

An Innovation Roadmap: *Criteria for Innovative Schools in the 21st Century*



What is a 21st Century School?

Twenty-First Century Schools are first and foremost effective organizations. They are schools where innovation and continuous improvement are core values. Twenty-first century schools have strong leaders who create learning environments where the best educators want to stay. And they are schools that use metrics because they know what gets measured gets done.

However, what differentiates these schools is an urgency to prepare students for 21st century professions. They understand that our current assessment systems are critical but insufficient; and that in many cases are measuring skills that are becoming rapidly obsolete. The jobs of the future will be complex, require innovative and creative thinking. Jobs that are not, will be done by a computer.

If someone can figure out the algorithm for a routine job, chances are that it is economic to automate it. Many good well-paying, middle-class jobs involve routine work of this kind and are rapidly being automated.

- Tough Choices or Tough Times: NCEE 2009

Data now show that routine, cognitive but middle-income jobs (i.e., basic accounting or basic financial services) are rapidly disappearing or upskilling. Meanwhile, non-routine creative and analytical jobs in design, marketing, research, and engineering are on the rise. To prepare students for the future, we must engage them in rigorous learning that prepares them to ask good questions and not just simply give right answers. For this we will need to rethink and innovate our assessment systems and our expectations of student performance.¹

Definition of Terms in the Rubric

The Rubric for School Innovation provides a guide for thinking about different stages in the development of an innovative school. This tool offers a set of guiding questions and indicators of effectiveness and innovation, especially innovation made possible by technology.

| Innovative | Emerging | Traditional | Underdeveloped |
|--|--|--|---|
| <ul style="list-style-type: none"> • A school that goes beyond standard measures of success. • Highly innovative and redefines the traditional definition of school. • Evaluates how successfully it is preparing students with core academic and 21st century skills. | <ul style="list-style-type: none"> • A school that is effective by standard measures of success and is working to go beyond. • Innovating within and beyond traditional definitions of school. • Working to prepare students with core academic and 21st century skills. | <ul style="list-style-type: none"> • A school that is effective by standard measures of success. • Innovates to improve within traditional definitions of school. • Poised to move forward. | <ul style="list-style-type: none"> • A school that is still striving to succeed by standard measures of success. • Unable to make or sustain school improvements. |

Core Academic Skills: Topics, skills, and content areas that are currently tested by the state with an emphasis on assessment that is multiple choice and not performance-based. The expectation is content mastery and basic reading and computational skills.

Higher Order 21st Century Skills: “It is an emphasis on what students can do with knowledge, rather than what units of knowledge they have.”² Higher-order skills have always been emphasized in learner-centered instruction, but are becoming more essential, relevant and complex because of the technology. Students should develop a deeper understanding of academic content and contemporary issues through:

- Creative and innovative thinking
- Research and information fluency
- Complex communication and collaboration
- Problem-solving, critical-thinking; while
- Learning to self-regulate their progress and productivity

¹ Innovating Beyond the Bubble: The Education Sector 2009

² Measuring 21st Century Skills: The Education Sector 2008

Review each question below and rank your school from a 4 to 1 in each area. See attached rubric for criteria.

| Rubric for School Innovation | | 4 – Innovative | 3 – Emerging | 2 – Traditional | 1 – Underdeveloped |
|---|--|-----------------------|---------------------|------------------------|---------------------------|
| Student Achievement Outcomes | | | | | |
| STUDENT ACHIEVEMENT | How well are students developing core academic and higher order 21 st century skills as measured by traditional and performance assessments? | | | | |
| Leadership | | | | | |
| VISION AND PRIORITIES | Does school leadership promote a shared vision for improving student outcomes that includes goals for both core academic and higher order 21 st century skills? | | | | |
| ALLOCATING RESOURCES | Does the school effectively allocate resources to support its priorities? | | | | |
| Curriculum Coherence, Learner Centered Instruction and Digital Content | | | | | |
| CURRICULUM COHERENCE | Is there a coherent scope and sequence that sets clear expectations for what students should know and be able to do across grade levels and subject areas? | | | | |
| CURRICULUM BREADTH | Is the curriculum designed to provide an effective balance of core academic content and higher order 21 st century skills? | | | | |
| LEARNER-CENTERED INSTRUCTION | Do students routinely engage in learner-centered instruction? | | | | |
| ASSESSMENT | Is there a coherent assessment framework that includes both multiple choice and performance-based assessments to measure students' progress in attaining core academic and higher-order 21 st century skills? | | | | |
| Human Capital – Teacher Effectiveness | | | | | |
| TEACHER RECRUITING | Is there a strategic teacher recruitment process in place designed to identify high quality educators with the skills to address both core academic and higher order thinking skills? | | | | |
| PROFESSIONAL LEARNING COMMUNITY | Is professional learning structured to empower educators to identify student learning needs, plan and align instruction and assessment across grade levels, and learn effective practices to advance core academic and higher order 21 st century skills? | | | | |
| DATA USE AND COLLABORATIVE INQUIRY | Do educators use data as part of collaborative inquiry around how to improve student outcomes? | | | | |
| RETENTION | Is there a strategic teacher retention plan in place that facilitates new roles for teachers, offers opportunities for professional growth and recognizes excellence and innovation? | | | | |
| Infrastructure: Hardware, Software, Networks and Tech Support | | | | | |
| ACCESS | Do teachers and students have consistent and reliable access to hardware, the Internet, and digital content at the learning moment both during and out of school? | | | | |
| TECHNOLOGY SUPPORT | Are technology support structures in place and monitored so that technical requests are handled promptly and efficiently? | | | | |
| SCHOOL - HOME INFRASTRUCTURE | Does the infrastructure make it possible for the community (students, families, and educators) to communicate, collaborate, and access learning opportunities that extend beyond the traditional school day and school building? | | | | |

Student Achievement Outcomes

| | Innovative | Emerging | Traditional | Underdeveloped |
|--|---|--|---|---|
| <p>STUDENT ACHIEVEMENT</p> <p>How well are students developing core academic and higher order 21st century skills as measured by traditional and performance assessments?</p> | <ul style="list-style-type: none"> A majority of students are demonstrating mastery of core academic skills as measured by state assessments. A majority of students are demonstrating mastery of higher order 21st century skills as measured by school-wide performance assessments. | <ul style="list-style-type: none"> A majority of students are exceeding testing requirements in core subjects as compared to similar schools. Many students are demonstrating higher order 21st century skills as evidenced in class observations and class work. | <ul style="list-style-type: none"> A majority of students are meeting minimum testing requirements in core subject areas as compared to similar schools. | <ul style="list-style-type: none"> Students are not meeting minimum testing requirements in Reading and Math as compared to similar schools, and school is targeted for improvement. |

Leadership

| | Innovative | Emerging | Traditional | Underdeveloped |
|---|--|---|--|---|
| <p>VISION AND PRIORITIES</p> <p>Does school leadership promote a shared vision for improving student outcomes that includes goals for both core academic and higher order 21st century skills?</p> | <ul style="list-style-type: none"> Most teachers can articulate a shared vision for student learning emphasizing both core academic and higher order 21st century skills. Most teachers are inspired and empowered to advance the vision and meet and exceed student outcome goals. | <ul style="list-style-type: none"> Many teachers can articulate a shared vision for student learning emphasizing core academic and higher order 21st century skills. Many teachers are working to meet goals defined by school leadership. | <ul style="list-style-type: none"> Some teachers can articulate a shared vision for student learning that emphasizes core academic outcomes only. Many teachers are working towards goals defined by standardized tests. | <ul style="list-style-type: none"> Few to no teachers can articulate a shared vision for student learning. Most teachers are not working towards specific goals for improving student outcomes. |
| <p>ALLOCATING RESOURCES</p> <p>Does the school effectively allocate resources to support its priorities?</p> | <ul style="list-style-type: none"> Resources are closely aligned to support school priorities. Technological resources are <i>essential</i> and aligned to advance school priorities. | <ul style="list-style-type: none"> Resources are adequately aligned to support school priorities. Technological resources are aligned to but not essential to advance school priorities. | <ul style="list-style-type: none"> Resources are somewhat aligned to support school priorities. Technological resources do not support school priorities. | <ul style="list-style-type: none"> Resources are not aligned to support school priorities. Technological resources are wasted or are underutilized. |

Curriculum Coherence, Learner-Centered Instruction and Digital Content

| | Innovative | Emerging | Traditional | Underdeveloped |
|--|--|--|--|---|
| <p>CURRICULUM COHERENCE</p> <p>Is there a coherent scope and sequence that sets clear expectations for what students should know and be able to do across grade levels and subject areas?</p> | <ul style="list-style-type: none"> Curriculum scope and sequence is coherent school-wide and available digitally. Learning community generates, purchases, and shares existing and new curricula resources digitally for school and home use. | <ul style="list-style-type: none"> Curriculum scope and sequence is coherent across most of the school. Guides teacher planning. Some teachers share curricula resources digitally. | <ul style="list-style-type: none"> Curriculum scope and sequence is coherent in some subject areas. Utilized by some teachers to guide planning. | <ul style="list-style-type: none"> Curriculum scope and sequence is not coherent in any subject areas. Teachers select priorities for instruction without aligning across grades or subjects. |
| <p>CURRICULUM BREADTH</p> <p>Is the curriculum designed to provide an effective balance of core academic content and higher order 21st century skills?</p> | <ul style="list-style-type: none"> Curriculum goes beyond subjects, topics and skills outlined in state standards. Focus is on integrating core academic content with higher order 21st century skills. Non-traditional courses (e.g. programming, design) Online learning increases students' choice of courses. | <ul style="list-style-type: none"> Curriculum is adequately aligned to subjects, topics and skills outlined in state standards. Integrating core academic content and higher-order 21st century skills is in progress. | <ul style="list-style-type: none"> Curriculum is only aligned to subjects, topics, and skills outlined in state standards. Focus is on content coverage; higher-order skills not emphasized. | <ul style="list-style-type: none"> Curriculum is confined to the subjects, topics, and skills covered on state assessments. |
| <p>LEARNER-CENTERED INSTRUCTION</p> <p>Do students routinely engage in learner-centered instruction? (inquiry-based, authentic, collaborative and differentiated, and or individualized to meet the needs of diverse students)</p> | <ul style="list-style-type: none"> Learner-centered instruction is a core value. Focus of planning and PD. Implemented, monitored and observable school-wide. Digital content and tools essential to learning and creativity, self directed learning, exploring real world issues, collaboration within and beyond school and/or access to individualized instruction. | <ul style="list-style-type: none"> Some learner-centered instruction implemented (i.e. differentiated instruction, data to individualize) Addressed in planning and PD. Observable in many classrooms. Digital content and tools support learner-centered instruction. | <ul style="list-style-type: none"> Instruction is mostly teacher-directed. Some teachers employ learner-centered methods and are encouraged but not supported. Digital content and tools rarely utilized. | <ul style="list-style-type: none"> Instruction is mostly teacher-directed. Teachers who do employ learner-centered methods do so in isolation. |
| <p>ASSESSMENT</p> <p>Is there a coherent assessment framework that includes both multiple choice and performance-based assessments to measure students' progress in attaining core academic and higher-order 21st century skills?</p> | <ul style="list-style-type: none"> Teachers collaboratively develop shared metrics and use multiple-choice and performance-based assessments. Multiple-choice and authentic performance-based assessments are completed digitally (i.e. digital portfolios/w data) Teachers/parents/students access assessment data and graded samples of student work online. | <ul style="list-style-type: none"> Many teachers use multiple choice and performance-based assessments. Only multiple-choice assessments are completed digitally. Teachers/parents/students access multiple-choice assessment data online. | <ul style="list-style-type: none"> Teachers use multiple-choice assessments. No assessments are completed digitally. Teachers/parents students have little access to data online. | <ul style="list-style-type: none"> Teachers have no school-wide framework for assessment or do not use the one that exists. |

Human Capital – Teacher Effectiveness

| | Innovative | Emerging | Traditional | Underdeveloped |
|---|---|--|---|--|
| <p>TEACHER RECRUITING</p> <p>Is there a strategic teacher recruitment process in place designed to identify high quality educators with the skills to address both core academic and higher order thinking skills?</p> | <ul style="list-style-type: none"> • Significant upfront planning, time, resources, innovative methods and partnerships are used to attract top talent. • Majority of teachers hired demonstrate evidence of: <ul style="list-style-type: none"> - effectiveness in core academic areas (test gains) - instruction in higher order 21st century skills(sample work) - technological literacy | <ul style="list-style-type: none"> • Significant time and resources are used to attract highly qualified teachers. • Majority of teachers hired demonstrate evidence of: <ul style="list-style-type: none"> - effectiveness in core academic areas (test gains) - technological literacy | <ul style="list-style-type: none"> • Time and resources are devoted to hiring certified teachers. • Majority of teachers are hired without evidence of past effectiveness. | <ul style="list-style-type: none"> • Teacher hiring is reactive and is not a priority activity. • Majority of teachers are hired without evidence of past effectiveness. • Multiple vacancies and long-term subs prevalent. |
| <p>PROFESSIONAL LEARNING COMMUNITY</p> <p>Is professional learning structured to empower educators to identify student learning needs, plan and align instruction and assessment across grade levels, and learn effective practices to advance core academic and higher order 21st century skills?</p> | <ul style="list-style-type: none"> • Significant time and resources are devoted to professional learning and collaboration. • Professional learning is highly relevant; driven by immediate instructional challenges and informed by student outcomes. • PD on digital tools and resources is closely aligned to curriculum and instructional priorities. • Most teachers use email and web collaboration and publishing tools for professional learning, sharing and revising instructional resources. • Online PD resources used by many teachers. | <ul style="list-style-type: none"> • Time and resources are devoted to professional learning and collaboration. • Professional learning is relevant in some grades or clusters. • PD about digital tools and resources is sometimes aligned to curriculum and instructional priorities. • Many teachers use email and web collaboration tools for professional learning, planning and communication. • Online PD available. | <ul style="list-style-type: none"> • Time and resources are devoted to professional learning but many teachers do not participate. • Professional learning is not guided by instructional challenges or student needs. • PD about digital resources is only vaguely aligned to curriculum and instructional priorities. • Some educators communicate by e-mail. | <ul style="list-style-type: none"> • Few to no resources or time are devoted to professional learning and collaboration. • Professional learning is disconnected from instructional challenges or student needs. • PD about digital resources and tools is generally unavailable. • Little to no digital communication between educators by email. |
| <p>DATA USE AND COLLABORATIVE INQUIRY</p> <p>Do educators use data as part of collaborative inquiry around how to improve student outcomes?</p> | <ul style="list-style-type: none"> • Data systems for analyzing data easily accessible. • Collaborative inquiry is a seamless part of professional learning. • All administrators and teachers use multiple sources of student data on a regular basis as part of an inquiry process to inform instruction and improve student achievement across the school. | <ul style="list-style-type: none"> • Data systems are available to teachers. • Inquiry process is in place on some grade levels. • Many administrators and teachers analyze student data, and use the information to inform instructional practices. | <ul style="list-style-type: none"> • Data systems are available but not well understood. • Inquiry process is formal and occurs only on specialized teams. • Administrators and a few teachers review student data in isolation; no evidence that data is used to inform instruction. | <ul style="list-style-type: none"> • Data systems available but not well understood. • There is no articulated system or process in place for analyzing student data. • Neither teachers nor administrators review student data. |
| <p>RETENTION</p> <p>Is there a strategic teacher retention plan in place that facilitates new roles for teachers, offers opportunities for professional growth and recognizes excellence and innovation?</p> | <ul style="list-style-type: none"> • Retention rate is high. • Many high performing teachers. • Retention supports significant innovation and continuous improvement from year to year. | <ul style="list-style-type: none"> • Retention rate is acceptable. • Difficulty retaining high performing teachers. • Retention supports some innovation and continuous improvement. | <ul style="list-style-type: none"> • Retention rate is below acceptable. • Unable to retain high performing teachers. • Innovation and improvements slow. | <ul style="list-style-type: none"> • Retention rate is low. • Many teachers leave within three years. • Few sustained improvements. |

Infrastructure: Hardware, Software, Networks and Tech Support

| | Innovative | Emerging | Traditional | Underdeveloped |
|---|---|---|---|--|
| <p>ACCESS</p> <p>Do teachers and students have consistent and reliable access to hardware, the Internet, and digital content at the learning moment both during and out of school?</p> | <ul style="list-style-type: none"> • Technology moves with the students throughout the school day and to home. • Computers and Internet connections work. • Consistent high-speed wireless Internet access exists in every classroom. • Access to digital content, software, document storage, and virtual workspaces are available from any machine at school and at home. | <ul style="list-style-type: none"> • A critical mass of technology is available in most classrooms. • Computers and Internet connections work. • Wireless Internet access is available in all classrooms, but is slow. • Access to digital content, software, document storage, and virtual workspaces are available from any machine at school only. | <ul style="list-style-type: none"> • Working technology is available for specialized purposes or grade/subject area groups within the school. • Internet access is slow, or exists only in some classrooms. • Digital content and software is consistent from machine to machine. Student and teacher work is saved locally. | <ul style="list-style-type: none"> • Working technology is rarely available. • There is no working Internet access in classrooms. • Internet access is limited to administrative offices. • Digital content and tools vary from machine to machine. Student and teacher work is saved locally, but often unsuccessfully. |
| <p>TECHNOLOGY SUPPORT</p> <p>Are technology support structures in place and monitored so that technical requests are handled promptly and efficiently?</p> | <ul style="list-style-type: none"> • Support typically takes less than 24 hours. • Turn-around time is tracked and monitored for efficiency. | <ul style="list-style-type: none"> • Support routinely takes 48 hours or less. • Turn-around time is tracked but not monitored for efficiency. | <ul style="list-style-type: none"> • Technical service requests usually take up to a week to resolve. • Turn-around time is not tracked or monitored. | <ul style="list-style-type: none"> • Technical requests may take months to resolve. • Turn-around time is not tracked or monitored. |
| <p>SCHOOL - HOME INFRASTRUCTURE</p> <p>Does the infrastructure make it possible for the community (students, families, and educators) to communicate, collaborate, and access learning opportunities that extend beyond the traditional school day and school building?</p> | <ul style="list-style-type: none"> • Online portal facilitates school-home interactive access to learning content. School administrators, parents, teachers and students communicate and collaborate online in ways that advance student outcomes. | <ul style="list-style-type: none"> • School has a website that is updated with information for families and email communication between administrators, parents, teachers and students is common. | <ul style="list-style-type: none"> • Web-site exists but is not updated. • Some use of email between parents and teachers or teachers and students but it is not routine or supported by the school. | <ul style="list-style-type: none"> • There is no digital connection or communication between the school and home, or between teachers, parents and students. |