McGuire Memo

The Next Generation of Westside Community Schools

Introduction
Imagine a school district where students and teachers are fully engaged in the learning process. A place where students design and drive their educational experiences under the guidance of qualified staff. A school district where students and staff pursue their passions and where they develop their strengths and talents to find success.

Is it possible for a school district to seize the opportunity to build upon its strengths to create such a student-centered environment? I believe it is not only possible, but also imperative that we do this for our young people. It is clear that students today want more freedom to design their own educational experiences. Our profession needs to create school cultures that respect students and their abilities and skills; we need to trust our students. We need schools that are designed for knowledge work and that do not mimic factory work. We must leave the industrial model of education behind or risk young adults becoming disengaged with their schooling.

It is my sense that public education is at a crossroads nationally and is in flux in the Metro area. Our challenge is to create student-driven learning environments. Our goal is to prepare our next generation of learners to confront a rapidly changing global society. Our work is to create a vision for the future and to develop a set of policy recommendations and implementation strategies to accomplish our goal. It is important and critical work.

This document will include:
- The context of change in society
- The current state and historical perspective of public education
- The future trends in public education
- The local context
- A set of observations from my transition work
- A set of recommendations outlining initial steps for the future of Westside Community Schools

The context of change
Otto Scharmer in his book *Theory U* explains that systems such as healthcare, public education, world politics, finance, and environmental systems are not providing the results we expect or want locally, nationally, or globally. All systems are changing. For some reason society is unable to identify and understand that change is constantly occurring. Consequently, people tend to deal only with the symptoms of change due to short-term thinking, never taking the long-term view of an evolving society.

The following two examples demonstrate the disruptions felt in society. Our profession is not immune to these types of distractions.
In Thomas Friedman’s book *The World is Flat*, he describes the impact of globalization. Many people feel that America lost its business edge, but in reality, the rest of the world began to catch up with American businesses as globalization occurred. The auto industry is a great example of this globalization. Fifty years ago an American auto company made nearly every car on the road. Today, they are a fraction of the market. Our students must be prepared to live and work in this global village.

Another important disruption to society is found in past and present technological advances. The silicon chip and laser technology have led society to a new frontier in the area of computing. Its impact on education is initiating new ways of knowing and learning that are causing us to rethink our profession.

In fact, two disruptions occurred in education that signaled to educators that industrial model was beginning to fail. The first was the space race and the Russian launch of Sputnik. The second was in 1983 when the *Nation at Risk* report was published, but more on that later.

**The current state of public education**

Today’s schools were designed at the turn of the century, albeit the 20th century. That model served our country well for 50 to 70 years. At that time, the mission was to prepare students for factory work; schools were designed to imitate that work environment. The expectation was only to finish high school; just 13 percent of students went on to complete college. Consequently, many students dropped out prior to graduation and were employed in factories of that era.

In today’s fast-paced global world we can no longer accept students leaving school prior to graduation or becoming disengaged while in school. The stakes are too high for our children who now exist in a very complex world that is competitive and changing rapidly. We no longer have plentiful employment available for those who drop out of high school. Today’s educational opportunities are not consistently meeting the expectations of this or future generations and their employers.

Yet, our schools remain entrenched in this industrial model of the 1890’s. Reformers continue to tinker around the edges of educational institutions bound by the legacy of this outdated model. Schools are now expected to educate every child to take his/her place in a global society. No matter how hard we work or how committed we may be to our students, the current configuration cannot be easily reformed. We need to design a system that works for today’s learners.

The cavalry is not coming to our rescue; educators must take the lead in designing and sustaining engaging teaching practices. Since no new money will be forthcoming in the short-term, educational leaders will need to use current funding efficiently to transform their systems. It may mean that schooling looks different than what we remember from our experiences. It may mean the roles of educators are less about knowledge acquisition and more about navigating this knowledge with students. It
may mean that we educate kids in ways that they learn best individually to ensure that all students are at or above grade level by fourth grade. By focusing on PK-4, we may avoid the high cost of remediation. Districts may reallocate funds to support individualization now labeled personalized learning.

The historical perspective
In many ways, I feel public education lost its way after the Nation at Risk report was published in 1983. The report’s recommendations focused on reform of an outdated system incapable of meeting the needs of today’s society. As a result, we seemed to chase reform after reform, finally landing on this idea of high-stakes testing as the Holy Grail of accountability and student progress. We did more of the same in hopes of different results. Sadly, we missed a great opportunity to redesign our educational system.

Public education must remember why it emerged in our democracy if we are to educate and engage all students who enter our classrooms. Each generation of learners is asked to acquire knowledge, skills and habits to contribute to society. They are found in the following*:

- Develop the whole child academically, socially, and physically
- Nurture ethical citizens and leaders who contribute and thrive in a global society
- Promote cultural literacy
- Foster creative, collaborative, adaptable, curious, self-motivated, critical thinkers
- Develop skills to enable economic self-sufficiency
- Instill the democratic values, principles and beliefs on which our society exists
- Educate for life, not merely more school


Additionally, we cannot forget the historical roles that schools have played in society. The roles identified through a review of the historical functions of schools are the following: educational, custodial, community building/enrichment, and economic. These identified roles must be addressed as we transform our schools for the new mission of engaging all students. (CESA #1, 2010).

However, we cannot merely implement reforms to the current system, we must design future educational experiences by taking the best from today and by using those practices to shape the emerging future of public education and specifically the Westside Community Schools. It is achievable if we build an educational future for all children that we would want for our own children.

The future trends of education
In 1920, John Dewey, noted educational leader, remarked, “we don’t know what kids will need to know in 1944.” Every generation of educational leaders grapples with
educating current students for the future. Westside’s current kindergarten class will graduate in 2025 and retire in 2082. We are faced with designing educational opportunities in a world that is constantly changing, challenging us to educate every student for an unknown future.

The drivers of change are seen throughout all sectors of public and private industry. Educators must learn from other sectors so that we may redesign our system where appropriate. The status quo will not be acceptable for our children as they step into a world that is very different than the one their parents entered.

Fortunately for us, the technology already exists in other sectors of society that will allow us to personalize/customize the learning of our children and our staff. Companies such as Amazon Books know what genres of literature we like to read and then offer us similar selections to purchase. Pandora Internet radio allows us to customize the music we want to listen to on our computer. Social media sites such as Facebook, LinkedIn, and Twitter are changing how and with whom we communicate/network through customization.

Today, Apple is developing the ability to place textbooks on an iPad “virtually” replacing the traditional textbook at affordable prices. I recently “enrolled” in an iTunes U class that facilitates anywhere/anytime learning. I was able to customize the class and chose the materials and resources I wanted to use for my learning.

Further, companies like Cerner Health Information Technology customize and personalize healthcare by integrating and managing electronic patient records. A doctor is able to order a procedure that is now tracked into the system. It creates a common patient profile so that physicians may consult from various locations to make healthcare decisions for that patient.

Imagine that each student could examine his/her learner profile and collaborate with his/her teachers and parents to design specific learning opportunities that maximize the learners’ strengths. This profile helps parents and teachers assist students with educational decisions. But more importantly, the students know how they learn best and begin to take ownership in their learning choices. By increasing student ownership and meeting the individual needs of each student they become more committed to their own learning. We shift from a culture of compliance to that of a learner committed to his/her learning experiences.

Most likely this shift from learner compliance to learner commitment will blend face-to-face instruction with that of on-line learning. Many predict that nearly 50 percent of all high school classes will be taught on-line within this decade. Teachers will assist children as they excel in solving complex real-world problems and in developing skills such as creativity, collaboration, communication, and critical thinking. Students will engage in activities that are personally relevant and meaningful to them as they become proficient with these skills.
No longer will teachers be bound to the inch deep and mile wide approach to learning. Teachers will build stronger relationships with students, fully engaging students and teaching them how to go about this work without an educator constantly directing them. These personal relationships will be very beneficial for students who depend on the student/teacher relationship to build engagement and persistence leading to academic success.

This transformation is about designing learning activities based on our students’ strengths, interests, and passions. Teachers will work with students to find each learner’s “sweet spot,” where instruction is sufficiently challenging to each student. Studies show that students should have a reasonable hope of success or risk becoming disengaged because their persistence wanes.

The following list contains examples of transformative practices that could be explored and/or improved within a rigorous curriculum to better meet the needs of unique learners in District 66*.

- Learning and/or progress based grouping
- Small, collaborative, flexible learning communities
- On-going, embedded and dynamic authentic formative assessments
- Mobile learning systems that incorporate anywhere/anytime learning environments
- Student-centered, relational staffing featuring professional partnerships with experts, certified staff, community resource people and mentors, with the emerging new roles of educators
- Learning plans that recognize and integrate the “whole child” range of social, emotional, and physical needs through “real world” project based learning opportunities. *Adapted from CESA #1, (2010).

The local context
The good news for the Westside Community Schools is that a culture of individualization and personalization has existed for nearly two generations of learners and several Boards of Education. The District’s 50 Years of Excellence book highlights this when, in 1972, then Superintendent H. Vaughn Phelps explained the importance of the District’s emphasis on individualization and personalization of learning. He stated:

The real purpose of education is to provide an opportunity for young people to grow and to develop into the finest kinds of human beings possible. Individualization is important because each human being is important as an individual, with his own learning strengths and weaknesses... A child should never be bound by the capacities of other students (Boyd, 1997).

During the past 65 years, the District has followed this philosophy to create opportunities for students to reach their full potential. District 66 implemented many innovative instructional initiatives that promoted individualized student learning. The curriculum was individualized in varying degrees in math and reading with other content areas following suit. Further, flexible scheduling was
implemented throughout the District. However, the two most important initiatives that supported this approach were implemented in 1967 and 2004.

First, the modular schedule, implemented in 1967, provides time in a teacher’s schedule to work with students individually. The beauty of the modular schedule is that teachers are able to “call back” students for additional help or to complete an independent study in an area of interest or passion. This time devoted to personalized learning is one key for the future of the District.

Technology is the second key for the future of the District. The grade 8-12 laptop initiative approved by the Westside Board of Education further opened the door to individualization. By granting technological access to all students and connecting them with the potential of the computer, students and teachers could begin to experiment with anywhere/anytime learning and other transformative opportunities. These technological innovations are available to younger students as well. For instance, in our kindergarten classes, students use iPads to facilitate their learning.

These initiatives were accomplished by inviting the community, the staff, and more importantly the students, into the conversation. These initiatives would not have been sustained without the support of these key stakeholders.

The District is now ready to take the next step in the evolution of individualization by using current technology to customize learning for every student and meet the needs of unique learners.

We need your help and your advice as we move forward to fulfill the words of H. Vaughn Phelps. “…Education in the future will be a continual process of improving and renewing for the individual. If the past 25 years are any indication, by 1997, continuing education will have arrived; there will never be a formal end to school” (Boyd, 1997).

Observations and recommendations
During the past several months I have observed and listened to the District and its key stakeholders. Please let me share those observations and finish with a series of recommendations intended to move the Westside Community Schools forward.

A culture of innovation exists in District 66 and I sense that staff and community would like the opportunity to continue to build upon past curricular innovations and initiatives to keep the District educationally current and relevant. Additionally, it is clear to me that technology has played a prominent role in the development of this school district and is expected to in the future.

Historically, the culture depended on teacher and staff leadership, student involvement, and community collaboration to educate our children. These groups are more important than ever to the future success of District 66.
District 66 has always belonged to the residents of District 66. In fact, H. Vaughan Phelps defined the District as a *community school* in 1972. He went on to say:

*The Westside Community Schools were developed as a unique concept, at least in this area, in which community would have a greater involvement in helping decide what their schools were to become. And I hope over the years, that the parents and residents of the community have felt that they have been able to make an impact on the direction of the school system...* (Boyd, 1997).

A variety of themes emerged from my transition work. People throughout all constituencies felt that the District was doing very well. These same people are committed to improving the Westside Community Schools and to helping the District become the best District possible. In my conversations, several areas of concern were identified.

First, that a stronger sense of community must be developed both internally and externally. It was indicated that a shared vision was needed to connect people to something greater than themselves. As an example, one teacher told me “*No clear coherent vision for the school district exists, no unifying thread to our work exists.*”

Along with that, many people felt that communication could be more open and transparent. Many people did not feel that the District was clear with its direction and others felt that District leadership did not listen very well and that people’s voices were not heard.

Many internal constituents felt that the current governance structure did not encourage innovation or provide opportunities for ideas to bubble up from teachers and principals. It appears that a systemic imbalance between District initiatives and school initiatives exists. In my experience, a positive creative tension usually develops between central office and school sites to create a balance of district ideas with those found within the schools. If this balance is not intentionally developed it may lead to low morale, mistrust and a perceived loss of autonomy. An example of this thinking came from an administrator who told me, “*I would like to see more autonomy among schools to make decisions that benefit their department/school.*”

People were concerned with the changing demographics of the District. They suggested we needed to examine our current academic practices in light of those changing demographics to ensure that we meet the needs of our unique learners. The following Board Member comment exemplifies the sentiment of a majority of those I spoke with “*...that the District accept children/families where they are and help them grow and meet their potential.*”

Funding was a concern throughout all groups. They questioned how the District will maintain its rich tradition of excellence in light of the existing gaps between revenue and expenses. Financial stability is critical to the future of the District.
Additionally, a few people expressed concern for our aging elementary facilities and the need to update them to meet the needs of our students.

Finally, many people were concerned about the impending retirements and the loss of leadership throughout the District. The leadership found in District 66 amazes me. To support our leadership transition, retiring leaders are currently mentoring emerging leaders. Additionally, District 66 continues to be a destination district and will attract quality applicants. Finally, the District has historically invested in its people and should continue to do so throughout this current transition.

This work is in line with the systems approach I highlighted at our “back to school” staff meeting. For us to find success, we must collaborate to maintain and to improve our systems in the areas of vision, data/accountability, shared governance, community engagement, and instruction. The following recommendations focus on key initial steps as we begin a journey of transformation.

In the short-term, I am recommending the following:

• **Engage in an inclusive visioning process that will align our vision, mission, and core beliefs with a set of strategic goals to guide our school district.**

• **Work with software firms to create a data collection system, including a learner profile that allows teachers to develop customized student learning pathways.**

• **Build inclusive governance structures that encourage innovation through collaboration, and result in positive school and district cultures.**

• **Collaborate with faculty to develop personalized and differentiated professional development opportunities supporting staff as they innovate with student customized learning pathways.**

• **Examine our current technology infrastructure for future expansion to meet the needs of this transformation of District 66.**

The future is filled with ambiguity. I am not yet certain what this means for our current roles or us. I am not yet certain about our students’ educational potential once we have redesigned their learning experience. Yet, I do know that the hallmarks of this school district are its innovation and its vision. Our staff and community are poised to discuss these ideas and to design a school system that is focused on each student and their unique learning needs.

Respectfully submitted,

Blane K. McCann
Superintendent
Westside Community Schools
Suddenly I remembered why I had gone into teaching in the first place. I had forgotten, and I didn’t even know I had forgotten. Then I remembered what I had always thought teaching would be all about.

—Middle School Teacher in the Enrichment Cluster Research Project

Most teachers have had, at some point, a vision about what they thought teaching would be all about. They pictured themselves in classrooms with interested and excited students listening in rapt attention to fascinating tales about dangerous midnight movements on the Underground Railroad. They envisioned young people eagerly gathered around a science table discovering the mysteries of how things work or experiencing the Ah-ha that occurs when the relationships between a set of numbers starts to make sense. And they saw in their mind’s eye a child’s joy when hearing praise for a creative story or science project, eager to work in suggestions for making the project even better. And the most visionary prospective teachers fantasized about the letter or phone call from a former student saying that a play she wrote was going into production, and it all started when she was a student in the teacher’s creative writing class so many years ago.

For many teachers, there is a disconnect between their vision of a challenging and rewarding career and the day-to-day grind so rampant throughout the profession. Perhaps most ironic about the separation between the ideal and the reality of today’s classrooms is that most teachers have the skills and motivation to do the kinds of teaching about which they once dreamed. Unfortunately, the lists, regulations, and other peoples’ requirements that are imposed upon them “from above” have resulted in both a prescriptive approach to teaching and a barrier to creating a challenging and exciting classroom. Over prescribing the work of teachers has, in some cases, lobotomized good teachers and denied them the creative teaching opportunities that attracted them to the profession in the first place. In her 1997 study, Linda Darling-Hammond reported that most teachers felt their views of good teaching were at odds with those of their school districts. Seventy-nine percent of the teachers participating in this study
indicated that concerns for children and for learning are central to good teaching, but only 11% said that their school district shared this view. A large majority of teachers (75%) believed that their school officials favored behaviorist theories of learning rather than theories that are more child centered and constructivist.

This guidebook provides a rationale and practical set of guidelines for a program that supports a different brand of learning from the approach that guides activities in many classrooms today. We call this brand “student-driven learning” and the vehicles designed to deliver this more creative method of teaching are enrichment clusters. Enrichment clusters are student-centered—directed by student interest and the development of authentic products for real audiences—and are based on both common sense and research that challenges the assertion that important intellectual growth can only be charted through an information transfer and standardized testing approach to education (Gentry, Reis, & Moran, 1999; Reis & Gentry, 1998). We do not think that all prescribed, textbook-driven, standards-based teaching is bad, nor do we criticize the current national movement to improve the achievement test scores of our nation’s young people. We believe that a good education balances a prescribed curriculum with regular, systematic opportunities that allow students to develop their abilities, interests, and learning styles. This balance must be achieved in an atmosphere that places a premium on enjoyment and collaboration as well as opportunities to engage in first-hand investigative activities and high levels of creative productivity. Even within the current trend toward an externally determined, “top-down” curriculum, teachers must have some opportunities to teach in a manner that is more consistent with the ideals that attracted them to the profession. As one teacher put it, “I am tired of being the administrator of a textbook and the victim of a system that fails to recognize my talents and creativity. Enrichment clusters gave me the opportunity to do some real teaching.”

The main purpose for developing an enrichment cluster program is to create a time and a place within the school week when student-driven learning is on the front burner of student and teacher activity. Although we would like to see more of this type of learning infused into the overall curriculum, the external forces that dominate most schools are simply too powerful to bring about massive, immediate change. Educational change seldom takes place at the center of things; instead, it evolves on the fringes where dedicated people exercise their judgment in the best interest of serving the young people for whom they are responsible. And successful change occurring on the edges has been found to seep its way toward the center. In the research we conducted on enrichment clusters (see Chapter 6), we found that many of the strategies teachers used to facilitate enrichment clusters found their way into everyday teaching practices in regular classrooms. Through strategies such as creative compliance and the infiltrator model of school change, we have witnessed remarkable changes taking place in mainstream classrooms.

**Why Student-Driven Learning Is Important for Our Schools and the Nation**

Student-driven learning is based on an inductive approach to learning that provides students with opportunities to apply and extend the basic knowledge and skills that are the legitimate
outcomes of a deductive learning model. Our aim is not to do away with deductive learning but, instead, to achieve balance between deductive and inductive learning. Introducing inductive learning into the school is important for several reasons. First, schools should be enjoyable places that students want to attend rather than places they endure as part of their journey toward assimilation into the job market and the adult world. Second, schools should be places in which students participate and prepare for intelligent, creative, and effective living. This type of living includes learning how to analyze, criticize, and select from alternative sources of information and courses of action; how to think effectively about unpredictable personal and interpersonal problems; how to live harmoniously with one another while remaining true to an emerging personal system of attitudes, beliefs, and values; and how to confront, clarify, and act upon problems and situations in constructive and creative ways.

All of America knows that there are two school systems in our nation. One school system—the one that serves poor and mainly minority students—has generally failed to make the kind of progress that leads to improved achievement, progression into higher education, and improved standards of living. Billions of dollars and massive reform efforts aimed at addressing the problem of poor schools have focused largely on compensatory and remedial models. Most would agree that the positive results of these school reform efforts have ranged from minimal to nonexistent.

America's other school system—the one that serves mainly middle-class white students—has, by contrast, been successful enough to produce one of the most affluent and productive societies in the history of the world. Herein lies the problem: Endless state regulations, overly prescribed curriculum, and horrendous pressures to "get the scores up" have caused both school systems to buy into using more and more highly prescriptive didactic models of teaching. As a result, schools continue to withhold high level learning opportunities from poor children, and they are now slowly dismantling those aspects of our successful schools that have contributed to our nation's inventiveness, entrepreneurship, and creative productivity.

Student-driven learning is important because our society's economic and cultural growth, even our democratic way of life, depend on an unlimited reservoir of creative and effective people. One idea for a new product or the innovative and entrepreneurial action that results in the start of a new business has the potential to create millions of jobs or cultural enrichments that contribute to a better way of life for untold numbers of Americans. A small number of individuals will always emerge as creative thinkers and problem solvers, but we as a society cannot afford to leave the emergence of such leaders to chance, nor can we waste the undeveloped talents of so many of our young citizens who are the victims of poverty. All students must have opportunities to develop their unique talents and potentials and to lead constructive lives without trampling on or minimizing the value of others in the process. We have no argument with the importance of basic skill learning, but without an equal investment in the teaching and learning that promotes talent development, leadership, and creative productivity, our society may unwittingly be letting our schools devolve into the kind of education system that resembles a third world country.
Learning Theory 101: The Short Course

Every teacher remembers taking a course in educational psychology in which they devoted a good portion of time to various theories of learning. Informal surveys with hundreds of teachers, however, reveal that very few remember much about these theories; and in most cases, if they do, they see little relevance between what was covered in the course and the work they do in classrooms. However, a couple of ideas about learning theory from those courses are very relevant, and we will focus on those few points. (Readers interested in a more detailed discussion of the theory underlying the brand of learning upon which enrichment clusters are based can refer to “The Definition of High-End Learning,” which can be found at www.sp.uconn.edu/~nrcg7/sem/semart.html.)

So let us begin Learning Theory 101. All learning exists on a continuum ranging from deductive or didactic approaches at one end to inductive or constructive approaches at the other. This continuum exists for learners of all ages—from toddlers to doctoral students—and it exists in all areas of curricular activity. The continuum also exists for learning that takes place in the nonschool world, the kind that young people and adults pursue as they go about acquiring new skills for their jobs or working in the kitchen, the garden, or the workshop in the basement. (There are, of course, occasions when a particular approach falls between the two ends of the continuum. However, for purposes of clarifying the main features of deductive and inductive learning, we will treat the two models as polar opposites.) Both models of learning and teaching are valuable in the overall process of schooling, and a well-balanced school program must make use of basic and high-end approaches as well as the combined approaches between the two ends of the continuum.

The Deductive Model of Learning

Although many names have been used to describe the theories that define the ends of the continuum, we simply refer to them as the Deductive Model and the Inductive Model. The Deductive Model is familiar to most educators and guides most of what takes place in classrooms and other places where formal learning is pursued. The Inductive Model, on the other hand, represents the kind of learning that typically takes place outside formal school situations. A good way to understand the difference between these two types of learning is to compare how learning takes place in a typical classroom with how someone learns new material or skills in real-world situations. Classrooms are characterized by relatively fixed time schedules, segmented subjects or topics, predetermined sets of information and activities, tests and grades to determine progress, and a pattern of organization that is largely driven by the need to acquire and assimilate information and skills that are deemed important by curriculum developers, textbook publishers, and committees who prepare lists of standards. The Deductive Model assumes that current learning will have transfer value for some future problem, course, occupational pursuit, or life activity.

Deductive learning is based mainly on the factory model or human engineering concep-
tion of schooling. The underlying psychological theory is behaviorism, and the theorists most frequently associated with this model are Ivan Pavlov, E. L. Thorndike, and B. F. Skinner. At the center of this ideology is the ability to produce desirable responses by presenting selected stimuli. In an educational setting, these theories translate into a form of structured training for purposes of knowledge and skill acquisition. A curriculum based on the Deductive Model must be examined in terms of both what and how something is taught. The issue of what is (or should be) taught has always been the subject of controversy, ranging from a conservative position that emphasizes a classical or basic education curriculum to a more liberal perspective that includes contemporary knowledge and life adjustment experiences (e.g., driver's education, sex education, computer literacy). Overall, American schools have been very effective in adapting what is taught to changes taking place in society. Recent concerns about the kinds of skills that a rapidly changing job market will require have accelerated curricular changes that prepare students for careers in technological fields and a post-industrial society. Nowhere is this change more evident than in the emphasis currently placed on thinking skills, interdisciplinary approaches to curriculum, and the use of technology in the learning process. These changes are favorable developments, but the Deductive Model still limits learning because it restricts both what is taught and how the material is taught.

Although most schools have introduced teaching techniques that go beyond traditional drill and practice, the predominant instructional model continues to be a prescribed and presented approach to learning. The textbook, curriculum guide, or lists of standards prescribe what is to be taught, and the material is presented to students in a predetermined, linear, and sequential manner. Educators have become more clever and imaginative in escaping the strictiveness of highly structured deductive models, and it is not uncommon to see teachers using approaches such as discovery learning, simulations, cooperative learning, inquiry training, problem-based learning, and concept learning. More recent approaches include simulated problem solving through interactive computer technology. Some of these approaches certainly make learning more active and enjoyable than traditional, content-based deductive learning, but the bottom line is that there are certain predetermined bodies of information and thinking processes that students are expected to acquire. The instructional effects of the Deductive Model are those directly achieved by leading the learner in prescribed directions. As indicated above, there is nothing inherently "wrong" with the Deductive Model; however, it is based on a limited conception of the role of the learner. It fails to consider variations in interests and learning styles, and it always places students in the roles of lesson learners and exercise doers rather than authentic, first-hand inquirers.

The Inductive Model of Learning

The Inductive Model, on the other hand, represents the kinds of learning that ordinarily occurs outside formal classrooms in places such as research laboratories, artists' studios and theaters, film and video production sets, business offices, service agencies, and almost any extracurricular activity in which products, performances, or services are pursued. The names
most closely associated with inductive learning are John Dewey, Maria Montessori, and Jerome Bruner. The type of learning advocated by these theorists can be summarized as knowledge and skill acquisition gained from investigative and creative activities that are characterized by three requirements. First, there is a personalization of the topic or problem—the students are doing the work because they want to. Second, students are using methods of investigation or creative production that approximate the modus operandi of the practicing professional, even if the methodology is at a more junior level than that used by adult researchers, film makers, or business entrepreneurs. Third, the work is always geared toward the production of a product or service that is intended to have an impact on a particular audience. The information (content) and the skills (process) that are the substance of inductive learning situations are based on need-to-know and need-to-do requirements.

For example, if a group of students is interested in examining differences in attitudes toward dress codes or teenage dating between and within various groups (e.g., gender, grade, students vs. adults), they need certain background information. What have other studies on these topics revealed? Are there any national trends? Have other countries examined dress code or teenage dating issues? Where can these studies be found? Students will need to learn how to design authentic questionnaires, rating scales, and interview schedules and how to record, analyze, and report their findings in the most appropriate format (e.g., written, statistical, graphic, oral, dramatized). Finally, they will need to know how to identify potentially interested audiences, the most appropriate presentation formats (based on a particular audience's level of comprehension), and how to open doors for publication and presentation opportunities. This example demonstrates how knowledge and skills that might otherwise be considered trivial or unimportant become instantaneously relevant because they are necessary to prepare a high-quality product.

All resources, information, schedules, and sequences of events are directed toward this goal, and evaluation (rather than grading) is a function of the quality of the product or service as viewed through the eyes of a client, consumer, or other type of audience member. Everything that results in learning in a research laboratory, for example, is for present use. Therefore, looking up new information, conducting an experiment, analyzing results, or preparing a report is focused primarily on the present rather than the future. Even the amount of time devoted to a particular project cannot be determined in advance because the nature of the problem and the unknown obstacles that might be encountered prevent rigid, predetermined schedules.

Learning Theory 101 Summarized

The Deductive Model has dominated the ways in which most formal education is pursued, and the track record of the model has been less than impressive. One need only reflect for a moment on his or her own school experience to realize that with the exception of basic language and arithmetic, much of the compartmentalized material learned for some remote and ambiguous future situation is seldom used in the conduct of daily activities. The names of famous generals, geometric formulas, the periodic table, and parts of a plant learned outside an applicable, real-world situation are usually quickly forgotten. This is not to say that previously
learned information is unimportant, but its relevancy, meaningfulness, and endurance for future use is minimized when it is almost always learned apart from situations that have personalized meaning for the learner.

Inductive learning, on the other hand, focuses on the present use of content and processes as a way of integrating material and thinking skills into the more enduring structure of the learner’s repertoire. It is these more enduring structures that have the greatest amount of transfer value for future use. When content and processes are learned in authentic, contextual situations, they result in more meaningful uses of information and problem-solving strategies than the learning that takes place in artificial, preparation-for-the-test situations. If individuals involved in inductive learning experiences receive some choice in the domains and activities in which they are engaged and if the experiences are directed toward realistic and personalized goals, this type of learning creates its own relevancy and meaningfulness.

If people do, in fact, learn important content and skills outside of formal classroom situations, then it is important to examine the dimensions of this type of learning and the ways in which real-world learning can be brought into the school. However, bringing anything new into the school can be tricky business. The track record in this regard has been one of overstructuring and institutionalizing even the most innovative approaches to learning. Many educators can remember how the much heralded concept of Discovery Learning ended up being what one teacher called “sneaky telling” and how a focus on thinking skills and creative thinking fell prey to the same types of formulas and prescribed activities that characterized the content-based curriculum that has been criticized so strongly by thinking skills advocates. Even the present fascination with computers and on-line learning is in some cases turning out to be little more than tutoring with electronic worksheets. But if we, as educators, can learn to view the Internet and other media as a vast treasure chest of categorical and searchable information that can be sought out on a need-to-know basis, then we will begin to tap the true value of this resource for inductive learning experiences.

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Student-Driven Learning

To understand the essence of student-driven learning is to compare how learning takes place in a traditional classroom with how someone might learn new material or skills in real-world situations. The majority of classrooms are characterized by an organizational pattern largely driven by the need to acquire and assimilate information and skills imposed from outside the classroom. Contrast this type of learning with the more natural chain of events that takes place in research laboratories, business offices, or film studios. In these situations, the goal is to produce a product or service. All resources, information, schedules, and events are directed toward this goal, and looking up new information, conducting experiments, analyzing results, or preparing a report are activities focused primarily on the present need for information rather than for a distant future. It is these present uses that have the greatest amount of transfer value for future use. When content and processes are learned in authentic, contextual
situations, they result in more meaningful uses of information and problem-solving strategies than the learning that takes place in overly structured, prescribed classroom situations. In short, student-driven learning applies two concepts—(1) high-end learning and (2) the often used (and abused) concept, real-world problems—to the Inductive Model of Learning.

High-End Learning Defined

High-end learning is based on the ideas of a small number of philosophers, theorists, and researchers (e.g., John Dewey, Albert Bandura, Howard Gardner, Maria Montessori, Philip Phenix, Robert Sternberg, E. Paul Torrance, Alfred North Whitehead). The work of these theorists, coupled with our own research and program development activities, has given rise to the concept that we call "high-end learning." The best way to define this concept is in terms of the following four principles:

1. Each learner is unique, and, therefore, all learning experiences must be examined in ways that take into account the abilities, interests, and learning styles of the individual.
2. Learning is more effective when students enjoy what they are doing. Consequently, learning experiences should be constructed and assessed with as much concern for enjoyment as for other goals.
3. Learning is more meaningful and enjoyable when content (i.e., knowledge) and process (i.e., thinking skills, methods of inquiry) are learned within the context of a real and present problem. Therefore, attention should be given to opportunities to personalize student choice in problem selection, the relevance of the problem for individuals and groups who share a common interest in the problem, and strategies for assisting students in personalizing problems they might choose to study.
4. Some formal instruction may be used in high-end learning, but a major goal of this approach is to enhance knowledge and thinking skill acquisition gained through teacher instruction with applications of knowledge and skills that result from student construction of meaningfulness.

Many educators have asked us to be more precise about the goals of enrichment clusters. They want answers to questions such as "What are the specific skills that define high-end learning and how are these skills different from the traditional goals of didactic learning?" To address these questions, we used an inductive rather than deductive approach—that is, rather than making a list from the theoretical literature or our own expectations about goals and outcomes, we examined activities taking place in clusters, evaluated student work and teacher involvement, and drew conclusions based on these actual experiences. In other words, we did exactly what we are recommending students do as they go about pursuing problems in their enrichment clusters.

After carefully examining the work of numerous students and questioning many teachers who participated in the enrichment cluster research project, we were able to identify the following list of specific outcomes. Not all outcomes occurred in every cluster, and the levels to

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1 It is beyond the scope of this book to review the work of these eminent theorists and thinkers; the main concepts or ideas that each person has contributed to this approach to learning can be found in Schools for Talent Development (Renzulli, 1984, p. 203).
which any individual or group achieved these outcomes varied. Taken collectively, however, we believe that these learning behaviors represent a fairly comprehensive list of outcome goals. We recommend that you include such a list in a proposal for or description of an enrichment cluster program. The specific skills that are the goals of high-end learning include developing the ability to

- find and focus a problem that has personal relevance to the individual or group;
- distinguish between problem-specific, relevant and irrelevant information, identify bias in information sources, and transform factual information into usable knowledge that will help solve the problem;
- plan tasks that address the problem, sequence events in their most-logical and practical order for attacking the problem, and consider alternative courses of action and their possible consequences;
- monitor one's understanding at each level of involvement and assess the need for gathering more advanced level information (content), methodological skills (process), and human or material resources;
- notice patterns, relationships, and discrepancies in the information gathered and use this information to refine tasks for addressing the problem and drawing comparisons and analogies to other problems;
- generate reasonable arguments and explanations for each decision and course of action;
- predict outcomes; apportion time, money, and resources; value the contributions of others to the collective effort; and work cooperatively for the common good of the group;
- examine ways in which problem-solving strategies from one situation can be adopted in or adapted to other problem-solving situations (Transfer of Learning);
- communicate in lively and professional ways to different audiences and in different genres and formats.

The ultimate goal of learning that is guided by the four principles and the specific goals or outcomes listed above is to replace dependence and passive learning with independence and engaged learning. Although all but the most conservative educators will agree with these principles and outcomes, much controversy exists about how these (or similar) principles and outcomes may be applied in everyday school situations. Some might view these principles as yet another idealized list of generalities that cannot be easily manifested in schools already overwhelmed by prescribed curriculum and deductive models of teaching. For this reason, we have provided guidelines for developing schedules that inserts enrichment clusters into the regular school week without forcing out other activities (see Chapter 3). By setting aside a time and following a simple set of guidelines, all students will have opportunities to participate in high-end learning experiences sometime during their school week.

The most difficult part of facilitating high-end learning is getting teachers to stop prescribing and to replace traditional instruction with the kinds of "guide-on-the-side" responsibilities that are used by mentors and coaches. People in these roles instruct only when there is a direct need to accomplish a task necessary for developing a product or service. Many teachers who
have served in extracurricular activities as yearbook advisors, drama club directors, 4-H Club advisors, or athletic coaches already have the techniques necessary for high-end learning. The basic characteristics of extracurricular activities follow:

- Students and teachers select the area in which they participate.
- They produce products and/or services that are intended to have an impact on a particular audience.
- They use the authentic methods and advanced level content of professionals to produce their product or service. They may operate at a more junior level than adult professionals, but their goal is exactly the same—to produce a product or service of as high quality as possible within their level of experience and the availability of resources.

The teacher's role in these activities is to guide students as they find and focus a real-world problem, lend a hand as they locate content and methodological resources, and help them understand how to use the resources. For example, in a cluster that examined the incidence of acid rain in the northeastern part of the United States, the teacher taught students how to prepare slides for microscope analysis and, with the aid of a microprojector, showed them how to identify contaminants in their rainwater samples. Direct instruction should take place only when the acquisition of a new skill needs some explanation and demonstration by the teacher.

✓ "Real-World Problem" Defined

The term "real-world problem" has been tossed around so freely and easily in education circles these days that it has become little more than a hollow cliché. Because a good deal of the focus of enrichment clusters is on the pursuit of real-world problems, we feel obligated to provide the reader with as precise a definition as possible about this oft-used but frequently elusive (and illusive) term.

Enrichment clusters are designed to promote the kind of high-end learning described above, and a key concept in organizing and delivering services for this type of learning is application. High-end learning consists of applying relevant knowledge, research skills, creative and critical thinking skills, and interpersonal skills to the solution of real problems. But what makes a problem real? We define a real-world problem in terms of four essential elements.

1. Personalization of the problem. First, a real problem requires a personal frame of reference for the individual or group pursuing the problem. In other words, the problem must involve an emotional or internal commitment to action in addition to a cognitive or scholarly interest or simply wanting to find out more about something. Something that is a real problem for one individual or group may not be a real problem for others. For example, stating that global warming or urban crime are "real problems" does not make them real for an individual or group unless they decide to do something to address the problem. For these reasons, problems pursued in enrichment clusters must not be predetermined by the teacher or externally assigned. Teachers might help in problem finding and focusing, but students within the cluster

2 An exception to this requirement might be an enrichment cluster formed around an established program (e.g., Math League, International Future Problem Solving, Odyssey of the Mind) that specifies one or more problems for state or national competitions. The criterion, however, is partially met because students ordinarily volunteer for such programs.
should be the main decision makers for selecting the problem and the ways in which it will be pursued. This self-selection provides the ownership and commitment that is needed to work on the development of a product or service for an extended period of time. Teachers and other adults can provide guidance, but they must avoid crossing the line from suggestion to prescription. Divisions of labor within clusters (discussed in Chapter 2) allow individuals to specialize in some aspect of the problem and product, thus increasing opportunities for students to place a personal stamp on any given problem and product.

2. **Open-endedness of the problem.** A second essential element of real problems is that they do not have existing or unique solutions for the groups or individuals addressing the problem. If an agreed-upon solution, already existing right answer, or prescribed strategy for solving the problem exists, then it is more appropriately classified as a training exercise. Even simulations based on approximations of real-world events are considered training exercises if their main purpose is to teach predetermined content or thinking skills. Professionals solve problems in order to bring about some form of change in the actions, attitudes, or beliefs of a targeted audience or because they want to contribute something new to the sciences, arts, humanities, or other areas of human productivity. We use the word “new” here in a local rather than global way. It is not necessary for young people to make contributions that are new for all mankind. Replications of studies that have been done many times before can be new in a relative sense if they are based on new data gathered locally or a new wrinkle in the data that makes the study different from the work of others. For example, a group of young people who gathered, analyzed, and reported on data about television-watching habits in their community were contributing information that was new, in a local sense, even though similar studies had been done in other communities.

3. **Authentic methodology and advanced content.** The third essential element of a real problem is that the problem is addressed using authentic methods that applies advanced content—that is, by employing the methodology, knowledge, and materials typically used by investigators and creative producers in the various disciplines. Enrichment clusters ask students to assume the roles of practicing professionals to develop the skills of first-hand investigators as they apply cutting-edge knowledge and content from the area of study. These roles and skills may be at a more junior level than adult journalists, historians, artists, environmentalists, filmmakers, or other professionals, but they are clearly different from the typical school role of student as lesson-learner. Using authentic methods is critical because one of the goals of inductive learning is to help young people extend their skills beyond the usual kinds of products that often result when teachers and students view “research” as merely looking up and reporting information. Authentic methodology lends itself to authentic products.

Similarly, in an enrichment cluster, students construct meaning and consult advanced references and sources as professionals would. Though some reporting of previously known information is a necessary part of most investigations (in the professional world, the pursuit of new knowledge should always begin with a review of what is already known about a given topic), the end result should be a creative contribution that goes beyond existing information that can be found in encyc-
Every field of organized knowledge can be defined, in part, by its methodology, and the methodology of most fields can be found in certain kinds of guidebooks or manuals. These "how-to" books are the key to escalating studies beyond the traditional report writing approach that often passes for research. In later chapters, we describe examples of these books and the ways in which teachers can access various sources of methodological information. Likewise, the content of a field is often organized in books about the specific topic, found on the web, and in current journals of the field. To obtain advanced knowledge, students and cluster facilitators alike can connect with experts in their areas of pursuit.

Every field of knowledge can also be defined in part by the kinds of data that represent the raw material of the field. New contributions are made in a field when investigators apply well-defined methods to the process of making sense out of random bits and pieces of information. Although some investigations require levels of sophistication and equipment that are far beyond the reach of student investigators, almost every field of knowledge has entry level and junior level data-gathering opportunities.

4. Authentic audiences. The final essential element of real problems is that they are directed toward real audiences. Real audiences are a major part of the raison d'être of the practicing professional upon which this model of learning and teaching is based. Professionals produce creative products for specific clients and audiences. Writers hope to influence the thoughts and emotions of their readers, scientists do research to find better ways to cure diseases or make better products, and artists create products to enrich the lives of those who view their works. Students within enrichment clusters also need to develop their work for a real audience. Audiences may change as the work evolves, but they serve as targets that give purpose and direction to the work. Any teacher who has been involved in the production of a school concert or play knows how anticipation of opening night focuses the preparation, precision, and quality of the performance. The same striving for excellence can be found in groups responsible for publishing a school newspaper, yearbook, or developing a community action project. A sense of audience contributes greatly to task commitment and concern for excellence.

Real audiences consist of people who voluntarily attend to information, events, services, or objects. What one group of students did with the results of their local oral history project illustrates the difference between a real and a contrived audience. Although this group first presented their findings to classmates, they did so mainly to rehearse presentation skills. Their authentic audience consisted of members of a local historical society and individuals who read about the student research in the local newspaper and a historical society newsletter.

The Assembly Plant of the Mind

Student-driven learning consists of investigative activities and the development of creative products in which students assume roles as first-hand investigators, writers, artists, or other types of practicing professionals. Although students pursue this kind of involvement at a more
junior level than adult professionals, the overriding purpose is to create situations in which young people are thinking, feeling, and doing what practicing professionals do in the delivery of products and services. Student-driven should achieve the following five objectives:

1. Students receive opportunities, resources, and encouragement to apply their interests, knowledge, thinking skills, creative ideas, and task commitment to self-selected problems or areas of study.

2. Students acquire advanced-level understanding of the knowledge and methodology used within particular disciplines, artistic areas of expression, and interdisciplinary studies.

3. Students develop authentic products or services that are directed primarily toward bringing about a desired impact on one or more specified audiences.

4. Students develop self-directed learning skills in the areas of planning, problem finding and focusing, organizational skills, resource utilization, time management, cooperativeness, decision making, and self-evaluation.

5. Students develop task commitment, self-confidence, feelings of creative accomplishment, and the ability to interact effectively with other students and adults who share common goals and interests.

Student-driven learning focuses on the pursuit of real problems and should be viewed as the vehicle through which everything—from basic skills to advanced content and processes—comes together in the form of student-developed products and services. In much the same way that all the separate but interrelated parts of an automobile come together at an assembly plant, we view this form of learning as an assembly plant of the mind. This kind of learning represents a synthesis and an application of content, process, and personal involvement. The student’s role is transformed from one of lesson-learner to first-hand inquirer; and the role of the teacher changes from an instructor and disseminator of knowledge to a combination of coach, resource procurer, mentor, and, sometimes, a partner or colleague. Although products play an important role in creating these authentic learning situations, the development and application of a wide range of cognitive, affective, and motivational processes are the major goals of this type of learning.

Key Resources

This brief excursion through the complexities of learning theory and the thinking behind student-driven learning is important because it will help you understand the big picture of what we are trying to achieve through enrichment clusters. Although any change from the status quo is always a little intimidating at the start, we have achieved a fair amount of success by gaining faculty, administrative, and parental consensus on a small number of easy-to-understand concepts and related services and by providing resources and professional development related to specific service delivery procedures.

Enrichment clusters represent part of a general plan—called the Schoolwide Enrichment Model (SEM) (Renzulli & Reis, 1997)—to develop the gifts and talents of all young people. Although enrichment clusters can be developed and implemented independently from the
overall Schoolwide Enrichment Model, some of the underlying theory, research, and practical know-how surrounding SEM on developing gifts and talents can be useful to program developers for both background information and for expanding the continuum of services based on this common goal. The following key resources provide valuable information about SEM as well as schoolwide enrichment in general:


  Teachers learn how to streamline the regular curriculum in order to provide time for more challenging enrichment and acceleration activities.


  This manual describes six interest assessment instruments that invite students to examine present and potential interests and explains how to administer and interpret these tools.


  To help teachers identify student preferences for common instructional techniques, this manual details how to administer and score the LSI instruments as well as the theoretical rational for identifying learning styles.


  My Way helps teachers and students determine which kind of products students are interested in creating.


  This resource offers practical advice for achieving educational excellence in today's schools through an SEM program.


  Keeping Total Talent Portfolios for students helps schools assemble important information about students' abilities, interests, and preferences that aid teachers in deciding which types of enrichment and acceleration options will most benefit students.
Educators are beginning to use the term *personalized learning* more and more frequently. In fact, our colleagues note it is not uncommon to see a reference to personalized learning in district strategic plans, journal articles, and books. As we have worked with and for school districts that have implemented approaches that deliberately put students at the center of learning and intentionally plan for how they will respond to proficient students, we have seen engagement and achievement flourish. Teachers and administrators who have embraced concepts such as personalized learning, Genius Hour, and schoolwide enrichment have an advantage in addressing PLC critical question 4 because they have had practice in using these methods that are beneficial to question 4 students’ extension. Therefore, we believe the five elements of personalized learning serve as a wonderful foundation for framing how your collaborative team addresses question 4. In this chapter, we will clarify the concept of personalized learning by defining the term, address misconceptions, outline the five elements we identify as comprising this approach to teaching and learning, and discuss the research and realities that support using this approach in your classrooms and schools.

**Definition of Personalized Learning**

*Personalized learning* can mean many different things to many different people. Is it a free-for-all where students come in and do whatever they want? Is it using a series
of packets that students complete one after another? Is it a personal learning plan? Is it offering classes online with 24/7 access? A grandparent at a community forum we attended may have summed up the confusion best when she asked, “If my grandson wants to learn about clowns all day, can he just do that and forget about math?” To her, personalized learning sounded loose and unstructured, with little direction, and not tied to the standards and indicators of the content being taught. We can assure you that this is not the type of personalized learning we espouse.

Take a moment before you read any further in this chapter to reflect on what your definition is for personalized learning (and, please, leave out any references to clowns). When you reconvene with your collaborative team, share your definitions. In what ways are your definitions similar or different?

INDIVIDUAL REFLECTION

Without reading any further in this chapter, how do you define personalized learning?

If you struggle with a definition, you are in good company. In fact, EdSurge columnist Alex Hernandez (2016) writes that personalized learning is so difficult to pin down, perhaps we should stop trying to develop a definition. We, however, would argue that developing a common vocabulary and set of elements has truly been the keys to our growth in this area.

Also, if yours is like other teams, your conversations may reflect a difficulty in determining the difference between traditional differentiation, individualized learning, and personalized learning. Personalize Learning, LLC founders Barbara Bray and Kathleen McClaskey (2015) offer a wonderful chart and exercise in their book Make Learning Personal: The What, Who, WOW, Where, and Why (see table 2.1, page XX). They (Bray & McClaskey, 2015) break down the differences between differentiation, individualized learning, and personalized learning into nine categories.

Individualized instruction is what takes place when the teacher provides accommodations and customization to the individual learner. Even when individualization takes place with technology in an anytime, anywhere format, it is still the teacher that assigns the tasks (Kallick & Zmuda, 2017). Differentiated instruction is what takes place when the teacher provides accommodations and customization to groups of learners. Again, the teacher still assigns the tasks. Personalized learning is what happens when the teacher provides groups and individuals with accommodations and customization but the learners help drive their own learning.
### Table 2.1: Differentiation Versus Individualization Versus Personalization Chart

<table>
<thead>
<tr>
<th>The Teacher . . .</th>
<th>The Teacher . . .</th>
<th>The Learner . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides instruction to groups of learners</td>
<td>Provides instruction to an individual learner</td>
<td>Drives his or her own learning</td>
</tr>
<tr>
<td>Adjusts to learning needs for groups of learners</td>
<td>Accommodates learning needs of the individual learner</td>
<td>Connects learning with his or her interests, talents, passions, and aspirations</td>
</tr>
<tr>
<td>Designs instruction based on the learning needs of different groups of learners</td>
<td>Customizes instruction based on the learning needs of the individual learner</td>
<td>Actively participates in the design of his or her learning</td>
</tr>
<tr>
<td>Is responsible for a variety of instruction for different groups of learners</td>
<td>Is responsible for modifying instruction based on the needs of the individual learner</td>
<td>Owns and is responsible for his or her learning that includes voice and choice on how and what he or she learns</td>
</tr>
<tr>
<td>Identifies the same objectives for different groups of learners as he or she does for the whole class</td>
<td>Identifies the same objectives for all learners with specific objectives for each individual who receives one-to-one support</td>
<td>Identifies goals for his or her learning plan and benchmarks as he or she progresses along his or her learning path with guidance from teacher</td>
</tr>
<tr>
<td>Selects technology and resources to support the learning needs of different groups of learners</td>
<td>Selects technology and resources to support the learning needs of the individual learner</td>
<td>Acquires the skills to select and use the appropriate technology and resources to support and enhance his or her learning</td>
</tr>
<tr>
<td>Supports groups of learners reliant on him or her for the learning</td>
<td>Understands the individual learner is dependent on him or her to support the learning</td>
<td>Builds a network of peers, experts, and teachers to guide and support his or her learning</td>
</tr>
<tr>
<td>Monitors learning based on the Carnegie unit (seat time) and grade level</td>
<td>Monitors learning based on the Carnegie unit (seat time) and grade level</td>
<td>Demonstrates his or her mastery of content in a competency-based system</td>
</tr>
<tr>
<td>Uses data and assessments to modify instruction for groups of learners and provides feedback to individual learners to advance learning</td>
<td>Uses data and assessments to measure progress of what the individual learner learned and did not learn to decide next steps in the learning</td>
<td>Becomes a self-directed expert learner who monitors progress and reflects on learning based on his or her mastery of content and skills</td>
</tr>
<tr>
<td>Uses assessment of and for learning</td>
<td>Uses assessment of learning</td>
<td>Uses assessment as and for learning with minimal assessment of learning</td>
</tr>
</tbody>
</table>

Source: Adapted from Bray & McClaskey, 2015, pp. 9-10.

Even though this chart (see table 2.1, page XX) highlights differences, we should note that these three concepts are deeply connected. Carol Ann Tomlinson (2017), the guru on differentiated instruction, refers to personalized learning as a type of
differentiated instruction. Andrew Easton (2016), a teacher who works for a midwestern school district as a personalized learning collaborator, offers an interesting perspective on the relationship between these three key themes. He explains that personalized learning is differentiated and individualized instruction on steroids (Easton, 2016).

The key distinction between personalized learning versus differentiation and individualization is students have voice and choice in what they are learning. To us, the linchpin of personalized learning is voice and choice (one of the five elements we discuss in the next section, page XX) and how teachers use it in conjunction with the other elements. That being said, our definition of personalized learning is: an instructional approach designed to nurture learners to discover and broaden the ways in which they learn best so that they become independent learners committed to their learning by encouraging student choice, voice, and interests to master the highest standards possible in a relational environment.

A Misunderstood Concept

[AQ: Added heading here and moved up discussion of Herold article. OK?] As we’ve noted, personalized learning can mean many different things to many different people. While there is a great deal of momentum around personalized learning, Benjamin Herold (2017) explores in an EdWeek article three main critiques educators and policy makers have expressed regarding this learning philosophy: (1) the hype outweighs the research, (2) personalized learning is bad for teachers and students, and (3) big tech + big data = big problems. We’d like to offer our perspective on the points this article raises.

The hype outweighs the research. Some educators are un receptive to personalized learning because there is not a definitive set of research to demonstrate its effectiveness. While the RAND Corporation has done some research in this area, they have not developed studies to cite conclusive evidence. Also, this topic becomes hard to study because the term personalized learning means different things to different people.

While there is not a definitive set of research on this topic, Herold (2017) highlights that there is a great deal of research that supports the fundamentals of personalized learning, which include giving students control over their own learning, differentiating instruction for each student, and providing real-time feedback.
Personalized learning is bad for teachers and students. Many educators are under the impression personalized learning is really just putting learning on the computer where tasks are broken down into smaller segments and students quietly proceed through a program until they reach completion at their own pace. They are concerned that if this is what personalized learning is, it does not offer an inspiring education experience. Herold (2017) notes that that until personalized learning can figure out "the appropriate role for software in the classroom, how much autonomy is best for student learning, and the challenge of maintaining high standards and social interaction when every student is pursuing his or her own path," these concerns will remain high.

We agree that personalized learning is an often misunderstood topic. The difficult thing is that one person might feel it is a computer program that students work at their own pace and another feels it is a way of thinking when designing classroom, activities, or units in a way that works in parallel with the teacher, and they are both correct. There is not one universally agreed on definition. However, to us, personalized learning is the latter of these two conceptualizations. It is teachers philosophically and collaboratively developing instructional strategies that incorporate concepts such as knowing your learner, allowing voice and choice, providing flexibility, using data, and integrating technology. Personalized learning is not, to us, students working on a computer program on their own in the corner of the classroom.

Big tech + big data = big problems. To some, personalized learning means a large emphasis on data hardware and software, which involves technology companies. For example, Mark and Chan Zuckerberg have pledged to invest millions of dollars into the initiative. With this type of involvement, Herold (2017) notes there are concerns about sacrificing student privacy and asks, if students are entering detailed information about their thoughts, preferences, hopes and fears, is that something we are OK with? Herold (2017) also raises the question of whether it is appropriate have formulas and algorithms to determine what students are learning.

Big data and algorithms are not a part of any conversation regarding the personalized learning that we promote in this book or the schools and districts we highlight throughout this book that are using this approach. It is a philosophy and way of thinking for classroom teachers and is not intended to replace the teacher in any way.

It is important to note when studying personalized learning that there are many misconceptions and misunderstandings around this topic. In the following sections, we will describe in detail our view of this concept to ensure that all readers understand personalized learning as we envision and intend it.
The Five Elements of Personalized Learning

While working with groups of teachers implementing personalized learning, we reached a key turning point when we broke down the definition and understanding into smaller parts we call the five elements of personalized learning. These elements serve as the framework for the subsequent chapters in this book.

1. Knowing your learners
2. Allowing voice and choice
3. Implementing flexibility
4. Using data
5. Integrating technology

It is important to note that implementing one of these elements in isolation is not personalized learning. Typically, it takes combinations of the elements to come together to create personalized learning. Grouping students or rearranging furniture does take make a lesson personalized; however, it might be if you discover where students are in their learning with a preassessment and then establish opportunities for voice and choice by offering learning tiered activities to meet the learner at his or her level based on how he or she performed.

Teachers working in collaborative teams will be able to better address critical question 4 if they make it a regular part of their time together and frame their critical question 4 conversations around the five elements of personalized learning. In most cases, question 4 students have likely proven through various traditional methods that they are ready for extension by their performance in class. When this occurs, customization for the individual learner is just a natural fit as their learning needs to move beyond what the teacher intended and planned for every student. Personalized learning provides the framework and discussion starters for teams looking to determine what to do for this type of learner. It further encourages a classroom culture in which students are encouraged to stretch their learning, engraining in students what Carol Dweck (2006) refers to as a growth mindset—a belief in the idea that intelligence can be developed rather than simply inherited. [AQ: Addition OK to introduce growth mindset early on before readers encounter references in passing?]

This philosophy and type of thinking goes beyond asking students to read quietly, help a struggling student, or just hang out while others get caught up. Personalized learning (and its five elements) is a wonderful tool to ensure question 4 students in
every grade band from kindergarten through senior year are successfully extending their learning beyond the learning targets.

The Case for Personalized Learning

When leading conversations about why we advocate for personalized learning and its connection to question 4, we enjoy starting with a simple activity in which we ask participants to recall a time when they, as teachers, had students who were totally tuned out and unengaged with a lesson because they already knew the content, and a time when a student was ecstatic about and very engaged in what they were learning because the teacher respected what they knew about the subject matter. For example, one author, Mark, remembers his first year of teaching eighth grade American History. As perhaps many first-year teachers would be, he wanted to follow the rules and be seen as a good teacher. Many of his units were geared around discussions and lecture about the textbook readings, which would typically be followed up with some sort of activity or simulation, and conclude with a type of assessment. There was one student who was an American Civil War enthusiast. When it came time for the units and activities around this topic, Mark didn’t quite know what to do with him. He would routinely interrupt the classroom conversations to share cool and interesting facts and bring in various artifacts he had collected. While the student was able to share his excitement and knowledge in some ways, there is no doubt that he was bored or at least not given an opportunity to shine or extend his learning. Looking back, offering personalized learning opportunities based on the elements and strategies we feature in this book would have been far more valuable for this one student.

INDIVIDUAL REFLECTION

Think of a time when, as a teacher, a student you were working with was tuned out and unengaged with a lesson because they already knew the content.

We would argue that, like many question 4 students, he played along with what the rest of the class was doing even though he personally didn’t get much out of it. He could have been far more engaged if his teacher had worked with a collaborative team that intentionally and deliberately had planned for ways for him to extend his learning since he already knew the content. Perhaps this student could have presented on a certain battle or chosen an independent project to work on and develop over the three-week unit.
Conversely, we recall an example of heightened engagement when one of the authors was working with his son, who was learning about force and motion in his fourth-grade classroom. [AQ: Identify author] He had previously passed the classroom assessment, which covered the material during whole-group instruction. Not needing additional direct instruction, his son had the opportunity to extend his learning with an activity that was very similar to one done by sophomores in that district’s high school. The son brought home a balloon and said that by the end of the week, he needed to use household items to make a vehicle, and students would win prizes for the vehicles that went the farthest distance. The balloon would ultimately serve as the one energy source that would provide propulsion to the vehicle that he would be creating. For three days, the author watched his son perform various trial-and-error activities to get things just right. After using just the right aerodynamic box, pencils to serve as axles, and old CDs as wheels, the son proudly obtained a third-place finish out of about one hundred fourth graders who completed the activity. The boy profoundly commented, “I was just really proud of myself. I don’t know why. I want to do more of that kind of thing.” Interestingly, the next day, his kindergarten-age brother saw the excitement and energy in his older sibling and was busy making his own vehicle out of household items. Mark’s son was given an opportunity to show that he knew the material (which involves personalized learning elements of knowing learners and using data), allowed to extend his learning, given voice and choice in how he wanted to construct his vehicle (which involves voice and choice), used technology to generate ideas (which involves integrated technology), exercised a growth mindset as he went about multiple trial and errors to make sure his creation would be competitive (which involves flexibility), and got to share his final product in a competitive environment. If we can provide personalized learning opportunities like these to question 4 students, everyone wins.

**INDIVIDUAL REFLECTION**

Think of a time when, as a teacher, a student you were working with was excited and engaged with the content because they were allowed to extend their learning.

It’s likely that student you thought of in the preceding individual reflection was one who, when he or she was engaged, just worked—not because the student had to, but because he or she wanted to—and time passed quickly the student. Learning didn’t just happen to this student; he or she took command of it. This is what Russian researcher Mihaly Csikszentmihalyi (2008) calls flow. Csikszentmihalyi
Personalized Learning

(2008) finds that our best moments occur when we are completely absorbed in an activity, particularly when those activities help us explore our creativity. Flow describes that feeling a person gets when they are totally locked into a task and make progress with what feels like effortless movement. (Csikszentmihalyi, 2008).

As educators, we know what flow is, but it is a challenge to get to it. Using the five elements of personalized learning and making them a regular part of collaborative team discussions is a wonderful way to intentionally and deliberately create opportunities for students to be more engaged and extend their learning. In our experience, question 4 students who aren’t being challenged or given additional opportunities typically just play along to just get by with minimal effort, or find something else to keep their mind occupied. As educators, we would never allow this with struggling students. It is our job as professional educators to give all students an intentional and engaging learning plan.

With any change in an organization, it is important to start with the why (TEDx Talks, 2009). Along with our personal experiences of being engaged and unengaged, the reality that no student is average, the technology- and personalized-rich era in which today’s learners have been raised, the ways in which emotions impact learning, and the connections of personalized learning to deep research help make a strong case for why we advocate for personalized learning as a tool to extend learning.

The Myth of Average

The myth of average presents a compelling case for personalized learning. In a 2013 TED Talk, Todd Rose, a Harvard professor and former high school dropout, describes the design principles that guided the work of the U.S. Air Force in the early 1950s (TEDx Talks, 2013). The Air Force used fighter jets with cockpits made for the average pilot from the year 1926. Thinking that perhaps pilots were just bigger than they used to be, it was determined that new specifications for planes would be needed, based on ten different physical traits. Air Force researchers, at a base in Ohio, measured thousands of pilots to find this new average. In the end, not one of the 4,063 pilots were average in all ten categories. This finding transformed the way the Air Force began to build its jets (Rose, 2106).

The pilots might have been above average in some areas, average in others, and below in still others, so the manufacturers had developed jets for literally nobody. In a bold move, the Air Force called for companies who built planes to no longer build for the average but to design to the edges, which called for designing planes that could be personalized for pilots, so pilots of various sizes could fly (TEDx
Talks, 2013). Because of the new cockpits, pilots were more successful and the pool for pilots expanded. Rose's (Ted TALKS, 2013) presentation gets to the point: when you design for the average, you design for no one. Rose (Ted TALKS, 2013) then connects this story to education, noting that classrooms are the "cockpits of our economy."

Often in education, we plan our instructional activities around what we consider to be the average. Teachers we know have shared with us that, realistically, in typical learning and lesson plan creation, whether alone or as a collaborative team, conversations center around average students who have struggled to learn the material. Hardly any mention is given to the question 4 student. When we plan in this way, we are not really planning for anyone. To further illustrate the myth of average, use the tool in figure 2.1 (page xx) to rate your aptitude on several characteristics educators tend to value in students.

| Individually, reflect on how you would rate yourself in each of the following categories, with a score of 1 being very low and 5 being excellent. |
|---|---|---|---|---|
| Memory | 1 | 2 | 3 | 4 | 5 |
| Language | | | | | |
| Knowledge | | | | | |
| Reading | | | | | |
| Vocabulary | | | | | |
| Curiosity | | | | | |
| Perceptual | | | | | |
| Cognitive | | | | | |
| Interests | | | | | |

Now, add up your columns and divide by 9. What is your average?

How many items did you rate yourself as average (3)?

Figure 2.1: Personal rating exercise.

Visit go.SolutionTree.com/PLCbooks for a reproducible version of this figure.
When we do this activity with groups of educators, it is interesting to see that those who consider themselves to be average are, like the pilots, not average in many areas. For those with an average overall score, it is not uncommon to see only one or two individual areas that actually represent the average. Our students are no different. So, like Rose (TEDx Talks, 2013) suggests, when we plan for the average or the middle, we are not serving the needs of anyone. Personalized learning is a wonderful way to consider designing to the edges.

Our Students’ Immersion in Technology

As of 2018, all K–12 educators teach students born after the year 2000. What are some personal characteristics you believe to be true about students today that are different from when you were a student?

The students of this generation have much different backgrounds and upbringing than many of the people reading this book. First, because these students have always had access to technology that quickly responds to their needs, they have had their entire lives personalized; they have been able to access anything they want on a moment’s notice in the way they want. A colleague of ours has a daughter with a 1998 birthday who is a college freshman. His daughter was born the year Google became available for public use. Students in college have literally not been alive for a day when they couldn’t just google the answer to a question. In fact, many young adults live their entire lives through social media; it didn’t happen if it wasn’t published to the world. Unlike this book’s authors’ generations, these students have full-text articles and books, and experts on social media just a click away.

Educators reading this book probably remember watching television shows like *The Brady Bunch, Happy Days, Family Ties,* or *The Fresh Prince of Bel-Air* with their families and also watching whatever their oldest siblings were watching. We remember when there was one TV in the house and the family watched together. Then, the youngest child in the family didn’t have a say in what to watch and was not allowed to change the channel to something else. Now, because of handheld technology, in some families the youngest doesn’t even use the main TV in the family room. They are watching another TV or are using their own devices, watching the shows they want when they want, with no commercials. Tom Murray (2017) calls this generation the *Netflix Generation,* a term to describe students who use newer platforms like Netflix and YouTube for entertainment. Murray (2017) makes the connection to this idea by calling out a challenge to our profession: “If our existing mindset is
that our job (as teachers) is content delivery, we have to realize that we are being outsourced by YouTube.”

Nearly everything else with technology is personalized as well. We authors remember, when we were much younger, buying our music on tapes, records, and CDs and trying to enjoy all the songs that came on the album with the one hit song we actually liked. However, when we choose songs we like on iTunes, we don’t have to order the rest of the album, and as the app begins to learn our tastes in music, it shares potential songs to buy based on what it knows about us. If someone does a search for a product that he or she finds interesting, that person will suddenly see many ads appear with these items when he or she uses other sites such as social media. Netflix similarly recommends shows for us to watch based on what we’ve already viewed. Whether it is watching television, ordering products, or listening to music, we are all used to and expect personalization.

**Emotions and Learning**

As authors, we had the chance to sit in on a series of conversations with Mary Helen Immordino-Yang, associate professor of psychology at the Brain and Creativity Institute at the University of Southern California. Two of us authors enjoyed professional opportunities that allowed us to meet with Immordino-Yang on multiple occasions from 2015–2017 and speak with her personally on the topic of emotions and learning. In these conversations with us, Immordino-Yang convincingly shares that all learning is emotional (personal communications, 2015–2017). When educators recognize that people only think deeply about things they care about, it becomes clear that asking students to recite or recall facts may not be the most effective strategy. In fact, in her studies on individuals with certain brain injuries, Immordino-Yang (2016) finds that when learning is devoid of emotion, being able to apply what was learned in a novel situation does not happen (Damasio, 1999; Fischer & Biddell, 1998). In other words, proficient and advanced students that learn how to play the school game, sit quietly, and get through the traditional tasks of schools as quickly and efficiently as possible are likely going to struggle when it is time to apply their learning outside of school. Teaching and learning with the end goal of a good grade on the material from the book is less effective and lacks the emotional aspect of learning. This embodies the old saying that someone is “book smart, but not street smart.” To challenge and push learners, especially those question 4 students, it is our job to make learning emotional and to connect their learning to what they will need to know and be able to do outside of the classroom.
Emotion and cognition go hand in hand. In education, we ask students to learn, pay attention, remember, make decisions, motivate, and collaborate with others. Emotion affects all of these important learning factors. The question isn't whether we should pay attention to emotions. For educators the question becomes, How do we leverage the emotional aspects of learning in education?

Immordino-Yang (2016) shares another key finding: the toggling that takes place when the brain is looking out (actively learning) or looking in (resting). While we all know the brain is never truly at rest (it is always working to keep us alive and manage biological functions necessary for life), we do have times when we turn off external stimuli and rest our brains to a certain degree. Day-dreaming, reflecting, and just thinking are key components of what takes place when we turn off the external stimuli. In listening to and reading study after study (Buckner & Vincent, 2007; Esposito et al., 2006, Fox et al., 2005; Raichle et al., 2001; Seeley et al., 2007) cited in Immordino-Yang's (2016) work, it seems logical to suggest that it is important for educators to consider providing students the opportunity to spend time looking out and looking in.

While we certainly don't want to make a claim or post the headline that says, "Neuroscience says personalized learning works," we do feel validated because what we know about the connection between emotions and learning supports the personal learning strategies we describe in this book. In personalized learning, teachers give students opportunities to emotionally connect with what they are learning and time for self-reflection. Based on all that she has done in the field, we asked Immordino-Yang what her ideal classroom would look like. She shared that her ideal classroom, which would of course look different in each environment, would be one where all students are engaged and generally willing to share what they are doing. Students may say they are doing great, not doing great, or just doing OK, but they would know why this is so and what it would take to do better (M. Immordino-Yang, personal communication, April, 2017). Immordino-Yang also said in her ideal environment, the teacher would be able to tell you one thing about which each student is an expert. To us, this sounds a lot like personalized learning.

**Research on Personalized Learning**

While there is not a great deal of research about personalized learning, the limited extant research is promising. Some specific studies include a 2014 Bill and Melinda Gates Foundation report featuring RAND Corporation research and a 2015 follow-up report (Panc, Steiner, Baird, & Hamilton, 2015). The two-year study
(Bill and Melinda Gates Foundation, 2014) includes five thousand students attending twenty-three charter schools that began implementing personalized learning in 2012. There are some promising results, as gains in mathematics and reading scores are significantly higher than a comparison group’s. Effect sizes are .41 in reading, and .29 in mathematics (Bill and Melinda Gates Foundation, 2014). Note that effect sizes allow researchers looking at others’ work, to compare their results, even if they used different statistical measures. Effect size predicts whether or not the strategy would work and it helps predict how much range in the scenarios.

In a 2015 follow-up report, the RAND Corporation uses a larger study of sixty-two schools involving more than eleven thousand students, which again reveals gains in mathematics (.27) and reading (.19) when compared to control groups (Pane et al., 2015). Perhaps even more promising, the 2015 report states the schools in the original study continue to see gains, and those who had the most growth are students who began with lower achievement levels. A 2017 report (Pane et al., 2017) notes that schools who were awarded funding through the NGLC (Next Generation Learning Challenge) experienced positive achievement effects in mathematics and reading, with statistical significance in reading, and that levels of achievement relative to grade-level norms appeared to benefit.

Additionally, Jim Rickabaugh shares impressive data about work from districts in Wisconsin (J. Rickabaugh, personal communication, March 4, 2017). He notes that in an unpublished report from the personalized learning organization CESA, where he served as project director, there are specific examples from three different districts showing increases in projected growth in areas such as mathematics and reading on Northwest Evaluation Association Measures of Academic Progress tests after incorporating personalized learning strategies. [AQ: The personal communication citation implies that the report information was conveyed through this personal communication. Also, I cannot locate this report anywhere online or find evidence of its publication. OK to introduce as unpublished and cite personal communication for references to the report? Please also ensure the organization name and Rickabaugh’s connection to the organization are listed correctly here. Thanks.] In the study cited in this report, all seventh-grade students were evaluated by how they performed on the Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) assessments. [AQ: Edits to clarify what “MAPS testing” referred to. Please verify this is correct. Thanks.] This is significant, as even the top performing students were measured for academic growth. In this example, 73.6 percent of the students saw growth in their own learning.
another middle school implementing personalized learning strategies, a significant number of students completed top-level mathematics courses and were ready for pre-calculus when they entered high school. In yet another middle school, a district with scores typically above the eighth grade normed referenced test, data indicate that at each grade level at the middle school, students, even the top performers, showed an average 25 percent growth in college readiness in English, mathematics, reading, and science. The report also shares qualitative findings that reference the power of personalized learning.

While it would be wonderful to have a broader range of research that specifically ties to personalized learning, the best case for the topic comes from Professor John A. C. Hattie’s (2009, 2015) work, which includes a great deal of deep research that reflects the underpinnings of personalized learning. Hattie, who many consider to be the most influential education researcher, regularly updates a ranked list of the influences that impact student learning (Visible Learning, n.d.b). Of the top items, we find the ones in the following list to be in direct alignment with personalized learning. Note the numbers in parenthesis are the effect sizes. Hattie determines that the average effect size of all the strategies or interventions is 0.40. The list ranges from 1.62 (teacher estimates of achievement) at the top to -0.9 (physical influences of ADHD) at the bottom.

- **Teacher estimates of achievement (1.62):** Teachers knowing their learners, developing a plan to ensure student success, and then following the plan

- **Self-reported grades (1.33):** Teachers getting to know learners by learning what the students’ expectations are, and then working with the students to exceed them

- **Cognitive task analysis (1.29):** Instructional strategies that require a lot of cognitive activity from the learner and include items such as decision making, problem solving, memory, attention, and judgment

- **Strategy to integrate with prior knowledge (.93):** In order to acquire deeper learning, deliberately activate prior knowledge and then make relations and extensions beyond what students have learned at the surface phase

- **Teacher credibility (.90):** Students perception about whether or not the teacher is high quality
When They Already Know It

- **Teacher clarity (.75)**: Teachers providing a clear explanation about what is expected of students (goals and success criteria) before providing instruction.

- **Feedback (.70)**: Teachers providing immediate feedback, which aligns very closely with formative assessment, to learners to maximize student learning; this also includes feedback from the student to the teacher.

While these items do not specifically mention personalized learning, the teacher actions they describe are in close alignment with the five elements of personalized learning you will learn about in the upcoming chapters. It is hard to argue against personalized learning when deep research so clearly aligns with this work.

Further, in conversations with teachers who are implementing personalized learning, we continually see and hear about how it ignites student learning. It is hard to measure what a teacher is telling us when she says, “I just feel it,” but the students’ energy, engagement, and excitement to learn are palpable.

Just as important, the students aren’t the only ones who benefit from this approach. In reference to personalized learning, one teacher we spoke to stated, “The spark is back.” The teachers we talk to are enjoying their roles as mentors and team members in the learning process. Not all learning has to come from the front of the classroom.

**Next Steps**

At this point, you and your team have developed some common definitions and understandings around personalized learning and why you should consider implementing it. In the upcoming chapters, you will learn specifics about each of the five elements of personalized learning to better support your understanding of this topic, which will provide you with tools to address PLC critical question 4. Before you move on to the next chapter, use the reproducible “Individual Reflection: Ranking Reasons for Personalized Learning” (page XX) to reflect on the arguments this chapter makes for using personalized learning. Then, as a collaborative team, use the reproducible “Collaborative Team Discussion: Personalized Learning” (page XX) to reflect on how your team defines personalized learning, your examples of engagement and lack of engagement, and your thoughts regarding the arguments for personalized learning.
Individual Reflection: Ranking Reasons for Personalized Learning

Rank the following items that argue for implementing personalized learning from first to fifth based on which you think makes the best case.

_____ My own examples of being engaged or unengaged
_____ The myth of average
_____ The age of our students
_____ Emotions
_____ Research studies

What resonates with you about your top-ranked item?

Do you think your top-ranked item also resonates with others on your team?

What item did you rank last? What is it about this item that causes you to provide a low ranking?
Collaborative Team Discussion: 
Personalized Learning

Definition of Personalized Learning

How did your collaborative team members' definitions of personalized learning compare? How are they similar? How are they different?

Engaged and Unengaged Examples

In the examples the authors provide of their own experiences with students being engaged and unengaged, there is a profound difference between feeling annoyed with an eager Civil War buff and feeling pride in one’s accomplishments. List the differences your team sees in your own examples.

The Why of Personalized Learning

Collectively, when looking at your rankings of arguments for personalized learning, how did your rankings compare to others' on your team?

Does your team think the arguments in this chapter make a strong enough case to continue to learn about how personalized learning relates to PLC critical question 4? Why or why not?
Good Seeds Grow in Strong Cultures

School improvement emerges from the confluence of four elements: the strengthening of teachers’ skills, the systematic renovation of curriculum, the improvement of the organization, and the involvement of parents and citizens in responsible school-community partnerships. Underlying all four stands, however, is a school culture that either energizes or undermines them. Essentially, the culture of the school is the foundation for school improvement, a view summarized by Purkey and Smith (1982):

“We have argued that an academically effective school is distinguished by its culture: a structure, process, and climate of values and norms that channel staff and students in the direction of successful teaching and learning. The logic of the cultural model is such that it points to increasing the organizational effectiveness of a school building and its modification by asking, ‘What can we do in this school to increase the climate for success?’”

If certain norms of school culture are strong, improvements in instruction will be significant, continuous, and widespread; if these norms are weak, improvements will be at best infrequent, random, and slow. They will then depend on the unsupported energies of hungry self-starters and be confined to individual classrooms over short periods of time. The best workshops or ideas brought in from the outside will have little effect. In short, good seeds will not grow in weak cultures.

Giving shape and direction to a school’s culture should be a clear, articulated vision of what the school stands for, a vision that embodies core values and purposes. Examples of core values might be community building, problem-solving skills, or effective communication. These value commitments vary from community to community; what is important for school leaders to know is the role of values as the fuel of school improvement. If core values are the fuel, then school culture is the engine.

The 12 Norms of School Culture

The cultural norms listed in Figure 1 can be supported where they exist and built where they do not by leaders and staff. The degree to which these norms

Figure 1. The Cultural Norms That Affect School Improvement.

1. Collegiality
2. Experimentation
3. High expectations
4. Trust and confidence
5. Tangible support
6. Reaching out to the knowledge bases
7. Appreciation and recognition
8. Caring, celebration, and humor
9. Involvement in decision making
10. Protection of what’s important
11. Traditions
12. Honest, open communication

Jon Saphier is President, Research for Better Teaching, and Matthew King is Superintendent and Principal, Carlisle Public Schools, Carlisle, Massachusetts.
The notion that teaching is our 'second most private activity.'

2. Experimentation
"Teaching is an intellectually exciting activity. Around here we are encouraged by administrators and colleagues to experiment with new ideas and techniques because that is how teachers and schools improve. And we can drop experiments that do not work and be rewarded for having tried. We are always looking for more effective ways of teaching. Last year we published Opening Classroom Doors, a booklet with short descriptions of new ideas tried in classrooms. One teacher, for example, shared how she used jigsaw activities to do cooperative learning in social studies."

3. High Expectations
"In this school the teachers and administrators are held accountable for high performance through regular evaluations. We are specifically expected to practice collegiality and to experiment with new ideas. We are rewarded when we do and sanctioned if we don't. Our continued professional development is highly valued by the school community. While we often feel under pressure to excel, we librge part of a dynamic organization."

4. Trust and Confidence
"Administrators and parents have my professional judgment and commitment to improvement—no matter how effective I already am—and it confidenc in my ability to carry my professional development and design instructional activities. We are encouraged to bring new ideas to our classes and given discretion over budgets for instructional materials.

5. Tangible Support
"When I need help to improve instruction, people extend themselves to help me with both time and resources. Indeed, when resources are scarce, professional development remains a priority. Around here people believe that professional knowledge and skills of teachers are so important to good teaching that developing human resources is a high and continued commitment. Despite financial constraints we still have sabbaticals, summer curriculum workshops, and funds to attend professional conferences."

Reaching Out to the Knowledge Base
“Cultures are built through the everyday business of school life. It is the way business is handled that both forms and reflects the culture.”

Thus, leaders might require teachers to work on expanding their repertoires of teaching skills but leave the choice of how and what up to them. Simultaneously, though, these leaders would offer tangible support—for example, one release afternoon a month—and provide a menu of options such as in-house study groups, outside speakers, tuition for attending workshops or courses, or support for individual projects.

6. Reaching Out to the Knowledge Base

There are generic knowledge bases about teaching skills and how students learn; about teaching methods in particular areas; about young people’s cognitive and affective development; and about each of the academic disciplines. These knowledge bases are practical, accessible, and very large. Teachers and supervisors are continually reaching out to them to improve their teaching and supervision.

There are two features of this norm we would like to highlight. The first is its aggressively curious nature. There is always more to learn, and we can respond to that understanding with energy and reach out beyond our classes or our buildings, sharing journals, attending workshops, visiting each other and other sites. A principal could model this by inviting several teachers to visit another school with him or her. Such an activity might build collegiality by bringing together teachers who don’t normally work together. Indeed, as much may happen during the ride together and over lunch as happens during the visit itself.

The second feature of this norm is the reality and usefulness of these knowledge bases. The erroneous belief that there is no knowledge base about teaching limits any vision of teacher improvement. It is also isolating because in the absence of knowledge, good teaching must be intuitive; if “goodness” is inborn and intuitive, then having problems is a sign of inadequacy or too little of the “right stuff.” This syndrome discourages talking about one’s teaching, especially one’s problems. Furthermore, if good teaching is intuitive and there’s no knowledge base, what’s the good of working on improvement?

But the knowledge base on teaching is very real and expanding all the time. It tells us that there are certain things that all teachers do, regardless of age group, grade, or subject. It tells us the situations or missions that all teachers have to deal with in one way or another. It also tells us what our options are for dealing with each area of teaching, and that matching behaviors and techniques to specific students is the name of the game. In some cases, it even gives us guidelines for how to go about the matching.

Teachers make decisions and act to deal with numerous aspects of their instruction and relationships with students. For example, experts agree that there are dozens of ways to gain and maintain attention, several kinds of objectives (Sample and Gower, 1982), and over 20 models of teaching (Joyce and Weil, 1980). Because there are many ways to deal with each of the myriad of teaching tasks, skilled teaching involves continually broadening one’s repertoire in each area and picking from it appropriately to match particular students and curriculums.

The knowledge base about teaching is the available repertoire of stories and patterns of action in any area, available for anyone to learn, to refine, and to do skillfully.

“Giving shape and direction to a school’s culture should be a clear, articulated vision of what the school stands for, a vision that embodies core values and purposes.”
Caring, Celebration, and Humor

Consider another knowledge base, each subject has, in addition to the main knowledge of its discipline, a knowledge base of teaching methods and materials. Where it is the norm to consult the knowledge bases, teachers are reaching to learn new methods and examine the latest materials and not to find the single best ones, because there are no best ones. They seek to expand their repertoire so as to expand their capacity to reach students with appropriate instruction.

This particular norm, reaching out to the knowledge bases, is one of the least understood and most neglected. It is also one of the most powerful for rejuvenating an ailing school culture. In schools where the knowledge bases are cultivated, a common language for talking about instruction emerges. This language reduces the isolation commonly experienced by teachers (Lortie, 1972).

7. Appreciation and Recognition

"Good teaching is honored in this school and community. The other day I found a note from the principal in my mailbox: 'When Todd and Charlie were rough-housing in the hall you took them quietly and firmly yet treated them maturely by explaining the ways of your intervention. It really makes our grown-up talk about respect mean something when teachers take responsibility for all kids the way you do.' He just observed that incident for a minute, yet took the time to give me feedback. (Somehow it had more impact than a phone call.) Things like that make me feel there is a real value placed on what I do with students. I am recognized for my efforts and achievements in the classroom and the school."

There are many ways this message can be sent: teacher recognition as a regular feature of school committee meetings, faculty lunches at the beginning and end of the year for faculty and staff, short notes in teachers' mailboxes from a principal who notes something praiseworthy during a walk around the building; perhaps even superior service awards written up each year in local newspapers with stipends given annually to a few teachers. Of course, underlying these efforts should be a pay scale that is at least competitive with neighboring districts.

8. Caring, Celebration, and Humor

"There are quite a number of occasions when we show our caring for each other and awareness of significant events in each other's lives, as well as celebrating benchmarks in the life of the school. Bunt, for example, somehow arranges a 15-minute party with some goody for every faculty member's birthday in her building. We often have these little gatherings in the teacher's room before the kids come in. There is a lot of humor and laughing together in this school."

9. Involvement in Decision Making

"I am included in decision-making processes in this school, especially when they directly affect me or my kids. That doesn't mean I am consulted on all policies or decisions, but I am told you the truth, I don't want to be— I'd never get all of my own work done. But when I do consult, it's not a phony gesture; my input is taken seriously. And there are mechanisms open to me to raise issues. Last spring I asked the faculty advisory council to look at how kids were treated in the halls. That led to a faculty brainstorming session on the topic of school climate. I don't always get people to buy into my issues, or even ask them to. But when I do, the issues are treated seriously, and I am esteemed for bringing them up even if my solutions do not carry the day."

10. Protection of What's Important

"Administrators protect my instruction and planning time by keeping meetings and paperwork to a minimum. In fact, we don't have faculty meetings in the usual sense... certainly not just for business and announcements. Those needs get covered by memos and word-of-mouth contact with the principal. When we do meet, it is for curriculum and instruction purposes, often in small groups like the study group on learning styles."

11. Traditions

"There is always something special to look forward to as I scan the calendar. Be it a fair, a trip, or a science Olympiad, there are events coming up that students and teachers alike see as refreshing or challenging and a definite change of pace. Some of these traditions are rooted in ceremony, others in activity. They exist both in the curriculum as grade-level projects or activities, and as recurrent events within the life of the school."

12. Honesty, Open Communication

"I take responsibility for sending my own messages. I can speak to my"
colleagues and administrators directly and tactfully when I have a concern or a belief without fear of losing their esteem or damaging our relationship. Around here people can disagree and discuss, confront and resolve matters in a constructive manner and still be supportive of each other. And I can listen to criticism as an opportunity for self-improvement without feeling threatened.”

Robert Hinton captures these qualities when describing changing relationships in a Chinese village during the revolution:

One had to cultivate the courage to voice sincerely held opinions regardless of the views held by others, while at the same time showing a willingness to listen to others and to change one’s own opinion when honestly convinced of error. To bow with the wind, to go along with the crowd was an irresponsible attitude that could never lead to anything but trouble... The reverse of this, to be arrogant and unbending, was just as bad (Hinton, 1966, p. 395).

This type of communication is supported by several of the cultural norms. Difficult issues and criticism require an inner conviction that one is right and respected by others. Appreciation and Recognition, Involvement in Decision Making, and Reaching Out to the Knowledge Bases support this kind of mutual respect.

**How to Build the Norms of School Culture**

Sergiovanni (1984) describes five leadership forces where actions make a difference in building good schools (see Figure 2). Effective leaders have skills with which to apply each force.

Technical skills pertain to such managerial matters as scheduling and delegating; human skills include listening,
Group dynamics, and conflict resolution. Educational skills include knowledge about teaching and learning; symbolic skills include knowledge of and commitment to core institutional values and ways of articulating and representing them. And the cultural arena involves building norms such as the 12 discussed here. But if we are to understand what leaders do to build and maintain excellence in schools, the relationship among these five forces and arenas for action needs expansion.

Leaders show their technical, human, and educational skills through activities that call them forth rather directly. A parent’s night must be organized (technical and human); difficult meetings chaired (human); and conferences held after classroom observations (human and educational). We offer the proposition that leaders show their symbolic and culture-building skills through those same activities and not in separate activities that are exclusively symbolic or cultural (with exceptions like opening-of-school speeches that are symbolic occasions. From this perspective Sergiovanni’s diagram might be redrawn as shown in Figure 3.

Cultures are built through the everyday business of school life. It is the way business is handled that both forms and reflects the culture. Leaders with culture-building on their minds bring an ever-present awareness of these cultural norms to their daily interactions, decisions, and plans, thus shaping the way events take place. Because of this dynamic, culture-building occurs simultaneously and through the way school people use their educational, human, and technical skills in handling daily events or establishing regular practices.

For example, suppose there is interest in a revised curriculum planning procedure. What would a culture-builder do in a leadership position? A sure way to prevent the crisis-management of curriculum—where small numbers of parents can successfully pressure a school board, superintendent, or principal to “look into” a curriculum area such as science—is to maintain a planning process that systematically and routinely evaluates and renovates all curriculum areas. Such a system might ask parent-teacher committees to assess the existing curriculum by reviewing literature, consulting experts, and interviewing parents. Having established a curriculum’s strengths and weaknesses, the committee could write a statement of philosophy to guide the next phase—the identification of new curriculums, texts, and activities—recognizing that the review process might well validate existing programs.

“Our district distributes $6,000 service awards for “recognizing teachers’ contributions in a variety of areas.”

“... collegiality is an expectation that is explicitly stated by the leader, rewarded when it happens, and sanctioned when it doesn’t.”
all curriculum areas can be located on the planning cycle. While this approach to curriculum planning can be done by whole school systems, the process is especially powerful when conducted in individual schools.

A planning process such as this is itself an opportunity for infusing the cultural norms into a school. A good place to start is with a leader offering to parents and teachers Lichter's (1983) notion of a "consciousness of imperfection," a perspective in which we assume that any school has areas of strength and weakness and that the "good" school is distinguished by its openness to dealing with its imperfections. The school leader could use this opportunity to point out how improvements emerge from a culture that embodies norms such as our 12. She or he can then outline a process that demands experimentation by piloting new curricula and encouraging collegiality by asking teachers to work together on evaluation and design. Central to the planning is a commitment to involve stakeholders in decision making while being clear about the limits of their influence.

After completing the review, the administrator must ensure that teachers receive support to carry out their plans. For example, if a science committee recommends integrating microcomputers into science laboratories, funds need to be budgeted for purchasing equipment and training teachers. While providing support, the principal needs to emphasize the high expectations she or he has for their work. Building specific goals into teachers' formal evaluations—which should take place no less than every three years—is a useful way of making the connection between support and high expectations. Down the road a principal will want to recognize teachers' efforts by reporting to the superintendent and school board and perhaps even attaching rewards for their efforts. Our district distributes six thousand dollar service awards for recognizing teachers' contributions in a variety of areas.

The culture builders in any school bring an ever-present awareness of the 12 norms to everything they do in the conduct of daily business. It is this

---

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July 7–11, 1985

This 11-day institute, conducted by the Principals' Center at the Harvard Graduate School of Education, will address three fundamental questions related to school improvement:

- How can schools be improved from within?
- What are some of the necessary components of school change?
- How can individual school leaders respond creatively to renewed public interest in school reform to improve their schools and their own performance?

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- increase their understanding of the literature on school improvement;
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- explore the concept of a 'principal's center' as a resource to support and encourage school leaders.

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Cambridge, MA 02138
or call (617) 495-3472
Prized materials will be available in late February.
awareness and commitment to culture building that is more important than any single activity or structure in the school organization. Once we are clear about what the important norms of a strong culture are, the activities and forms through which we build them are legion.

If we are serious about school improvement and about attracting and retaining talented people to school careers, then our highest priority should be to maintain reward structures that nurture adult growth and sustain the school as an attractive workplace. A strong culture is crucial to making schools attractive workplaces. If the norms we have outlined are strong, the school will not only be attractive, it will be energized and constantly improving.

References


Barth, Roland S. "Sandingboxes and Honeybees." Education Week, May 1, 1984.


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COMMON DEFINITIONS FOR 12 CULTURAL NORMS

**Collegiality** - People sharing ideas to help one another experience success at teaching.

**Experimentation** - Willing to take risks with new educational strategies.

**High Expectations** - Goals set by ourselves for our school community.

**Trust and Confidence** - People do not blame each other and believe that we each work hard with a purpose.

**Tangible Support** - Opportunities created for staff to partake in activities that develop their professional expertise.

**Reaching Out to the Knowledge Base** - Searching for new ideas about teaching and learning.

**Appreciation and Recognition** - People recognize good work and affirm it through positive comments.

**Caring, Celebration and Humor** - Take the time to remember events and benchmarks in people's lives.

**Involvement in Decision Making** - Given avenues to give input, submit comments and voice concerns.

**Protection of What's Important** - Realize what is important in our school and focus on those activities.

**Traditions** - Events that occur each year at our school.

**Honest Open Communication** - Agree to disagree gracefully - speak about our feelings without fear of reproach.
2. Experimentation

3. High Expectations

4. First and Confidence

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**Decision Making**

<table>
<thead>
<tr>
<th>9. Involvement in decision-making in certain areas of my life.</th>
</tr>
</thead>
</table>

**10. Protection of what is important.**

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<th>10. Protection of what is important.</th>
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**11. Traditions**

<table>
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<th>11. Traditions of the school.</th>
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**12. Honesty, openness in communication.**

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<th>12. Honesty, open communication.</th>
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**54**

If my schoolmates do not carry the responsibility of decisions and actions, I cannot be involved in decision-making processes in the school. I can only be involved in certain areas of my life and make decisions that affect my instruction and activities, pro-

---

Communication

There is always something special to look forward to as I scan the calendar. Be it a job, a trip, or a science Olympiad, there are events coming up that I can look forward to. I can say to my colleagues and classmates, "There is always something special to look forward to."
CULTURAL NORMS THAT AFFECT ORGANIZATIONAL IMPROVEMENT

1. Compatibility
2. Experimentation
3. High Expectations
4. Trust and Confidence
5. Tolerable Support
6. Reaching out to the Knowledge Base
7. Appreciation and Recognition
8. Courage, Celebration, and Humor
9. Involvement in Decision Making
10. Protection of What's Important
11. Traditions
12. Honesty, Open Communication
WHAT IS ORGANIZATIONAL LEARNING?

The world seems to be changing faster and faster—from the technologies available to us, to the increasingly global scope of our interactions. Moreover, the problems facing us as a global community seem to be growing ever more complex and serious. How do we navigate such change and address these problems—not only in our work lives but also in our families, communities, and schools?

We believe that organizations—groups of people who come together to accomplish a purpose—hold an important key to these questions. The field of **organizational learning** explores ways to design organizations so that they fulfill their function effectively, encourage people to reach their full potential, and, at the same time, help the world to be a better place.

This field is rooted in a set of powerful principles, values, and disciplines. As Peter Senge wrote in his seminal book **The Fifth Discipline: The Art & Practice of the Learning Organization**, an organization is learning when it can bring about the future it most desires. In the business community, learning is much more than just a way to create the future you want; in today's fast-paced, highly competitive work world, it may actually give your organization the edge it needs to survive—and thereby keep fulfilling its purpose.

Organizational learning focused originally on the practice of five core disciplines, or capacities, of which **systems thinking** forms the cornerstone:

- systems thinking
- team learning
- shared vision
- mental models
- personal mastery

Let's take a closer look at these disciplines:

**Systems thinking** is the art of seeing the world in terms of wholes, and the practice of focusing on the relationships...
among the parts of a system. By looking at reality through a systems thinking "lens," you can work with a system—rather than against it—to create enduring solutions to stubborn problems in every arena of your life. Practicing this discipline involves learning to recognize "signature" systemic behaviors all around you, and familiarizing yourself with some special terminology and some powerful tools unique to this field.

✓ **Team learning** is what happens when a group of people working on something together experiences that rare feeling of synergy and productiveness that happens when you're "in the groove." When a team is truly learning, the group as a whole becomes much more than just the sum of its parts. Practicing this discipline involves startlingly different kinds of conversations and a remarkable degree of honesty and mutual respect—all of which you can learn to do through familiarizing yourself with specific tools from this field.

✓ **Shared vision** emerges when everyone in an organization understands what the organization is trying to do, is genuinely committed to achieving that vision, and clearly grasps how his or her role in the organization can contribute to making the vision real. Practicing this discipline involves knowing how all the parts of the organization work together and being clear about how your own personal goals align with those of your organization.

✓ **Mental models** are the deep beliefs and assumptions we hold about how the world works. These models shape the decisions we make in life, the actions we take in response to events, and the ways in which we interpret others' behavior. Practicing this discipline involves surfacing and testing your deepest assumptions and beliefs, and helping others do the same. Again, there are specific tools available from this field that can help you with this practice.

✓ **Personal mastery** is the art of identifying what mark you want to leave on the world during your lifetime. That is, what's your unique purpose in life, and how do you want to go about fulfilling that purpose? Practicing this discipline involves some honest exploration of your own life experiences and desires and a willingness to take some risks.

These five disciplines were originally outlined in 1990 in *The Fifth Discipline* and are core to many organizational learning efforts. We also believe there are many other disciplines that support and expand on the above five, including:

**Corporate culture** is that intangible "something" that influences the environments in which we work every day. Technically, culture is an anthropological concept. But in the field of organizational learning, it refers to the policies, beliefs, activities, and rituals that determine an organization's "personality." A company's culture can
support or hinder learning, encourage or stifle creativity, and so on. Fortunately, we can shape our organizations' culture through careful attention to how we do things and treat one another in the workplace.

**Corporate social responsibility** addresses the question of how the business community fits into the larger social picture. Specifically, what responsibility do organizations have beyond just their own industries and areas of competition? How do the actions of a particular organization or industry affect neighborhoods, the public sector, educational institutions, and families? It's tempting to compartmentalize these dimensions of human life, but of course they all influence each other. The discipline of corporate social responsibility focuses specifically on these interconnections and ways in which businesses can make the larger social world a better place for everyone.

**Dialogue** focuses on new communication forms that strengthen a group's collective intelligence. This discipline offers several intriguing tools and techniques that may seem strange to you at first but that, with practice, will transform the way you talk with others, stimulating questions and insights that we often miss through traditional forms of conversation.

**Leadership** in the field of organizational learning takes on a particular focus. Specifically, the discipline of leadership explores how managers—and leaders at every level in an organization—can unleash the full potential of each and every employee in the organization. Often this involves moving away from more traditional command-and-control management structures and toward more fluid, self-organizing leadership. This discipline is truly redefining the role of management for businesspeople everywhere.

**Sustainability,** as a discipline, entails being thoughtful stewards of the natural resources on which our organizations depend. After all, if we use those resources without regard to their limits, we may deplete them permanently—and our organizations can't survive that. Sustainable management practices help us design organizations that respect and balance human needs with the natural cycles and limitations of our planet.

**Work/life balance** is another area receiving increasing attention in the organizational learning field. More and more, people are seeking to design their work so that they have room for the other important dimensions of their lives—family, community, self-development, and so on. At the same time, the boundaries between work and home life have blurred in recent decades. The discipline of work/life balance seeks to explore the ramifications of these changes and address the question of how to set priorities and find meaning in both: our work and non-work lives.

Because everything really is structurally connected (systems thinking again!), an organization committed to true learning practices all of the above disciplines in some form, rather than tackling them in isolation. After all, they each reinforce one another, and when they come into alignment, the organization truly soars! And as we move into the 21st century, we'll no doubt see new disciplines emerge in this dynamic field.
Going Beyond Gutenberg and Skinner

By Joseph S. Renzulli

There are conferences for just about everything these days, but because of my interest in personalizing learning, it appeared that this one on redesigning personalized learning would be just the ticket for gaining new insights into how learning can be more responsive to the divergent needs and diverse populations in today’s schools. Most educators agree that the one-size-fits-all curriculum needs addressing.

Since the No Child Left Behind Act turned the learning process into a gigantic test-consumption and weaknesses-based test-prep industry, and the expectation that technology would be the major answer to this premise of a revolution in personalizing learning made the conference even more appealing.

The emergence of technology in education has certainly created renewed interest in personalizing learning and providing teachers with the tools necessary for differentiating curriculum. Early efforts to use software and technology to personalize the learning process can be traced back to B. F. Skinner’s teaching machines, which were designed to use rote and drill to automate the task of programming instruction. Get the correct answer, and you moved on to the next question. A wrong answer recycled the student through more practice material until he or she answered the question correctly.

Teaching machines were another failure in the long history of so-called “innovations” in education, but when computers and the Internet came along, we seemed poised to capitalize on technology that placed vast amounts of the world’s knowledge at students’ fingertips. Just as Gutenberg revolutionized access to knowledge, at least for the restricted number of scholars of his time, we now have the capacity to make knowledge public for anyone who can read and log in.

It soon became clear that the general focus of the conference was on basic curriculum competencies and more-efficient procedures for mastery and improved achievement-test scores. Now, rather than covering material in a lock-step fashion for all students at the same time, teachers can direct content at different levels to students according to their varied achievement levels. Although this use of technology extends by a giant step the traditional one-size-fits-all instructional model, it only accounts for varying competency levels rather than examining at least three other categories of learner characteristics that define true personalization. This restrictive focus led me to conclude that we are using today’s technology for what might be called “Gutenberg-on-line” — the electronic stuffing of worksheets and standard test material — rather than a more inclusive and creative model of learning. To paraphrase Gertrude Stein, a course is a course is a course, or in education-specific Standards-driven prescribed material is geared toward answering the questions at the end of the chapter and taking another achievement test. Skinner teaching machine movement failed because we were treating students like Pavlov’s dogs. We could face the same consequences with today’s technology unless we expand our vision about what personalization could and should help make happen.

True personalization requires more than just looking at achievement levels and trying to compensate for deficiencies.

This information can easily be gathered and analyzed through the use of computer-generated profiles and learning styles. Teaching machines and teachers who can program their teaching machine to check mat multiple categorized response from data banks containing vast quantities of highly interactive.

JOSEPH S. RENZULLI is the director of the Nong Center for Talent Development at the University of Connecticut, Storrs. He is a recent winner of the Harold W. McGraw Jr. Award for Innovation in Education. His most recent work is an Internet-based strengths-assessment and resource-matching program that can be found at www.renzullilearning.com.
Going Beyond Gutenberg and Skinner

CONTINUED FROM PAGE 21

active online material. Teachers can use this technology to infuse into any and all standards-driven curriculum highly engaging enrichment materials that can make any lesson or unit of study more exciting, engaging, and enjoyable. Math concepts improve and become more relevant when students use technology to design and build their own roller coaster. Students can gain a greater appreciation and understanding of ancient Egyptian culture when they do a virtual dissection and preservation of their own mummy.

The differentiation of content requires adding more depth and complexity to the curriculum rather than transmitting more or easier factual material. By focusing on structures of knowledge, basic principles, functional concepts, and methods of inquiry in particular disciplines, students are prepared to assume roles as first-hand inquirers rather than mere consumers of information. The differentiation of process requires the use of a variety of instructional strategies that differ from the traditional deductive, didactic, prescriptive approach used in most classrooms. Respect for learning-style variations can be achieved by using instructional strategies such as simulations, Socratic inquiry, problem-based learning, dramatizations, and individual and small-group investigations of real problems. Expression-style preferences can be accommodated by giving students opportunities to communicate visually, graphically, artistically, and through animatronics, multimedia, and various community-service involvements.

The biggest enemies of differentiation are time and the overprescription of learning. Before the availability of computers and the Internet, teachers simply did not have the time to find and direct customized resources to individual students.

Our obsession with content mastery and Skinner's behavioral theory of learning are slowly but surely giving way to an interest in personalization and differentiation. While it is understandable that our early use of technology was mainly an adaptation of Gutenberg-online and a teaching-machine mentality of what learning is all about, we now have both the pedagogical rationale and technological capability to use the many dimensions of student characteristics that clearly and unequivocally result in higher engagement, enjoyment, and enthusiasm for learning.

Amazon and Netflix know what we like to read and view, and they make use of this information to "differentiate" the material they send us. We can do the same thing to enrich the entire learning environment by capitalizing on a broader spectrum of learner characteristics, creating comprehensive computer-generated student profiles, and using the interactive capabilities of today's technology to revitalize learning. By so doing, we can minimize boredom and make learning the challenging, enjoyable, and relevant process that it should be.
Westside Community Schools will relentlessly pursue innovative educational ideals and promise to personalize learning for every student. We invite the challenge of developing a community of learners who embrace a broader, richer definition of success.

Outcomes for Core Strategies

Integrate literacy skills, creative and critical thinking, and authentic problem solving

- Increase the number of students who think critically and solve problems
- Increase frequency of integrated literacy practices in classrooms
- Ensure continued excellence in district, state, and national assessments

Support personalized learning pathways for students and staff

- Increase the amount of time students are allowed personal choice for their own learning
- Increase the number of school community partners who are actively engaged with schools, teachers, and students
- Increase the number of students who experience authentic learning
- Increase the number of students who leave their grade level with enhanced career and personal awareness, dual enrollment credits, advanced placement, certificates, internships and career experience
- Increase hope, engagement, and well-being of students and teachers

Integrate new and existing technologies

- Increase the quality of technology integration
- Students and teachers perceive technology as a way to enhance the learning capacity for all students
- Increase exposure to new and existing technology
### Design Team Common Vocabulary

<table>
<thead>
<tr>
<th>Key Terms/ Image</th>
<th>Seminal Author</th>
<th>Definition</th>
<th>WCS Example</th>
<th>District Connect Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-Loop Learning</td>
<td>Argyris</td>
<td>A group decision-making process where teams examine current reality, determine if new action would result in better outcomes, try the new strategy, and examine the results. The feedback loop is always going back and forth in an exchange of ideas.</td>
<td>A set of analytic processes that support the development of a shared vision for a desired future, determine action steps to meet building and district goals, and refine the plan until perfected.</td>
<td><img src="image1" alt="Design the Future" /> <img src="image2" alt="Understanding the Context" /> <img src="image3" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Collective Inquiry</td>
<td>DuFour, Senge</td>
<td>The process of building shared knowledge by clarifying the questions that a group will explore together focused on student learning/engagement.</td>
<td>PLC teams analyze state writing data and determine a plan for improvement, which includes common formative assessments, staff development, and data analysis.</td>
<td><img src="image4" alt="Design the Future" /> <img src="image5" alt="Understanding the Context" /> <img src="image6" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Backbone of Support</td>
<td>Hanley-Brown, Kania &amp; Kramer</td>
<td>Collective impact can take years. As such, a committed group formally provides a common agenda, facilitates dialogue through mutually reinforcing activities, manages data, coordinates communication, and seeks out funding sources.</td>
<td>Omaha community partnerships bring leaders of various Omaha organizations together to see how each group can work together effectively.</td>
<td><img src="image7" alt="Design the Future" /> <img src="image8" alt="Understanding the Context" /> <img src="image9" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Collective Impact</td>
<td>Kania &amp; Kramer</td>
<td>Solving social problems, not in isolation, but with a wide range of perspectives and professionals within a larger system. The essence of Personal Mastery is learning how the space between our desired future and our current reality is interdependent.</td>
<td>Teams of building leaders analyze concerns with language arts curriculum by seeing the needs of the user demographic, identifying the issues, clarifying the issues, and developing year-long design team actions that align with AdvancEd.</td>
<td><img src="image10" alt="Design the Future" /> <img src="image11" alt="Understanding the Context" /> <img src="image12" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>SEM</td>
<td>Renzulli</td>
<td>The Schoolwide Enrichment Model (SEM) is a detailed blueprint for total school improvement that is flexible enough to allow each school to develop its own unique program based on local resources, student populations, school leadership dynamics, and faculty strengths and creativity.</td>
<td>The design, construction, and installation of an historic library circulation desk by students at the high school for a new elementary school in the district.</td>
<td><img src="image13" alt="Design the Future" /> <img src="image14" alt="Understanding the Context" /> <img src="image15" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Mental Models</td>
<td>Senge</td>
<td>Continually collaborating with others by reflecting, talking about, challenging previous ideas, and reimagining new ideas. This balance is critical in creating and sustaining creative tension in our lives.</td>
<td>An effective teacher realizes that she needs to learn how to use technology in the classroom to effectively teach her students. She realizes that her current skills are not sufficient, so she listens and learns from others and eventually implements new technology strategies within the classroom.</td>
<td><img src="image16" alt="Design the Future" /> <img src="image17" alt="Understanding the Context" /> <img src="image18" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Personal Mastery</td>
<td>Senge</td>
<td>Personal mastery means living life from a creative perspective and resourcefulness; it is the key to learning. Secondly, it is continuing learning how to define current reality more clearly. Next, it is holding space between our desired future and our current reality called &quot;creative tension.&quot; The essence of Personal Mastery is learning how to generate and sustain creative tension in our lives.</td>
<td>Teams of building leaders analyze concerns with language arts curriculum by seeing the needs of the user demographic, identifying the issues, clarifying the issues, and developing year-long design team actions that align with AdvancEd.</td>
<td><img src="image19" alt="Design the Future" /> <img src="image20" alt="Understanding the Context" /> <img src="image21" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Shared Vision</td>
<td>Senge</td>
<td>Developing a shared vision for a desired future.</td>
<td>Building teams use District House document to establish school's shared vision and to determine action steps to meet building and district goals.</td>
<td><img src="image22" alt="Design the Future" /> <img src="image23" alt="Understanding the Context" /> <img src="image24" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>System Thinking</td>
<td>Senge</td>
<td>People learn that to understand change as an organization, the interconnecting of all of its pieces are crucial to implementing positive change across the system.</td>
<td>Students doing well on the ACT test are a product of strong elementary and middle school programs with quality staff, resources, and programs.</td>
<td><img src="image25" alt="District Results" /></td>
</tr>
<tr>
<td>Team Learning</td>
<td>Senge</td>
<td>Through dialogue and discussion, teams learn and transform their collective thinking together. The collective thoughts are energized due to the group effort. A key concept is that everything is interdependent and interconnected.</td>
<td>Elementary principals share concerns with current school and collectively learn about and ultimately develop a new master schedule model.</td>
<td><img src="image26" alt="Design the Future" /> <img src="image27" alt="Understanding the Context" /> <img src="image28" alt="See the Possibilities" /></td>
</tr>
<tr>
<td>Design Thinking</td>
<td>Stanford Design School</td>
<td>This process first defines the problem and then implements the solutions, always with the needs of the user demographic at the core of concept development. This process focuses on need finding, understanding, creating, thinking, and doing. At the core of this process is a bias towards action and creation: by creating and testing something, you can continue to learn and improve upon your initial ideas.</td>
<td>When teams of teachers learned about personalized learning, they used the Stanford Design Process to begin thinking about lesson design in a different way. By emphasizing in the role of a student, defining a student's needs, exploring and then trying the new ideas, and refining the plan until perfected, a newly designed lesson was developed.</td>
<td><img src="image29" alt="Design the Future" /> <img src="image30" alt="Understanding the Context" /> <img src="image31" alt="See the Possibilities" /></td>
</tr>
</tbody>
</table>
Westside Community Schools

Design Process
Design Team Process

Vision

Current Reality
Commitment to the Truth

School Profile
Organizational Outcomes

Understanding the Context

Observing
Collecting Data
Seeing the Issues
Challenging Mental Models
Suspending Assumptions

Designing the Future

Decision Making
Defining Innovation
Prototyping
Sensing the Future
Co-creating

Seeing the Possibilities

“How Do I Contribute”
Advocacy/Inquiry
Reflection/Nexting

School Profile
Organizational Outcomes

Seeing the Issues
Vision

Design Team Process
Principles of School Design

Philosophy
1. Schools should operate in a collaborative and inter-dependent manner, engaging staff and community members with the leadership of each school.
2. A school community should communicate in a clear, timely way with staff and community to develop learning environments that support the learning and engagement of each learner.

Guiding Principles

Unity of Purpose
Shared values, attitudes and beliefs.

Shared Autonomy with Responsibility
A school system, not a system of schools.

Commitment to Truth
Honest assessment of current reality and how it supports vision.

See the Possibilities
What do you see, feel, hear about your school?
Reflect at a data retreat
Identify success indicators

Shared Vision
How does your personal vision align with the organization’s vision?
All stakeholders design a desired future for the school
Design a future school you would want for your child/grandchild
Communicate and celebrate your vision publicly

Understanding the Context
Collect key data points
Organize data for reflection
Challenge mental models
Identify schools’ strengths/challenges

Design the Future
What’s next for the school/District?
Planning with District Design Principles
School as a whole sets priorities following reflection/data retreat
Implement work groups around identified priorities
Prototype possible solutions prior to full implementation
Begin/complete implementation cycle with evaluation

School Profile
Tell our story to the community
Evaluate and share results
Data informed decisions
Transparent communication

Philosophy
1. Schools should operate in a collaborative and inter-dependent manner, engaging staff and community members with the leadership of each school.
2. A school community should communicate in a clear, timely way with staff and community to develop learning environments that support the learning and engagement of each learner.

School Profile
- What’s next for the school/District?
- Planning with District Design Principles
- School as a whole sets priorities following reflection/data retreat
- Implement work groups around identified priorities
- Prototype possible solutions prior to full implementation
- Begin/complete implementation cycle with evaluation

Shared Vision
- How does your personal vision align with the organization’s vision?
- All stakeholders design a desired future for the school
- Design a future school you would want for your child/grandchild
- Communicate and celebrate your vision publicly

Understanding the Context
- Collect key data points
- Organize data for reflection
- Challenge mental models
- Identify schools’ strengths/challenges

Design the Future
- What’s next for the school/District?
- Planning with District Design Principles
- School as a whole sets priorities following reflection/data retreat
- Implement work groups around identified priorities
- Prototype possible solutions prior to full implementation
- Begin/complete implementation cycle with evaluation

Shared Autonomy with Responsibility
A school system, not a system of schools.

Commitment to Truth
Honest assessment of current reality and how it supports vision.

See the Possibilities
What do you see, feel, hear about your school?
Reflect at a data retreat
Identify success indicators

Guiding Principles

Unity of Purpose
Shared values, attitudes and beliefs.

Shared Autonomy with Responsibility
A school system, not a system of schools.

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Evaluate and share results
Data informed decisions
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Evaluate and share results
Data informed decisions
Transparent communication
Building Capacity

Design Team Collaborative

Self-Study Cycle

Identify Priorities at Data Retreat (why, why, why)
Generate Possible Solutions
Examine Results for Success
Finalize and Activate Implementation Plan
Prototype 1-2-3 Solutions

Examine Results for Success
Seven Trends that are Shaping the Future of K-12 Education

By Staff - April 19, 2017

The traditional model of K-12 education within school systems is rapidly diminishing as the 'norm' as fresh, innovative techniques are making an impact on how the US
landscape for K-12 programs throughout the country for years to come.

1. A Focus on Real-World Needs

One trend that is taking hold in education systems across the board is preparing learners for the real world. Whether this is community building, technology, or a focus on problem solving, this isn’t something that necessarily was given much attention in the past. Having hybrid learning can be a great way to complement this as well. If there are online components to learning, students will have an opportunity to learn more about computer programs and how these might be utilized to interface with the real world around them.

2. Family and Community Involvement

These days, there is a grassroots movement for families to be more involved with their children’s learning and education. This trend looks at the whole child and their educational needs, and not just formal education as a means to an end, as might have been in the past. Parents are taking more of an interest in their child’s education and where this fits into their overall development goals. This can be a great way for families and communities to work together to make sure that children are getting the help that they need and will be prepared for the future. Sometimes, this integral link can be missing in a more traditional school system setting. This unique opportunity to utilize parents and those in the community to give back and help with learning, fostering creativity, and individuality can be a benefit for all.
Depending on the age of children and their learning scope, having an online learning option can be a better fit. This is a trend that has gained traction in higher education and professional development, and is finally become more of an opportunity in the K-12 environment. Whether a child is home-schooled or in an alternative program, online learning can help with technology skills, time management, and collaboration through online communities and forums when it comes to group work, tasks, and projects.

4. More Educational Options in Populated Areas

While it might seem counter-intuitive, sometimes finding the right fit when it comes to childhood education can be even harder in overpopulated areas. Classes that are at max capacity, schools with impacted curriculums, or programs with no guarantee of admission year-to-year can be valid concerns of parents and a detriment to kids in populated communities such as Southern California. Seeking out alternative educational programs such as charter schools can be a great way for parents to find schools that fit the needs of their children, and give them the flexibility to make their own choice when it comes to education. As charter schools grow in popularity, having this choice has made all of the difference for some children who may have been put into less-than-optimal education situations otherwise.

5. Growing Alternative Communities

While local communities are the starting place for many newer educational models, as these grow throughout the country, communities will be larger and have more
school models, and isn’t considered a small separate community anymore. Assistance for budgets, curriculum, and accreditation are things that all states take seriously when it comes to alternative educational models, and the government will keep a close eye on what alternative trends might stem in the future.

6. Seeking Control Over Educational Missions and Goals

While public schools have their heart in the right place when it comes to childhood education, it can be frustrating for parents when things aren’t working or the mission isn’t matching up with the goals as intended. In smaller, alternative education environments, a direct correlation between the mission set forward and how goals will be achieved is transparent can be altered or discussed along the way. Many times, charter schools are evolving, and can be an organic, exciting place for everyone involved. Seeking out what isn’t working and replacing with needed tools or models is something that both teachers and parents can feel good about and implement as needed.

7. Embracing Individualized Learning

One the best trends that is coming out of the new educational climate is the need for individualized learning. All students are different, and will have different learning capacities and strengths. This needs to be fostered and celebrated instead of shut down. Many times, impacted school systems can struggle to find the time to find out what makes a student tick and get them excited about learning. In a smaller school
an educational environment might flourish and have more of a capacity when it comes to daily learning and focus.

Moving away from traditional models of education and teaching is something that is gaining traction and is readying our children for the real world around them. Charter schools and other alternative methods of teaching can set into place the building blocks that all children will need depending on their individual learning capacities and strengths. Focusing on what works and not being afraid to change traditional methods of education are directly benefiting children and families.

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https://www.methodschools.org/blog/seven-trends-that-are-shaping-the-future-of-K-12-education
culminating summative and alternative assessments. Yet what precisely do nouveau “research-based instructional strategies” entail? Although challenges in curriculum design may arise due to advanced technology integration, schools are nonetheless embracing the future. Here are five emerging trends for 21st-century classrooms.

1) App Innovation and Gamification

As a result of the recent explosion in education-related apps, educators can decipher students’ interests, academic passions and “trouble spots” more readily and in real-time to differentiate and fine-tune instruction. MIT App Inventor, for example, enables students to create their own apps in the comfort of their classrooms. The app offers training for students, a forum and additional support for educators, and a “challenge” for students to create their own apps. At the same time, education-related games that enhance skills in English language arts and other subjects have exploded in popularity, such as “Mathalicious” and “Get the Math,” which provide practical, true-to-life experiences. As students become comfortable utilizing online games to learn, educators can entice students via new apps to fine-tune skill-specific areas, such as mathematics and science.

2) Digital Literacy

Creating a digital literacy curriculum can be based on students’ developmental stages, and educators should be cognizant of both the risks (such as distractions) and myriad learning opportunities that technology integration and utilization in the classroom may provide. With increasing numbers of teachers using technology in the classroom and schools permitting students to become engaged with content via digital literacy, some schools are adopting formal digital literacy curriculum and digital literacy plans. Perhaps as a result, Google has published a plethora of resources about understanding digital literacy and digital citizenship, including YouTube videos, teacher’s guides and lesson plans.

Digital literacy may encompass simple student tasks, such as creating classroom presentations, or more intricate, collaborative work, such as video clip creations or posting online “mind-maps” using digital tools. The field of digital literacy will continue to grow in importance in the coming years as new approaches to learning via new technologies are embraced.

3) Library Media Specialists

Across the United States, and indeed throughout the world, libraries are increasingly becoming local technology hubs. Since libraries offer myriad services which require some knowledge of technology and how to access the internet, librarians’ job descriptions and key responsibilities have
drastically changed.

Library Media Specialists today remain informed about new technologies and research methods, and how students (and the general public) integrate digital formats into their work. In a separate, newfound administrative role, Library Media Specialists have many new responsibilities. They not only must establish technology policies and become responsible for budget oversight, but they must also plan the physical and virtual library space, and create a welcoming, positive and innovative atmosphere. Considering how new digital formats should be arranged in new workstations and deciding which specific formats to choose could affect physical layout, budget planning and alignment and common space issues.

They also evaluate and produce information through the active use of a broad range of tools, resources and information technologies, and (particularly at the high school and collegiate levels) may also integrate technology into the curriculum, which requires a keen understanding of how new technologies enhance the learning process for students while adhering to rigorous state standards. Library Media Specialists will continue to grow in importance as technology is integrated into 21st-century school curriculum.

4) Self-Directed Professional Development

In recent years, we have seen an increase in self-directed professional development (PD) for educators that includes interactive online webinars, or videos and other content that may be streamed through web browsers. One recently-published article offers a tempting feast of online option for educators to choose from. Since states are increasingly demanding that certified educators update their skills to remain in compliance with ethical and legal guidelines and become familiar with the latest standards, some school districts are turning to self-directed, online modules to provide educators opportunities to complete interactive learning components to remain abreast of the latest developments in education.

5) Collaborative Learning

New applications are making it easier for classroom teachers to be both innovative and interactive, and this trend is expected to grow exponentially in the coming years. From Google Docs to interactive whiteboards to new applications that create quizzes and activities, this is an exciting time for collaborative learning in education.

Kahoot is one new application worth highlighting. At no cost for educators to download and install, educators may conceive of fun quizzes and learning activities to enhance student engagement. According to one review, this management system enables educators more flexibility in

managing students' learning and documenting progress from any device.

“Educreations Interactive Whiteboard” by Edmodo is another way for both educators and students alike to assess, jointly present, or partake in interactive activities. Unlike “Kahoot,” however, which is available gratis, the “Educreations Interactive Whiteboard” is available for individual classroom purchase from Edmodo for $11.99/month.

New technologies have been a boon for school leaders and educators seeking to collaborate and hone their skills. Advancements in technology should continue to enhance collaborative learning, along with improving dynamic group presentations, in 21st-century school settings.

For more emerging trends in education, see:

- Top Higher Education Learning Trends to look for in 2017
- 5 Emerging Trends in Project-Based Learning
- Three Connectivity Trends to Watch in 2017

Scott Freiberger has been an educator, school-wide instructional mentor and teacher trainer, and is completing his third master’s degree, this one in School Leadership.

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These 10 trends are shaping the future of education

Innovation in the space likely won't create an all-new landscape, but it will be markedly different

By Roger Riddell • Aug. 27, 2015

It's an exciting time to be in education. The longstanding operating models for both higher ed and K-12 are both in a state of flux, and while demands for innovation probably won't create an all-new landscape, the resulting product of ongoing changes is likely to be unrecognizable compared to that of the last several decades. And while some challenges and changes are exclusive to one sector, a few see some overlap between K-12 and postsecondary learning.

From alternative credentialing and changing demographics to testing concerns and the rise of STEM, here are 10 trends currently shaping the future of education.

1. The rise of alternative credentialing necessitates shifts in business model

Just a few years ago, MOOCs were heralded by many as a force that would disrupt higher ed, upending traditional colleges and
universities in a new age of massive, open online learning. Though that’s not quite what happened, their impact on the space can’t be understated. As early for-profit providers like Coursera and Udacity have discovered, there is a demand for the model — though not as it was originally proposed.

Following lackluster completion rates and underwhelming institutional pilots (such as Udacity’s partnership with San Jose State University) in their attempts to expand higher ed access to underserved students, Udacity and Coursera have increasingly shifted focus to professional learning microdegrees. Udacity’s nanodegree programs focus largely on tech skills and feature courses built by the likes of Google, Facebook, and AT&T. Coursera’s Specializations, meanwhile, offer certification following a series of courses on topics ranging from digital marketing to cybersecurity, pairing many with capstone projects in partnership with companies like Instagram, Google, and Snapdeal.

Additionally, alternative credentialing models are gaining traction beyond MOOCs, with bootcamps like Galvanize, Skill Distillery, and other similar programs, offering key skills like coding in shorter time frames and at an affordable price. Not only are these models giving traditional higher ed’s continuing education programs a run for their money, but they’re proving particularly attractive to female students wanting to enter high-demand tech fields.

2. Changing demographics causing further strain in higher ed

College enrollment saw a spike during the onset of the Great Recession, but those numbers are now retracting as the economy improves. Meanwhile, the post-Millennial generation is projected to be smaller than the one preceding it. Simply put, America’s 629 public four-year institutions, 1,845 private four-year institutions, 1,070 public two-year institutions, and 596 private two-year institutions will soon be competing over a smaller pipeline of potential incoming students.

Of course, that competition will only be tempered by increasing competition from the aforementioned alternative credentials for those on the fence about traditional higher ed.

3. For-profits coping with regulation, enrollment issues

A longstanding rival to traditional colleges and universities, the for-profit higher education sector has seen its star on the wane due to increasing scrutiny from state and federal policymakers. Several smaller operators have shuttered in the last few years, but the most notable blow in recent memory is the shutdown of Corinthian Colleges under the pressure of U.S. Department of Education regulations that restricted its access to federal student aid.

The reliance of for-profits on that aid for continued operations has been a major source of scrutiny from lawmakers, particularly as the value of degrees from certain institutions in that space has been called into question. Several operators have also faced investigations over their marketing tactics, accused of aggressively targeting and even misleading specific student populations, like those in the military who receive GI Bill funding.
Negative impressions created by these scenarios, as well as the economy’s improvement since the recession, have also led to enrollment woes for the space. Declines for several operators have been in the double digits, with DeVry, for example, seeing its enrollment fall 20% year-over-year from spring 2014 to 2015. Still, some predict a comeback for these companies, potentially facilitated by an easing of regulations in the space by the Republican-controlled Congress.

Nevertheless, as detailed in April with a closer look at the space, expect to see a number of for-profits make the transition to nonprofit or benefit corporation status. Herzing University, Keiser University, Stevens-Henager, CollegeAmerica, California College, and Remington College have all gone nonprofit so far, and Grand Canyon University — the only for-profit with a Division I athletic program — has looked into doing so. Others, like Kaplan Inc. and the Apollo Group’s University of Phoenix, are looking to ride the wave of success among the aforementioned coding bootcamps and invest in those types of programs.

4. BYOD, BYOA, and the growing importance of campus device management

The average traditional college student brings a handful of devices to campus, including a laptop, a smartphone, a tablet or e-reader, and perhaps a gaming system. That influx of devices has necessitated that colleges and universities (and even some K-12 schools) prepare accordingly by providing adequate bandwidth and access to WiFi, and ensuring that network security measures are in place for a variety of platforms.
Most importantly, though, it has required institutions to institute Bring-Your-Own-Device (BYOD) policies detailing the amount of support they'll provide for specific devices. But that approach may be too macro.

As it turns out, a "Bring-Your-Own-Application" approach may be more effective, as the apps in use could have greater implications for key factors like security and bandwidth than the platforms they're being used on. "The applications that run on those devices are potentially more important than the fact that these devices are showing up on the network. That's the landscape of the problem," Chris LaPoint, vice president of product management at Texas-based IT management software developer SolarWinds, told eCampus News earlier this month.

Regardless of whether you're managing things by the device or application, getting a good grip on the issue now is critical — the "Internet of Things" is only going to make the issue more complex as smart watches, thermostats, locks, refrigerators, and other Web-connected gadgets find their ways on-campus.

5. Open educational resources gaining popularity as textbook prices rise

Textbook prices are ballooning, with Inside Higher Ed recently calling attention to a $400 pricetag on 400-level chemistry course's text. The topic has received particular attention as of late due in part to additional attention on the rising cost of tuition and the nation's massive student debt load. The issue isn't exclusive to higher ed, though — K-12 schools have long grappled with the issue of investing in updated textbooks that
have to last for years at a time, at the risk in some cases that they could become quickly outdated.

Digital textbooks have solved some of those issues to an extent, carrying a lower price point on average and being capable of receiving updated content. But many in higher ed and K-12 are looking beyond the traditional-textbook-gone-digital, and private publishers have lower incentive to digitize upper-level college textbooks that fewer students actually need. Many are looking to open educational resources (OER) to solve the problem.

With OER, educators can promote collaboration and provide customized resources to students. Educators must still, however, take copyright concerns into consideration. But in K-12, educators are compiling custom resource databanks. And 15 Virginia community colleges are using OER to pilot a "zero textbook cost" program that is expected to save 50,000 students $5 million in its first year. According to eCampus News, OER publisher OpenStax College at Rice University estimates its catalog will save students $25 million in the upcoming academic year. With the U.S. Department of Education also backing OER, it's definitely an area to watch for cost savings in the space.

6. Push for innovative school models continuing in K-12

A recent ranking placed the U.S. at No. 28 in math and science, bested by nations including Singapore, South Korea, Japan, Finland, Switzerland, and Canada. Low standing in international rankings have been a chief concern leading to calls for innovation and reform in America's K-12 schools.

Most notably, the traditional school model has been challenged by charters and magnet schools that take varying approaches to educating children. Some focus specifically on classical education, the arts, or science, while others target English language learners or those interested in, say, coding, learning outdoors, or even equine programs. Charters, however, have also been contentious, with some bad actors in the space breeding concerns of private business interests taking precedent over students' educations, as highlighted recently by ongoing issues in Ohio.

Still, not all are bad, and many have seen significant success in providing personalized educational experiences — something that's in high demand across the space at large and of particular interest to U.S. Department of Education officials. Due to funding concerns, however, doing so isn't always easy. Traditional public schools, for example, often struggle with large class sizes. As a result, technology is playing a bigger role across the board, with many districts deploying tablets and Chromebooks, equipped with digitized learning materials, and implementing "flipped" classroom models that see students engage with video lectures at home while completing classwork and receiving individual help during class time.

Of course, the influx of tech has come with concerns. Many schools, particularly those in underserved urban or rural districts, face outdated or even nonexistent broadband and wireless Internet infrastructure to adequately support these rollouts — and that's not even including the additional training needed for teachers. Thankfully, the FCC's E-rate program has been
modernized and given extra funding to help with the cost of bringing reliable high-speed connections to many of these schools (though many students still lack connections at home). The ongoing struggles with school innovation are far from over as the nation moves from a model designed to preparing most students for factory work to one focused on college and career.

7. Testing moving online as opt-out movements gain steam

The aforementioned infrastructure concerns have been highlighted recently by issues with the moves of many states' standardized tests to an online format. Nevada, Montana, Oklahoma, Indiana, Florida, Kansas, and Ohio have been among states experiencing disruptions during online testing in the spring. While not all of the issues were solely due to sub-par infrastructure (some landed at the feet of vendors), several, like Minnesota, were certainly exacerbated by a lack of bandwidth to handle the number of students taking tests.

Of course, glitches aren't the only thing impeding mandated standardized exams. The usefulness of the exams in the larger picture of a student's education has long been questioned, with critics decrying the massive amount of time and energy now placed on preparing for high-stakes assessments and its impact on everything from critical thinking skills to time for the arts and physical education. Efforts to tie student performance on the exams to teacher evaluations have only complicated things.
further, leading to scandals where educators have doctored tests to save their jobs.

In the most recent school year, several states had to contend with a growing opt-out movement that has seen parents refuse to allow their students to participate in the testing process. New York notably saw 20% of students statewide opt out and is now reportedly working on a response plan. Following similar opt-outs in Colorado, the U.S. Department of Education demanded that schools with particularly large numbers be held accountable. Some states, like Kentucky, refused to allow students to opt out, but they may not be able to ignore the movement for long — especially if its supporters aren’t satisfied by the greater testing agency given to states by a proposed rewrite of No Child Left Behind. Forced participation, however, may not sit well with those involved.

8. Student data use remains controversial

As controversial as testing, if not more so, is the use of student data in K-12. Concerns include vendors using personal data for commercial uses, the federal government assembling a national database, and a weakening of existing laws like FERPA or COPPA by the federal government to allow these scenarios to occur. While these fears are largely unfounded, a number of states have still made moves to abate them by passing their own privacy measures, in addition to a number of proposals at the federal level and further guidance from the U.S. Department of Education.
That hasn't, of course, stopped parents' lack of trust in the ability of districts or third-party vendors to protect that data from leading to abandoned initiatives or, in the case of Gates-funded InBloom, total closure. Those in support of using student data argue, however, that the opposition, including laws further restricting how data can and can't be used, could harm students who would benefit most from its insight and accountability. The back-and-forth over how data could and should be used isn't likely to die down anytime soon.

9. Increased demand in tech field driving STEM focus

Calls for more skilled workers in science, technology, engineering, and math-related fields have driven an increased focus in those areas across K-12 and higher ed. That drive will only increase as STEM jobs become a larger pillar of the U.S. economy.

Math and science are particular focuses of new systems of standards like the Common Core and Next Generation Science Standards, respectively. And computer science is increasingly finding its way into earlier grades in K-12, with 25 states now requiring it for high school graduation. STEM instruction has even been found to be beneficial to students with learning disabilities like dyslexia.

That said, despite the additional critical thinking components accounted for with STEM, expect concerns to also be addressed regarding the potential for the expanded focus to detract from a well-rounded education including the arts. It's an issue that some schools and districts have already addressed by expanding the
acronym to "STEAM" and emphasizing the connections between the arts and science and math, as well as many companies' desires to hire workers who can think creatively in addition to being technically skilled.

10. Districts moving away from zero-tolerance disciplinary measures

The recently reignited conversation around race in America has many schools and districts moving to address the school-to-prison pipeline, a phenomenon resulting from harsh "zero-tolerance" disciplinary measures that push many students into the juvenile justice system. The ensuing loss of class time ultimately leads many of these students to drop out, with a significant number ultimately ending up in the criminal justice system. Recent studies show a disproportionate impact on minority and special education students.

According to an essay for the Arkansas Law Review from Western State University law professor Tracie R. Porter, the pipeline is exacerbated by prison lobbies pouring funding into advocacy efforts for zero-tolerance discipline policies that see students suspended or worse for committing minor infractions like dress code violations or stealing a soda from a teacher lounge. The attention to the issue, however, is leading many districts to fight back by doing away with such policies and adopting less-punitive alternatives. Though the school-to-prison pipeline is far from being dismantled, such moves are a start in what's sure to be a long and arduous process.
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THE REAL FUTURE OF WORK

01
the PERFORMANCE issue

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What Is the Real Future of Work?

Among the trends that have affected the psychology of workers over the past decade, two stand out. The first is the accelerating pace of change in the way work gets done; digital technology has fundamentally altered the tools employees use, where they work, how they collaborate and how they are organised. The second trend is a slow and often painful recovery from the worst economic downturn in living memory — a devastating crisis that few saw coming, and which left political and social fault lines across the world, which it is still grappling with a decade later.

It's not hard to see how these two developments could produce an eagerness to anticipate the forces that may impact workforces over the next decade. "The Future of Work" has become a hot topic, the focus of hundreds of recent books, articles and conferences. The resulting dialogue has made valuable contributions toward our understanding in certain areas, such as the ramifications of artificial intelligence (AI) and the trend toward contingent and independent workers. But it has been less focused on how these factors affect the psychological needs of employees — a key driver that will define what the real future of work will look like as organisations restructure to account for new technologies and shifting markets.

Leaders need to know more about how employees will respond to the demands of emerging business realities — and how corporate strategies should adapt accordingly. Our aim with The Real Future of Work is to bring concise, actionable advice based on the attitudes and behaviours of employees in key economies across the world to help organisations address complex issues that are arising due to disruptive global forces.
Many Employees Foresee Substantial Changes in the Way They Work

Some predictions about the future of work have been fairly dire: in his recent bestseller *Homo Deus*, for example, Israeli historian Yuval Noah Harari discusses the possibility of a growing "useless class" of people whose skills have been made obsolete by automation and AI. However, a new Gallup study of employees in the UK, Germany, France and Spain finds that relatively few employees in those four countries are worried that their jobs will be eliminated. Seventeen percent of French employees say it is "very likely" or "somewhat likely" that their current jobs will be eliminated within the next five years as a result of new technology, as do 13% of British employees, 8% of Spanish employees and 7% of those in Germany.

Of employees who say there have been technology changes at their job in 2017, employees are in fact more likely to feel those changes will increase their productivity and the demand for their qualifications in the next three years, though the results vary considerably by country.
How will technological changes influence your work over the next three years? Will each of the following increase, decline or stay the same? Percentages in each country who say 'increase' or 'decrease'
Around two-thirds of French and British workers say their productivity will rise, as do about half of Spanish workers and more than a third of German workers. However, employees in each country are also more likely to say technological changes will place additional demands on their work performance in the coming years than to say the opposite.
Many European Businesses Are Held Back by Outdated Performance Management

The general conclusion is that while most employees in the four countries studied don't fear the consequences of technological advancement on their working lives, many anticipate significant changes in the way they do their jobs. To maintain their value to employers, workers will need to spend more time doing things machines have a hard time with — things like taking initiative, creatively solving problems, collaborating effectively and moving around within their organisations to maximise their contributions.

In turn, organisations will need to adjust their management systems to allow for greater employee autonomy and flexibility, while maintaining accountability and high productivity. Ironically, in an era of automation, companies that successfully adapt to make the most of their human resources will be the ones with a competitive advantage. That's why interest in People Analytics (PA) is booming as companies try to crack the code on using data to configure their workforces to meet future needs. So far, the answer has eluded most businesses: labor productivity has been alarmingly flat in Europe's largest economies since 2010.

Our results indicate most organisations in France, Germany, Spain and the UK are not ready for successful deployment of People Analytics. One major barrier is current performance management systems, which often maintain rigidity and outdated incentives. In none of the four countries do more than 30% of employees strongly agree that their performance is managed in a way that motivates them to do outstanding work.
How much do you agree or disagree with the following statement? My performance is managed in a way that motivates me to do outstanding work.

UK
- Strongly agree: 24%
- Agree: 33%
- Neither agree nor disagree: 28%
- Disagree: 11%
- Strongly disagree: 4%

FRANCE
- Strongly agree: 24%
- Agree: 31%
- Neither agree nor disagree: 23%
- Disagree: 12%
- Strongly disagree: 9%

SPAIN
- Strongly agree: 30%
- Agree: 22%
- Neither agree nor disagree: 27%
- Disagree: 10%
- Strongly disagree: 11%

GERMANY
- Strongly agree: 22%
- Agree: 37%
- Neither agree nor disagree: 25%
- Disagree: 12%
- Strongly disagree: 5%

In none of the four countries do more than 30% of employees strongly agree that their performance is managed in a way that motivates them to do outstanding work.
Why Is Performance Management so Important for People Analytics?

All People Analytics projects come down to “solving for performance” — i.e., helping maximise employees’ time and energy. When we build models to understand and predict employee turnover, we focus on high performers, employees we want to keep. When we explore collaboration patterns, we’re trying to figure out how employees perform best in teams. When we use machine learning algorithms to support our hiring strategy, we care about candidates’ future performance within their organisation.

To draw valuable insights from any analysis, organisations first need to ensure their performance metrics are suitable for PA deployment. Gallup’s work with businesses struggling with this question points to two key considerations that help ensure analytics data will be applied appropriately and that the resulting decisions will have the intended effects on employee positioning and motivation.

1) Identify the correct outcomes. Identifying and measuring employee performance will become trickier as many jobs become less based on routines. The primary consideration in choosing the correct performance measures is that they need to reflect individuals’ impact on achieving the organisation’s goals — meaning they should meet two conditions: 1) they must directly link to organisational success and 2) they must be in an employee’s sphere of control.

Failing to meet these conditions can lead to incorrect incentives; for example, if you track your sales team’s performance based on the number of meetings they have with prospects, they are going to have more meetings — which may or may not lead to more sales. Among the four countries, employees in Germany are most likely to say they can see how their work goals connect to their organisation’s overall goals, followed by those in the UK. Only about one in six employees (17%) in Spain and France strongly agree with this statement.

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How much do you agree or disagree with the following statement? I can see how my work goals connect to the organisation's overall goals.

- **Germany**: 44% strongly agree, 21% disagree
- **UK**: 34% strongly agree, 19% disagree
- **Spain**: 17% strongly agree, 13% disagree
- **France**: 17% strongly agree, 15% disagree

Perhaps more alarmingly, less than half of employees in all four countries strongly or somewhat agree that their performance metrics are within their control. This implies that many do not feel they are being held accountable for outcomes they have a great deal of influence over.

How much do you agree or disagree with the following statement? I have performance metrics that are within my control.

- **France**: 29% strongly agree, 16% disagree
- **UK**: 25% strongly agree, 22% disagree
- **Spain**: 19% strongly agree, 25% disagree
- **Germany**: 16% strongly agree, 20% disagree
Identifying the right outcomes for each employee ultimately means measuring and discussing performance in a manner that better captures a well-rounded view of the work they do and the value they bring to their jobs every day. When well-calibrated metrics are used to capture employees' unique contributions, managers and employees can have a more effective dialogue about personal development.

In one recent study, Gallup analysed 559 roles and 350 behavioural job demands to identify the job responsibilities that universally matter most across all types of individual contributor roles. The results highlighted three performance domains that comprehensively describe and statistically predict overall success in a role:

- **Individual achievement (My Work):** responsibilities that employees must achieve independently
- **Team collaboration (My Team):** how effectively an individual partners with other team members to achieve success
- **Customer value (My Customer):** the impact a person's work has on a customer. In this context, customers may be either internal or external to the organisation. All employees have customers of some kind, and to be "customer-centric" requires performance expectations that align with customers' needs.

By organising performance expectations using these domains, organisations can ensure performance achievement and developmental efforts are always focused on a well-rounded description of the key aspects of the job that matter most.

2) Ensure all performance measures are transparent and accepted by employees. As any psychologist will attest, the process of analyzing people must be handled carefully. This is just as true for managers employing PA strategies as it is in a therapist's office. That's because people react to being analysed — and their reaction is bound to be negative if they suspect the analyst is not acting entirely with their best interests at heart.

Leaders should therefore resist the temptation to use clandestine PA measures, hoping to avoid "contaminating" the results by making employees aware of how they are being evaluated. People care deeply about how their performance is measured, for any purpose. They are very motivated to find out how it is done, and probably will (if they can't — accurate or not — are likely to fill the gap).

Employees must also regard their evaluation criteria as fair — otherwise, they are unlikely to change their behaviour based on the results. For example, if employees' performance is measured using their manager's subjective rating across 15 vaguely defined competencies that aren't directly tied to organisational success, they may (justifiably) disregard the results — and therefore any efforts to analyse and influence the measure would be wasted.

The proportion of employees in Spain, France, Germany and the UK who strongly agree that the performance reviews they receive are fair range from about one-fifth (13%) in Spain to about one-third (32%) in the UK, in the UK and France, about two-thirds of employees agree at least somewhat, but this figure falls to 50% in Germany and just 36% in Spain.

By organising performance expectations using these domains, organisations can ensure performance achievement and developmental efforts are always focused on a well-rounded description of the key aspects of the job that matter most.
How much do you agree or disagree with the following statement? The performance reviews I receive are fair.

The rapid changes business leaders must accommodate in order to stay competitive are unlikely to abate anytime soon. Some analysts believe that the disruptions AI will bring in the coming decades will be more dramatic than anything we've seen over the last 50 years. The challenge today is that the cultures of many organisations — as reflected in the way they measure and recognise employee performance — are ill-suited for incorporating new data sources that can help their workforces adapt to these changes. Leaders increasingly have tools they need to make effective decisions about optimising the human capital in their organisations — but unless they use those tools in the spirit of partnership with employees themselves, they may end up doing more harm than good.
There is no more important indicator of engagement — particularly among millennial-age workers — than employees' perception that they have opportunities to learn and grow at their company. However, many European businesses fall short in this area.

Agility” has become a buzzword in recent years as leaders have increasingly prioritised the need to adapt quickly to rapidly changing technological developments and emerging business realities. Amid such constant change, companies need employees to be versatile and to continually upgrade their skill sets. Well-managed organisations match this need with employees' rising expectations for ongoing career-relevant learning and development (L&D) opportunities. There is no more important indicator of engagement — particularly among millennial-age workers — than employees' perception that they have opportunities to learn and grow at their company.

German employees are most likely to feel they have enough growth opportunities at their current company — but even in Germany, only one-third strongly agree. In France, Spain and the UK, no more than one in five employees strongly agrees. The strikingly low level of agreement among British employees is particular cause for concern, as many UK businesses already face retention issues created by Brexit-related uncertainty.
How much do you agree or disagree with the following statement? There are enough growth opportunities for me at my current company.

UK

14% 18% 47% 7% 13%

FRANCE

21% 21% 26% 19% 12%

SPAIN

19% 16% 19% 24% 22%

GERMANY

33% 27% 22% 9% 6%

More generally, the idea that many European businesses may not be prepared to help their employees meet the growing need for continuous learning and development is a major long-term concern. Not only does it imply a lack of adaptability among their workforces, it also may leave many employees feeling unprepared for technological advances and thus lower the efficiency with which new technologies are rolled out.

Businesses that understand the importance of performance development strategies invest in the future by ensuring high-quality L&D opportunities are available. Many cast managers as coaches who help employees stay on track with their developmental goals, often incorporating them as individualised performance metrics. In that way, managers are better able to use performance discussions as opportunities to keep employees motivated by aligning evaluation criteria with their developmental goals and personal sense of purpose.
Great Managers Are More Important Than Ever

The rise of independent workers in the gig economy is a reflection of broader changes in the nature of work. Even workers who are formally employed are more likely to have greater autonomy than those in times past, many cultivating an idiosyncratic portfolio of projects and responsibilities rather than adhering to a standardised job description. Organisational structures are adapting to reflect these changes, with traditional hierarchies giving way to team-based matrix models that allow for more flexibility in matching employee talents with business needs.

Many Europeans in the UK, France, Spain and Germany say they receive feedback from their manager relatively infrequently.

With these trends toward greater employee autonomy and matrixed work, "people management" skills have become more important than ever. Managers find themselves responsible for teams that cut across projects, divisions and countries. They rely on their ability to influence performance outcomes by helping ensure employees are in roles that fit their talents, and by aligning organisational goals with employees' personal sources of motivation, such as peer recognition. In this job of positioning employees for success, the role of management has shifted from "boss" to "coach."

In this new role, great managers focus on both the quality and quantity of their interactions with team members. Coaching relationships require more frequent, personalised interactions than is typically the case under more hierarchical forms of management. When managers and employees engage in an ongoing dialogue about performance, barriers can be removed, opportunities can be seized and expectations can be adjusted when circumstances change. Many employees in the four countries surveyed say they receive feedback from their manager relatively infrequently — particularly those in Spain and Germany, where most say it happens "a few times a year" or less often.
How often do you receive feedback from your manager?

- Daily or a few times a week
- A few times a month
- A few times a year
- Once a year or less

Of course, employees are unlikely to welcome a shift toward more frequent interactions if the quality of those interactions is poor. Effective coaching requires managers to connect authentically with employees through effective people skills and an individualised understanding of each team member. Gallup finds that when performance discussions are strengths-based and engagement-focused, managers move beyond the role of “task manager” and adopt a coaching perspective. Only through an appreciation of how employees are as people and what they need to be engaged can a manager effectively coach them to be their best.

When it comes to whether their managers focus more on their strengths than their weaknesses when discussing their performance, there is considerable variation among employees in the four countries surveyed. Employees in Germany are most likely to say their manager spends more time talking about their strengths, at 65%. However, just one-third of employees in France (34%) say the same, while two-thirds (66%) say their managers spend more time on how to improve their weaknesses.

Effective coaching requires managers to connect authentically with employees.
When your manager discusses your performance with you, do you spend more time talking about how to build strengths or how to improve weaknesses?

- How to build strengths
- How to improve weaknesses

To maintain high levels of workplace engagement and productivity, employers in each country need to increase their focus on employees’ strengths, in order to help them do more of what they do well.

Ultimately, as automation continually leads organisations to reorient their workforces around enduring human skill sets like creativity and relationship-building, those traits will become more important among managers as well. Those organisations that can identify and retain individuals with the empathy, self-awareness and strategic vision to be good coaches will have a powerful advantage in helping employees navigate future changes with versatility and confidence.

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Critical Issues for Design Team Consideration

Team:

Team Members

Use the following rating scale to indicate the extent to which each statement is true of your team.

1  2  3  4  5  6  7  8  9  10

1. _____The design team and work groups have been established, which includes all teachers and administrators in the building.

2. _____All team members have voice and choice in their team selection, allowing each person to play to their individual strengths and areas of interest.

3. _____Our building’s design team and work group time is reserved and allowed to meet on a regular (if not weekly) basis.

4. _____We have identified team norms and protocols to guide us in working together.

5. _____We use the district vision and strategic plan to serve as a guide to our work.

6. _____We have analyzed district and building data to inform us in establishing goals, ongoing data points, summative assessments, action plans and targets.

7. _____The HEAT map is a document that is regularly updated, maintained, and shared with the staff. The completion of the HEAT map for a given year is directly linked to the data that is available at that time.

8. _____The focus of our design team and work groups clearly center around student learning.

9. _____We regularly use strategies that recognize the craftsmanship of our meeting time and ensure that there are specific activities used to make sure all voices are heard.

10. _____We have agreed to use teams as the catalyst for practicing shared leadership.

11. _____All members of design teams and work groups are flexible in their thinking and exhibit characteristics of a growth versus fixed mindset.

12. _____We formally evaluate our progress towards our established goals at least twice per year.
Critical Issues for Team Consideration

Team Name:

Team Members:

Use the following rating scale to indicate the extent to which each statement is true of your team.

1           2            3           4            5           6           7           8           9           10
Not True of Our Team            Our Team Is Addressing This            True of Our Team

1. _____ We have identified team norms and protocols to guide us in working together.

2. _____ We have analyzed student achievement data and established SMART goals to improve upon this level of achievement we are working interdependently to attain. (SMART Goals are Strategic, Measurable, Attainable, Results oriented, and Time bound. SMART Goals are discussed at length in chapter 6.)

3. _____ Each member of our team is clear on the knowledge, skills, and dispositions (that is, the essential learning) that students will acquire as a result of (1) our course or grade level and (2) each unit within the course or grade level.

4. _____ We have aligned the essential learning with state and district standards and the high-stakes assessments required of our students.

5. _____ We have identified course content and topics we can eliminate to devote more time to the essential curriculum.

6. _____ We have agreed on how to best sequence the content of the course and have established pacing guides to help students achieve the intended essential learning.

7. _____ We have identified the prerequisite knowledge and skills students need in order to master the essential learning of each unit of instruction.

8. _____ We have identified strategies and created instruments to assess whether students have the prerequisite knowledge and skills.

9. _____ We have developed strategies and systems to assist students in acquiring prerequisite knowledge and skills when they are lacking in those areas.

10. _____ We have developed frequent common formative assessments that help us determine each student’s mastery of essential learning.
11. ____ We have established the proficiency standard we want each student to achieve on each skill and concept examined with our common assessments.

12. ____ We use the results of our common assessments to assist each other in building on strengths and addressing weaknesses as part of an ongoing process of continuous improvement designed to help students achieve at higher levels.

13. ____ We use the results of our common assessments to identify students who need additional time and support to master essential learning, and we work within the systems and processes of the school to ensure they receive that support.

14. ____ We have agreed on the criteria we will use in judging the quality of student work related to the essential learning of our course, and we continually practice applying those criteria to ensure we are consistent.

15. ____ We have taught students the criteria we will use in judging the quality of their work and provided them with examples.

16. ____ We have developed or utilized common summative assessments that help us assess the strengths and weaknesses of our program.

17. ____ We have established the proficiency standard we want each student to achieve on each skill and concept examined with our summative assessments.

18. ____ We formally evaluate our adherence to team norms and the effectiveness of our team at least twice each year.
Clock Partners

Make appointments with four people, one for each indicated hour on the clock. Record the appointment in the corresponding slot on your clocks.
## Museum Tour Note-Taking Guide

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Focusing Consensus
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Canvass


## Walkabout Review

### Recollections

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### Insights

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### Applications

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The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion.

- Abraham Lincoln (1862)

“Do we have it in us to create a future worthy of our past?”
- John Gardner

This short video captures how Westside Community Schools is looking ahead to meet the educational needs of current and future students. Click here to watch the video.