

**Re-Imagining High-Quality School Choice for Families:
Diverse School Orientations and Learner-Centered Schools**
By: Ulcca Joshi Hansen

The Instructional Orientations project was aimed at understanding the instructional and systems-level elements that create and support schools that meet the developmental, cognitive and social needs of a wide range of students. It resulted in the development of a framework that provides an alternative lens on what it means for parents and students to have meaningful choices among schools that reflect the diverse ways in which students learn and demonstrate their abilities.

Background on the project and the identification of school orientations

The project began with the question of whether there was a useful way to classify schools based on their instructional approach rather than their governance model. Intuitively, we understand that a college preparatory charter school approaches learning very differently than a Montessori charter school. The governance model does not itself impact the work done with students. We sought to understand the philosophical, instructional and cultural elements of schools' work that makes them different. This portion of the project involved a number of research methods:

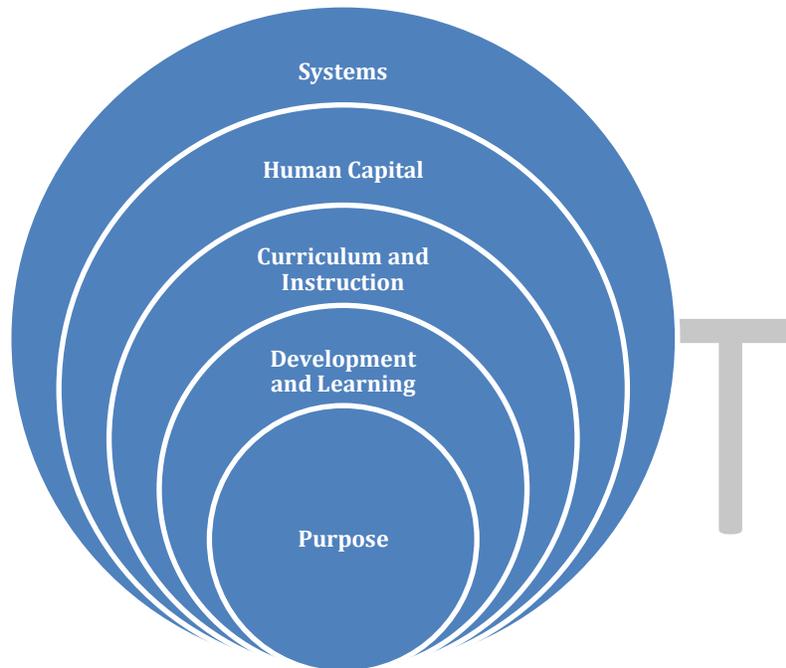
- Framing out the elements of an "Instructional Model (IM)," namely, a comprehensive and coherent approach to the way in which a school defines its purpose and practices;
- Reviewing the research related to each element of an instructional model; and
- Conducting and integrating data collected from over 65 school visits to help inform thinking about what each IM element entailed.

For the purposes of this project, an instructional model is a comprehensive approach to the work of schooling that takes into account the following elements (Figure 1):

- Articulating a school's values around its primary purpose in its work with young people;
- A research-based theory about how young people grow and learn, including developmental needs;
- *In light of a school's articulated purpose and adopted theories around student growth and learning,* decisions about what content and skills will be covered;

- *In light of beliefs about human development and learning*, the adoption of intentional methods for shaping learning experiences and assessing student outcomes;
- Training and professional development approaches that help educators develop the specific pedagogical skills they need to engage students with content and experiences; and
- School structures designed to support the entirety of that work.

Figure 1. Instructional Model Overview



Drawing from the literature as well as school observations and interviews, six **Instructional Model Elements (IME)** were chosen as critical for classifying schools.

- Primary Purpose(s)
- How a School Addresses the Developmental Needs of Young People
- Approach to Discipline and Character Development
- Beliefs about How Learning Occurs
- Pedagogical Approach
- Ways of Assessing Student Learning

The Classification Framework was created through an iterative process, which involved a review of research as well as conversations with experts across a range of fields with a particular focus on human development, cognitive psychology, pedagogy, instruction, assessment and the impact of accountability and policy on a school's work. Data collection also included site visits to dozens of schools in the traditional public, public charter, private and independent sectors that adopted a wide range of instructional approaches ranging from college preparatory to student-centered/progressive, and alternative education campuses, in half a dozen cities and regions. Site visits included document reviews, interviews with administrators and teachers, classroom observations and, to the extent possible, interviews with students and parents.

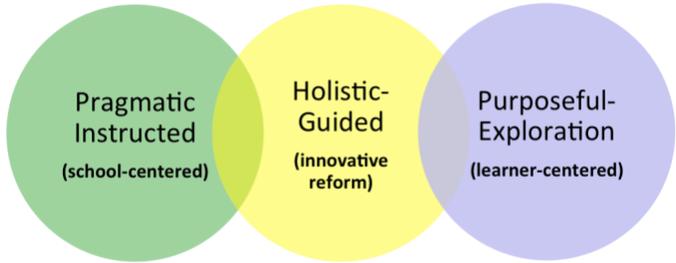
The data and artifacts were analyzed and resulted in the identification of different **Approaches** that schools adopt with respect to each of the Instructional Model Elements (IME). Consider the IME "Assessment." Assessment approaches used by schools include summative standardized, interim standardized, teacher observations, student self-assessment, portfolios, exhibitions; passage panels, and authentic assessment pieces. In some cases, it is important to consider subtle distinctions within Approaches. For example, all schools address the emotional needs of students in some way. However, some schools adopt policies, procedures and practices around character development, discipline and behavior management that view emotional development in a more *functionalist* manner, namely, focusing primarily on emotional management as a way of helping students achieve academically. Other schools adopt what research would describe as a *systems perspective* to emotional development, understanding that emotional maturity and development is influenced by age and cognitive maturity, as well as by the complex management of relationships and human dynamics within the school and a student's boarder environment. The policies, procedures and practices adopted in these schools looks very different from those at schools with a more functionalist approach, and are aimed helping students recognize, process and manage their emotions in a more holistic manner. Figure 2 captures the Elements and Approaches identified as being central to understanding a school's orientation to its work. Appendix A includes the full set of Elements and Approaches identified through this process along with definitions that help to capture the subtle but important differences between Elements and Approaches. The nuances are critical to understanding how different schools approach their work and why schools end up being classified within an Orientation.

Figure 2: Instructional Model Elements and Approaches

Primary Purpose(s) Aligned Curriculum	Developmental Needs	Learning Theories	Pedagogy	Approach to Discipline	Assessment
(1) Academic ("core" focus)	(1) Academic	Teacher-focused	(1) Teacher-directed	(1) Consequentialist (modified zero tolerance)	(1) Summative standardized
(2) Cognitive (reasoning, remembering)	(2) Cognitive	(1) Behaviorism	(2) Teacher-guided	(2) Positive Behavioral Interventions and Supports (PBIS)	(2) Interim standardized
(3) Physical	(3) Physical	-Linear	(3) Enquiry-based	(3) Restorative Connections	(3) Teacher observation
(4) Social	(4) Social	-Uniform pacing	(4) Situational learning	(4) Student Self-assessment	(4) Student Self-assessment
o Social awareness	o Social awareness	-Standardized notions of "rigor"	(5) Design-based learning	(5) Portfolios	(5) Portfolios
o Relationship skills	o Relationship skills	-Sequential	(6) Play-based	(6) Exhibitions	(6) Exhibitions
o Responsible decision-making	o Responsible decision-making	-Standardized notions of "rigor"		(7) Passages	(7) Passages
(5) Emotional	(5) Emotional	(2) Cognitivism		(8) Authentic assessment pieces	(8) Authentic assessment pieces
o Functional perspective	o Self-awareness	-Sequential			
o Discrete states perspective	o Self-management	"rigor"			
o Systems perspective	(6) Relationship to community	Student-focused			
Focus:	> Authenticity	(3) Constructivism			
o Self-awareness	(7) Sense of self	-Focus on individual zone proximal development			
o Self-management	o Self-concept/ self-understanding, authenticity	-Bursts of understanding			
(6) Moral education	o Self-esteem	(4) Connectivism			
Approach:	(8) Sense of purpose	-Learner makes connection between old and new info (create learning network)			
o Character education		-Need diversity of opinions to develop knowledge			
o Infusion approach		-Must identify connections between concepts			
> Values articulation					
> Curriculum embedded					
(7) Relationship to community					
o Functional approach					
o Foundational approach					
(8) Sense of self					
o Self-concept					
o Self-esteem					
(9) Sense of purpose					
(10) Social justice					

What became clear from the analysis of school visit data is that there are clusters of guiding beliefs and IME Approaches that are correlated and frequently found together. This led to the identification of three broad Educational Orientations that capture the most common patterns: *Pragmatic-Instructed*; *Holistic-Guided*; and *Purposeful-Exploration* (Figure 3).

Figure 3. Three Educational Orientations



It is important to acknowledge that in proposing three orientations we are obviously simplifying a wide continuum of school-based practices. While many schools fall fairly clearly into one or another of the orientations, there are schools that are harder to classify. However, for the purposes of identifying and talking about critical areas of educational and school practice, it is helpful to recognize that these three Orientations reflect sets of beliefs and practices, which are commonly found together, in part because many Approaches are too contradictory to be adopted by one coherent system. For example, a school with a theory of learning that is highly linear, sequential and standardized, would not adopt a pedagogical approach that embraces the idea that learners might not all master content within a set time frame.

We believe the benefits of the Orientation Framework outweigh the slight risk of oversimplification because it helps frame a different conversation around school choice and what it means to have a meaningful “portfolio” of school options for families. If, as we believe is the case, there are meaningful differences in the ways that schools with different Orientations approach their work, and meaningful differences in how they serve the learners in their schools, then it is important to understand these differences as we consider a range of policy and funding issues. This includes how we think about school choice, portfolio development and promising school models; as well as policy decisions such as the timelines and supports we set up for schools as they begin their work; and the types of systems we create to ensure professional learning and accountability for student outcomes. Table 1 summarizes key defining characteristics of each Orientation referencing the definitions in Appendix A.

DRAFT

Table 1: Characteristics of School Orientations

Orientation	Pragmatic-Instructed (School-centered)	Holistic-Guided (School-centered with innovation/reform)	Purposeful-Exploration (Learner-centered)
Purpose	Primarily academic focus aiming towards standardized outcomes	Whole child focus	Individual development
Human development	<p>Limited to little consideration of human development in the design and delivery of curriculum; or school approaches to discipline and culture-building</p> <p>Functionalist approach to social-emotional development, with a focus on strong systems and structures that help direct/manage student behaviors</p> <p>Functional approach to relationship development</p> <p>Self-esteem and self-identity closely tied to values of the school and academic success</p>	<p>Recognition that human development has an impact on school’s work; often leads to changes with respect to the social-emotional work of the school, but less on the academic</p> <p>Discrete states perspective on social-emotional development with a stronger focus on helping student manage their emotions</p>	<p>Central to school’s organization and work; recognition that rates of progress and even student outcomes must be individualized, making standardization difficult</p> <p>Systems perspective to social-emotional development with a primary focus on helping students become self-aware, which in turn leads to self-regulation and management on the part of students</p> <p>Foundational approach to relationship development</p>

		<p>More functional approach to relationship development</p> <p>Focus on developing positive self-esteem</p>	<p>Students explicitly and intentionally supported in developing a sense of identity as an individual and sense of purpose in relationship to larger community both inside and outside of school</p>
Discipline/character	<p>Focus on traits aligned to academic success; consequentialist approach</p> <p>Character education/values articulation approach</p>	<p>Character development understood more broadly; often adopt positive behavior intervention and support models</p> <p>Values articulation approach to character building with some elements of curriculum-embedded</p>	<p>Curriculum-embedded exploration of values and character; restorative connections/restorative justice approach</p> <p>Infusion approach to character development; embedded within the curriculum</p>
Theory of learning	<p>Sequential, linear and paced; focus on conceptual learning</p>	<p>Individually-constructed; fairly heavy conceptual focus</p>	<p>Developmentally-influenced; practical and situational; emphasis on experiential learning</p>
Approach to teaching	<p>Teacher-directed or teacher-guided</p>	<p>Mostly teacher-guided with some room for enquiry-based learning</p>	<p>Primarily enquiry/project-based; situational/internships; career and technical programs emphasized</p>
Assessment of learning	<p>Standardized, norm-referenced summative and interim data</p>	<p>Standardized assessments; some student-work</p>	<p>Portfolios; exhibitions; authentic assessments; focus on self-assessment and improved craftsmanship</p>
Cognitive strengths served	<p>Strong verbal; sequential processors; strong working memory; fewer socio-emotional and executive functioning challenges</p>	<p>Strong verbal; sequential processors; reasonable working memory; more capacity to adapt to students with socio-emotional and executive function challenges</p>	<p>High and low verbal processing; high visual-perceptual capabilities; variable processing speed and working memory capability; holistic and sequential processors; can adapt to students with socio-emotional and executive function challenges</p>
Types of schools	<p>Many college-preparatory and high-performing charter schools and networks.</p> <p>Generally typical middle and high school programs trend towards this orientation.</p>	<p>Varies, but early childhood and elementary schools are more likely to fall into this orientation.</p> <p>Many of the P-E programs that are operating with less fidelity.</p>	<p>Specific models such as Montessori, Waldorf, Expeditionary Learning, Big Picture Learning implemented with fidelity.</p> <p>Many alternative education campuses/programs.</p>

The next to last row in this table is especially significant. It is well-established in the cognitive psychology literature that there are a range of discrete human cognitive skills and abilities including verbal, visual/perceptual, processing speed and working memory. There are also cognitive indices related to attention, socio-emotional and affective behaviors. Individuals fall along a continuum of performance along each of these indices, and different sets of cognitive capabilities are often associated with unique and important strengths.

For example, individuals with dyslexia often perform lower on sequential processing tasks; however, this is often associated with corresponding strengths in holistic and visual processing, including random association, pattern recognition and inductive reasoning, all of which are critical to creative thinking and problem-solving. While it may be possible for schools to “remediate” students with certain cognitive weaknesses, schools adopting a Purposeful-Exploration orientation are more likely to frame a student’s relative strengths and challenges as an overall positive set of capabilities than a set of deficiencies to be “remediated.” They are more likely to be able to provide opportunities for students to gain access to content and learning experiences in ways that fit with their strengths, rather than placing the focus on making students adapt their learning to suit the school’s approach. This is not to say that these schools do not provide students with basic skills, but rather that they are organized to approach the development of basic skills in a more individualized and flexible manner.

Table 2 lays out the primary cognitive elements identified and assessed through metrics such as the WISC and WIPSE that are often used to assess cognitive capabilities and strengths for the purposes of special education and giftedness diagnoses.

DRAFT

Table 2: Cognitive Profile Elements

Verbal	Visual-spatial	Processing speed	Working memory	Attention
<ul style="list-style-type: none"> •Language proficiency •Verbal communication •Writing skills •Written communication 	<ul style="list-style-type: none"> •Finding orientation in space •Facility with mental imagery 	<ul style="list-style-type: none"> •Rate of taking in information, making sense and responding •Ability to work under time pressure 	<ul style="list-style-type: none"> •Ability to follow long discussions, recall information immediately 	<ul style="list-style-type: none"> •Executive functioning •Planning and organization

Traditionally, schools as institutions have focused heavily on verbal and quantitative abilities, have used teacher-directed pedagogies, and have measured outcomes using timed, written and standardized tests. These practices favor individuals with strong verbal, processing speed and working memory capabilities. However, these specific cognitive indices do not speak to how capable an individual is, especially once they leave the world of

formal education. Yet, as our schools and accountability systems have increasingly focused on verbal and quantitative capacities as measured by standardized tests, the percentage of students in US schools who are diagnosed with learning disabilities has skyrocketed. These same students are at increasing risk of dropping out; a recent report concludes that nearly 20% of students diagnosed with a learning disability dropped out before completing high school, and students with learning disabilities are less likely to enroll in and complete 4-year college programs. The research suggests that schools biased towards these specific strengths do not serve all students equally well. Given what we know about the perfectly natural variation in human cognitive capacities and our stated desire to serve all students in our system well, we must be intentional about supporting schools that are designed to serve the needs of a wider range of learners.

It is worth clarifying this project's focus on the school-level orientation to the work of teaching and learning. Many teachers adopt a range of approaches in their work with individual students. However, this project focuses on school-level practice because research suggests that:

- Teachers whose personal approach is at odds with the orientation of a school either find themselves constantly working against the system; or eventually modifying their style to fit with the dominant culture of the organization;
- Schools and teachers find it challenging to constantly adapt their practices to meet the needs of an exceedingly wide range of cognitive, social and emotional needs. In most cases, schools simply fail to do this well and end up failing to serve learners whose learning needs do not match the school's primary approach to instruction; and
- If a school's orientation is consistent, it is better positioned to recruit, support and maximize the effectiveness of teachers by providing teachers the professional development, training, curricular and systems supports needed to optimize teachers' time and work with students.

A focus on supporting schools within the Purposeful-Exploration orientation

The James Walton Fund is specifically interested in supporting the expansion and success of schools, which fall into the Purposeful-Exploration (P-E) orientation. The School Orientation research indicates that P-E schools are uniquely organized to serve a wider range of learners than schools with either Pragmatic-Instructed or Holistic-Guided orientations. This is due to three main factors:

- P-E schools place a much greater emphasis on the socio-emotional and relational aspects of the learning environment and experience, which supports learners who may not find adequate support in other learning environments where there are less intentional, integrated and sophisticated efforts to promote and support the socio-emotional needs of students;
- The curriculum is more integrated and the pedagogy is more experientially-based. Both of these design principles allow all learners to organize and pace their learning. This is especially helpful for learners with

lower working memory capacity or processing speeds who often struggle to keep up with the standardized pacing of teacher-centered pedagogies; and

- P-E schools place far less emphasis on timed standardized assessments, favoring more authentic assessment approaches including portfolios and work products. This allows students – especially those who struggle with the verbal, working memory and processing speed biases of standardized and interim tests - to demonstrate and receive credit for the full range of what they know and are capable of doing.

The challenge for P-E schools is that under existing educational policies and accountability systems, their approach to working with students is not adequately recognized and, in some ways, is actually penalized. For example, many P-E schools operate off a foundational (and scientifically-supported) belief that learning does not occur in a linear fashion or in 6-9 month blocks of time. In light of this, these schools are organized to allow students to progress through material over longer periods of time, and in ways that often do not align to the “grade level expectations” enshrined in state policies, academic standards, and annual tests. This is as true in “core” subjects like English Language Arts and Math as it is in science and art.

Ideally, these schools would be empowered to establish learning trajectories suited to their curriculum and be held accountable for student progress in 2-3 year cycles; this would ensure that all students have adequate time to engage content in a developmentally-appropriate window of time. However, under current accountability systems in most states, P-E schools are held accountable in exactly the same way as schools designed to cover content in a more sequenced and uniform manner. Because district and state accountability systems are designed to compare all schools against each other, regardless of their instructional orientation, P-E schools are often identified as doing “worse” than schools that might not be serving as wide a range of learners.

As a second example, the challenges of P-E schools begin as soon as they plan to open their doors. Because of their strong focus on the social and relational aspects of the school; and because their pedagogical approach requires students to have learned the skills needed to take ownership of their learning, the timeline for these schools to open and demonstrate progress on academic metrics is often longer than that of schools focused on establishing more adult-directed behavior management, and adopting teacher-directed pedagogies. Table 3 identifies some of the unique requirements of P-E schools, and the rationale for creating differentiated approaches to assessing student-level and school-level outcomes. These are discussed further in the next section.

Table 3: Unique Aspects of Purposeful-Exploration Orientation

Unique P-E Orientation Needs	Reason
Start-up timelines and support	<ul style="list-style-type: none"> Schools define their primary purpose as being about the human development and relational aspects of their program. This takes time to establish. Pedagogy is experientially-based and requires students to understand how to take ownership of their learning. Need time to gradually release students into this way of learning.
Assessment of student outcomes	<ul style="list-style-type: none"> Learning is developmentally-influenced and thus pace and sequence will be unique to each student Standard tests are not the best way for all students to demonstrate their learning These schools assess a broader set of student outcomes Need assessments that are aligned with a student’s learning experience. For example, learning in an internship is often assessed through a work product
School-level accountability	<ul style="list-style-type: none"> Often have specific missions and outcomes beyond core academics for which they should held accountable/given recognition Aim to accommodate a wider range of learners so need different ways to fairly assess learning Especially at the high school level, P-E schools assume that success looks different for each student. Schools need ways to account for how they help students meet the requirements for different post-secondary pathways
Unique human capital needs	<ul style="list-style-type: none"> <u>Facilitating</u> student-directed learning requires a different sets of skills than are often central to success in more teacher-directed schools which focus on effective instructional delivery

Student-level accountability in P-E schools

Schools adopting a P-E orientation embrace methods for monitoring student learning that honor their core beliefs about how young people develop and how learning happens. Analysis of data collected during this project as well as research into “alternative” assessment practices in the US and in school systems abroad highlight the following core beliefs that drive the approach to assessment taken in P-E schools:

- Human development does not occur in a linear and sequential manner, or in a uniform progression for all students, especially through the early elementary years. This results in schools that:
 - Use multi-age groupings rather than organize students by birth year into standard grade level groupings.
 - Adopt a curricular scope and sequence that provides students multiple years to access concepts and content.
- These schools often have specific missions. While many people are familiar with alternative education campuses that serve unique student populations (e.g. pregnant teens, homeless youth or recovering addicts), many P-E schools serve general populations of students but have strong missions around student outcomes that are not reflected by a traditional focus on core academic preparation. This results in schools that:

- Require support in articulating and creating appropriate metrics to capture important outcomes, understanding that many such outcomes are difficult to measure in norm-referenced, highly standardized ways.
- Require accountability systems that provide “credit” to schools for articulating and pursuing student outcomes that are often a large part of the reason that parents and students choose these schools over more traditional school environments.
- Conceptual learning and experiential learning are both critically important, and different learners may have preferences for one mode of learning over another. This results in schools that:
 - Prioritize experiential learning approaches that require students to own and make sense of their learning. The pedagogical approaches of these schools more heavily emphasize situational learning such as internships and apprenticeships, design-based learning and “play-based” learning.
 - Emphasize approaches to teaching/learning that often work for learners whose cognitive profiles put them at a disadvantage when it comes to more traditional teacher-directed or teacher-guided pedagogies that require stronger verbal, working memory and processing speed capabilities.
- Believe that assessment of learning should be aligned with the type of learning that is provided to students. If students are engaged in experiential, authentic learning activities, assessments should be meaningfully related to those activities. Hence, these schools:
 - Use and prioritize authentic assessment pieces aligned with situational learning, internships and other experiential learning opportunities. These are generally captured and shared through portfolios and exhibitions.
 - Adopt some form of multi-year demonstration of mastery and growth such as a “passage process” through which students are given the opportunity to reflect on and share their growth as an individual and learner over the course of multiple years. This is usually done to an audience of community members rather than simply for teachers.

This project included a landscape analysis of promising programs around the US that are adopting alternative assessment for students. The majority of such efforts are being adopted by schools participating in initiatives around Deeper Learning and project-based learning, as well as among alternative education programs/campuses, many of which focus on serving high school students who have exhausted options among more traditional school options. Many of these schools fall into the P-E orientation. Table 4 provides summaries of a handful of promising programs, and some Colorado-based programming.

Table 4: Promising Student-level Assessment Approaches

School/program	Overview	Assessment approach
SIATech	<p>Dropout recovery program that operates in partnership with Job Corps, Workforce Innovation and Opportunity Act programs, and school districts.</p> <p>Create small learning communities of between 150 and 450 students which allows for a "High Tech" and "High Touch" environment where students gain the relationship skills, academic skills, metacognitive skills, and confidence to learn to self-monitor their progress</p>	Competency is demonstrated in benchmark assessments and culminates in the presentation of five senior projects that represent a broad sampling of student learning.
New York Performance Standards Consortium	Moving schools away from high stakes testing in favor of performance-assessment. Consortium schools require students to engage in time-intensive, in-depth research projects and papers known as Performance Based Assessment Tasks (PBATs).	Consortium schools require students to engage in time-intensive, in-depth research projects and papers known as PBATs. Topics emerge from class readings and discussion. In some classes teachers craft tasks and in others students develop them. All graduation level tasks are evaluated using Consortium rubrics.
New Hampshire Learning Initiative NG2: Personalized Inclusive Education Pathways	<p>Seven elementary schools in New Hampshire are piloting methods for combining competency-based learning and performance assessments in multi-learning settings.</p> <p>The purpose of NG2 is to develop a new model of personalization that allows a more flexible and effective educational pathway through the development and use of PreK–Grade 8 learning progressions and common understanding of the six NG2 Tenets (Deep Learning Through Projects; Learner Agency; Whole Person Focus; Blended Learning; Learning Progressions; Authentic Assessments).</p>	Learning progressions are developed in PreK–Grade 8 multi-age environments, applying project-based learning pedagogies with authentic quality performance assessments.
HSRA (High School for Recording Arts)	Students learn by creating interest-driven projects overseen by their advisors. Project-based learning is designed to guide learners through the subjects they must master on their own path to graduation. Instead of breaking up learning into specific subject areas, a learner decides on a project to work on, and then seeks out teachers with relevant content-area expertise to support the project. There are group projects, small classes, and a variety of guided study opportunities based on students’ interests and needs.	Authentic assessment pieces are chosen for each of the projects. A combination of rubrics and industry-standards or industry experts help ensure project quality.
Big Picture Learning Network	Learners, with the support of their mentors, parents, and peers, leverage BPL’s design components and distinguishers to create individualized learning plans. Focus is on helping students learn how to learn rather than receiving instruction on topics, subjects, or information. Five learning goals frame how each learner approaches their work: 1) Empirical Reasoning, 2) Quantitative Reasoning, 3) Communication, 4) Social Reasoning, 5) Personal Qualities	BPL uses “public displays of learning that track growth and progress in the learner’s area of interest.” This could be an oral presentation, an art project, a business plan, or a story. Supported by Advisors and Mentors learners decide how best to demonstrate their learning and mastery.

Colorado CareerWise and other Secondary Pathway Programs	Strong focus on experientially-based secondary school programs including career and technical programs and apprenticeships. Students learn through situational learning opportunities, taking on	Programs are working to develop career-aligned assessments, by working with industry partners to ensure that students receive course credit for demonstrations of learning on authentic, workplace products.
FairTest	Organization “working to end the misuse and flaws of standardized testing and to ensure that evaluation of students, teachers and schools is fair, open, valid and educationally beneficial.” Partners with individual schools or networks of schools interested in collaborating to develop practitioner-designed assessments that are closely aligned with student learning.	Developed model assessment system for states interested in taking advantage of ESSA’s Innovative Assessment pilot. The core of the model is classroom-based evidence, including student work, gathered and evaluated in portfolios, learning records, and work samples, as well as teacher observations. The goal is to prioritize individualized, student-based learning.
Iowa BIG	Learners, with support of their mentor teachers and members of the business, non-profit, and government community, choose and access authentic, real-world projects and problems tied to their interests and learning path. Teachers and community partners challenge learners to learn and apply conceptual knowledge and 21 st century skills through their projects. Students attain mastery of the Common Core, Next Generation Science Standards, and 21 st century skills through these authentic projects and work.	Heavy teacher interaction and conversation with teachers seen as professionals adept at working with teenagers. Multiple perspectives from a collection of teachers, community partners and the learner themselves provide the evidence of learning.

Research on the outcomes of longstanding alternative accountability approaches used by P-E schools is robust and compelling. One of the oldest programs in the country, the New York State Performance Standards Consortium, was started in 1997 and currently includes 28 member schools. The main components of the student assessment system include:

- Practitioner-designed and student-focused assessment tasks;
- External evaluators for written and oral student work;
- Moderation studies to establish reliability;
- Extensive professional development; and
- Predictive validity based on graduates’ college success.

Across a range of metrics these schools, all of which adopt a P-E approach to teaching and assessment, have consistently demonstrated their ability to serve all students, but especially those underserved by more traditional schools. Highlights include:

- All student subgroups demonstrated higher rates of high school and college completion, with up to 25% more ELL and SPED students graduating than their peers in the NY system as a whole;
- Persistence rates in 4-year college programs were 93% for Consortium graduates versus 75% for NY as a whole and 81% nationally;

- 86% of African-American male Consortium graduates were accepted to college versus 37% nationally; 90% of Latino male Consortium graduates accepted to college versus 42% nationally;
- The suspension rate at Consortium schools was 5% compared with 11% at NYC high schools and 12% at charter schools and 5-12 schools; and
- Teacher turnover rates for teachers with less than 5 years experience in Consortium schools was 15%, versus 26% for charter schools and 5-12 schools, and 58% in NY high schools.¹

It is important to note here that part of the insight of this project is that, while policymakers have been willing to acknowledge the need for “alternative education campuses” for a small subset of students, AECs alone cannot solve for some larger problem with the current system. Students qualifying for AECs are often well into the middle or secondary school years. They are forced to go through their early years of schools unsupported by the schools they attend. We must ensure that they have access to learning environments and opportunities that serve their needs far earlier. We know that students fall across a spectrum of capabilities with respect to their academic, cognitive and socio-emotional needs. District and state systems should be designed to afford all learners access to a range of schools that can meet their needs, without students needing to fail in traditional environments before qualifying for “alternative” education environments.

The success of this approach to assessment seems to depend, in large part, on the collaborative nature of the endeavor. Because P-E schools take a more individualized approach to teaching and learning, a great deal of effort is involved in delineating competencies and high-level outcomes that may be demonstrated in multiple ways. Rubrics are the most common tool used to lay out performance levels and indicators because of the flexibility they provide to those assessing different students’ work products. The process of building the assessment system and tools is often beyond the means of individual schools. This has led many schools within the P-E orientation to partner and learn from other schools doing similar work whether through formal instructional model networks such as Expeditionary Learning, Montessori or Big Picture, or more loosely affiliated networks of schools such as the Progressive Education Network, the Alternative Accountability Forum for Alternative Education programs, the Hewlett Foundation’s Deeper Learning project or Education Reimagined Pioneer Labs.

School- and systems-level accountability for P-E schools

The inherently collaborative nature of P-E schools’ work leads to an interesting consideration about how we might better develop accountability systems that support the work of schools with a P-E orientation. During interviews school leaders continually raised the challenges involved in attempting to do their work within today’s accountability regimes. State and district accountability systems’ emphasis on standardized test scores have led

¹ http://performanceassessment.org/articles/DataReport_NY_PSC.pdf

many people to equate “good” schools with high test scores. As discussed earlier, this presents a problem for P-E schools, not least because their approach often attracts students for whom more traditional educational environments are not working and who may not test well. P-E school educators and leaders often articulated a frustration that they were not “getting credit” within the existing accountability system for how much their students are actually able to do.

Table 3 summarized many of the unique design principles that result in challenges for P-E schools under the current approach to accountability. Key among these are the fact that:

- These schools place a much heavier emphasis on relationship-building and socio-emotional supports and systems;
- These schools focus heavily on the learning process that learners engage in as opposed to simply outcomes on summative assessments;
- Student-level assessment is more individualized and “subjective” thus raising concerns among some external observers about how to ensure that all students are held to high-expectations;
- These schools often have specific missions they are trying to achieve for students, which are not accounted for by traditional metrics such as norm-referenced, standardized tests;
- The students that these schools serve are often the same students for whom timed, computerized, standardized tests are not the best way to demonstrate learning;
- These schools don’t accept the premise that success for each child is going to look the same as for every other child. As a result efforts are made to personalize programs, pathways and outcomes to reflect the strengths, interests and needs of individual students. This is especially pronounced at the high school level as students prepare for different post-secondary pathways; and
- These schools are smaller with fewer adults and resources that can be put towards the development of school/approach-specific curriculum and assessment resources.

Interviews also revealed one final feature of these schools, which differentiated them from schools within other orientations. For the students, teachers and leaders of P-E schools ***accountability is philosophically viewed as the natural outcome of a continual improvement of process.*** It is easiest to grasp an illustration at the individual student level. Individual students are not only held accountable for their final piece of work; they are held just as accountable for how they demonstrate the ability to assess a first draft, receive and use feedback to improve the quality of their work, and reflect on the process they used to improve and how this will inform future work. A student whose first draft and final draft look the same will often be deemed less successful than a student who demonstrates the ability to learn and improve on measures of work quality and craftsmanship.

The same applies to how educators and leaders think about accountability at the school level. Many schools today engage in academic data reviews and reflection about how to improve instruction to ensure better student outcomes. However, interview data from P-E schools was striking in terms of the extent to which teachers,

leaders and even students, could provide robust and aligned details about how the school's processes and routines established methods for continual process-focused activities designed to assess how well the school was doing with respect to both academic and non-academic areas of focus. Examples of such processes included engaging in learning rounds either internally or with philosophically-aligned schools; staff retreats specifically aimed at supporting the mental and emotional well-being of individual teachers and the cohesiveness of staff as a whole; professional development specifically aligned to the school's philosophical and instructional approach; and strong student-parent-community engagement and feedback processes.

Given the articulated priorities of P-E schools as well as the demonstrably different ways in which they pursue their work and measure their success, this project suggests that there is a better way to provide these schools support and feedback for their work, and in a way that can hold them accountable in light of the more personalized and developmentally-driven nature of their work. In the name of ensuring "equity" and "high standards" for all students, our general accountability systems have moved in the direction of standardizing outcomes and measuring outcomes at a very high altitude, in the form of norm-referenced, standardized tests. This is because policymakers believe that making results comparable across large numbers of students is the best way to ensure "high expectations" are held for all students. The challenge with this approach is that it does not allow for the flexibility that is often needed to work with students who deviate too far from the "norm." While it is understandable that we cannot have a system that leaves too much to the prerogative of individual principals and teachers, this project suggests that schools and students within the P-E approach would be better served by a collective accountability approach, through which metrics and processes could be normed at an "altitude" closer to the level of the student. This would happen through the development of networks of 7-10 schools that adopt the same orientation to their work. The network itself would ensure that educators, students and parents were being exposed to standards of practice within a larger community – ensuring that low-quality practices would be flagged and supported in improving within a larger community of learning and practice. Some external accountability would still need to be integrated through district, state or school authorizer involvement in the process. However, the external accountability process could be tailored in a way that aligned with the unique practices of P-E schools rather than simply imposing an accountability framework designed for schools with more traditional approaches.

Beyond improving overall accountability, this network of practice approach would provide numerous benefits including:

- Economies of scale around common metrics aligned to P-E approaches including curriculum templates and rubrics for student work;
- Rubrics and processes around professional development and educator evaluation aligned with the specific approach of the school;

- Opportunities to develop teacher and leader preparation pathways such as residencies that require program-specific mentors;
- Potential economies of scale around core academic and non-academic services (e.g. one biology teacher or learning specialist that could work in multiple smaller schools); and
- The development of larger, more intentional and transparent communities of practice.

The concept of networked improvement and accountability is also not new. What is unique here is recognizing that networks of schools are far more likely to succeed, both in improving practice and in holding schools accountable, if they are grounded in a common vision and articulation of their work.

There are fewer promising programs within the US in light of the national direction of accountability over the last two decades; however Table 5 provides some US-based programs as well as programs that have been highlighted through the work of the Global Cities Education Network (GCEN).

Table 5: Promising Collective Accountability Approaches

Program	Approach
<p><i>New Hampshire Learning Initiative</i> <i>NG2: Work Study Practices</i></p>	<p>During the 2015-2016 school year, New Hampshire’s Tier 1 Districts, along with an additional seven Tier 2 and 3 districts, began unpacking the four State of New Hampshire Work Study Practices of Communication, Collaboration, Creativity, and Self-Direction. Teachers began translating these success skills into curriculum, instruction, and assessment within their schools and classrooms.</p> <p>These districts, in consultation with the NH Department of Education, The Center for Innovation in Education, and 2Revolutions, began to explore and implement strategies to:</p> <ul style="list-style-type: none"> • Build deep understanding, shared mental models, and common language to describe the development of the WSPs • Create and refine existing instructional strategies that integrate WSPs with content across the curriculum • Create and implement high quality assessments to collect student learning of the WSPs • Build community buy-in for the importance of WSPs • Integrate WSPs into local reporting and accountability systems
<p>Alternative Education Accountability Framework.</p>	<p>Education Northwest is in the process of developing an accountability framework for alternative programs. The framework includes both qualitative and quantitative measures that districts and schools can use to measure student progress, ensure high standards of instruction and capture practices that can be replicated and scaled. Quantitative metrics measure student progress, student achievement, school connection, and school climate. Qualitative data are intended to provide context for the quantitative metrics.</p>
<p>Colorado Alternative Education Campus work</p>	<p>Building off of national work, the Colorado program is developing optional measures and metrics to give AECs greater flexibility. In the AEC school accountability framework “student engagement” replaces growth gaps as a metric. Student engagement is a popular metric advocated by alternative campuses around the country. AECs have also advocated for freedom to create qualitative measures unique to a school’s design and mission, decreasing a school performance framework’s reliance on academic achievement and growth.</p> <p>The recommended categories for measurement and their respective weightings are:</p>

	<ol style="list-style-type: none"> 1. Academic Progress: <ul style="list-style-type: none"> • Achievement 5% • Growth 25% 2. Student Engagement 20% 3. Post-Secondary Workforce Readiness 30% 4. Opportunity Measures 20% (Six sub-categories and schools will identify three subcategories to use in their AEC SPF.) <ul style="list-style-type: none"> • System of learning designed for success with AEC students • Community-based opportunities, including post-secondary opportunities • Student support mechanisms • Evidence of fulfillment of the school’s mission • Evidence that the school has identified areas for institutional growth and has demonstrated growth in designated areas • School climate and culture.
<p>CO Rural Education Collaborative - Student-Centered Accountability Program (SCAP)</p>	<p>The Student-Centered Accountability Project (SCAP) is a collaborative effort by nine rural districts to create a more comprehensive system of accountability than the current state District Performance Framework system, by using multiple measures beyond the a single state assessment. The State Board of Education unanimously endorsed the work of the SCAP in June 2015.</p> <p>Participating districts have identified three major elements to the SCAP accountability system: Meaningful Learning, Professional Culture, and Resource Prioritization. In the Professional Culture area, districts will gather data on a large variety of topics, which will include School Quality Review teams. The final element, Resource Prioritization, will provide information about finance, facilities, safety and parent/community involvement.</p>
<p>UK: School Self-evaluation and Inspection (SSE/I)</p>	<p>The UK has long adopted a program where a school’s external inspection follows self-evaluation (this happens in England, Wales, Northern Ireland and the Netherlands). Each country conducts the process differently. Major differences include variations in the national agency responsible for inspection, frequency of inspections, and extent and type of sanctions for low-performing schools. The core of the system is the ability of schools to self-evaluate. Self-evaluations are then validated by external inspections. Inspections are intended to evaluate the quality of a school’s self-evaluation system.</p>
<p>US: School Quality Reviews (SQRs)</p>	<p>Modeled on the British school inspectorate several states in the U.S. have piloted School Quality Reviews (SQRs), but in the face of NCLB they have either been dropped or operate on the margins. Teams of experts periodically review schools to provide them with feedback for improvement and for public reporting. Teams typically conduct multiday visits that include shadowing students through their classes, interviewing staff, students and parents, and reviewing evidence about the school.</p>

Collective accountability, as a specific accountability approach, has not been extensively researched given the educational environment in the US over the last two decades. However, research on networks of schools that have been informally using collective accountability and improvement approaches indicates that it is well-received by educators who feel that it contributes to the on-going improvement of their practice. The fact that systems such as the UK, the Netherlands, Hong Kong and Finland integrate this into their overall systems of accountability for schools speaks to the impact it has on supporting overall school and educator quality.²

² https://d2mguk73h8xisw.cloudfront.net/media/filer_public/filer_public/2016/05/18/across-classrooms_1440.pdf

However, regardless of whether it is an approach that makes sense to adopt in a wholesale manner for all schools within a district or state education system, the case for testing it as a potential approach for subsets of schools committed to working within the P-E orientation is compelling. The one-size fits all approach to accountability that has been the focus of US policy over the last two decades has not resulted in the progress we would like to see for all students. While much of the conversation around alternative accountability focuses on alternative education campuses, the bigger issue is ensuring that all P-E schools, many of which are not formally AECs, must be supported in their work

Conclusion

The results of this 18-month project indicate that it is time for districts and states to look beyond the current approach to school choice, where arguments about school quality and access have tended to focus on school governance models rather than on questions about schools approach their work and how this aligns with what emerging research tells us about how students develop and learn. Table 6 summarizes the high-level shifts that would accompany a move towards a choice system organized around instructional orientation, empowering students and families to understand more about the specific ways in which schools approach their work. It also summarizes the changes that would be needed to ensure that schools across the three orientations can demonstrate their efficacy with learners, and for families who may be choosing schools based on a variety of considerations that extend beyond the measures that have been central to school accountability in recent years.

Table 6: A Third Way: A New School Choice Paradigm

	“Traditional” approach	“Reform” efforts	Third Way: Learner Centered
Altitude of accountability	Individual classroom or individual school	20,000-feet; standardized, state-level metrics	Networks of schools adopting similar orientation operate within a “collective accountability” model with district/state oversight appropriate to the orientation of the schools
Governance model	Traditional district/ neighborhood governance model favored	Push to increase charter school parity	Governance agnostic; focus on school orientation
“High-quality” seat	Developmentally-appropriate	College preparatory Standardized test results	Choices among orientations that allow parents/students to find a learning fit
Accountability metrics	Focus on whole-child metrics	Academic outcomes on standardized tests	Greater focus on mission-aligned accountability metrics
Teacher-preparation	Traditional preparation programs with heavier focus on pedagogy and teaching	-Subject-matter knowledge focus	Orientation-specific pathways

Appendix A: School Classification Instructional Element Definitions

Purpose; Developmental Needs; Curricular Strands

- (1) Academic – Primarily defined as reading, writing and mathematics as “core” with science and social studies generally recognized as secondary tier – often through literacy. Other subjects are considered “specials” (e.g. music, art, PE)
- (2) Cognitive – Pertaining to intellectual efforts such as thinking, reasoning or remembering. Often measured in relationship to reading and mathematics.
- (3) Physical – Gross and fine motor development, physical coordination.
- (4) Social - Social competence refers to a person’s ability to get along with others and adapt to new situations. Social skills describe how children navigate social and learning contexts and can be conceptualized as including interpersonal skills and learning-related skills.
 - a. *Social awareness*: The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.
 - b. *Relationship skills*: The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking and offering help when needed.
 - c. *Responsible decision making*: The ability to make constructive and respectful choices about personal behavior and social interactions based on consideration of ethical standards, safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.
- (5) Emotional - Emotional regulation is the ability of a child to control his or her emotions and reactions to the environment. A major part of emotional development in children and adolescents is how children recognize, label, and control the expression of their emotions in ways that generally are consistent with cultural expectations.
 - a. Specific focus
 - i. *Self-awareness*: The ability to accurately recognize one’s emotions and thoughts and their influence on behavior. This includes accurately assessing one’s strengths and limitations and possessing a well-grounded sense of confidence and optimism.
 - ii. *Self-management*: The ability to regulate one’s emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, controlling impulses, motivating oneself, and setting and working toward achieving personal and academic goals.
 - b. *Functionalist perspective* emphasizes that emotions serve a function of focusing action to achieve personal goals. Self-regulation is critical to emotional development because it marks a progressive ability to regulate emotions according to the demands of the physical and social worlds.
 - c. *Discrete states perspective* understands emotions as patterns of configurations in the brain, as demonstrated in cognitive neuroscientific studies. Neurochemical processes result in subjective feeling states, with accompanying automatic changes in bodily function and behavior. These give rise to basic emotions. Theorists propose a maturational timetable for emergence of these basic

emotions, beginning in infancy. Emotional development and regulation are dependent on cognition for the most part; cognitive development leads to new abilities to understand and self-regulate basic emotions.

- d. *Systems perspective* acknowledges the functional utility of emotions or their grounding in discrete feeling states. But it also focuses on how emotions emerge from one's tendency to organize various interacting components. These components include felt experiences, cognitive appraisals, motivations, functions, and control elements. This perspective leaves emotional regulation dynamic and open to transformation since emotions are complex and specific to situations. They also help form the basis of one's self and personality.

(6) Moral education

- a. *Character education focus/program* – generally discrete programs that are added to a school's curriculum or values statements.
- b. *Infusion approach* to developing character – approach that restores moral education and student character development to central role of school.
 - i. Values articulation
 - ii. Curriculum as a source of moral education and character development
- c. *Service learning* – involves true service learning, which requires a long-term commitment to an organization or activity. There is an intentional focus on self-reflection, understanding how the process of serving contributed to personal growth and learning. Contrast this approach to those that require students to complete a designated number of volunteer hours.

(7) Relationship to community – Starting from birth there is a dialectical process of a child's sense of self developing in relationship to others within the community. Building and sustaining community is critical to supporting this aspect of development.

- a. *Functional approach* - involves establishing a shared set of values or common identity. Students are expected to behave in ways that conform to these shared values and expectations.
- b. *Foundational approach* - rests on the assumption that the community and relationships within it are foundational to a student's personal growth and development. Relationships are seen as intrinsically valuable; the nature, authenticity and quality of the relationships that are built between individuals is considered of primary importance.

(8) Sense of self – Involves answering questions such as: Who am I? What am I good at? What are my gifts? Sense of self refers to students' perceptions, beliefs, judgments, and feelings about who they are as people. There are two aspects of the sense of self:

- a. *Self-concept* - assessments of one's own characteristics, strengths, and weaknesses;
 - i. Students' self-concepts influence how they behave. Students' self-assessments are influenced by how successful their actions have been in the past. Through experience they acquire a sense of self-efficacy about the degree to which they can do certain things well. Over time students' specific self-efficacies for various tasks and activities contribute to their more general sense of self.
- b. *Self-esteem* - judgments and feelings about one's own value and worth.
 - i. Students' evaluation of themselves depends to some extent on how their own performance compares to that of other individuals, especially peers. Adolescents, in particular, tend to judge themselves in comparison with classmates. Those who see themselves achieving at higher levels than others are apt to develop a more positive sense of self than those who consistently find themselves falling short. Research suggests that in order to help students develop a positive sense of self, competition and other situations in which they might compare themselves unfavorably with others should be minimized.

- ii. Students' self-perceptions are affected by how others behave toward them. Adult interest and engagement is one huge factor. Another is membership in one or more groups. In general, students are more likely to have high self-esteem if they are members of successful groups including their families, ethnic or cultural groups.
- (9) Sense of purpose – a sense of being involved in something larger than oneself. Transcendental psychology as a discipline is relatively new; though the concepts themselves have roots deep in human communities. Transcendental psychologists and research into well-being suggest that it is both a primary human motivation and a human capacity to strive for meaning, to work towards something that transcends self-interests and serves the greater good.
- a. Purpose is a part of one's personal search for meaning, but it also has an external component: the desire to make a difference in the world, to contribute to matters larger than the self. The field of psychology has been slow to recognize the importance of purpose for positive youth development. There are a number of urgent questions concerning how—and whether—young people today are acquiring positive purposes to which they can dedicate themselves.
- (10) Social Justice – the fair and just relationship between an individual and society. This is measured by the explicit and tacit terms that determine the distribution of wealth, social privileges and opportunities for personal activity. Exploring issues of power, privilege and social justice is especially important for students coming from backgrounds and/or who identify with groups that experience social injustice. This includes students from underprivileged, minority and non-dominant identities.
- (11) Educational equity – two perspectives
- a. Reforms focused on improving addressing/eliminating disparities in educational performance or academic outcomes by increasing funding levels, redesigning school programs, teaching students in different ways, or providing comparatively more educational services and academic support to students with greater needs.
 - b. Approach to education and schooling that meets the needs of individual learners. Recognizes that students have different capacities, interests, motivations and aspirations and makes the individual student (rather than a “group”) the unit of analysis and focus. Embraces the goal of ensuring that each student is empowered to leave school and make the choices he/she wants to make for her future. This will look different for different students.

Theories of Learning

Teacher focused: Approaches that tend to assume learning is more sequential, linear and uniformly paced, so looks similar for all children.

- (1) Behaviorism is a worldview that assumes a learner is essentially passive, responding to environmental stimuli. The learner starts off as a clean slate and behavior is shaped through positive reinforcement or negative reinforcement. According to behaviorists, learning is a mechanical process of associating stimulus with response, which produces a new behavior. Learning is defined as a change in the behavior or outcomes that the learner produces.
- (2) Cognitivism refers to the study of the mind and how it obtains, processes, and stores information. This theory was a response to behaviorism. Learners are active participants in their learning because the mind functions like a computer processor. Information comes in as inputs, the mind processes the information, and stores it in a way that allows it to be retrieved later. Learning is shaped by helping students to

strengthen their prior knowledge and attitudes (schemas) and to develop learning strategies. Education is seen as a one-on-one relationship between the learner and the objective material to be learned so the educational process is often directed towards isolating the learner from all social interactions or distractions.

Student Centered: Approaches that tend to see learning as more developmentally driven, accounting for variations between children regardless of age or grade. Assumes bursts and ebbs in how learning and mastery of concepts and skills occur.

- (3) Constructivism is the study of a learner's own construction of knowledge. Knowledge is constructed through one's own personal experiences and interactions with the outside world. The learner takes in new information and gives meaning to it using his or her own prior attitudes, beliefs, and experiences as references. Learners are active participants in the construction of knowledge while the instructor serves as a facilitator. Constructivists focus on the learner rather than the subject/lesson to be taught, and provide opportunities for learners to learn within a community of learners rather than individually. Learning is a social activity; learning is intimately associated with our connection with other human beings: teachers, peers, family, even casual acquaintances.
- a. It takes time to learn. For significant learning students need to revisit ideas, ponder them try them out, play with them and use them.
 - b. Motivation is a key component in learning. Not only is motivation helpful to learning, it is essential for learning.
 - c. Zone of proximal development – Theory that giving students the hardest tasks they can do with scaffolding or support will lead to the greatest learning gains. The teacher must start at the child's level of knowledge and build from there. The zone of proximal development is an area of learning that occurs when a student is assisted by a teacher or peer with a skill set higher than theirs. The learner is poised at a moment of growth but cannot complete the task without the assistance of the teacher or peer (students can often complete a task within a group before they are able to complete it on their own). The teacher's job is to move the child's mind forward step-by-step. This theory accepts the fact that teachers cannot teach all children equally; they must determine which students are ready for which lessons at a particular point.
- (4) Connectivism is a learning theory, in which knowledge exists outside of the learner, and the learner makes connections between new and old information to build knowledge. The connections that learners make help them to create their own learning "network". This connected web helps learners stay up-to-date with content as it changes. It is important for the learner to be able to identify credible resources. Key ideas include:
- a. Learning and knowledge rests in having a diversity of opinions.
 - b. Learning is the process of connecting specialized nodes or information sources.
 - c. Nurturing and maintaining connections is crucial to facilitating learning.
 - d. The ability to identify connections between concepts is important.
 - e. Decision-making is a learning process since all information can change and what is viewed as correct one day may be incorrect the next.

Cognitive Profile Elements

- (1) Verbal – is the cognitive ability to use and understand language. The ability may be thought of as having a number of components – the most commonly known are:
 - a. *Language proficiency* - ability of an individual to speak or perform in an acquired language.
 - b. *Verbal communication* - communication using language. This may take the form of speech, conversation; handwriting; narratives; manual communication; oral communication; storytelling; vocalization; written communication.
 - c. *Verbal reasoning* - understanding and reasoning using concepts framed in words.
 - d. *Writing skills*: abilities that enable individuals to express themselves effectively in writing. These skills are developed through formal education and practice and include literacy, mastery of written language, vocabulary and verbal ability.
 - e. *Written communication*: representation of language in a textual medium through the use of signs or symbols. It is distinguished from illustration, such as cave drawing and painting, and the recording of language using mediums like digital audio or video.

- (2) Visual/perceptual - Our visual and spatial skills help us find our orientation in space, perceive objects around us and organize them into a coherent visual scene or mentally imagine an object that isn't physically present. Mental imagery plays an important part in thought processes, dreams, problem-solving (like mental calculation), anticipating events, memorizing, understanding a verbal description, reasoning or recognizing objects presented in an unusual way.

- (3) Processing speed - Processing speed is the pace at which an individual takes in information, makes sense of it and begins to respond. This information can be visual or auditory. It relates to the ability to process information automatically and therefore speedily, without intentional thought. Key indicators relate to the time and speed taken to perform tasks. A key strategy for individuals with slow processing speed is to reduce the time pressure associated with a task.

- (4) Working memory/Attention and memory - Measures of working-memory capacity are strongly related to performance in other complex cognitive tasks such as reading comprehension and problem solving. Individuals with memory needs may have difficulty following directions; immediately recalling information they have just seen or heard; listening to and comprehending lengthy discussions; or remembering information long enough to work it through to understanding. Key strategies are to not overload working memory; to form meaningful associations between new and old knowledge; and to develop memory aids.

- (5) Attention: executive functioning - Executive functions represent elaborate functions which control logical reasoning, strategy, planning, problem-solving, and hypothetical-deductive reasoning skills. Planning capacities help determine an action plan, and define and organize priorities. These are the thinking skills that help individuals plan, set goals, respond to problems and persist on tasks. Individuals with executive functioning issues have trouble with impulse control, emotional control and flexible thinking.

- (6) Attention: planning and organization: Individuals with attention needs have difficulty sustaining concentration and focusing on an activity while ignoring distractions. They might concentrate on tasks that are exciting or interesting, but have particular difficulty concentrating on activities that are not interesting. These individuals need support with paying attention, structuring and managing tasks and organizing work.

- (7) Socio-emotional factors – as discussed in the earlier section around social and emotional development, factors to be considered include:
- a. *Social*: Communication and behavioral regulation, arguing, cooperation, temper outbursts, disruptive behavior, socially-appropriate responses to others; impulsiveness;
 - b. *Emotional*: Sadness, fearfulness, adaptability to change, positive attitude, worry, difficulty rebounding from setbacks, withdrawal.

Pedagogical Approaches

- (1) Play-based – relevant primarily in the early childhood context, play-based pedagogy stems from research that indicates that what looks like “play” to adults, is actually the way in which young children learn about and make sense of the world. In a play-based program, children choose activities based on their current interests. The play-based classroom is broken up into sections, such as a home or kitchen, science area, water table, reading nook, space with blocks and other toys, or other areas. Teachers encourage the children to play independently, facilitating social skills along the way.
- (2) Teacher-directed
- a. Teacher directed pedagogy, or direct instruction, often manifests as a form of explicit instruction that presents information to learners in a way they can easily access, understand and master. All forms of direct teaching share a set of basic principles that include:
 - i. Setting clear objectives for learning
 - ii. Systematically organizing instruction to progress from simple to complex ideas and skills
 - iii. Ongoing monitoring of student progress
 - iv. Frequent questioning and answering
 - v. Re-teaching of content when necessary
 - vi. Guided and independent practice
 - b. Teacher directed pedagogy operates under the belief that by presenting information to students clearly and explicitly teachers will eliminate the likelihood of misinterpretation. Direct teaching is most suitable for teaching information and skills that are well defined and need to be mastered step by step, for example, mathematical computation, foreign language vocabulary and word recognition and decoding. Research suggests that direct instruction can be beneficial in these situations since it often leads to gains in student achievement and an increase in students’ sense of self-efficacy. Teacher directed instruction is also often seen as a way to manage difficult behaviors within the classroom.
 - c. Despite these benefits teacher directed activities and direct instruction are not always appropriate and/or beneficial. Direct instruction is often inappropriate children with learning difficulties as they often have a limited attention span and are unable to successfully process information presented verbally. This method also does not incite or develop intrinsic motivation by this method is poor. Direct teaching does not meet social or emotional objectives and does not foster students’ creativity and initiative.
- (3) Teacher-guided – Teacher takes a role in shaping a learning activity for students, modeling and overseeing student execution. This is a form of instruction that falls between teacher-directed and purely enquiry-based approaches.

- (4) Enquiry-based – Enquiry-based instruction starts with the teacher posing questions, problems or scenarios, as opposed to simply presenting established facts or portraying a smooth path to knowledge. The process is often assisted by a facilitator (usually the teacher). Inquirers (students) will identify and research issues and questions to develop their knowledge or solutions. Inquiry-based learning includes problem-based learning, and is generally used in small-scale investigations and projects, as well as in research projects. Inquiry-based instruction is principally designed to encourage thinking processes and help learners construct meaning.
- (5) Situated/situational learning - Situated learning was first proposed as a model of learning in a community of practice. At its simplest, situated learning is learning that takes place in the same context in which it is applied. Theorists argue that learning should not be viewed as simply the transmission of abstract and de-contextualised knowledge from one individual to another, but rather as a social process through which knowledge is co-constructed. They suggest that such learning is almost inherently situated in a specific context and embedded within a particular social and physical environment.
- (6) Design based learning (DBL) is a specific type of project-based learning used most often in science and math. It involves engaging students in the process of developing, building, and evaluating a product they have designed. Encourages a learning context in which students are active participants and construct knowledge instead of passively learning it. Research provides evidence that this inquiry based pedagogy increases students' content knowledge and engagement working on the design challenge; enables students to transfer knowledge into another task, learn through collaboration; and develops students' positive attitudes towards academic content.

Approach to Discipline

- (1) Consequentialist (full or modified zero tolerance) - imposes automatic punishment for infractions of a stated rule, with the intention of eliminating undesirable conduct. Zero-tolerance policies forbid even people in positions of authority from exercising discretion or changing punishments to fit the circumstances subjectively. Instead, they are required to impose a pre-determined punishment regardless of individual culpability, extenuating circumstances, or history. This pre-determined punishment need not be severe, but it is always meted out.
- (2) Positive Behavioral Interventions and Support - school-wide systems of support that include proactive strategies for defining, teaching, and supporting appropriate student behaviors to create positive school environments. Instead of using a piecemeal approach of individual behavioral management plans, PBS implements a continuum of positive behavior support for all students within a school. This includes the classroom and non-classroom settings such as hallways, buses, and restrooms. Attention is focused on creating and sustaining primary (school-wide), secondary (classroom), and tertiary (individual) systems of support that make inappropriate behaviors less effective, efficient, and relevant, and desired behavior more functional.
- (3) Restorative Connection - Restorative connection is based on respect, responsibility, relationship-building and relationship-repairing. It focuses on mediation and agreement rather than punishment. The typical response to bad behavior is punishment. Restorative connection resolves disciplinary problems in a cooperative and constructive way. If a student misbehaves he/she is given the chance to come forward and make things right. The student sits down in a circle and works together with the teacher and the

affected parties to work things out. To facilitate the process, the teacher or mediator asks non-judgmental, restorative questions like, “What happened? How did it happen? What can we do to make it right?” Through the discussion everyone gains a better understanding as to what happened, why it happened and how the damage can be fixed. Students come up with a plan and fulfill that plan with the intent that the relationship will become stronger.

Assessment

- (1) Summative - Summative assessments are used to evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined instructional period—typically at the end of a project, unit, course, semester, program, or school year. The tests, assignments, or projects are used to determine whether students have learned what they were expected to learn. Because they are given at the end of the teaching cycle they are generally evaluative, rather than diagnostic (i.e., better used to determine learning progress and achievement, measure progress toward end goals, or make course-placement decisions)
 - a. *Summative standardized* – increasingly popular as a tool because of the wide variety of assessments available on the market and because of an increased focus on having “objective” information about student outcomes. Many schools routinely use summative standardized assessments to measure outcomes. The data is then theoretically consistent and can be used to provide uniform professional development and support.
- (2) Interim – Interim assessments are used to track student learning over the course of a learning unit or project. Interim assessments can be teacher observations, short quizzes, review of writing sample or a conversation with a student. The critical point is that it is diagnostic and can be used to adjust strategy or pace.
 - a. *Interim standardized* - Standardized interim assessments are also becoming more common because of a desire to consistently used data for improvement at a school or grade level. However, the use of standardized interim assessments requires all classroom teachers using the assessment to have taught the same material in a fairly prescribed scope and sequence allowing far less discretion for teachers to adjust their instruction to meet the needs and interests of students.
- (3) Student self-assessment – A process by which students monitor and evaluate the quality of their thinking and behavior while learning, and identify strategies that improve their understanding and skills. Student self-assessment depends on teachers providing clear outcomes as well as easily understood and tracked indicators of progress towards those outcomes. Rubrics are the most common tool to facilitate student self-assessment. As students become older they often construct their own rubrics as a way of taking additional ownership over their learning.
- (4) Student-developed summative projects (portfolios, exhibitions, passage panels)
 - a. *Portfolio*: A student portfolio is a compilation of academic work and other forms of educational evidence assembled for the purpose of (1) evaluating coursework quality, learning progress, and academic achievement; (2) determining whether students have met learning standards or other academic requirements for courses, grade-level promotion, and graduation; (3) helping students reflect on their academic goals and progress as learners; and (4) creating a lasting archive of academic work products, accomplishments, and other documentation. Advocates of student portfolios argue that compiling, reviewing, and evaluating student work over time can provide a

richer, deeper, and more accurate picture of what students have learned and are able to do than more traditional measures that represent a student's achievement at a moment in time.

- b. *Exhibitions* - Students present their work through self-selected media, in a manner most appropriate to the work, and to a relevant community audience.
 - c. *Passages* – Culminating process for students in which they present a portfolio of their work over a period of a year or two. Community members (non-teachers) are often involved in the process of reviewing the work and speaking with the student to allow him/her to explain areas of improvement or particularly strengths. Passages often culminate in a formal advancement to a new grade or level.
- (5) Authentic assessment pieces – Pieces that are the natural output of a body of exploration or work that has been undertaken. May be a performance, a speech to a city council – the final product is determined by the project that was undertaken not by the need for a certain type of assessment or specific form of data to be collected that is consistent across a classroom or school. When applying authentic assessment to student learning and achievement, a teacher applies criteria related to construction of knowledge, disciplined inquiry, and the value of the achievement beyond the school. Authentic assessment tends to focus on contextualized tasks, enabling students to demonstrate their competency in a more real-world setting.

DRAFT