Self-Directed Learning:
A Landscape Analysis and Recommendations for Transforming Educational Practice

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A Letter from the Co-Founder of The Forest School and The Institute for Self-Directed Learning

In most US schools today, young people are following rules they didn't make and listening to explanations of questions they didn't ask.

Think about that for a minute.

Imagine that was your modus operandi every single day for 12+ years during the most developmentally important years of your life.

With that kind of practice, and with that amount of repetition, what would you get good at doing? How much would you value what you learned? What would your mindsets be like? In all seriousness, how would your spirit feel?

Now, imagine this education system existed for decades and ultimately graduated a country full of young people with years of practice and repetition operating in a similar way. Would graduates of an education system like that gain the qualities, skills, and knowledge they will need to apply in their futures? Would they be able to understand all sides and make complex decisions that will impact both their future, and the future of their country? Current research would say, no.[1]

Here's the thing.

The traditional designs of schools and classrooms in the United States have created an epidemic of dependent learners unprepared to do the complex thinking and creative problem solving required for life's next steps. And the data are clear—a disproportionate number of students living in poverty, English learners, and students of color are unable to work to their full potential because of ongoing exposure to rote memorization, undemanding curriculum, and a lack of exposure to productive struggle and freedom in learning.[2]

The good news is that self-directed learning can help.

Self-directed learning is when learners—in the context of an interdependent community of peers, trained educators, and caring adults—choose the process, content, skills, learning pathways, and outcomes of learning, with the guidance, accountability, and support of others. Self-directed learning happens when young learners shoulder the responsibility for their own learning in the context of a community of relationships. Not by some magic spell. But by educators, school leaders, and caregivers making key moves, having key mindsets, and believing key things that successfully inspire, support, and hold young people accountable to direct their own learning.

[1] (Halpern, Diane F., 2007; Sternberg et al., 2007)
[2] (Orfield, 2001; L. B. Perry & McConney, 2010)

Self-directed learning is not alternative education. Rather, it's how we as adults—who usually don't have teachers at our side—learn every day. Think about it, when we as adults come across a skill or piece of knowledge that we don't yet understand but need to, sometimes we take courses, hire teachers or coaches, follow assignments, apprentice to others, and put ourselves into a more conventional student role. But this is a rare privilege even for adults. More often than not we learn 1) by researching (for me personally Youtube is king, and I usually pull up 10 videos, 3 of which are helpful, and 1 of which usually teaches me the thing); 2) by tapping our network to find someone to teach us what we do not yet understand; or 3) by trial and error (i.e., the scientific method) and learning from our failures (or successes) when we try something new. Children, if rightly supported, guided, and motivated by others, can learn in similar, self-directed ways.

With the right relationships, guidance, and incentives, children can research, find, and learn new things without those things being told or explained to them. In fact, every time a student is told something explicitly, she loses the chance to learn it independently. The more we explain and tell, the more dependent upon explanation and direct instruction she becomes.

As teachers, we worry about students not learning, and we should. But if we take the long term view, what's more important—students knowing something when we hope they should, or students learning to learn for themselves?

Importantly, self-directed learning doesn't remove the role of the teacher at all. On the contrary, it makes the teacher's role even more crucial—it takes unique skills and knowledge to shepherd children to learn independently. In self-directed learning, teachers become the designers and facilitators of environments that promote deep learning; of intrinsic and extrinsic motivators that inspire engagement; and of relationships that foster support and trust.

The trouble with the current state of education research and practice is that we're missing an abundance of research and examples for self-directed learning in the context of a supportive learning community. It's hard to know where to start self-directed learning, how to design classrooms and schools to promote it, and what proof there is that it works.

Hence this landscape analysis and the development of The Institute for Self-Directed Learning.
In what follows, we attempt to sum up what is known to date about self-directed learning so we can all stand on the shoulders of pioneers and accelerate the design and redesign of learning environments that graduate truly independent—and interdependent—self-directed learners.

It is our contention that in an Information Age, schools should be making moves towards self-directed learning because these environments are well suited to empower young people to find and pursue their life purpose and to promote the kind of personal and public leadership of which our nation is in desperate need.

So, let's get going.

Dr. Tyler S. Thigpen

CO-FOUNDER THE FOREST SCHOOL AND THE INSTITUTE OF SELF-DIRECTED LEARNING

A Letter from the Founder & CEO of Choice-filled Lives Network

When asked to complete this landscape analysis by Dr. Tyler Thigpen, Founder and Executive Director of The Forest School and its Institute for Self-Directed Learning, Choice-filled Lives Network enthusiastically agreed to take on the task. We viewed it as an opportunity to not only provide framing and next steps for the Institute's important and impactful work ahead, but also as an opportunity to write a story ….a story about the state of education in our country; a story about the equity and opportunity gaps that plague our society and block self-direction and freedom for so many; a story that paints a renewed vision for the future of learning; and a story about the educational entities and other organizations that are leveraging self-directed learning and its aligned theories and practices to work toward eliminating these gaps to work toward making the difference in the lives of the children and communities they serve.

While the goal of this analysis is not to deface traditional ways of schooling and traditional education in general, we do aim to objectively state and call out the cancerous components of our systems that need to be excised and removed, as well as the opportunities for growth and transformation that are right at our fingertips if we understand systems thinking and the science of learning and human development. With this in mind, this landscape analysis has 4 primary intentions:

- To make an awakening statement about the current state of our education system in the United States, and share a new vision for learning and growth that is grounded in agency, equity and purpose for all children
- To provide both historic and re-conceptualized definitions of self-directed learning that are grounded in developmental and cognitive science, as well as a comprehensive review of schools and environments where it can be found in action
- To discuss and share some of the theories and frameworks that are aligned to this re-defined conceptualization of self-directed learning, and that can therefore support the transformation of schools throughout our country, eliminate opportunity gaps and pave a choice-filled path for all children
- To state some of the necessary disruptions and shifts that must happen for the field to develop motivated, agency-filled, self-directed or independent learners, and eliminate equity and opportunity gaps at scale, and how to approach these changes

It is our hope that this landscape analysis will leave you, the reader, and the field, enthusiastic and filled with hope, energy and a desire for us to each do our part to set all children on the path to success… a path that they self-direct in collaboration with their communities, and a path that ultimately leads to a choice-filled and purposeful life.

Yours in Educational Equity,

Brandi B. Kenner, Ph.D.

FOUNDER & CEO, CHOICE-FILLED LIVES NETWORK

Acknowledgements

We had the pleasure of conversing with several experts in the self-directed learning, equity, and related spaces across the preschool-12 and higher education sectors. Through interviews and conversations, we learned about their philosophies, perceived challenges in the field, and what they deem to be needed approaches to the work to move the needle. Below are the leaders who engaged with us during this journey. Thank you for sharing your time, wisdom, and expertise.

In gratitude,

Choice-filled Lives Network

Interviewees

Dr. Belinda Biscoe

Dr. Naomi Boyer

Catherine Fraise

Zaretta Hammond

Luetta Marks-Perry

Landscape Analysis Collaborators

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Dr. Lisa Riegel, CEO at Educational Partnerships Institute

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Introduction: The Purpose of this Landscape Analysis

The Forest School: An Acton Academy, located in Fayetteville, Georgia, within the Trilith (formerly known as Pinewood Forest) community, is a learner-driven K-12 academy that prioritizes real-world learning through apprenticeships, socratic guiding, and creates an inclusive, diverse, and character-forging community in which children thrive and become their best selves—living into their Hero's Journey. Their mission states: "Each person who enters our doors will find a calling that will change the world."[3]

The school has adopted several design principles that serve as common threads for each child's experience at the school. These design principles include:

- Inspiring to all participants;
- Deeply personalized and self-directed learning;
- Enthusiastically diverse and relationship-centered environments;
- Unambiguously rigorous, relevant, and mastery-based work products.

One design principle, deeply personalized and self-directed learning, has served as a catalyst to enrich and deepen the other principles. As such, the school embarked upon a journey of founding and developing an Institute for Self-Directed Learning. The Institute for Self-Directed Learning envisions a world where graduates of learning environments are independent and interdependent self-directed learners. To this end, The Forest School's Institute for Self-Directed Learning, with The Forest School its primary, preliminary testing ground, brings together leaders, teachers, and researchers to design gold-standard learning environments that inspire and empower youth to take charge of their learning.

The Forest School and its Institute for Self-Directed Learning, partnered with Choice-filled Lives Network to request a thorough landscape analysis of the self-directed learning space in an effort to ensure optimal impact through the Institute's mission and work, and to avoid duplication of efforts in the field. A diverse methodological approach has informed the findings, including literature searches in peer-reviewed journals, desktop research, and interviews with experts and practitioners in the field.

This paper lays out our findings, and is organized as follows:

- **"The Story & The Why":** an exploration of the goals of self-directed learning, and why it is needed within the current educational landscape
- **"The What":** historic definitions and an evolved definition of self-directed learning and the rich theoretical and empirical work from which it draws
- **"The How":** design elements of self-directed learning communities in practice
- **"The Who":** an analysis of the current players in self-directed learning
- **Conclusion:** learnings, insights, and recommendations for the future role of the The Institute for Self-Directed Learning to have optimal impact

[3] (*The Forest School*, n.d.)

THE STORY & "THE WHY"

A Journey Toward Agency, Self-Determination, and Flourishing

While many narratives and policies frame the purpose of schooling as being about securing good jobs, The Forest School frames the vision for the future lives of our students around a more holistic vision of a good life, which requires more than just remunerated work. Parents, educators, and young people themselves describe good lives as full of productive work, but also of meaningful relationships, creative self-expression, civic engagement, and health.[4]

> "Meaning is not something you stumble across, like the answer to a riddle or the prize in a treasure hunt. Meaning is something you build into your life. You build it out of your own past, out of your affections and loyalties, out of the experience of humankind as it is passed on to you, out of your own talent and understanding, out of the things you believe in, out of the things and people you love, out of the values for which you are willing to sacrifice something. The ingredients are there. You are the only one who can put them together into that unique pattern that will be your life. Let it be a life that has dignity and meaning for you. If it does, then the particular balance of success or failure is of less account."
>
> ***John Gardner***

Flourishing, now and in the future, requires more than a job; it requires being able to make informed choices to create a life of relationship, community, self, and health that feels right. In this way, The Forest School's view of flourishing aligns with Aristotle's notion of eudaimonia—being able to make deliberate choices about the options available, aligned with your values and unique constellation of personal preferences and strengths.[5] In other words, we flourish, and feel ourselves flourishing, "when our core needs are met, we have the freedom to make choices about our lives (Aristotle, 2012; Aristotle & Press, 2015), and we find our choices to be meaningful and fulfilling." [6]

From this understanding, it becomes clear that agency and self-directed learning are core to flourishing in school and beyond school because it is what prepares young people with the sense of self, capacities, character, and belief to make deliberate choices they will find to be meaningful and fulfilling.

Imagine a world where educational systems provide every child with the experiences and environments they need to develop to their full potential as active choice-makers and changemakers personally and in their communities. Imagine there were a set of signature learning experiences for teachers and parents that would equip them to create the conditions for student empowerment. In this world, each child has the agency to self-direct their learning in service of their identified purpose and every graduate leaves as a confident, independent, and interdependent self-directed learner.

If this education system existed—one that truly empowered every child to be self-directed and equipped

[4] *(Allen, 2016; Arendt, 2013; Raab, 2017)*
[5] *(Aristotle, 2012, 2016)*
[6] *(Raab, 2019a)*

with the knowledge of self and the world they need to make informed choices—it would address many of the issues currently plaguing us as a nation and world because we would have:

- A society of citizens who graduate ready to do the hard and critical work of participating in democracy;
- An education system that is more equitable in its experiences and outcomes;
- Young people with the opportunity, insights, and skills to develop the innovations of the future;
- Individuals who are empowered to follow their passions and discover their calling.

The Forest School and its Institute for Self-Directed Learning are working to create this world. The history of self-directed learning is long, and the research is promising about its effects. Research has found, for instance, that self-directed learning increases learners': a) sense of agency and self-efficacy; b) social responsibility; c) emotional intelligence; and d) self-esteem, among other positive effects.[7] While there is a good foundation of research, part of the mission of the Institute is to both create and cultivate a stronger research base for the impact of self-directed learning experiences and environments.

In the next section, we start with evidence of how and why our educational systems do not currently provide all learners with the opportunity to become self-directed and empowered choice-makers. In the following sections, we look at self-directed learning itself and **what** it offers in terms of a new set of mindsets, priorities, and approaches for education. Then we explore the actual implementation of self-directed learning and **how** it looks in practice. Finally, we explore **who** is involved with self-directed learning today, and the opportunity that exists for the future role of the Institute for Self-Directed Learning.

Current Educational Conditions and Barriers to the Journey

Despite the fact that we know an incredible amount about the science and experience of learning and well-being, schools today are largely not designed to foster either. This is problematic because both are foundational to self-directed learning.

Neuroscience, social-psychology, and youth development research tells us, for instance, that humans have core social psychological needs they need filled if we want them to be both able and motivated to learn, including safety (psychological and physical), autonomy, relatedness, competence, and meaning.[8] And, research shows that limiting factors, including chronic stress, shame, scarcity, alienation/anomie, and psychological threat, undermine our ability to meet our core needs, and thus our ability to develop and grow to our full potential. If we aim for a world in which children self-direct their learning and chart their own choice-filled paths, we must acknowledge and address the barriers to core foundational needs

[7] *(L. Guglielmino et al., 2009; Hoban & Hoban, 2004; Muller, 2008; Panton et al., 2014; Ponton et al., 2010)*
[8] *(Deci & Flaste, 1996; Deci & Ryan, 2000; Hammond, 2014; Raab, 2017)*
[9] *(Brown, 2015; Csikszentmihalyi, 2008; Mullainathan & Shafir, 2014; Raab, 2017; Sandi et al., 2001; Steele, 2011)*

being met within our schools and education systems.

In other words, if we don't design schools to fulfill our core human needs and remove limiting and even oppressive factors, students will not grow into their full potential, no matter the curriculum nor the teachers, nor the technology we employ.

Yet many schools often seem designed for the very things that inhibit learning and well-being, rather than for fostering them. First, schools are largely designed for accountability and compliance.

- **Accountability:** Traditional accountability assumes a one-size fits all approach to learning and to learners themselves. Environments defined by top-down accountability undermines student and educator needs for autonomy and meaning, and often lead to high levels of teacher burnout, as well as student anxiety, or boredom and disengagement.[10] Furthermore, the fact that most accountability is based on multiple-choice tests, undermines educator and learner needs for competence and denies them the ability to develop a growth mindset toward learning. Without regular and consistent opportunities to make mistakes and to embrace failure as learning, educators and learners alike can develop a sense of learned helplessness; "the giving-up reaction, the quitting response that follows from the belief that whatever you do doesn't matter." [11]

- **Compliance:** A close companion to accountability, our analysis sheds light on the common culture of compliance within many schools across our country. David Geurin, a high school principal explains this relationship this way: "The traditional model of education has been very focused on compliance. In fact, compliance is often celebrated. I've had parents and teachers talk with admiration about teachers and administrators who ran classrooms and schools with an iron fist. They applaud the strict adherence to commands and rules." [12] Compliance can inhibit educators and students' ability to fulfill their need for relatedness by undermining the authenticity and trust in adult-learner relationships. One way it does this is by introducing psychological threat and shame into the environment, which causes our brains to create a stress response, that Dr. Jacob Ham, Director of the Center for Child Trauma and Resilience at Mt. Sinai in NYC, refers to as "Survival Brain." [13] When a child, or any person, is in survival brain mode, all learning shuts down and the "flight or fight" response is executed into high gear. Compliance-driven cultures can also damage and stagnate executive function skills in children in other ways because compliance can be understood as the ways in which adults are often viewed as the keepers and disseminators of knowledge, and creators of the rules, and students as the passive recipients who must "comply" by their standards and rules and therefore do not prepare learners to think critically, plan intentionally and make good choices. From a systems-perspective, over compliance has led us to often value credentials over learning.

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[10] *(Gallup, 2013; Ingersoll et al., 2014; Simon & Johnson, 2015)*
[11] *(Seligman, 2012)*
[12] *(Guerin, 2018)*
[13] *(Ham, 2017)*
[14] *(Hammond, 2014)*

Broadly, our focus on accountability and compliance illustrate how today's schooling system has been designed to facilitate administrative efficiency and top-down control, as opposed to learning or well-being. And, it leads to many learners becoming what Zaretta Hammond calls "dependent learners". Dependent learners, "struggle because we don't offer them sufficient opportunities in the classroom to develop the cognitive skills and habits of mind that would prepare them to take on the more advanced academic tasks." [14] The chart below identifies key characteristics of learners when adopting "dependent" vs. "independent" behaviors.

Figure 1: The Dependent Learner versus The Independent Learner [15]

The Dependent Learner	The Independent Learner
• Is dependent on the teacher to carry most of the cognitive load of a task always • Is unsure of how to tackle a new task • Cannot complete a task without scaffolds • Will sit passively and wait if stuck until teacher intervenes • Doesn't retain information well or "doesn't get it"	• Relies on the teacher to carry some of the cognitive load temporarily • Utilizes strategies and processes for tackling a new task • Regularly attempts new tasks without scaffolds • Has cognitive strategies for getting unstuck • Has learned how to retrieve information from long-term memory

These are not absolute or essentialist categories. For one thing, adoption of a dependent or independent stance is often a reaction to the environment or context—a student might be a dependent or independent learner in one context and not in another. Furthermore, there is a developmental component—what dependence or independence looks like at different ages or within the development of different skills may vary. However, it is a simple frame that is useful for thinking about how our approach to teaching and learning may foster dependence rather than independence in learning.

[15] (*Hammond, 2014, p. 13*)

Systemic Racism and Deficit Ideology

We know that all humans, regardless of race, ethnicity, religion, gender, sexual orientation, or nationality, have equal levels of potential to learn, grow, and flourish. Yet, systemic racism and associated economic and socio-political inequalities have been intentionally embedded into every level of America's infrastructure since its founding, including the education system. In his book: "America's Original Sin: Racism, White Privilege, and Bridge to a New America", author Jim Wallis references a 1978 article he published in which he asserts: "The United States of America was established as a white society, founded upon the near genocide of another race and then the enslavement of yet another." [16] Wallis reports receiving an array of reactions to this assertion—many found it to be outrageous, while others called it courageous. However, Wallis sustains that this comment, "was simply a historical statement of the facts." [17]

These intentional policy-related and structural barriers and divides have resulted in achievement and, more importantly, well-being and opportunity, being highly correlated with race, ethnicity, socio-economic status, and the zipcode in which a child lives.

Both slavery and the Jim Crow era that enforced "separate but equal" laws in United States' history, have created systemic, generational circumstances that have disenfranchised a large portion of society. Jim Crow laws were indeed separate, but in practice were the antithesis of equal. These laws have had detrimental impacts on children and families for generations, and the data support this assertion. Research suggests that children in the United States from low-income and minority backgrounds are more likely to:

- attend less well-rated schools[18];
- be tracked in lower academic courses, regardless of ability[19];
- be suspended and expelled at higher rates[20];
- experience low-trust, low-belonging, and/or feel their self-integrity is under threat[21];
- experience stereotype threat and/or experience school as a hostile environment[22].
- dropout of school at a rate five times that of their peers form high-income households[23].

Wallis (2016) points to data from the Brookings Institute in 2015[24], indicating that the average black student in America attends a school that is in the 37th percentile for achievement, while the average white student attends a school that is in the 60th percentile comparably.[25] These statistics did not come about by happenstance. For instance, in 1860, a bill was put on the senate floor in Washington, D.C. to provide funding for black children to be educated. It has been documented that then Senator, Jefferson

[16] (*Wallis, 2016, p. 33)*
[17] (*Wallis, 2016, p. 33)*
[18] (*Orfield, 2001; L. B. Perry & McConney, 2010)*
[19] (*Hallinan & Oakes, 1994)*
[20] (*Anyon et al., 2014, 2014; Payne, 2010)*
[21] (*Cohen & Garcia, 2008; Fiske et al., 2014)*
[22] (*Calabrese, 1990; Delpit, 2006; T. Perry et al., 2004; Steele, 2011)*
[23] (*Balfanz et al., 2012; Chapman et al., 2011)*
[24] (*Reeves, 2015)*
[25] (*Karpilow & Reeves, 2001; Wallis, 2016)*

Davis, adamantly opposed this legislation, stating that the bill itself was based upon a false belief of racial equality and that the "inequality of the white and black races" was "stamped from the beginning."[26] Even in more recent times, Wallis (2016) reminds us of when the federal government recognized the need to provide additional support for World War II veterans so that they could economically catch up to their peers who did not serve in the military. This recognition birthed the GI Bill, that provided many employment, housing, and other benefits for World War II veterans. However, Wallis asserts that many of us do not realize that very few black American veterans had access to the benefits provided by the GI Bill. He points to Nick Kotz's review of Columbia professor Ira Katznelson's book, When Affirmative Action Was White, in which he summarizes the following:

> *"African-American veterans received significantly less help from the GI Bill than their white counterparts..." the law was deliberately designed to accommodate Jim Crow....As a result, thousands of black veterans in the South—and the North as well—were denied housing and business loans, as well as admission to whites-only colleges and universities. They were also excluded from job training programs for careers in promising new fields like radio and electrical work, commercial photography, and mechanics. Instead, most African-Americans were channeled toward traditional, low paying 'black jobs' and small black colleges, which were pitifully underfinanced and ill equipped to meet the needs of a surging enrollment of returning soldiers."*[27]

One can think of the relationship between property values and educational system resources as just one example of how the discriminatory GI Bill practices trickled down to impact educational systems.

Additionally, in an interview with Luetta Marks-Perry, a retired 36-year veteran teacher from a large, Urban southern school district, she reflected upon the year she was forced to integrate her school district as a teacher. She shared that teachers were integrated prior to children, and that all teachers were required to take an achievement test of sorts. The results of this achievement test were then utilized to determine which teachers would go to which schools. The highest performing white and black teachers were sent to schools serving white children, while the lowest performing teachers of both races were sent to teach black children.[28]

Policies such as the intentional placement of inferior teachers with black students during integration efforts, those that determined who could and couldn't benefit from GI Bill housing and employment benefits at the end of World War II, or even explicit congressional declarations to adamantly oppose funding education for black children in the 1860's have shaped and groomed America in a systemically racist soil that has proved beyond challenging to cleanse, from generation to generation.

Our current achievement data, though limited in its own makeup, further illustrate this point. Given the fact that potential is equally distributed across races, the two figures below illustrate that black, Hispanic, and native children are rarely provided the opportunity to develop to their full potential in reading and math, for example.

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[26] *(Kendi, 2017)*
[27] *(Kotz, 2005) in (Wallis, 2016)*
[28] *(L. Marks-Perry, personal communication, 2020)*

Figure 2: Nation's Report Card Achievement Level Data for 4th Grade Reading by Race/Ethnicity[29]

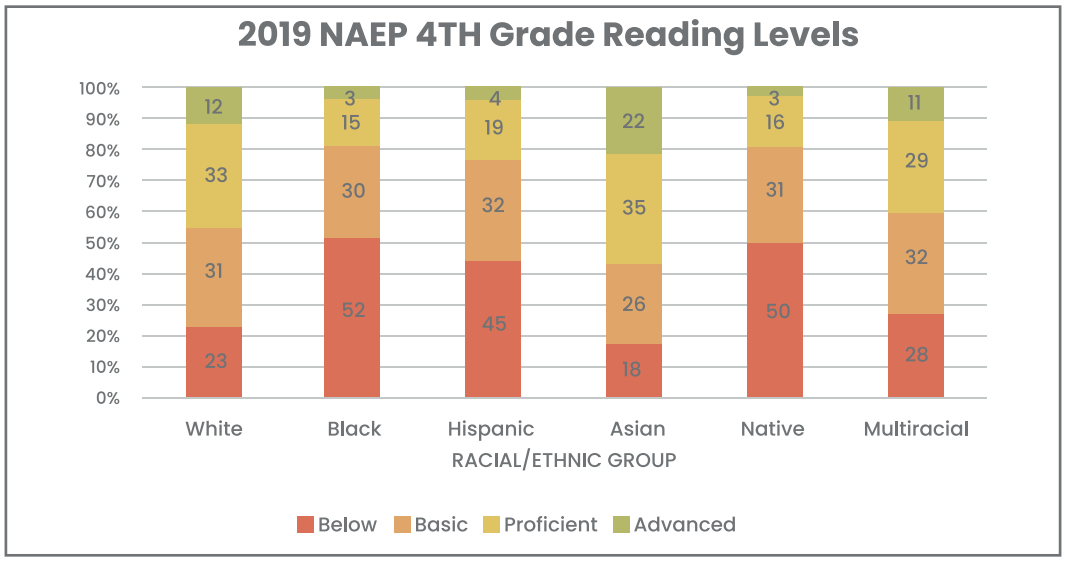
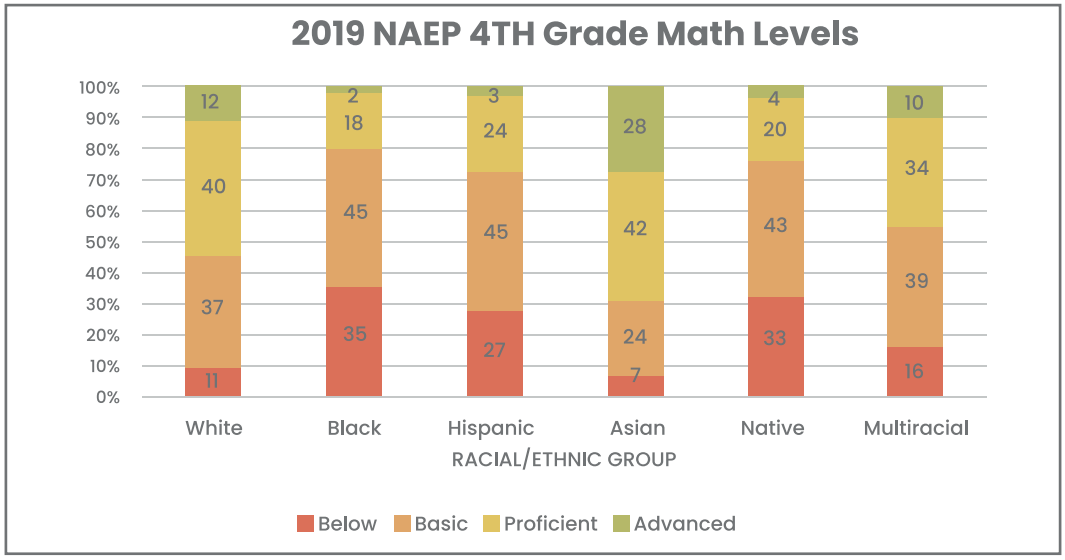


Figure 3: Nation's Report Card Achievement Level Data for 4th Grade Mathematics by Race/Ethnicity[30]



While we acknowledge test scores are an imperfect form of evidence, sources such as the National Assessment on Educational Progress (NAEP) still portray a vivid story of the racial, ethnic, and socioeconomic divides within The United States.

These systemically-created and perpetuated differential outcomes are often blamed on the students or families themselves. Derald Wing Sue (2010) describes three specific deficit ideologies that are prevalent in our educational system and society as a whole that locate the problem in students and their families:[31]

- Lack of Motivation to Improve One's Self—e.g. "They just don't want to do better."

[29] *(NAEP Report Cards, n.d)*
[30] *(NAEP Report Cards, n.d)*
[31] *(Sue, 2010)*

- Assignment of Intelligence—e.g. "We know that 'they' are not as intelligent as white people."
- Criminality/Assumption of Criminality—e.g. "They are all criminals, guilty until proven innocent. If they didn't do it this time, they will."

These deficit ideologies are widespread—and they are incorrect. The real causes of perceived disengagement, low achievement, and students who appear to push the rules can be found in historic, intentional inequities and barriers to education and access. Relatedly, the problems we face as a country can be traced back to errant beliefs about what children are capable of, as well as the ways in which our society has historically and intentionally blocked families from diverse racial and ethnic backgrounds from avenues to prosperity, wealth, and wellness. Our society has in turn designed and upheld a system in which many people are unable to meet their core needs for secure housing, food, and healthcare. These discrepancies carry over into learning environments and educational experiences as well.[32]

Despite being incorrect, these deficit ideologies about learners and their families create dangerous feedback loops that harm a large number of children in our country. These ideologies were born out of systemic racism, and continue to be upheld by systemic, pervasive human biases that have remained unchecked. The end result has been learners in classrooms around the country being asked to comply with rules they did not develop, and being asked to find understanding within questions they did not pose, thereby undermining learners' needs and rights for autonomy, equity, meaning, critical thinking, cultural relevance, and relatedness.

From a systems-perspective, it is clear that our educational systems are designed for accountability and compliance, rather than for learning. It is also evident that, in large part, schools are designed to actively inhibit learners' and educators' abilities to meet their core human needs, and are therefore designed to inhibit learning for all, particularly black, Indigenous, Latinx, and other learners of color, and those who have experienced generational lack of access, and wounding misguided beliefs about their capability.

The other point that becomes clear is that it is not just individual choices that matter. Our ability to choose is insignificant if our freedom to choose is undermined, or if the choices we want are not available to us. To this end, "life potentialities realized are the outcomes of the ways our choices interact with the options and paths available to us in our world." [33] In this model of flourishing, defined as one having the ability to make deliberate choices that are right for them, there are four leverage points for equity work, which can be seen as four conditions for flourishing. The first is that everyone has the freedom to make choices about their lives. The second is to ensure that everyone's core needs are met, otherwise all of their choices will be oriented toward meeting their core needs. The third is to make the options people have to choose from equitably distributed and accessible. The fourth is to ensure every

[32] *(Kozol, 2012; Rothstein, 2004)*
[33] *(Raab, 2019a)*

child develops the sense of self, capacities, character, and beliefs they need to be able to make deliberate choices—and are prepared to work with others to ensure the first three conditions are met.[34]

From this perspective, freedom and democracy are necessary conditions for human flourishing, and in turn, prerequisites for self-directed learning. However, in many regards our history in the United States has not been one of freedom nor, its counterpart, democracy. In fact, our society through our educational institutions, regularly pipelines our children into prisons, unemployment, and other societal traps, rather than acknowledging and developing their cultural capital and building their intellectual capacities. To right these wrongs, and to provide each child with an equitable, self-directed educational experience such that they are able to navigate the world critically, and work alongside others to transform our world, there must be both an acknowledgment of our country's history and an understanding of the pervasive and generational cognitive schema and deficit ideologies that created these structures, and that continue to sustain their malignant growth. Additionally, we must design students' environments and experiences to fulfill each child's core needs, and allow them to practice and experience self-directed learning and well-being throughout their schooling experiences.

Paulo Freire, in Pedagogy of the Oppressed, keenly wrote, "Education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity, or it becomes the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world." [35]

While it is not the only potential solution, adopting the practice and model of self-directed learning in schools presents a potentially powerful way to address these aforementioned critiques, and attune to Freire's call to transform education into "the practice of freedom." To this end, in the next section, we explore the "what" of self-directed learning and how its foundational tenets provide a much needed shift in priorities and mindsets from the traditional educational system.

[34] *(Raab, 2017)*
[35] *(Freire, 1970)*

"THE WHAT"

Self-directed Learning Historically Defined

While the current system does not prioritize self-directed learning or live our values of equity and inclusion, the work of creating a world of self-directed learning has a long history. Our work today stands on the shoulders of, and in conversation with, wise elders such as Henry Giroux, Maxine Greene, Paulo Freire, bell hooks, John Dewey, Ira Shor, Ivan Illich, Svi Shapiro, David Purpel, Nel Noddings, John Holt, Jean-Jacques Rousseau, among others. Building off of the wisdom of these elders, practitioners, researchers, and other leaders in the field have further defined self-directed learning. Not surprisingly, given the breadth and depth of people who have influenced it, the construct has come to be defined in many ways.

Historically, definitions of self-directed learning include:

A. an active learning technique and a process by which learners manage their own learning process from beginning to end;[36]
B. (a.) a process that is (b.) initiated by the individual, which (c.) may or may not involve the help of others, to (d.) identify their learning needs, (e.) develop learning goals from their needs, (f.) find the necessary resources to attain these goals, (g.) select and implement the proper learning strategies to meet their goals, and (h.) determine how to measure learning outcomes.[37]

In more recent times, self-directed learning has also been defined as:

A. education that derives from the self-chosen activities and life experiences of the person being educated ("What is Self-Directed Education?", n.d.);[38]
B. learn[ing] the traditional academic subjects, but also valuable lessons about responsibility, problem solving, social justice and most importantly, how to relate to each other ("The Albany Free School" n.d); [39]
C. a whole-life, freedom-based process ("How Do People Practice SDE?, n.d.).[40]

[36] *(S. L. Boyer et al., 2014)*
[37] *(Knowles, 1975)*
[38] *(What Is Self-Directed Education?, n.d.)*
[39] *(The Free School, n.d.)*
[40] *(How Do People Practice SDE?, n.d.)*

Commonalities across these recent definitions of self-directed learning include: content that is often self-identified or chosen, and practices that nurture the whole human, are freedom-based, and impact both the learner and the larger community or world.

While these definitions have moved the field forward and provided a way to conceptualize what learning might look like outside of the constraints of a system organized for administrative efficiency, there are three key missing aspects:

1. These definitions do not provide clarity about the kinds of humans we want to foster through self-directed learning (e.g. what knowledge, values, beliefs, mindsets, skills, character).
2. These definitions do not take into account the cognitive, developmental, and sociocultural research on how adults may need to cultivate self-directed learning mindsets, habits, and foundational skills with individual children from diverse backgrounds and readiness levels.
3. These definitions do not provide a compelling vision for the kind of society an entire system of self-directed learning schools might help to create, nor what that might look like.

What must we add to this definition for it to explicitly illuminate desired equity and empowerment outcomes?

Self-Directed Learning for Equity and Empowerment

If we want to create a world that is more just and more equitable, we must be cognizant of both our understanding of what this means, and the beliefs, mindsets, knowledge, and skills our young people must develop to be co-creators of this meaning and intent. In other words, we must set a clear vision for both the collective and the individual, and then understand how to foster growth in the direction of that vision.[41]

> "Without new visions, we don't know what to build, only what to knock down. We not only end up confused, rudderless, and cynical, but we forget that making a revolution is not a series of clever maneuvers and tactics, but a process that can and must transform us."
>
> ***Robin D.G. Kelley***

Our research suggests the ultimate goal of the movement for self-directed learning is two-fold: 1) to create a more equitable society; and 2) to facilitate learners' ability to self-identify their interests, and goals, and to have the motivation to pursue such goals, in service of finding their life's purpose, and therefore uniquely contributing to their community and society as a whole.

This means that, while self-directed learning is an intentional learning process that is both co-created and evaluated by the learner, if it is to be effective at both addressing systemic and historical inequities, and to be empowering the learner, self-directed learning educators (facilitators) must consider the cognitive, developmental, and sociocultural mechanisms that facilitate true growth when designing the learning

[41] *(Raab, 2017)*

environment and experiences.

Theoretical and Pedagogical Underpinnings

To design equitable, empowering self-directed learning environments, it is critical to examine the science of learning and human development, broadly. While not explicitly recognized as a part of all self-directed learning ecosystems, the core tenets of self-directed learning have birthed from several key theories. Self-directed learning educators benefit from incorporating theories that address the foundational cognitive, socio-cultural, motivational, and developmental underpinnings of learning. To this end, first, we name and define a few of the key theories. Then, we look at pedagogical approaches that incorporate them.

Theories

Each of the following theories are backed by decades of research, and we argue that they are critical for moving from a definition of self-directed learning, to an empowering enactment of it in practice.

- **Constructivist Theory:** Conceptualized in the work of cognitive, developmental psychologist Jean Piaget, constructivism sees learning as an individual active, organic, and continual process that takes place by engaging with others and the surrounding world. The root word, "construct" attests to this theory's perception of the learner as builder of their own knowledge. It can be contrasted with the notion that knowledge exists apart from the learner and is simply transferred into their mind.
- **Sociocultural Theory:** Developed by psychologist Lev Vygotsky, sociocultural theorists see learning as a social process, and that social interactions play a critical role in overall development. Vygotsky further posits that new learnings occur by children having opportunities to be immersed in learning experiences that reside within their Zone of Proximal Development (ZPD). The Zone of Proximal Development refers to the range of learning and exploration for which a learner is cognitively prepared, yet needs the social interaction and support, or scaffolding, by a model or facilitator to reach the desired goal.
- **Social Cognitive Theory (SCT):** Developed by Albert Bandura as an extension of his previously developed Social Learning Theory, this theory posits that learning and knowledge are acquired through observation of others within one's environment, including social interactions, day-to-day experiences, and even media (and in current times social media) influences.
- **Social Cognitive Career Theory (SCCT):** Developed by Richard Lapan, this theory attempts to explain why we have the interests we do and thus how we set the goals we do and take action. SCCT reveals a pathway for how self-directed learners can build their own purpose seeking skills. Namely, by 1) reflecting deeply on their person inputs and backgrounds, by 2) encountering learning experiences that are both connected and disconnected from their current interests, and by 3) continuously self reflecting on their self efficacy (What am I capable of?) and outcomes expectations (What will happen if I do or do not do this?). If a self-directed learner engages in the above, they will discover their interests, goals, and actions will move ever so slightly but

meaningfully towards their life's purpose—whether that is through further affirmation of the interests they held before, or through the exciting discovery of brand new interests and life passions.[42]

- **Information Processing Theory:** This theory describes cognitive processes involved in learning and likens the human brain to a computer that gathers information, organizes and stores it, and can then retrieve it at a later time. This theory puts forth the following processes and functions:
    - Sensory Register: The mechanisms through which we hear, smell, taste, and feel environmental data and route it into our working memory.
    - Working or Short-Term Memory: The mechanism through which we temporarily house information while we work with the data gathered and determine how to use it in real time, and/or encode, store, and route it to our long-term memory for later use.
    - Long Term Memory: The mechanism through which we store information that is not currently being used, and retrieve such information as necessary.
- **Self-Determination Theory (SDT):** SDT is a meta-theory used to explore studies of human motivation, and is particularly concerned with the conditions and relationships that foster intrinsic motivation rather than extrinsically driven motivation. SDT is empirically supported with over four decades of research, and has found that environments that support an individual's experience of autonomy, competence, and relatedness foster the most volitional and high quality forms of motivation and engagement for activities, which result in enhanced performance, achievement, persistence, and creativity. Furthermore, SDT proposes that the evidence suggests these three are psychological needs, in the sense that when they are unsupported or thwarted within a social context there is considerable detrimental impact on wellness in that setting.[43]

Pedagogical Approaches

While the aforementioned theories provide the foundational underpinnings of self-directed learning, it is important to connect theory to practice, and identify the specific pedagogical approaches that are theoretically aligned. In other words, how might educators incorporate these theories into everyday learning experiences and learning environment construction?

Culturally responsive pedagogical approaches, and approaches that foster the foundational language and literacy skills, which enable learners to critically, and independently navigate the world around them in service of self-directing their learning, are both important to consider.

As Zaretta Hammond has often communicated, all pedagogy is culturally responsive; the question is: to which and whose culture and norms are we responding?[44] To this end, efficacious self-directed learning environments center pedagogical practices around the individual learner within their unique context,

[41] *(Lapan, 2004)*
[42] *(Deci & Flaste, 1996; Deci & Ryan, 2000)*
[43] *(Hammond, 2014)*

prior background knowledge, communities, and experiences.

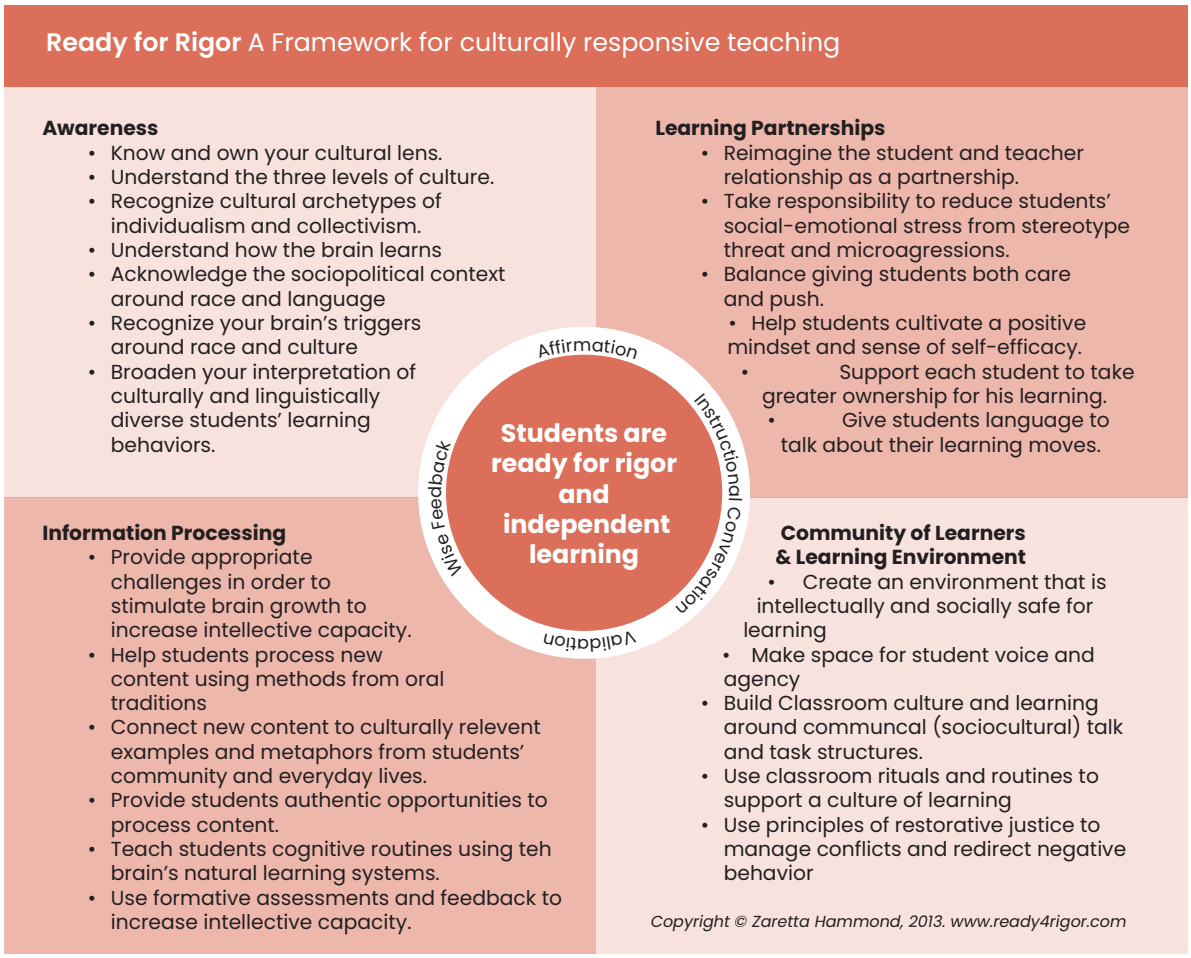
The following frameworks serve as recommendations for research-grounded pedagogical frameworks that should underlie the actual implementation of any self-directed learning environment to ensure students' optimal and equitable access to learning and the world.

- **Culturally Responsive Teaching (CRT)** draws on many of the developmental theories above, and incorporates them into a lens for equity, serving young people who are not part of the dominant cultural group. Originally, Gloria Ladson Billings developed a vision for a Culturally Relevant Pedagogy, and this evolved through the work of Django Paris, Samy Alim, among others. As Zaretta Hammond, practitioner and author of Culturally Responsive Teaching and the Brain, notes, "CRT isn't a set of engagement strategies you use on students. Instead, think of it as a mindset, a way of looking at the world…CRT is about being a different type of teacher who is in relationship with students and the content in a different way."[45] The educator understands the importance of being in a relationship and having a social-emotional connection to the student in order to create a safe space for learning."[46]

  To help educators put this into practice, Hammond developed the Ready for Rigor framework to illustrate the ways in which culturally responsive teaching comes to life in a way that is relevant to all learners. Ready For Rigor contains four primary mindset and disposition components-Awareness, Learning Partnerships, Information Processing, Community of Learners and Learning Environment-and a core of necessary actions—affirmation, validation, Instructional Conversation, and Wise Feedback, that ultimately lead to students being ready for rigor and independent learning.

[45] *(Hammond, 2014, p. 52)*
[46] *(Hammond, 2014, p. 15)*

Figure 4: Ready for Rigor



Foundational and Critical Literacy:

Reading and written language are key foundational skills that students must acquire in order to leverage and access the plethora of information and resources around them in service of meeting their goals. To develop foundational literacy in a self-directed learning context requires that educators understand the science of reading acquisition, as well as the ways in which our environments and experiences shape our brains and learning readiness over time.

One framework that describes the inputs, both internal and external to the child, that shape the formation of the reading brain is The Construction of the Reading Brain Framework.[47] Developed in 2016 out of work at The Atlanta Speech School and its Rollins Center for Language and Literacy by Sondra K. Mims, M.A., CCC-SLP and Brandi B. Kenner, Ph.D., this research-grounded framework is based upon Maryanne Wolf's work examining the "Deep Reading Brain."[48] The framework is also grounded in the work of researchers such as Hugh Catts, Patricia Kuhl, Janet Werker, and others, and is

[47] *(Mims, S. K. & Kenner, B. B., 2016)*
[48] *(Nevills & Wolfe, 2009)*

theoretically grounded in Constructivism and Social Cognitive Theory. At its core, the framework holds an underlying scientifically-grounded belief, that although human brains are born, the "Reading Brain" is built.

Foundational reading skills are also necessary for children to fully engage in critical literacy, or the ability to examine relations between language use and power dynamics being presented in curricular materials or texts. Part of moving toward a more equitable educational landscape includes children having the necessary skills to critically reflect upon the information they are encountering and absorbing in an effort to:

- disrupt that which is commonplace;
- consider multiple viewpoints;
- focus on sociopolitical implications; and
- take action.

To synthesize from this section, and drawing from The Institute's desire for children to discover and ground their purpose in service of community and society as a whole, educators of self-directed learning will need to base their work in: (1) exploratory learning guided by one's passions and interests inherent in Constructivist Theory, (2) adult or community facilitation and guidance uplifted in Sociocultural Theory, (3) supporting children's abilities to efficiently absorb, organize, and process new information as outlined in Information Processing Theory, (4) the actualization of autonomy, competence, and relatedness as articulated in Self-Determination Theory, and (5) the practical frameworks for addressing equity and foundational skill development found in culturally responsive teaching, reading brain construction practices, and discourse norms that encourage critical literacy.

How do these crucial educator moves address the barriers and conditions identified in the opening framing around systemic racism and deficit ideologies? In the following section we explicitly outline a vision for shifting mindsets and priorities from one that privileges accountability for efficiencies, compliance, and inequities, to an ecosystem overhaul in which each child is known, valued, and rigorously supported as an individual learner who is developing personalized learner outcomes within a community of personalized practice.

To this end, the Forest School and Institute for Self-Directed Learning have developed an evolved definition of self-directed learning: "Self-directed learning is when learners—in the context of an interdependent community of peers, trained educators, and caring adults—choose the process, content, skills, learning pathways, and outcomes of learning, with the guidance, accountability, and support of others, in service of finding a calling that will change their communities and the world." (The Forest School, n.d.).[49]

[49] *(The Forest School, n.d.)*

A Path Forward through Self-Directed Learning—Shifting Mindsets and Priorities

Pedagogy is the set of theories, practices, beliefs, mindsets, and norms that guide the design of learning environments and experiences. **Importantly, self-directed learning pedagogy includes a variety of key beliefs and priorities, some of which challenge the status quo, including:**

- learner as leader in the agenic pursuit of learning
- learners as naturally curious and deeply capable
- adult as "guide" or "facilitator" of learning
- a focus on freedom to learn what and when learners choose
- passion and interest as drivers of learning pursuits
- learning as personalized, unique, and holistic—reaching far beyond core academics
- play and unstructured time as exploration and methods for learning
- resources as widely available and flexible in use
- learning for the individual and the collective—the world
- creating a safe, constructive space for learners to make decisions and experience—and learn from—the natural consequences of their decisions

> "I am sending this email because I would like to talk to you about a situation that I have been running into with Khan Academy. Unfortunately over the past couple months I have realized that I haven't been learning as much math as I should be. I feel like I am not learning anything from Khan Academy, and that these past couple months I have just been wasting my time learning on a platform that I don't understand. Anyway, I think I might have a solution to this problem. My to put together a system that works for my learning type. I have some ideas and a proposal that I would like to get your thoughts. Do you have time in the next couple days to meet with me to discuss this more?"
>
> ***7th Grader, The Forest School***

Collectively, these beliefs, mindsets, and norms provide the foundation for self-directed learning and inform key shifts away from traditional school design. Combined with the theories above, this clearer vision and aims for self-directed learning, along with grounding self-directed learning experiences in these theories and frameworks, addresses a number of the issues identified with traditional schooling. This is summarized in the table and discussed below.

Figure 5: Traditional vs. Self-Directed Learning School Design

Traditional School Design	Self-Directed Learning School Design
Accountability for Administrative Efficiency	Accountability for Learning
Compliance	Connection
Reproduces Inequity	Enables Equity
"Fixing" the ***Learner***	Designing equitable and empowering ***environments and experiences***

Accountability for Administrative Efficiency vs. Accountability for Learning

Accountability in self-directed learning spaces remains, but the outcome for learners is starkly different. "Encouraging self-directed learning and self-assessment does not mean ignoring accountability."[50] Rather, self-directed learning, as defined in this analysis, at its core means holding one's self and community accountable for measuring what matters most... that which will inform what learning has occurred so as to know where to head next, that which will illuminate specific targeted foundational skills needed to embark upon self-directed learning throughout one's lifetime, and that which learners have identified as important to know and learn based upon their desired life outcomes and based upon what is valued in their communities and cultures.

Within self-directed learning environments, learners are indeed held accountable. However, accountability is measured via mechanisms that have direct relation and relevance to desired outcomes and goals. Accountability is both personal and community focused, providing opportunities for gauging individual learning and growth through choice-making and experiencing natural consequences, which in turn yields community or school-wide lessons, achievements, and accolades. This culture in turn fosters a growth mindset and a willingness to "fail" or, in other words, to learn.

Compliance vs. Connection

Dr. Naomi Boyer asks, "It is not what we do to the learner, but what can we do to empower the learner?."[51] Premiere self-directed learning spaces empower learners to create norms within the community, alongside guides—adults in the learning space. Rather than a top-down approach in which teachers give directives and students absorb, students agree to act in accordance with community agreements or ways of being in relationship with one another. These relational agreements, include agreed upon student-determined consequences for stepping out of bounds from the community-wide established agreements and norms. As stated by Dr. Tyler Thigpen, Head of School at The Forest School, "students are respected for their thoughts, plans, and emotions and are empowered—within limits—with autonomy, freedom, and choice."[52]

Self-directed learning spaces do not abandon the notions of accountability or compliance. Instead, leaders and learners in these spaces ask, "Who am I accountable to?" and "What does compliance mean to me and to my learning community?". In self-directed learning spaces, accountability is often to oneself and one's community and compliance is not top-down from teacher-to-student, but instead is a set of norms created for, and by, the learners within a community.

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[50] *(L. Guglielmino et al., 2009)*
[51] *(N. Boyer, personal communication, May 18, 2020)*
[52] *(T. Thigpen, personal communication, April 15, 2020)*

Reproducer of Inequity vs. Equity Enabler

There are two primary ways self-directed learning can serve as an equity enabler. The first draws on the work of Pierre Bourdieu, a French sociologist, in the role of cultural capital in social reproduction. Within Pierre Bourdieu's theory of Social Reproduction, the education system is a key social instrument for ensuring class stasis and the reproduction of inequality and inequities. It effectively ensures that capital of all forms (economic, cultural, and social) is transferred from generation to generation, while maintaining the appearance of being a neutral institution that affords equal opportunity to all.

Many researchers and philosophers have built upon and expanded this idea of schools as an instrument of social reproduction.[53] Within this lens, cultural capital is the knowledge, behaviors, and skills that a person draws upon to demonstrate their cultural competence and social status. Scholars since Bourdieu have expanded this theory by arguing there is not just one kind of cultural capital. In fact, there are many because cultural capital depends on context.

Cultural capital comprises a person's social assets that allow them to navigate society. Often it is used to describe what assets support social mobility. This kind of capital constitutes the values and behaviors that society rewards. In other words, this is non-financial currency that helps us both navigate society, and move up in society. Examples include language or dialect, education, knowledge of classical art, music, dance, cuisine, mannerisms, and dressing. Cultural capital is generally passed along by our families and communities.[54]

> Families can only pass along that which was passed along to them.
>
> *Belinda P. Biscoe, Ph.D., Associate Vice-President for University Outreach, University of Oklahoma*

Scholar Belinda Biscoe, Ph.D. contends that most African American students have experienced a lack of generational access to the dominant culture's cultural capital due to the history of slavery and Jim Crow laws. Consequently, these students continue to be adversely impacted educationally and in other ways. In reviewing the NAEP data presented earlier in this document, African American students had the highest percent of students performing at a "below basic" level in reading and math, across all racial and ethnic groups. Biscoe contends this is a by-product of not having access, from generation to generation, to the types of cultural capital valued by the dominant culture that helps one navigate the dominant culture successfully. Families can only pass along that which was passed along to them. Biscoe thus argues that students of color, in particular African

[53] *(Beegle, 2000; Espenshade & Radford, 2013; Horvat & Antonio, 1999; Lareau & Horvat, 2008; Stevens, 2007)*
[54] *(Cole, 2019)*

American students, must gain cultural capital upheld by the dominant culture, while simultaneously advocating to ensure the cultural capital they already possess from their families and cultural backgrounds is acknowledged and valued by educational systems and educators. These are both crucial in our work to eliminate opportunity gaps at scale, which will in turn eliminate achievement gaps.[55]

The second way we propose to think about equity is rooted in the experience of education itself, rather than in terms of future socioeconomic or school attainment outcomes. Raab (2017) argues that when we frame the purpose of schooling as social mobility, and educational equity in terms of competition, schooling does become a highly refined sorting mechanism but it does not solve issues of inequality because schools do not have direct control of socio-economic outcomes—our socio-economic policies do. When we organize schooling for children to compete in an unequal economic system, it obscures and undermines the true role schooling could play in promoting social equity: ensuring all children can effectively and actively participate in a democracy, because social equity is only achieved through a political process—and only those engaged and effective at that political process will have true power to achieve it.[56]

In a changed definition, educational equity is not achieved solely when all children are prepared with the cultural capital, knowledge, and skills needed to compete in the workplace, but rather, "true educational equity is achieved when every child develops the knowledge, skills, character, and beliefs they need to reflect accurately on their world, make choices aligned with their values and preferences, and work with others through democratic processes to make the whole system more equal and equitable for all." [57]

Self-directed learning addresses both of these equity concerns by acknowledging and nurturing the gifts and existing cultural capital within each learner, and approaching learning experiences through a lens of agency-filled democratic processes that build autonomy within a community context. To this end, self-directed learning environments support children to find and develop their unique voice, and to therefore have a direct say and influence in their own learning journey and impact within their communities.

"Fixing" the Individual vs. Designing equitable and empowering environments and experiences

Finally, self-directed learning moves educators and our system away from deficit ideologies about children to focusing on what educators have control over: the environments and experiences they create. It shifts the metaphor from one of manufacturing a specific kind of student, to that of gardeners creating conducive environments for growth. It acknowledges three fundamental truths of education: (1)

[55] *(B. Biscoe, personal communication, May 15, 2020)*
[56] *(Acemoglu & Robinson, 2012)*
[57] *(Raab, 2017, 2019b)*

growth and learning long-term and non-linear; (2) what students need to grow and learn is already inside of them; and, (3) you cannot control the outcome. And, what we want is beautiful variation in outcome, not sameness, which means, "You cannot manufacture a human just like you cannot manufacture a tomato. You have to cultivate them."[58] This directs our attention away from finding problems supposedly hidden in learners (or in educators) and towards questions about what the design components and principles are for empowering learning environments and experiences that will allow children to optimally develop in all domains—cognitively, physically, socially, and emotionally.

For all of these reasons, we believe self-directed learning is a way to effect positive transformation in our schools and beyond. When rooted in a strong sense of the collective and social responsibility, self-directed learning is the way of moving toward change because, "Committed, innovative, persistent self-directed learners, in their searches for meaning, justice, or better ways to do things in their own lives, sometimes pursue paths that contribute to advances in knowledge or technology or a more equitable, charitable, or just society.…Our societies move forward through the efforts of dedicated self-directed learners."[59]

So, how then does self-directed learning happen?
While all self-directed learning might include self-identified or chosen content, nurture the whole human, be freedom-based, and impact both the learner and the larger world, self-directed learning does not look the same across the board—HOW it is done varies by context, or learning environment.

[58] *(Raab, 2017)*
[59] *(L. M. Guglielmino & Guglielmino, 2008)*

"THE HOW"

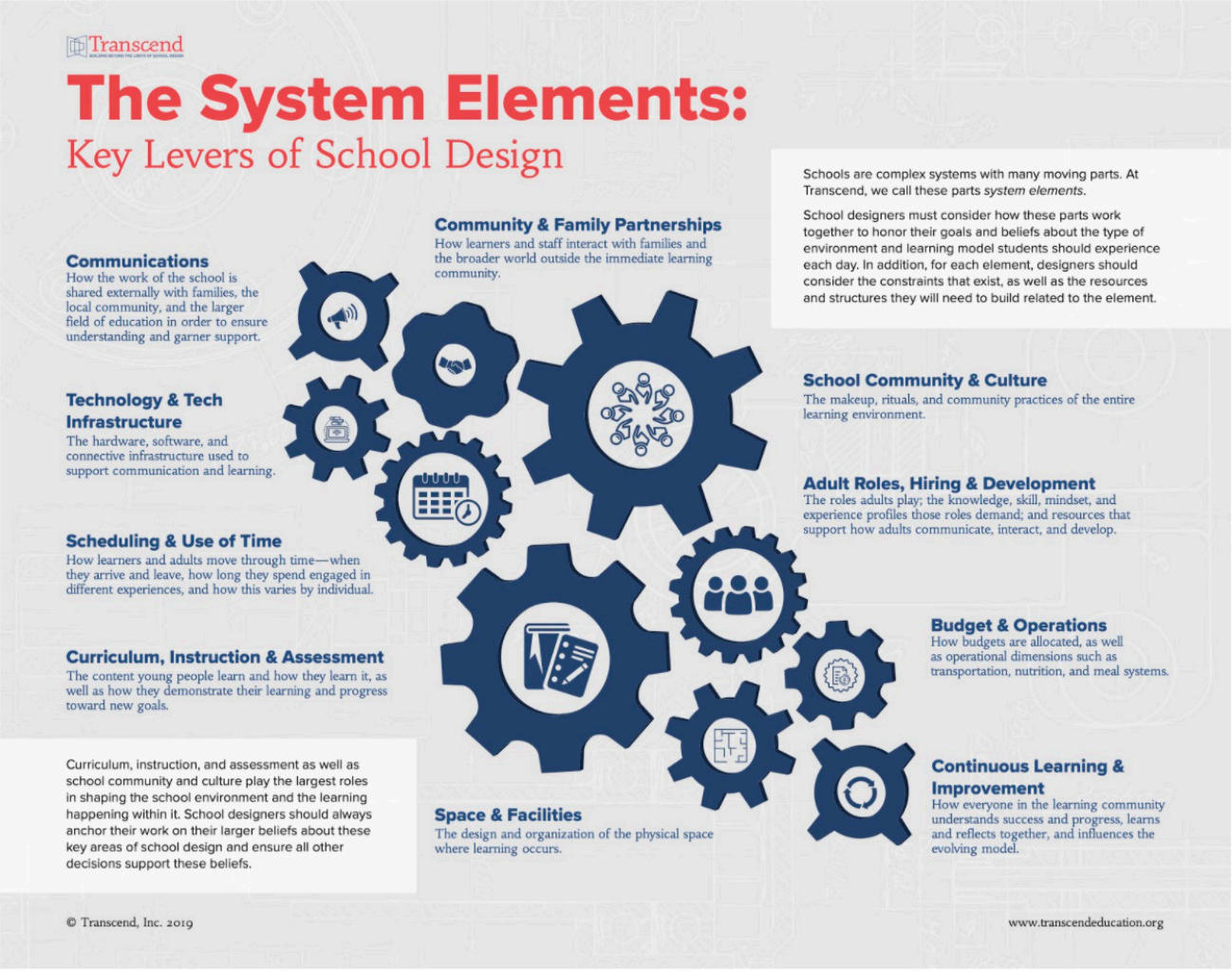
In other words, while embracing core components and principles of self-directed learning, self-directed learning spaces around the world each have developed unique, and sometimes overlapping, "hows". The "hows" refers to the ways learning environments are curated and designed to support student and societal development. We took an inductive approach to understanding the how, starting with interviews and document reviews, and then identifying themes and model components. This section explores how self-directed learning transforms the different elements of traditional school models.

School Redesign & Systems Elements

As we learned about the full transformation of self-directed learning spaces from traditional school models, we needed a way to capture the variety of shifts. Transcend has developed a useful framework to support schools and districts through the process of redesign and re-thinking of school model components. In this section we use Transcend's framework's of 10 system elements to spotlight and illuminate emerging themes and promising practices within self-directed learning models.

> "...The problems I was experiencing with American education was not caused by individual factors, but by the confluence of several factors at once, and by a misguided conception of the purpose of schools. These educational thinkers, people who have been identified in the field as critical social theorists, critical pedagogues, existentialist or humanistic educators, and progressive educators, offered a new view into what I had been going through - a systemic view. Until this point, I never thought about schools in this way. I had always viewed schools on an individualistic level; the system that lay beneath had been invisible.
>
> *Morrison, Free School Teaching, 2007, p. 15*

Figure 6: The System Elements: Key Levers of School Design[60]



In Appendix A, each of these elements is described in more detail as they relate to self-directed learning, and we include embedded exemplars from existing self-directed learning environments.

Additionally , we further explicate the first five system elements below, because as we consider transforming learning environments into those that support learner-directed practices, these elements are foundational to shifting the overall ecosystem and learning environments that students encounter.

It is important to note that this model components analysis is not meant to be comprehensive of all of the promising practices in the self-directed learning space. Rather, this analysis presents vignettes of what each model component represents in self-directed education, and how each component shows up in a variety of models. To this end, the following section explicates these terms and how they are often applied and actualized in self-directed learning contexts.

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[60] *(Transcend, n.d.)*

Curricula & Assessment

Curricula refers to any numerous set of (1) learning standards or expected outcomes (e.g. Common Core, Georgia Early Learning Development Standards (GELDS), etc.) and (2) teacher and student tools and resources available to assist in learning.

> "We regard the curriculum as everything we do here and therefore eschew the word 'extracurricular'. The four pillars of the school, rigorous academics, the work program, the arts, and physical activity, all combine and intertwine to create students who understand what it takes to get things done."
>
> *The Putney School, Putney, Vermont*

The following are curricular themes, which surfaced through this analysis.

Learning spaces vary in the degree of mandatory versus non-mandatory learning objectives.

Most self-directed learning spaces include a mix of mandatory versus non-mandatory learning objectives. For example, most self-directed learning spaces have required literacy and math learning objectives, which are often met when the learner is ready, rather than at or by a particular grade or age. At one end of the spectrum is Summerhill. It is not mandatory to attend any specific courses or meet any specific learning objectives. Though Summerhill has had great success in many regards, this is not typical of the 'average' self-directed learning space.[61] At the Albany Free School, "Instead of following the Common Core, the curriculum is co-created by students, teachers, and parents."[62] Per these examples, self-directed learning spaces range in their commitment to mandatory learning objectives.

Standardized curricula are minimized and personalized pathways towards learning objectives are supported and encouraged. Learning is deep and often includes long-term, project-based endeavors, which are cross-curricular in nature.

Learning standards exist in the vast majority ofw self-directed learning environments. However, standardized curricula are often minimized and personalized pathways towards learning objectives are supported and encouraged. According to leadership at The Chicago Free School, "While each student follows an individualized curriculum based on their interests, we believe that it is important for all students to study literacy and math each day. Literacy and math look different for each student based on their individual interests, level of skill, and learning needs."[63] The role of student-centered goal setting also contributes to a personalized learning experience. Frameworks such as SMART Goals and The WOOP Framework are frequently utilized with the support of teachers-as-guides.[64] Such goal setting sets the stage for avenues of study and exploration, unique to each

[61] *Summerhill has many tools and resources available to students, however nothing is required. Leadership at Summerhill report that students opt into classes and chart personalized courses.*
[62] *(Free to Learn, n.d.)*
[63] *("Core Subjects," 2018)*
[64] *("WOOP for Classrooms," n.d.)*

student. Personalized pathways towards learning often include independent, project-inquiry that is cross curricular and rooted in students' interests. At The Forest School in Fayetteville, Georgia, these are called Quests. Quests "are real-world projects to master 21st-century skills. Usually lasting four- to six-weeks, each Quest includes a series of challenges bound by a compelling narrative and is designed to deliver 21st century skills while simultaneously incorporating traditional topics like science, social studies, and history." [65] At Workspace Education students are encouraged to pursue available pathways, such as "The Scientist Pathway."[66] Additionally, personalized pathways are also created through an expansion of various school foci to celebrate and nurture the whole human.

All resources and experiences are considered curricula. Tools and resources are infinite. Students often use a combination of in-person and virtual components in self-directed learning spaces. In-person curricular resources often include access to adults-as-guides, including community-member experts, peers, books and other printed materials, manipulatives, and more. Places such as Workspace Education, and its affiliated Acton Academy, allow students to access the knowledge capital and consult with adults with a variety of skills and expertise as they navigate their learning experience. From the virtual learning side, students often have access to all that can be gleaned from the Internet and web-based tools. Many self-directed learning spaces utilize non-digital as well as online tools such as Zearn, Reflex, and Kahoot to support asynchronous learning of mandatory learning objectives in core academic subjects.[67]

A student at The Sudbury Valley captures the essence of this vast curricular experience well by saying, "I didn't really think I was 'getting an education'. We weren't learning subject by subject, but in a much more organic manner. You would be doing a lot of different things and you would learn them in little bits and pieces that would start adding up to much bigger pictures. By the time you were done learning about something, information was coming from so many different sources, from books and from people you were talking to, and from a long drawn out experience, that you had no idea how you learned it."[68] At its essence, self-directed learning is fluid and naturally complex rather than rigid or compulsory.

Robust curricular offerings spark and engage natural student curiosity. Curricular offerings in self-directed learning spaces are generally vast. These offerings include traditional academics, 21st century skills, as well as a plethora of additional courses and experiences. Jointly these offerings create the skeleton for the learning

[65] *(The Forest School: Projects & Quests, n.d.)*
[66] *(Workspace Education | A Global Colearning Community, n.d.)*
[67] *(Van Ness Elementary School, n.d.)*
[68] *(Practice | Sudbury Valley School, n.d.)*

ecosystems. Each self-directed learning space has its unique formula and menu of possibilities. At Workspace Education there are, "classes from the culinary arts and fine arts and performing arts to robotics, from mindfulness to fencing, allowing learners to pursue their passions and live their dreams."[69] The Workshop School is famous for its auto shop, which has produced hybrid, electric, and biodiesel powered cars, gaining members of this community an invitation to the White House for The Maker Faire.[70] The Chicago Free School, among others, utilizes studios or maker spaces to engage creativity and innovation. At The Chicago Free School, "Makerspace is open for business after lunch as a hub of creativity. This indoor space is stocked with a variety of crafting tools and materials, including saws, hammers, hand-drills, hot glue guns, and sewing equipment. Students can design their own project or work on the 'project of the day'. Projects have included building model houses, designing and building marble mazes, and binding books."[71] Generally speaking, self-directed learning spaces are continually evolving their offerings based upon student interests, adult expertise, and spontaneous curiosities that arise.

The self and the learning community are curricula.

Curricula also include self and community development. At The Forest School, students in middle and high school take an online, self-assessment tool annually called Purpose Match. This tool allows them to discover their purpose and design a vision for their life and career.[72] According to leadership at Prenda, a network of self-directed learning microschools across the United States, "[the] model is designed around our simple mission: to empower learners…this includes all the academic subjects…but it also includes problem-solving, communication, goal-setting, growth mindset, teamwork, self-learning, and creativity."[73] Additionally, regular practices, such as class-based and whole school meetings and councils provide space and resources for deeper self-reflection and community building.

Assessment is the set of mechanisms for (1) determining one's prior background knowledge, (2) demonstrating newly learned information, and (3) guiding next steps for continued learning and/or remediation in alignment with established learning objectives.

> While humans are not born with instruction manuals, given enough time, we have figured out quite a bit about the way we work. In one of the great unassigned group projects of our species, people unbounded by time and place have contributed to our understanding of wellness, happiness, and human flourishing. This tool is a synthesis and interpretation of the work of scientists, researchers, philosophers, poets, and prophets who have contributed to this body of knowledge. Many mysteries remain, cultural and historical biases affect the questions we ask, and it must be impossible to put an absolute number on something as intangible and ephemeral as wellness. However, if we are what we measure, shouldn't we try to measure our flourishing?
>
> Joy Thigpen, Experience Designer + Flourishing Guide

[69] *(Workspace Education | A Global Colearning Community, n.d.)*
[70] *(Automotive | The Workshop School, n.d.)*
[71] *("A Different Kind of School," 2015)*
[72] *(The Forest School, n.d.)*
[73] *(What Do Prenda Kids Learn in Their Microschool?, n.d.)*

What are the Purposes of Assessment?

Assessment in self-directed learning spaces serves three primary purposes.

1. A mechanism for determining one's prior background knowledge in an effort to scaffold new learnings
2. A mechanism for demonstrating newly garnered knowledge, information, or growth
3. A mechanism for guiding next steps toward continued learning and/or remediation in alignment with the self-selected desired learning objectives or outcomes

These purposes are more akin to formative than summative assessment in traditional learning environments.

What is Assessed in Self-Directed Learning Environments?

Self-directed learning environments assess a wide range of learning outcomes including: a) readiness for self-direction including (1) self-management, (2) self-monitoring and evaluation, and (3) self-modifying and correcting; b) Mastery of skills and knowledge connected to core academic content; c) Mastery and progress towards 21st Century skills; and, d) Purpose development.[74]

What Does Assessment Look Like in Self-Directed Learning Environments?

On average, self-directed learning environments lack coherent assessment practices to support educators and learners. Along the spectrum are learning environments who engage in some standardized assessment and others who engage in none at all; some who engage with virtual learning tools and aligned assessments and others who engage in none at all; some who engage in teacher-to-student assessment and others who engage in none at all. As previously mentioned, while desired learner outcomes are often clear, the self-directed learning landscape lacks a coherent assessment strategy. To note, some self-directed learning communities intentionally do not place emphasis on assessment.

However, some promising examples of assessment, or progress monitoring do exist. At Acton Academies across the country, peer-to-peer feedback via councils supports formative data to launch towards next steps. At The Forest School in Fayetteville, Georgia students engage in a 'Flourish Assessment' where they self-assess where they are with the following six categories: (1) I am a meaningful part of something larger than myself; (2) I feel a sense of love and connection with others; (3) I am aligned with and connected to my body's needs; (4) I am aligned with and connected to my mind's needs; (5) I am aligned with and connected to my spirit's needs; and, (6) I am connected with nature. Students set goals based upon baseline and other formative data and frequently return to these goals towards greater flourishing.[75]

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[74] *(Mastery Transcript Consortium® (MTC), n.d.; The Forest School, n.d.)*
[75] *(J. Thigpen, 2020)*

A New Vision for Self-Directed Learning Assessment

Leaders in the field such as those with The Mastery Transcript Consortium, The Forest School, and One Stone are helping the self-directed education space rethink (1) what learning standards and related competencies should be mastered (e.g., 21st Century Skills—both inter and intrapersonal, social-emotional learning, and comprehensive human development more broadly) and (2) how students can show mastery.[76] Leaders with The Mastery Transcript Consortium, and other sister-organizations, "recognize that their students have talents and capabilities that are overlooked by traditional academic measures—they are eager to empower their learners with tools that allow them to tell their authentic stories, and to join a national discussion about re-thinking the college admissions process through a lens of equity."[77]

Schedules & Routines

Every self-directed learning space has unique ways of engaging with time, schedules, and routines. Time is one variable, or unit of measure that often dictates, or structures schedules and routines. Think of the school bell as a traditional unit of schedule-keeping. However, most self-directed learning spaces do not abide by "a bell schedule". Through our analysis of the self-directed learning landscape, the following themes emerged pertaining to schedules and routines:

- Non-mandatory schedules exist to provide students with the opportunity to make informed decisions about how to spend their time.
- Flexible time—"flex time"—or free time is often built into some, or all of the day or is offered as a viable option.
- Asynchronous instruction activities are part of the curated learning experience, allowing for students and teachers, or guides, to engage organically.
- Daily routines often exist to create regularity and predictability.
- More or fewer hours are spent in the school building, or learning space, than in traditional schools.

Not all self-directed learning spaces define their schedules by all of the above, but instead are often characterized by some combination of two or more. Here are sample schedules from a variety of self-directed learning spaces.

[76] *(Lab51 | One Stone, n.d.)*
[77] *(Mastery Transcript Consortium® (MTC), n.d.)*
[78] *(The Six Optimizing Conditions, n.d.)*

Adult Roles & Adult Learning

In many non-self-directed learning environments, children and adults are viewed within a hierarchy, with adults as the leaders. However, self-directed learning environments often call the adults in the learning communities "guides" or "facilitators" or "advisors". Educators are meant to provide support to learners; "helpers, not judges."[78] Learning is ultimately the responsibility of the learner. As such, in many self-directed learning spaces, students can and are encouraged to engage with any adult who may be the best resource. This may involve adults directly within the learning environment, as well as others including content and skill experts in the community.[79]

Educator Practices

> Our job is to provide a protected space of love, safety, and stability in which children of many unpredictable kinds can flourish. Our job is not to shape our children's minds; it's to let those minds explore all the possibilities that the world allows.
>
> *Bria Bloom, Alliance for Self-Directed Education Community Manager*

- Decipher an "easy out" from a genuine call for help.
- Educators "walk the line" of identifying learner attempts at 'easy outs' and trusting learners calling for genuine assistance and support.
- Be in-relationship and lead with genuine curiosity.[81] Educators engage genuine curiosity in contrast to expressing false curiosity to get a desired result or to create a 'teachable moment'. This happens through authentic conversation that builds relationships. The learning that takes place is a consequence of these authentic interactions.
- Model use of resources available to find answers and solve problems.
- "Rediscover one's local community to uncover peers and available skills." [82, 83] Educators carry the mindset that every human available to learners is a resource. As such, educators encourage peer-to-peer and adult-to-learner resource,skill, or knowledge sharing.
- Affirm learners.
  Educators notice and name learner strengths and skills.
- Engage in instructional conversation.
  Educators engage with students about their learning, the processes, and their goals.

Community & School Culture

[81] *(Just Be in Relationship, n.d.)*
[82] *(From Deschooling to Unschooling, n.d.)*
[83] *(N. Boyer, personal communication, May 18, 2020)*

No two self-directed learning spaces are the same. That said, our analysis shed light on common characteristics of school culture and community. Self-directed learning environments:

- Focus on the development of a future, engaged citizenry based in democratic values of freedom and collaboration.
- Identify collaborative responsibility as key to community-building and success.
- Hone natural self-discipline, self-reflection, and self-determination towards individual and societal ends.
- Nurture holistic child development.

Here are spotlights on some self-directed learning spaces where one or more of the above indicators define the community and school culture.

Community Partnerships

Community partnerships are often integral to learning in self-directed learning spaces. Many of the learning spaces included in this analysis leverage the resources and expertise available to students in the community in a number of different ways. A key theme that emerged is that the school walls are not where learning ends. In fact, internships, apprenticeships, and adult thought-partnership surfaced as common within a variety of learning spaces. This engagement with the wider community is also aligned to the emphasis that many self-directed learning spaces place on community and on relationships. Community partnership is therefore defined by both the relationships within and outside of the direct members of the learning community.

- **Community as Learning Space**

  Members of self-directed learning spaces often find themselves (1) utilizing community resources and (2) contributing to the community to support learning and to be in community. At The Albany Free School the student experience is deeply rooted in 'food justice' and the school is viewed as part of the community, rather than as separate from it. As such, "We engage students in volunteering, local events, learning about different cultures and supporting important social justice efforts led by people in our community."[84] At The Workshop School, the automotive course offers opportunities to be in and contribute to community. According to leadership at The Workshop School, "Most recently, we've launched Cars from the Heart, an amazing new program that lets our students hone their automotive skills while helping others. As part of the program, Workshop School students fix up cars that we have bought at low cost or received as donations, and in turn donate those cars to graduates of Youthbuild Philly, who need transportation to secure employment in construction and other jobs for which they have been trained. The program is great for everyone. We learn, we help others, and we work

[84] *(The Free School, n.d.)*
[85] *(Automotive | The Workshop School, n.d.)*

with an awesome partner."[85] In a variety of forms, community resources and engagement are viewed as valuable portals towards greater curiosity and learning as well as community contribution.

- **Internships + Apprenticeships**
  A number of self-directed learning spaces identify internships and apprenticeships as ways that their students engage with the expertise in the larger community. At the Workshop School in Philadelphia, "In 11th grade, all Workshop School students find and participate in passion-based internships. First, they identify organizations/companies working in their area of interest and learn to network with those companies. Working collaboratively with host sites, they then define the internship experience and align it to specific learning goals."[86] Big Picture Learning, a network of over 70 learning communities in the United States and over 100 more in countries around the world, engage students in real world learning through internships with experts in their fields of interest. Students gain, "experience and exposure to how their interests intersect with the real world."[87]
  At the Putney School students participate in apprenticeships with local artisans. In alignment with a primary tenet of self-directed education that learning should be driven by student interests, internships and apprenticeships provide opportunities for students to partner with their community to explore their interests and contribute to society.[88]

- **Student-Community Member Partnership**
  Guides, or teachers within many self-directed learning spaces encourage students to use others in the community, peers and elders as experts who are full of cultural capital. At The Forest School experts in the form of parents and caregivers and other community members are engaged regularly as resources and to support Quests, longer-term, project-based and interest-inspired endeavors. Additionally, Workspace Education in Bethel, Connecticut is a co-learning and working space for parents/caregivers and their children. Students engage with others within the co-learning community and are encouraged to find experts in the field to support their knowledge development and growth.[89]

- **Nature + The Outdoors**
  The outdoors are not always thought of as part of the community. That said, many place-based pedagogies are deeply rooted in green spaces, wildlife refuges, and outdoor spaces generally as community. At The Albany Free School, "An important part of The Free School experience is getting outdoors into nature. Children are born naturalists. They explore the world with all of their senses, experiment in the environment, and communicate their discoveries to those around them. Not only do we regularly go on

[86] *(Internships | The Workshop School, n.d.)*
[87] *("Big Picture Learning: 10 Distinguishers," n.d.)*
[88] *(The Putney School, n.d.)*
[89] *(Workspace Education | A Global Colearning Community, n.d.)*
[90] *(The Free School, n.d.)*

outings to local parks and go on hikes, but the school also owns a 200 acre tract of woods in Grafton, across the road from the Peace Pagoda, where kids learn wilderness skills and explore."[90] Additionally, the Putney School is deeply rooted in values and actions surrounding sustainability. The school is located on a 500-acre working farm, which the entire school community supports. While the vast majority of self-directed learning environments are not on hundreds of acres of land, many still view the outdoors and a connection to nature as part of what it means to partner with community.

It is also important to note the ways in which the remaining system elements manifest in self-directed learning environments. Therefore, the graphic below explores all systems elements with embedded exemplars from existing self-directed learning environments. This model components analysis is not meant to be comprehensive or representative of all promising practices in this space. Rather, this analysis presents vignettes of what each model component represents in self-directed education, and how each component shows up in a variety of models.

To read in more detail, the chart in Appendix A gives a full description of each element and how it applies to self-directed learning.

"THE WHO"

In this section we discuss the current players in self-directed learning, including both schools and institutes.

Self-Directed Learning in Practice: Global Exemplars[91]

According to leaders at Summerhill, the oldest self-directed learning space and childrens' democracy in the world, "The democratic schools movement is now blossoming internationally, with many schools far and wide."[92] Self-directed learning spaces exist in five out of the six continents. Antarctica does not identify either of its two schools as self-directed. The Alliance for Self-Directed Education, a non-profit organization dedicated to making self-directed education accessible to all young people, lists approximately 300 self-directed learning spaces throughout the world.[93] The diversity of structure of these learning spaces includes private, public, public-charter schools, as well as learning centers and villages.

Each of the learning spaces spotlighted on the following pages undeniably provide opportunities for deep learning and human flourishing for all who participate. Given the vastness of the self-directed learning space, the self-directed learning environments listed are a sampling of what currently exists. That said, the list includes the oldest, formal self-directed learning space in the modern world, spaces that successfully meet the needs of neuro-divergent learners, those who root experience in community partnership, those who are committed to comprehensive, or holistic, human development, and more. Additionally, the identified exemplar learning communities meet some or all of the following criteria: (1) use student interests and passions as drivers of learning, (2) place emphasis on both the individual and community with regards to growth and responsibility, (3) provide opportunities for learning outside the school walls via internships or apprenticeships, (4) emphasize and support personalized pathways towards learning outcomes, and (5) support comprehensive student development. Spotlighted are some of the most innovative self-directed, or self-directed theoretically inspired learning spaces we came across in this analysis.

Our belief is that words are vastly powerful and that they only communicate so much. Further visual engagement can serve to communicate messages inaccessible through words. As such, when available, videos, viewbooks, and more are linked to further illuminate each learning space.

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[86] ***A Note on Terminology*** *The terminology used to communicate self-directed learning includes democratic, progressive, freedom-based, and student-centered, among others. Throughout this analysis, we use these words interchangeably with an emphasis placed on the verbiage of self-directed learning. A 'learning space' is defined in this analysis as the places where children and adults co-collaborate towards learning and development.*

[87] *(Summerhill School - Democratic Schooling in England, n.d.)*

[88] *(The Alliance for Self-Directed Education | Resources, n.d.)*

Figure 7: Self-Directed Learning Space Global Exemplars

Self-Directed Learning Space Global Exemplars

Summerhill [Suffolk, England] Summerhill, founded in 1921 by A.S. Neill is the oldest recognized self-directed learning space. [video]

The Putney School [Putney, Vermont] The Putney School, founded 75 years ago serves to create active, critical thinkers and members of a democratic society. [viewbook]

The Albany Free School [Albany, New York] The Albany Free School was founded in 1969 and is the longest running inner-city independent alternative school in the United States. [video]

The Sudbury Valley School [Framingham, Massachusetts] The Sudbury Valley School, founded in 1968, believes that the survival of every species depends on the driving ambition of its young to develop the skills they need to thrive as effective adults in the world. [essay]

The Forest School [Fayetteville, Georgia] Founded in 2018, The Forest School is a member of the Acton Academy family and is fueled by the idea that each person who enters their doors will find a calling that will change the world. The Forest School is an intentionally diverse community that, given its proximity to Pinewood Atlanta Studios, places an emphasis on storytelling. [video]

The Acton Academy Network [national and international campuses] This is a network of affiliated campuses, which are each learner driven and are based on the principle that every learner, "is a hero on a hero's journey who deserves to find a calling that will change the world."[94]

The Workshop School [Philadelphia, Pennsylvania] The Workshop School serves 100% economically disadvantaged students. Two core beliefs are: (1) beyond high school a strong foundation of skills is needed in any walk of life and (2) real-world experiences develop and hone those skills. [video]

Ad Astra School [Los Angeles, California] Ad Astra means "To The Stars" and is aligned to the needs of the future. [video]

The Chicago Free School [Chicago, Illinois] Students have the freedom to choose what they want to learn and how they want to learn it, while participating in a democratic, inclusive school community. [school philosophy]

[84] *(Acton Academy | One-Room Schoolhouses for the 21st Century., n.d.)*

Red Bridge [San Francisco, California] At Red Bridge students set goals, work together, reflect, and own their learning. Agency is key. [video]

Workspace Education [Bethel, Connecticut] Workspace Education is a co-learning community based in personalized pathways for all learners. [video]

Prenda [across the United States] Prenda, micro-schools are focused on learner autonomy and support students to be in Conquer, Collaborate, and Create modes. [video]

Ecole Mahana [Courgenay, Switzerland] The Mahana School is based on the pedagogical approach that each child learns spontaneously through paying attention to their interests and motivations. ["Mahana School in a Few Words"]

Freie Schule [Frankfurt, Germany] At Freie Schule, The Free School Frankfurt, each student decides, what, how, when, and where to learn. To this end, children and adults have equal rights. [about]

Native American Community Academy (NACA) [Albuquerque, New Mexico] NACA is founded on a community vision based on the core concepts of academic excellence, identity development, and holistic wellness. Personalized learning plans and peer-to-peer guidance as well as a focus on collective purpose are central to the model. [mission]

The New School [Atlanta, Georgia] Learning at The New School is rooted in entrepreneurship, deep support of passions, and community partnerships. This learning community is devoted to constant growth for its students, the world, and itself. [video]

The Life School [Atlanta, Georgia] The Life School places deep emphasis on freedom, choice, and responsibility. To this end, students engage in passion projects to pursue their interests and goals. [school philosophy]

Big Picture Learning [national and international campuses] The vision of Big Picture Learning is for students to "live lives of their own design, supported by caring mentors and equitable opportunities to achieve their greatest potential."[95] Advisories, small, family-like learning communities, are unique to the model and support the aforementioned vision. [model distinguishers]

[95] *(Big Picture Learning, n.d.)*

Existing Self-Directed Learning Institutes + Hubs

A number of institutes and hubs related to self-directed learning exist throughout the world. The oldest started in the 1980s, with newer entities emerging more recently. Each institute or hub has a unique mission and related services, publications, membership profiles, and resources that are leveraged to fulfill each mission. The most prominent organizations we found included the following (See Appendix B for more details on each.):

- The Alliance for Self-Directed Education
- The International Society of Self-Directed Learning
- Alternative Education Resource Organization
- Alternatives to School: Welcome to the World of Self-Directed Education
- Personalized Education Now: Centre for Personalized Education
- North-West University - Research Unit Self-Directed Learning
- Learning 1 to 1

For the purpose of comparability of institutes and hubs, Choice-filled Lives Network created an Institute Development Framework based on the attributes of current institutes and hubs and the roles needed to adequately address the existing identified barriers in the field.

The framework comprises five Core Criteria and aligned Indicators for Success: (1) Capacity Builder, (2) Community Building Catalyzer, (3) Equity Enabler, (4) Learning Lab, and (5) Resource Hub.

One of the primary purposes of this analysis is to identify what exists and what does not in the way of existing institutes and hubs in the self-directed, democratic, progressive, student-centered space. The table below, which utilizes the Choice-filled Lives Network Institute Development Framework and accompanying criteria to characterize each existing institute or hub, is not meant to be evaluative. The table below is meant to spotlight each existing institute or hub for the ways in which it contributes and adds value to the global self-directed learning community.

Figure 8: Comparative Analysis of Existing Institutes & Hubs

Comparative Analysis of Existing Institutes + Hubs					
	Capacity Builder	Community Building Catalyzer	Equity Enabler	Learning Lab	Resource Hub
The Alliance for Self-Directed Education [96]	✓	✓			✓
The International Society of Self-Directed Learning	✓	✓			✓
Alternative Education Resource Organization					✓
Alternatives to School: Welcome to the World of Self-Directed Education					✓
Personalized Education Now: Centre for Personalized Education	✓	✓		✓	✓
North-West University - Research Unit Self-Directed Learning [97]	✓	✓		✓	✓

Each of these core criteria and their purposes are defined below.

[96] *The Alliance for Self-Directed Education is committed to "collectively amplify[ing] the truth". It is not immediately obvious that they engage the development of a research agenda, implement and test, and measure outcomes.*

[97] *Choice-filled Lives would like to acknowledge that North-West University-Research Unit on Self-Directed Learning does engage in equity work, specifically with regard to its emphasis on indigenous knowledge.*

Figure 9: Choice-filled Lives Networks' Institute Development Framework - Core Criteria and Indicators for Success

Choice-filled Lives Network's Institute Development Framework Core Criteria and Indicators for Success	
Core Criteria	**Indicators for Success**
Capacity Builder	A **Capacity Builder** is an entity that supports and facilitates growth in beliefs, mindsets, dispositions, and skills among others. The following define a **Capacity Builder:** • sharing, training, and mastery transfer of a variety of best practices in self-directed learning spaces, such as the role of the "teacher as guide", through the development of an online professional learning platform; • in person coaching, e-coaching, and technical assistance to support continued transfer of the beliefs, skills, and mindsets critical to thriving self-directed learning spaces; • working with institutions of higher-education to reform teacher and school leader pre-service, education programs; • supporting existing learning spaces to understand steps towards the tenets and practices that are foundational to self-directed learning; both within physical learning spaces and via digital/e-learning.

Community Building Catalyzer	A **Community-Building Catalyzer** is an entity that enhances partnership and fosters a sense of collective community through a variety of mediums. The following define a **Community-Building Catalyzer:**
	• communities of practice established to share and crowdsource ideas, resources, etc.;
	• in-person professional learning opportunities across schools and professional organizations
	• an annual conference or summit, or other large professional gathering;
	• a robust following of educators, researchers, and policy makers in the space, and provide consistent communication such as:
	  • Summaries and updates from relevant conferences, symposia, etc.;
	  • Opportunities to collaborate on projects of interest in the field.

Equity Enabler	An **Equity Enabler** is an entity that supports building the cultural capital of all learners, while simultaneously acknowledging our country's history and intentionally strategizing to obliterate the remaining inequitable structures at individual, communit, and systemic levels. The following define an **Equity Enabler:** • addresses the existence of implicit bias and works directly with anti-bias frameworks and techniques to support educators; • guides learning spaces to acknowledge and leverage learner, educator, and leadership cultural capital towards human flourishing; • promotes brain-based principles that are aligned to culturally responsive teaching to level the playing field for all learners; • promotes scalability of self-directed learning spaces; • enables partnerships between institutions of higher-education and K-12 learning spaces that are mostly comprised of traditionally underserved populations, to promote skill and mindset building of learners to prepare them for 'the beyond'.

Core Criteria	Indicators for Success
Learning Lab	A **Learning Lab** is an implementation science and visioning space for generating research questions, testing them on the ground, and measuring outcomes. The following define a **Learning Lab:** • co-generating a research agenda that addresses some of the most pressing questions in the self-directed learning space, including identification of 'bright spots' and gaps or opportunities; • designing resources to support self-directed practices for students and guides; • testing and implementing self-directed learning practices; • measuring outcomes on the research agenda through partnership with others in the self-directed learning space, including practitioners and researchers; • serving as a model of excellence through a lab school.
Resource Hub	A **Resource Hub** is a place where practitioners, researchers, and communities can find vetted resources related to their domain of practice and or specific needs. The following define a **Resource Hub:** • bridging research-to-practice by housing concrete examples of ways in which theoretical principles are applied in practice in the areas of pedagogy, assessment, and curricula; • sharing self-directed learning-related outcomes through 'white papers' coming out of direct efforts of self-directed learning implementation and research; • an online database of scholarly articles and other written materials related to self-directed learning; • an online database of self-directed learning spaces and organizations nationally and internationally, including their offerings; • posts and updates on grant opportunities and opportunities to collaborate; • a podcast that spotlights leaders in the self-directed learning space and tells the story of democratic education; • educator and/or learner created content (e.g., videos) of self-directed learning in action; • a magazine or publication that deeply includes student voice.

CONCLUSION: RECOMMENDATIONS

Self-directed learning as a field is theoretically well-grounded, diversely, yet sporadically spread, and is a growing movement with multiple stakeholders and learning communities across the globe. And, it still has room to grow to reach its maximum influence. Given what we learned, we believe The Institute for Self-Directed Learning has an important set of roles to play in moving the field forward. In this section we lay out recommendations for both strategic purposes and core activities.

Recommended Strategic Purposes

This landscape analysis serves as the foundation for Choice-filled Lives Network to recommend five strategic purposes/focus areas, with supporting core activities, for The Institute for Self-Directed Learning (The Institute). Each core activity has throughlines to the others, making it a truly unique constellation.

Choice-filled Lives Network recommends that The Institute identify and execute within the following strategic purposes: (1) Capacity Building, (2) Community Building Catalyzer, (3) Equity Enabler, (4) Learning Lab, and (5) Resource Hub (See Figure 10.)

Strategically, this would make The Institute the only global hub to work simultaneously in all five focus areas, illustrating the value add that will come from The Institute 's comprehensive model.

Figure 10: Choice-filled Lives Network's Institute Development Framework

Figure 11: Comparative Analysis of Existing Institutes & Hubs

Comparative Analysis of Existing Institutes + Hubs					
	Capacity Builder	Community Building Catalyzer	Equity Enabler	Learning Lab	Resource Hub
The Institute for Self-Directed Learning	✓	✓	✓	✓	✓
The Alliance for Self-Directed Education	✓	✓			✓
The International Society of Self-Directed Learning	✓	✓			✓
Alternative Education Resource Organization					✓
Alternatives to School: Welcome to the World of Self-Directed Education					✓
Personalized Education Now: Centre for Personalized Education	✓	✓		✓	✓
North-West University - Research Unit Self-Directed Learning	✓	✓		✓	✓

Recommended Core Activities

Each strategic purpose area outlined in the Institute Development Framework provides a springboard from which core activities will be implemented to move the work of The Institute forward. We recommend the following specific, supporting core activities, within each strategic purpose, to ensure that The Institute's mission and vision are fulfilled with intentionality and fidelity.

Figure 12: Recommended Core Activities

Strategic Purpose	Recommended Core Activities

Capacity Builder	• Partner with key researchers and experts in the self-directed learning field and related fields to develop a scientifically grounded research-to-practice agenda that includes critical capacity building levers for educators, including fostering educators' own self-directedness.
	• *Develop an online professional learning platform, part fee-based and part universally free and accessible, that is housed within a custom-designed, or otherwise appropriate, learning management system (LMS) curated for teachers and leaders, focusing on the following key areas:
	  • Community member beliefs, skills, and mindsets critical to thriving self-directed learning spaces;
	  • An overview of the theories underlying the re-definition of self-directed learning and examples of the translation of these theories into practice;
	  • Culture and climate of self-directed learning environments, with a focus on creating a safe environment that fosters relationships in which children feel free to take calculated risks and learn from mistakes;
	  • Role of the teacher as guide and student as agent of learning;
	  • Self-directed learning pedagogical
	  • frameworks in action;
	  • Curriculum and assessment in self-directed learning environments;
	  • Foundations of Language Development and Reading Brain Construction in action;
	  • Fostering an environment of Critical Literacy.
	• Develop an e-coaching and technical assistance program to support schools, systems, institutions, and/or programs as they transition from traditional learning ecosystems to learner-led or student-directed ecosystems.
	• *Partner with institutions of higher education to plan and launch teacher and leader preparation and certification programs focusing on self-directed, equity-centered learning. (i.e. Certificate in Student-Directed Learning and Equity)

Strategic Purpose	Recommended Core Activities
Community Building Catalyzer	• *Develop a professional learning platform that includes mechanisms for community building, allowing communities to engage and share practices. • Within the professional learning platform, develop an annual fee-based membership structure that will include the opportunity to join specialized affinity groups within general membership. • Identify a set of key community and tiered sector partners who can support work toward the target outcomes within The Institute's Theory of Change. • Post and partner on opportunities for professionals to collaborate on requests for proposals (RFPs) or projects of interest in the field. • Develop a multi-platform, social media and communication (e.g., newsletters and text alerts containing relevant content, tips and updates) presence to garner a large following for The Institute.

Equity Enabler	• Develop a set of organizing beliefs and values that define the identity of The Institute, specifically beliefs and values that embed equity as central to liberatory learning environments.
	• Partner with experts to define what equitable learning embodies in practice, and embed this into The Institute's mission, vision, and core practices.
	• Ensure that all of The Institute's professional learning and core activities hold equity as a guiding principle by weaving pertinent topics into professional learning such as:
	  • issues of historic institutional racism and oppression in our society and education sector;
	  • the role of cognitive bias in shaping how we approach student engagement or mentorship;
	  • how biases and deficit ideologies shape expectations we hold for students' competence and abilities.
	• Partner with researchers and experts in equity and culturally responsive pedagogy (See Appendix C) who can provide direct advisement, coaching, and/or technical assistance to schools, systems, and programs to:
	  • Embed anti-racist and culturally responisve pedagogy into everyday learning interactions.
	  • Identify and leverage students' prior background knowledge and cultural capital to strengthen students' cognitive development and information processing faculties.
	  • Identify and leverage the assets within students' families and communities in an effort to transform learning communities into student-directed learning ecosystems.
	• *Partner with a higher education entity to pilot and launch an educator certification program in Self-directed, equity-centered learning. (i.e. *Certificate in Student-Directed Learning, Equity & Critical Literacy*)

Strategic Purpose	Recommended Core Activities

Learning Lab	• *Develop a research agenda for The Institute with critical research questions that can be explored and answered through real-time work in the identified self-directed learning lab school (i.e. The Forest School) and partner schools within The Institute's community.
	• Utilize learnings from the research agenda to:
	  • Inform the resources and products that The Institute develops.
	  • Iterate upon the Forest School's model.
	  • Share-out learnings to the field.
	• Develop an Institute-level evaluation plan to measure against the outcomes established in The Institute's Theory of Change.
	• Develop a sharing and learning mechanism for weaving the lab school's approach into The Institute's professional learning platform and related activities.
	• Establish processes and procedures to host peer-to-peer visits to the lab school for teachers/guides across the country and around the world.
	• Serve as a host site for pre-service teachers in the newly developed Student-Directed Learning and Equity Certification program, and other teacher certification programs.
	• Develop video-based modules highlighting aspects of The Forest School's, and other self-directed learning spaces within The Institute's community, approaches to be housed in the resource library on the professional learning portal.

Resource Hub	• Develop a peer-reviewed journal to be published by The Institute, or partner to co-publish with a partner.
	  • Invite expert guest editors to serve terms, to be identified by The Institute leadership (e.g. 1 or 2 year terms).
	  • Invite expert reviewers (researchers and practitioners) to review anonymous submissions, provide feedback, and review any necessary edits prior to publication.
	• Develop a resource library to ultimately be housed within The Institute's online professional learning platform, and initially housed on the website. The resource library should include, but not be limited to:
	  • concrete examples of ways in which theoretical principles are applied in practice in the areas of pedagogy, assessment, and curricula;
	  • student-developed learning goals and ways to lead learning through student interests and choice;
	  • videos, articles/manuscripts, and other written products to support best practices in self-directed learning;
	  • database of vetted and Institute-aligned national and international, self-identified self-directed or student-directed learning spaces;
	  • *RFP's and other funding opportunities.
	• Write and publish white papers on behalf of The Institute.
	• Develop and publish a student-led quarterly magazine or publication.

Final Thoughts

It is with utmost confidence that the Choice-filled Lives Network and its leadership recommend this strategic approach for The Institute. Having conducted this initial analysis and due diligence into existing self-directed learning focused institutes and hubs, it is evident that no existing entity or program supports all of the five purposes put forth by Choice-filled Lives Network. Thus, these gaps in the sector create a prime opportunity for The Institute to have wide-reaching and comprehensive impact at scale.

Through the recommended purposes and core activities, The Institute has the opportunity to disrupt: (1) the cycles of generational lack of access to high quality educational opportunities, (2) the accountability and compliance cultures that are pervasive throughout many school ecosystems, and (3) the deficit ideologies and other systemically racist mindsets and practices plaguing our society. Through intentional adult capacity building and by supporting schools and other child-focused systems to approach all educational efforts through the lens of supporting each individual child on their own individualized, research-grounded, and purposeful and community-centered learning journey, we can witness the evolution of the proposed, evolved vision for education and learning. By building and transferring capacity in the field, while simultaneously illuminating and supporting the adoption and implementation of the recommended pedagogy and practices that dismantle inequitable learning environments, The Institute for Self-Directed Learning will empower all children to develop their voices and sense of agency—to build and expand upon their sociocultural capital, and ultimately lead choice-filled lives.

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APPENDIX A:
Self-Directed Learning School Design System Elements

To summarize, the chart below includes key elements of school design for self-directed learning.

System Element	Structures that Support Self Directed Learning
Vision	• A purpose and/or mission statement that includes the notion of a community of peers and adults collaborating to support and empower learners to take charge of their own learning • A graduate profile and key student outcomes that include elements of independence, interdependence, and self direction • A profile of a teacher (or "guide") and key outcomes that reveal specific competencies required for educators to design, build, and sustain a self directed learning environment in their context • Student self direction—or learner-drivenness—as a key design principle that empowers designers of the learning environment to apply with discretion student ownership of learning throughout the student, teacher, and parent/caregiver experiences • An articulation of how the self directed learning approach aligns with and advances the equity, diversity, and belonging commitments of the learning community • An articulation of key design constraints that describe both the extent and limitations of self directedness in a particular learning environment • A public-facing, evidence-based articulation of key beliefs about self directed learning and motivation • A clear vision for stakeholder experiences—holistic and granular—that illuminate how self directed learning looks and feels throughout the learning environment • Exemplary perspectives—often in the form of quotes from users—that inform the vision and serve as testimonies for the promise of learning in a self directed, learner-driven environment • Core messaging and supporting media that promotes a vision for self directed learning

System Element	Structures that Support Self Directed Learning

Curriculum, Pedagogy, & Assessment	**Overview:**
	• A purpose statement and description of how the teaching, learning, and curriculum promotes student self direction
	• A learning progression that outlines the stages or steps that self directed learning theory and research suggest most students go through as they progress toward mastering the concepts, processes, strategies, practices and habits of mind of self direction..
	• Illustrative examples—detailed descriptions of what happens during class—of student actions and teacher actions that advance student self direction
	• A detailed description of modifications or interventions for "extreme users"—e.g., students with learning differences and/or students who academically far behind or far ahead of "average"
	Curriculum:
	• A full scope & sequence including unit plans (if applicable), knowledge and/or skill progressions, and indicators
	• A list of the analog and digital curricular materials and resources—i.e., every analog and digital curricular tool that a student, teacher, or parent will touch in pursuit of mastery and growth—texts, classroom materials, and manipulatives, etc.—with descriptions of how each is accessed and explored by students in self directed ways
	• Planning protocols for educators (e.g., looking at student work, intellectual prep, etc.) to make the curriculum accessible in self directed ways
	Pedagogy:
	• A description of the underlying pedagogical approach and rationale for self directed learning, including the methods of teaching that shift the focus of instruction from the teacher to the student and that develop learner autonomy and independence by putting responsibility for the learning path in the hands of students. Key pedagogies that promote self-direction include:
	  • Socratic guiding
	  • Culturally responsive teaching
	  • Project-, problem-, and/or place-based learning
	  • E-learning facilitation
	  • The Montessori method
	  • Open ended instruction
	  • Inquiry learning
	  • Experiential learning
	  • Cooperative learning
	  • Peer-to-peer teaching
	  • Self-governance in the classroom
	  • Case-based learning
	  • Learner daily goal setting
	Assessment:
	• A description of the underlying assessment approach and rationale, including formative and summative assessments that shift the focus of assessment from the teacher to the student and that develop learner autonomy and independence by putting responsibility for mastery in the hands of students. Key assessment elements may include:
	  • Self-assessment—methods when students identify strengths and weaknesses in their own work and revise accordingly
	  • Peer assessment—methods when students give informed feedback to one another on assignments or work

System Element	Structures that Support Self Directed Learning
Curriculum, Pedagogy, & Assessment	• Portfolios—a purposeful collection of student work whereby learners document their growth from novice to master • Exhibitions—a high-stakes (and often public) demonstration of mastery that occurs at a culminating academic moment, such as the end of a big project, semester, school year, or at graduation • Feedback from users—purposeful moments when users—i.e., individuals or groups who are experiencing a real world problem—give real time feedback to students on the extent to which their work appropriately addresses their pain points and perceived needs • Feedback from experts—purposeful moments when industry experts give real time feedback to students on their work and especially the feasibility of their solutions, prototypes, and/or recommendations • Badging or credentialing—a way of acknowledging achievements or skill acquisition at a more granular level than a grade
Roles, development, and management model (Human Capital)	**Organizational Design** • A detailed and illustrative description of the teacher or "guide" role in the self directed learning model, including performance measures and key outputs • A detailed and illustrative description of the administrator roles in the self directed learning model, including performance measures and key outputs • Staffing structure, org chart, and visions for how all the roles work together to fulfill overarching vision for self directed learning • A description of teaming structures and (if applicable) team "charters" and how they support self directed learning • The teacher or "guide" support and management model, including decision continua that supports self directed learning—e.g., what teachers vs students vs administrators vs parents decide and rationale **Staff Hiring and Recruitment** • Vision, strategy, and plan to find teachers or "guides" that will thrive and add value in a self directed learning context • Recruitment and marketing collateral that clearly champion self directed learning and how the teacher or "guide" role is meant to support it—i.e position descriptions, opportunity profiles, applications, etc. • Selection and interviewing approaches and materials that uncover candidates' agility with and interest in self directed learning • An articulation of staff development, evaluation, and promotion pathways in the context of a self directed learning model **Staff Learning + Growth** • Staff development vision, strategy, and plan, including processes, resources, tools (eg. rubrics + coaching guides) that align with the profile of a teacher or "guide" • Onboarding vision, strategy, and plan—including processes, resources, tools, agendas, etc.—to prepare teachers or "guides" for success in a self directed learning environment • Ongoing teacher or "guide" professional development vision and routines, including annual (including summer) calendars, sessions, facilitator guides, and space and logistics plans • Professional development tools for teachers or "guides" (e.g., rubrics, coaching guides) • A description of how staff capacity and sustainability are inventoried throughout the year in support of self directed learning

System Element	Structures that Support Self Directed Learning

Community practices and school culture	**Culture and Community Vision**
	• A detailed description of the outcomes (academic and nonacademic) and core beliefs that animate all of the self directed routines, cultural norms, and practices of the learning environment, with clear connections to the bigger vision for self directed learning
	• A detailed description of a family and community engagement strategy
	• An articulation of how self directed routines, cultural norms, and practices align with equity, diversity, and belonging commitments
	Student Community Rituals and Practices
	• Detailed description of student community rituals that support self direction. Examples include:
	  • Community meetings
	  • Town halls
	  • Student councils
	  • Goal setting meetings
	  • Circle time
	  • Conflict resolution meetings
	  • Class or "studio" contracts (i.e., promises learners make to one another to self govern)
	• All the systems, tools, and protocols that support the above (e.g., circle protocols, observation rubrics, student tools, teacher or "guide" moves)
	• Site-, System-, and Classroom-level awards program to celebrate the key features of self directed learning that the community hopes to cultivate in learners
	Family Engagement
	• A detailed description of the family role as integrated into the self directed learning community, including the core beliefs that animate that strategy and illustrative descriptions and anecdotes of ways caregivers successfully engage to promote student self direction
	• All systems, tools, and protocols that support the above (e.g., community meeting calendar, family council rituals, communication expectations and tools, ways to promote self directed learning at home, common learner pitfalls to be aware of and possible caregiver responses, guidance for when, how, and how much to be "hands off" vs not, etc.)

Bridges and partnerships	**Community Partnerships**
	• Vision and strategy for how outside partners help learners direct their own learning. May include vision for:
	  • Any outside of school learning pursuits,
	  • Expeditions,
	  • Internships,
	  • Mentorships,
	  • Apprenticeships,
	  • Distance (within + beyond network) learning,
	  • Community learning,
	  • Travel and cultural exposure,
	  • College planning,
	  • Employment,
	  • E-learning with other institutions
	• Detailed description of how the school evaluates prospective community partners, how the school interfaces with those partners, how partnerships are interwoven into the stakeholder experience, and how all of this is managed over time
	• All the systems, tools and protocols that support the above (e.g., board/ partner strategy, MOUs with specific partners, communication protocols, etc.)

System Element	Structures that Support Self Directed Learning
Space and facilities	**Space Design:** Architectural design, sketches, and facilities plans (e.g., seating arrangements, furniture, equipment, etc.) for flexible, self directed learning spaces (aligned to vision), including • buildings • common areas • classrooms • outdoor spaces • parking • (if applicable) boarding / housing **Furniture and Fixtures** • All furniture and fixtures (aligned to vision and included in illustrative examples of self directed learning) • Visual anchors (e.g., classroom charts, signs, hallway messages, etc.) that promote and inspire learner self direction • Facilities and space guidance for operations staff • Classroom or "studio" set-up procedures for teachers or "guides"
Technology and tech infrastructure	**Learning Platform & Digital Learning Tools** • A list of e-learning platforms the best suit the learning design • (If applicable) Inclusion of a customized learning platform to meet requirements of learning design (e.g., online curriculum, goal setting platform, portfolio platform, etc.) • A description of tech integrations required for digital curricula to work together efficiently and for the entire platform to work with legacy systems (e.g., SIS, reporting, etc.) • A rubric to evaluate the extent to which—and curate—the digital tools (e.g., price, functionality, requirements) support self directed learning • A description of data and reporting systems • Information system design (e.g., splash page for staff to access self directed learning resources) • A description of digital citizenship for learners, in and out of school **Tech Hardware and Infrastructure** • Determining device and purchasing needs (e.g., Which devices do students use? Teachers? What other devices in each classroom?) in support of self directed learning • Bandwidth analysis and wireless infrastructure plan **Setup and Support** • Operations manual for setting up and supporting technology needs locally • Modify central tech support and troubleshooting to meet unique needs of the self directed learning design • Training for operations and instructional staff on all tech platforms, tools, and protocols •

System Element	Structures that Support Self Directed Learning
Budget, operations, and logistics	**Budgets** Organizational/Network + School-based budgets **WITH: Articulation of any noteworthy design features, as*: • Transportation | food | etc; incorporating student input in food choices etc. • Student-managed budget for passion or group projects • Student intake processes • Student determined environmental considerations • Long-term school budget and network economic model (e.g., for fully enrolled school or for scaled model) **Operations** • Training for operations staff to reflect new responsibilities and needs • Student-driven procurement lists and ordering procedures • Shed unnecessary adult-led operations tasks and move them to the learners
Continuous learning and improvement mechanisms	**Assessment for each instructional block/subject or project):** • Approach + strategy co designed with learners • Diagnostic/formative/summative assessment tools and systems; including self and peer assessment, reflection, and goal setting. • Tools/guides for developing assessments in the hand of both students and teachers/guides • Sample assessments + rubrics for self directed learning • Student led assessment creation, giving learners opportunities to choose how, when, and why they show mastery • Mechanisms for learners to evaluate their learning experience and environment **Data and Reporting** • Giving learners the chance to select work worth showcasing to external and internal audiences • Giving students opportunities to tell the story of their work • Data input analysis, plan and tools in the hands of learners • Design data flow from student to report and back • Individual data report design and production plan **Data/Evidence Cycles and Reflection** • Empowering learners to elevate questions, data, and evidence worthy of progress monitoring and reflection **R&D Cycles and Pilots** • Involving students in every step of the R&D cycle, including Identification of key assumptions to test throughout the year • Design cycles aligned to pilot cycles

APPENDIX B:
List and Description of Self-Directed Learning Schools and Organizations

The Alliance for Self-Directed Education **https://www.self-directed.org**	The Alliance for Self-Directed Education (ASDE) is a nonprofit 501(c)(3) organization dedicated to informing people about the benefits of, and methods for, allowing children and adolescents to direct their own education. The Alliance's ultimate goal, its vision, is a world in which Self-Directed Education (SDE) - "Education that derives from the self-chosen activities and life experiences of the person being educated"- is embraced as a cultural norm and is available to all children, everywhere, regardless of their family's status, race, or income. The term Alliance in the organization's name emphasizes its goal of bringing together the various organizations and individuals who are already actively promoting and enabling Self-Directed Education. A goal of the Alliance is to create a collaborative space where we can all link arms, learn from one another, and collectively amplify the truth that is common to all of our experiences — that Self-Directed Education works! ASDE provides resources, forums, and support for ASDE.
The International Society of Self-Directed Learning **https://www.sdl-global.com**	The International Society for Self-Directed Learning (ISSDL) is dedicated to the promotion of self-directed lifelong learning and to the encouragement and dissemination of continued research on self-directed learning both within and outside of institutional contexts: in childhood education, higher education, adult education, training and human resource development, as well as formal and informal contexts. self-directed learning is defined according to Knowles (1975) as, "Self-directed learning is an intentional learning process that is created and evaluated by the learner."ISSDL has a research journal, gives awards, and hosts an annual symposium.
Alternativ Education Resource Organization **https://www.educationrevolution.org**	The Alternative Education Resource Organization (AERO)'s goal is to advance student-driven, learner-centered approaches to education. AERO is the primary hub of communications and support for educational alternatives around the world. Our network includes Montessori, Waldorf (Steiner), Public Choice and At-Risk, Democratic, Homeschool, Open, Charter, Free, Sudbury, Holistic, Virtual, Magnet, Early Childhood, Reggio Emilia, Indigo, Krishnamurti, Quaker, Libertarian, Independent, Progressive, Community, Cooperative, and Unschooling. AERO's mission is to help create an education revolution to make learner-centered education available to everyone. AERA is a membership-based organization that hosts conferences, provides resources and a searchable school directory.

[99] *The Alliance for Self-Directed Education is committed to "collectively amplify[ing] the truth". It is not immediately obvious that they engage the development of a research agenda, implement and test, and measure outcomes.*

Alternatives to School: Welcome to the World of Self-Directed Education **https://alternativestoschool.com/**	This site provides information about self-directed education and its benefits, answers to frequently asked questions, and suggestions about how to find aligned schools in your community.
Personalized Education Now: Centre for Personalized Education **https://www.personalisededucationnow.org.uk/**	This organization is based in the United Kingdom, and serves primarily as a resource hub. This center also authors a journal focused on topics in personalized education.
North-West University - Research Unit Self-Directed Learning **https://education.nwu.ac.za/research-unit-self-directed-learning/home**	Our vision is to promote self-directed learning that will lead to life-long learning in all education sectors through excellent research. Our mission is furthermore: • To conduct relevant research on strategies and contexts that contribute to self-directed learning skills for the 21st century with its unique 4IR demands; • To optimise the quality of our research outputs and to disseminate the results thereof locally and internationally; • To support academic staff to develop relevant knowledge and to gain international recognition; • To provide quality postgraduate training in order to promote self-directed learning in all education sectors; • To share our knowledge - where possible through open licenses or in the public domain - to promote self-directed learning practices. • To conduct research on self-directed learning for community engagement In our research we focus on the promotion of self-directed learning in all education sectors. We aim to propose strategies for diverse contexts which can contribute to the development of self-directed learning skills. The aim is to broaden the body of scholarship of SDL internationally and on the African continent.

APPENDIX C:
Recommended Research & Practice Partnerships

The following are researchers, as well as their affiliations and specific research areas and interests, who are recommended for research and practice partnerships. Primary critical focus areas include human development, innovative learning models, educator capacity, equity, and culturally responsive pedagogy, and educational ecosystems that prioritize human flourishing.

Researcher	Affiliation(s)	Specific Research Areas & Interests
Dr. Joyce King	Professor, Benjamin E. Mays Endowed Chair for Urban Teaching, Learning and Leadership - GA State University	• Transformative role for culture in curriculum • urban teacher effectiveness • morally engaged and community-mediated inquiry • Black education research and policy
Dr. Philippe Rochat	Professor of Psychology - Emory University	• Social and cognitive development across cultures • Early sense of self • Emerging self-concept • Development of social cognition and relatedness • Emergence of a moral sense during the preschool years in children from all over the world
Dr. Penny Van Deur	Lecturer in Teacher Education, College of Education, Psychology and Social Work - Flinders University, Australia	• Self-directed and Self-regulated Learning • Inquiry • Problem Solving
Dr. Brigid Barron	Professor, Graduate School of Education - Stanford University	• Interest-driven learning with a focus on how digital technologies can serve as catalysts for collaborative learning across home, school, and community settings with the goal of creating more equitable opportunities for the development of expertise. • Longitudinal documentation of learner pathways to engagement • Families as technology-supported learning teams • Roles that personal learning networks play in catalyzing and sustaining interest-driven learning

Researcher	Affiliation(s)	Specific Research Areas & Interests
Dr. Jacob Ham	Clinical Psychologist and Director of the Center for Child Trauma and Resilience at Mount Sinai, NYC	• Resilience & Purpose • Relationships • Environmental influences on learning brain • Building teacher capacity to identify students' needs
Dr. Julie Washington	Professor and Chair, Department of Communication Sciences and Disorders - GA State University	• Language development and language disorders in high risk populations • Early literacy and language interactions • African American child English • African American student achievement
Prof. Chloë Marshall	Professor in Psychology, Language & Education - University College London	• Language and Literacy Development • Montessori Education • The cognitive skills underlying typical and atypical language acquisition in hearing and deaf children (with a focus on working memory and executive functions).
Dr. Jack Shonkoff	Julius B. Richmond FAMRI Professor of Child Health and Development at the Harvard T.H. Chan School of Public Health and the Harvard Graduate School of Education; Professor of Pediatrics at Harvard Medical School and Boston Children's Hospital; and Director of the university-wide Center on the Developing Child at Harvard University.	• Human Development Broadly • Early Learning • Relationship Building
Dr. Michele Borba	Internationally recognized expert and author on children, teens, parenting, bullying, empathy and overall moral development	• Character and resilience • Building strong families • Creating compassionate and just school cultures • Reducing peer cruelty