enGauge Online Assessment Profile

School: SHIOCTON EL
District: SHIOCTON
Location: SHIOCTON, WI - Wisconsin
Survey Dates: Thursday, February 01, 2007 through Wednesday, February 28, 2007

About the Profile

This *enGauge* Online Assessment Profile has been customized for SHIOCTON EL based on the responses to the online surveys by your students, community, and staff.

The profile provides a snapshot of SHIOCTON EL's progress within the Six Essential Conditions for effective use of educational technology outlined in the enGauge Framework. This profile also contains information regarding how respondents prioritized both 21st Century Skills and the importance of technology integration in various content areas.

With this comprehensive technology use profile, SHIOCTON EL will be better prepared to make decisions that will ultimately improve teaching and learing.

The *enGauge* online survey is most valuable when combined with other forms of assessment such as observations and interviews.

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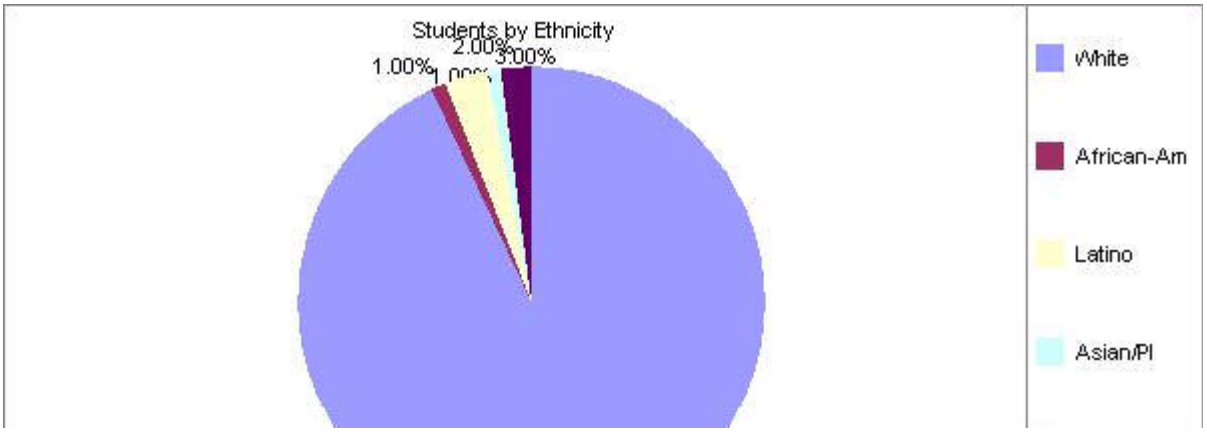
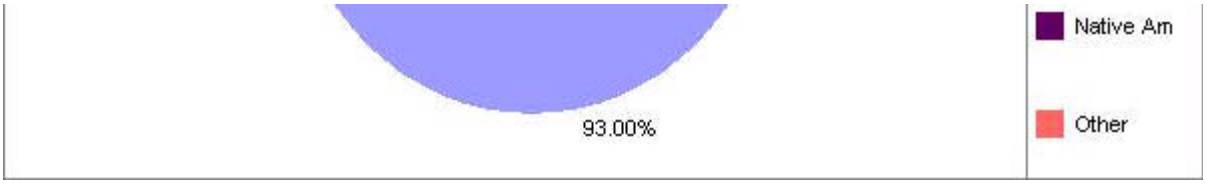
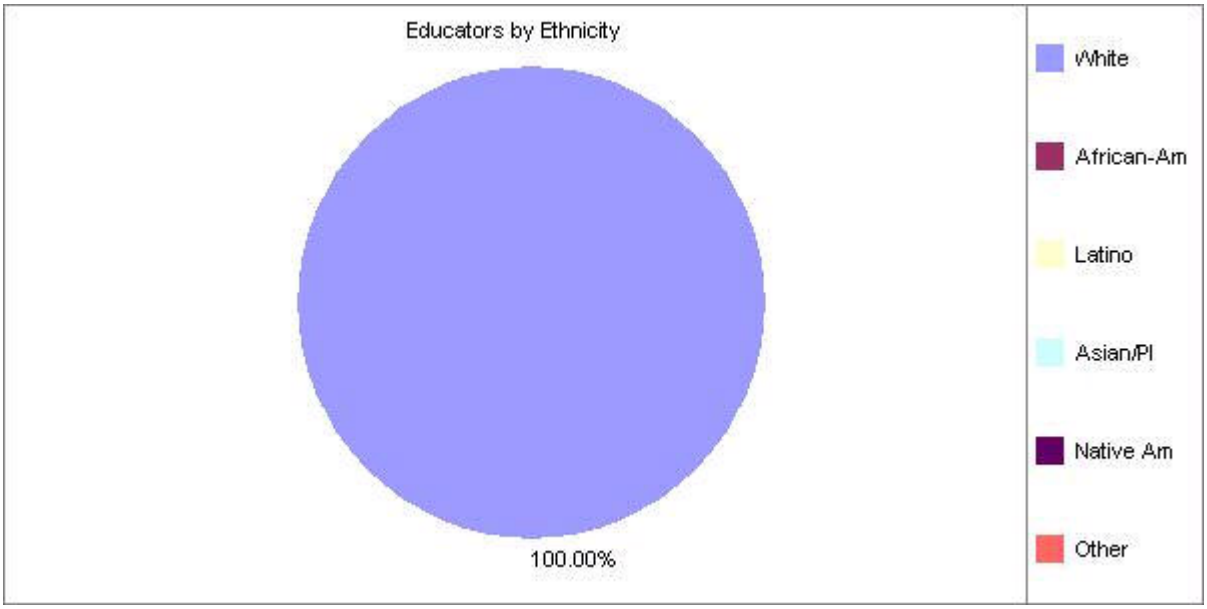
- *enGauge* is designed to assist schools and districts in identifying and studying key issues in learning technology within the context of a comprehensive school improvement or planning process.
- The *enGauge* survey is not intended to be used as a high-stakes assessment tool.

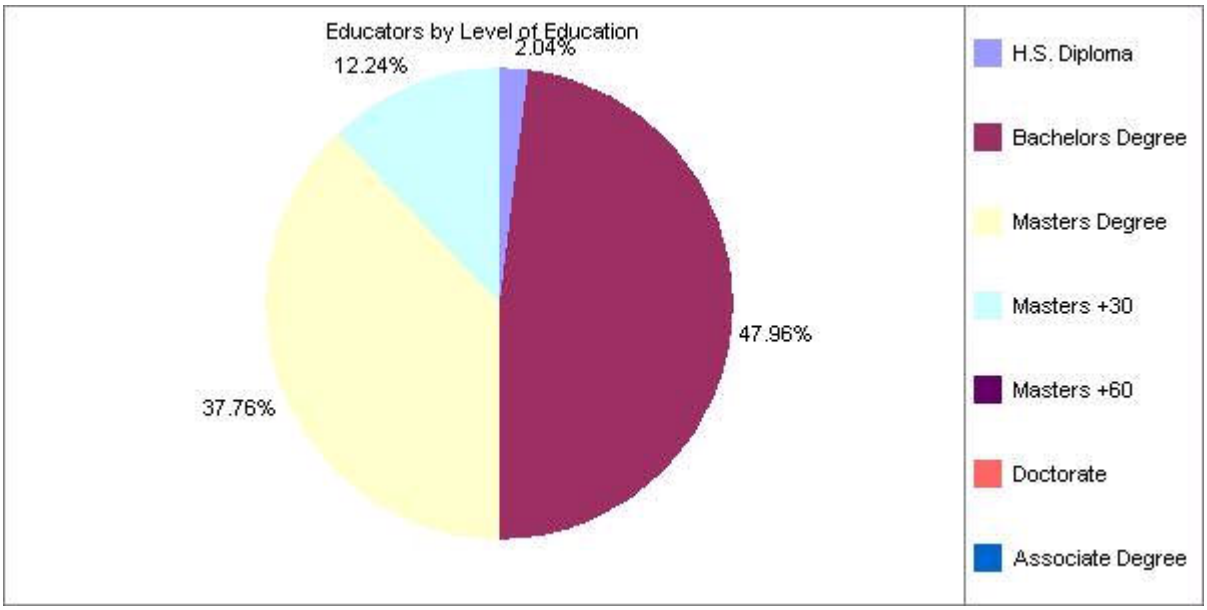
Executive Summary: Respondents

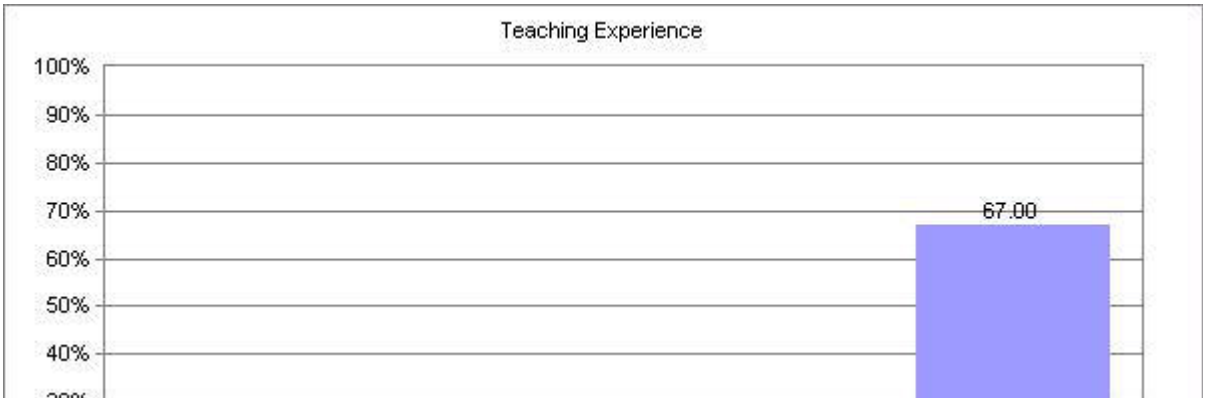
1 Board Member
1 Building Administrator
1 Building Technology Coordinator
4 Parents
5 Community Members
16 Students
40 Educators (teachers, assistants, special needs personnel, etc.)

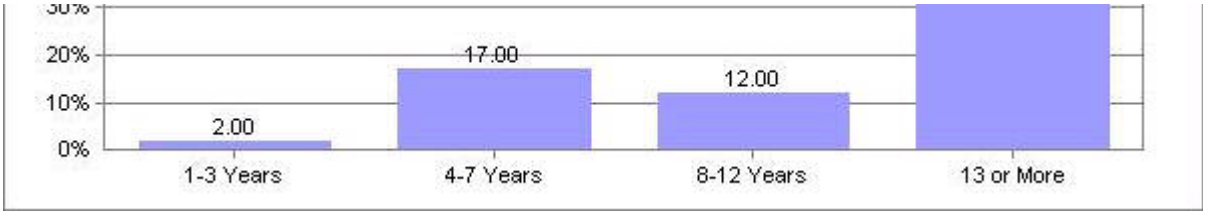


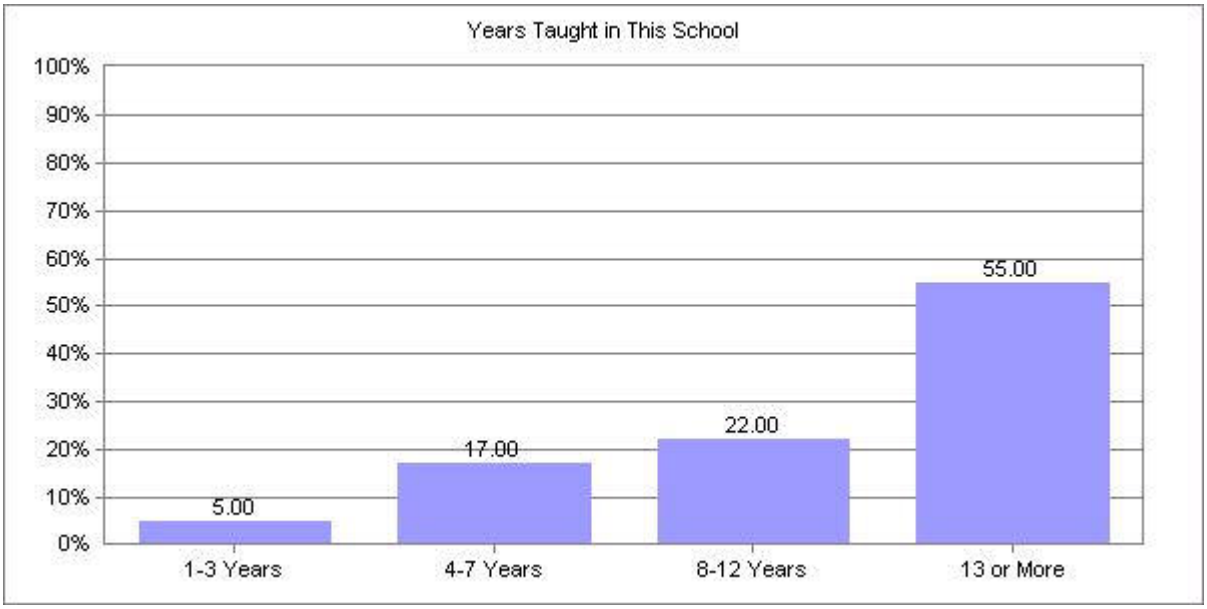








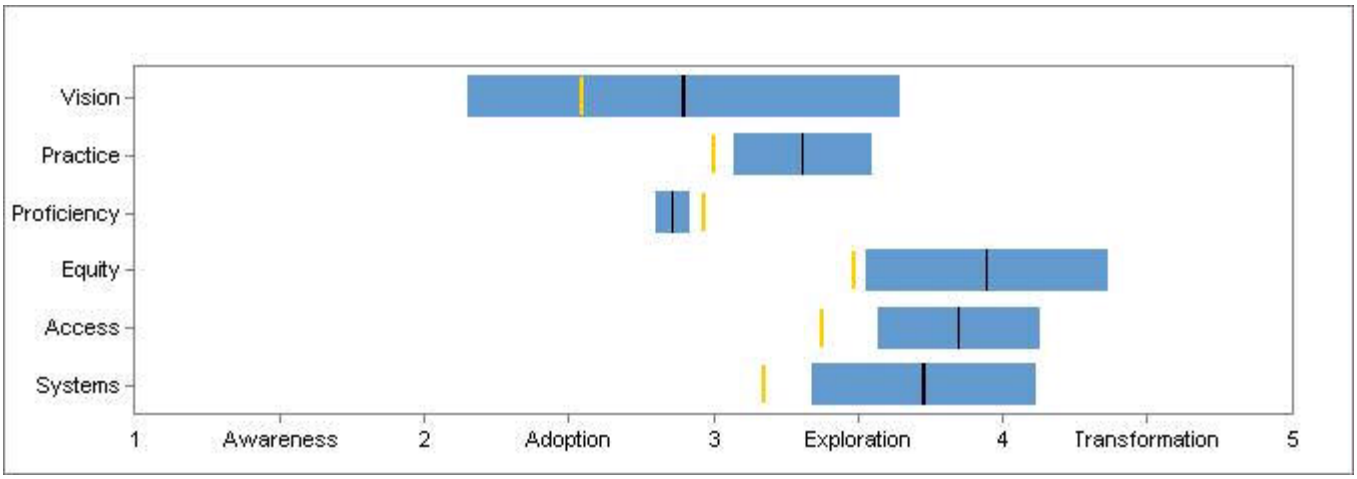




Executive Summary: Essential Conditions

The *enGauge* Framework describes six systemwide conditions that are essential for the effective use of technology. The chart below shows SHIOCTON EL's status on a 4-stage continuum of Six Essential Conditions.

Status: Six Essential Conditions



Vision Mean = 2.9 Variation = 0.75 Database Average = 2.58
Practice Mean = 3.31 Variation = 0.24 Database Average = 3.04
Proficiency Mean = 2.86 Variation = 0.06 Database Average = 3
Equity Mean = 3.95 Variation = 0.42 Database Average = 3.52
Access Mean = 3.85 Variation = 0.28 Database Average = 3.41
Systems Mean = 3.73 Variation = 0.39 Database Average = 3.21

All database averages are calculated from completed *enGauge* Online Assessment projects.

For the most part SHIOCTON EL is in the exploration stage suggesting that, in general, educators are using data to systematically align curriculum, instruction, and assessment to digital age goals. Technology is beginning to visibly bring value to P–12 education.

Executive Summary: Indicators

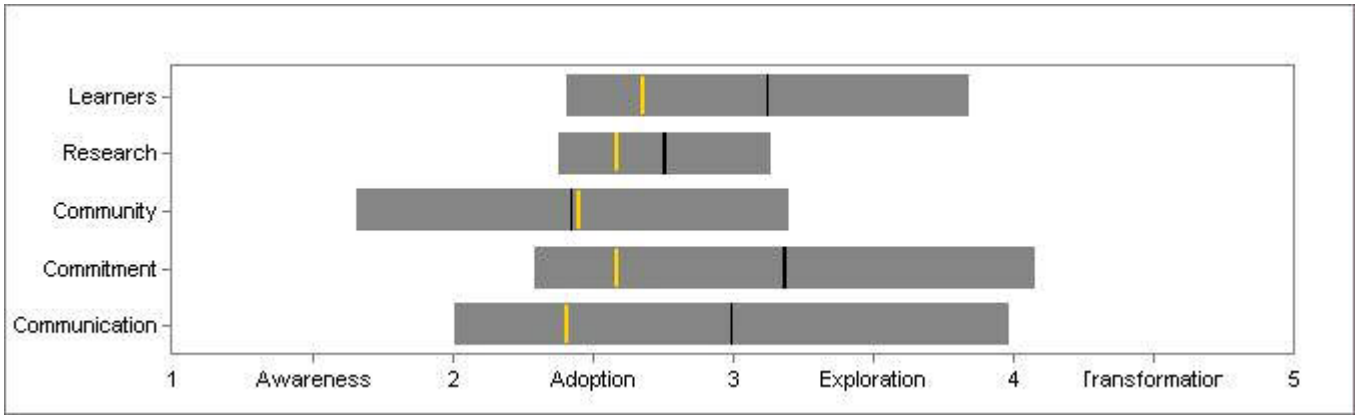
Within each Essential Condition, Indicators have been identified that describe measurable aspects of the condition.

- The table below lists your status for each indicator sorted from highest to lowest.
- Details on each of the 35 Indicators are presented in the full profile.

Status	Condition - Indicator	Continuum Stage
4.60	Equity - Gender	Transformation
4.46	Access - Connectivity	Transformation
4.36	Access - Facilities	Transformation
4.22	Systems - Funding	Transformation
4.19	Access - Administration	Transformation
4.17	Equity - Race	Transformation
4.16	Access - Support	Transformation
4.13	Systems - Accountability	Transformation
4.00	Systems - Proficiency	Transformation
3.82	Equity - Systemwide	Exploration
3.76	Systems - Development	Exploration
3.74	Systems - Thinking	Exploration
3.67	Practice - Research	Exploration
3.64	Equity - Socioeconomic	Exploration
3.59	Practice - Alignment	Exploration
3.54	Equity - Special Needs	Exploration
3.52	Systems - Culture	Exploration
3.49	Systems - Standards	Exploration
3.32	Practice - Range of Use	Exploration
3.19	Vision - Commitment	Exploration
3.14	Proficiency - Ethics	Exploration
3.13	Proficiency - Productivity	Exploration
3.13	Vision - Learners	Exploration
3.06	Practice - Relevance	Exploration
3.06	Proficiency - Implementing	Exploration
3.00	Access - Resources	Exploration
3.00	Vision - Communication	Exploration
2.95	Systems - Community	Adoption
2.93	Access - Opportunities	Adoption

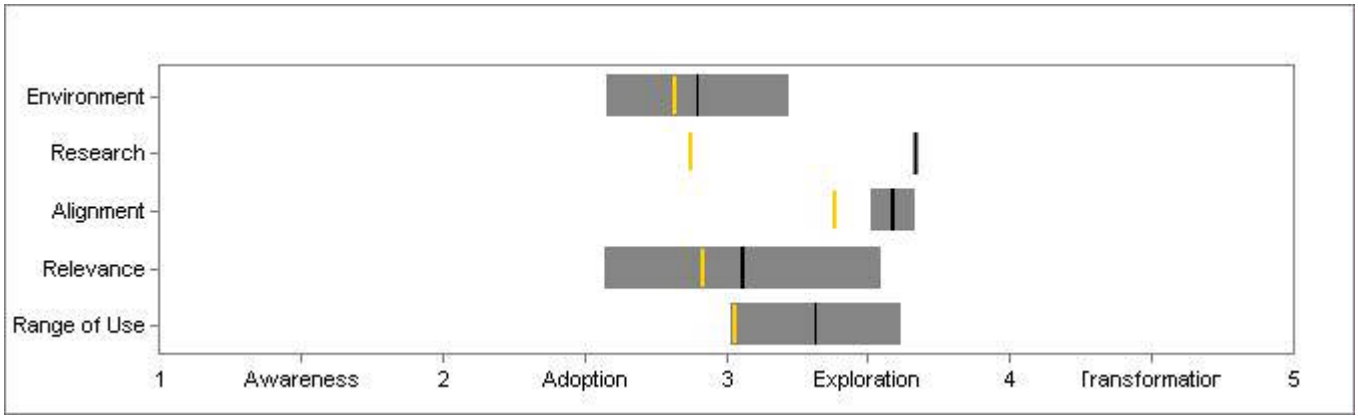
2.90	Practice - Environment	Adoption
2.80	Proficiency - Skills	Adoption
2.76	Vision - Research	Adoption
2.67	Proficiency - Planning	Adoption
2.43	Vision - Community	Adoption
2.37	Proficiency - Assessment	Adoption

Condition: Forward-Thinking, Shared Vision



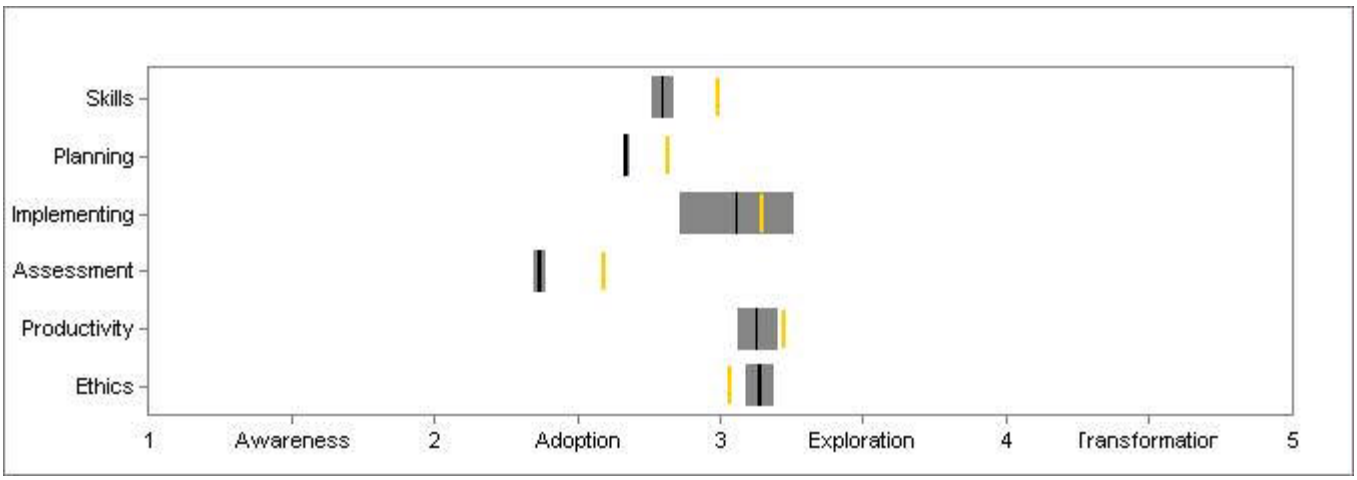
Learners Mean = 3.13 Variation = 0.72 Database Average = 2.72
Research Mean = 2.76 Variation = 0.38 Database Average = 2.62
Community Mean = 2.43 Variation = 0.77 Database Average = 2.49
Commitment Mean = 3.19 Variation = 0.89 Database Average = 2.62
Communication Mean = 3 Variation = 0.99 Database Average = 2.44

Condition: Effective Teaching and Learning Practice



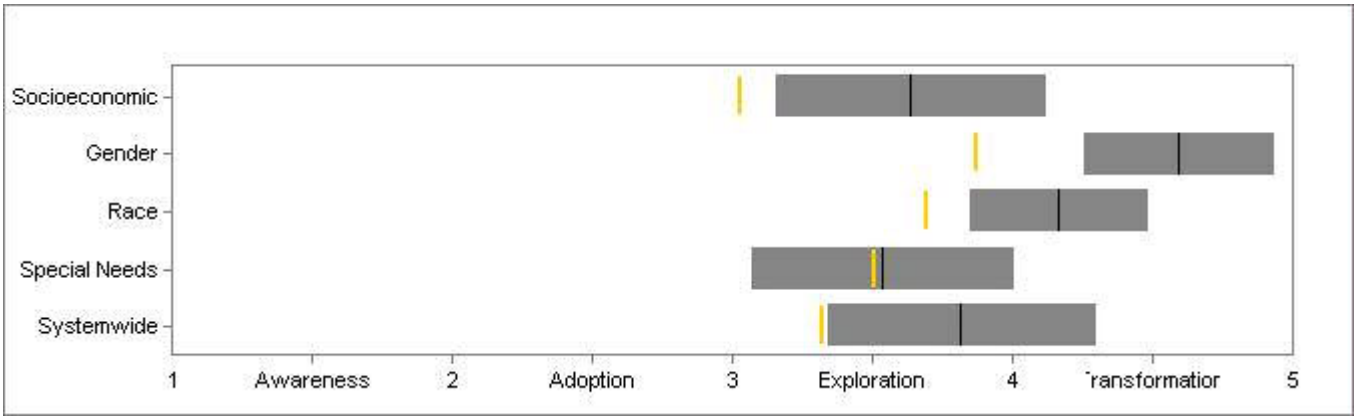
Environment Mean = 2.9 Variation = 0.32 Database Average = 2.85
Research Mean = 3.67 Variation = 0.01 Database Average = 2.91
Alignment Mean = 3.59 Variation = 0.08 Database Average = 3.42
Relevance Mean = 3.06 Variation = 0.49 Database Average = 2.95
Range of Use Mean = 3.32 Variation = 0.3 Database Average = 3.06

Condition: Educator Proficiency



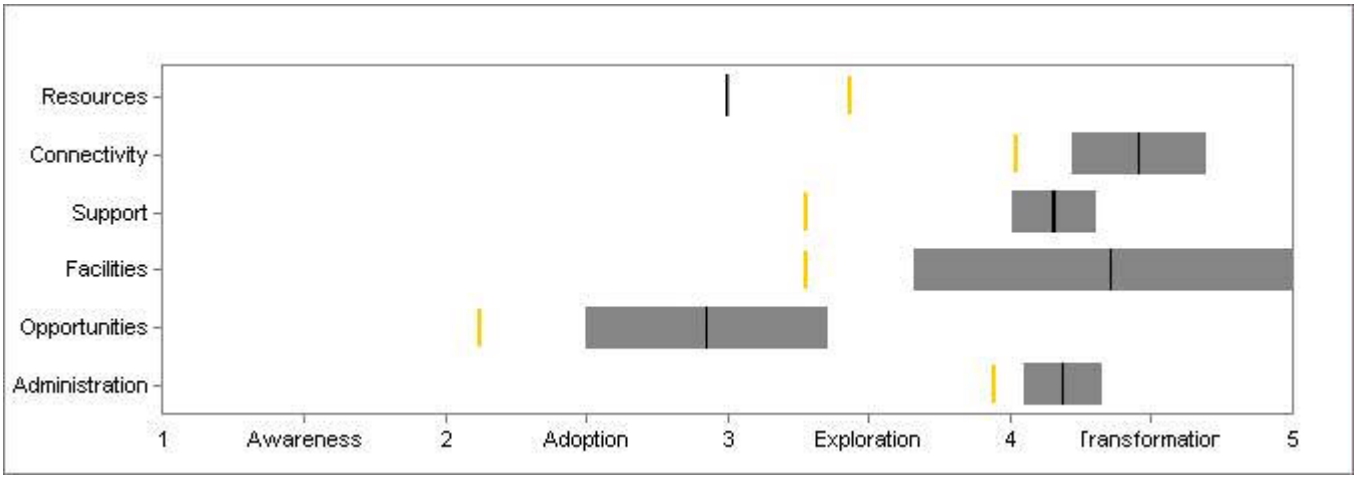
Skills Mean = 2.8 Variation = 0.04 Database Average = 3.03
Planning Mean = 2.67 Variation = 0 Database Average = 2.85
Implementing Mean = 3.06 Variation = 0.2 Database Average = 3.18
Assessment Mean = 2.37 Variation = 0.02 Database Average = 2.63
Productivity Mean = 3.13 Variation = 0.07 Database Average = 3.26
Ethics Mean = 3.14 Variation = 0.05 Database Average = 3.07

Condition: Digital-Age Equity



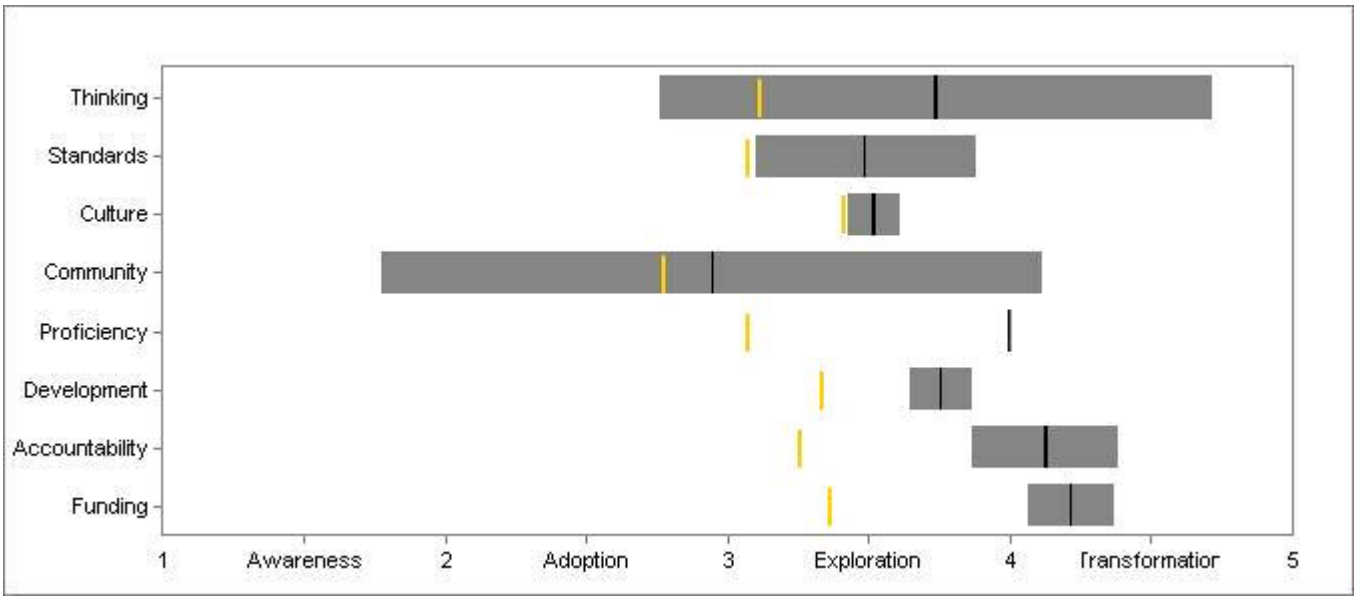
Socioeconomic Mean = 3.64 Variation = 0.48 Database Average = 3.06
Gender Mean = 4.6 Variation = 0.34 Database Average = 3.91
Race Mean = 4.17 Variation = 0.32 Database Average = 3.73
Special Needs Mean = 3.54 Variation = 0.47 Database Average = 3.54
Systemwide Mean = 3.82 Variation = 0.48 Database Average = 3.35

Condition: Robust Access Anywhere, Anytime



Resources Mean = 3 Variation = 0 Database Average = 3.47
Connectivity Mean = 4.46 Variation = 0.24 Database Average = 4.06
Support Mean = 4.16 Variation = 0.15 Database Average = 3.31
Facilities Mean = 4.36 Variation = 0.7 Database Average = 3.31
Opportunities Mean = 2.93 Variation = 0.43 Database Average = 2.16
Administration Mean = 4.19 Variation = 0.14 Database Average = 3.98

Condition: Systems and Leadership



Thinking Mean = 3.74 Variation = 0.98 Database Average = 3.15
Standards Mean = 3.49 Variation = 0.39 Database Average = 3.11
Culture Mean = 3.52 Variation = 0.09 Database Average = 3.45
Community Mean = 2.95 Variation = 1.17 Database Average = 2.81
Proficiency Mean = 4 Variation = 0 Database Average = 3.11
Development Mean = 3.76 Variation = 0.11 Database Average = 3.37
Accountability Mean = 4.13 Variation = 0.26 Database Average = 3.29
Funding Mean = 4.22 Variation = 0.15 Database Average = 3.4

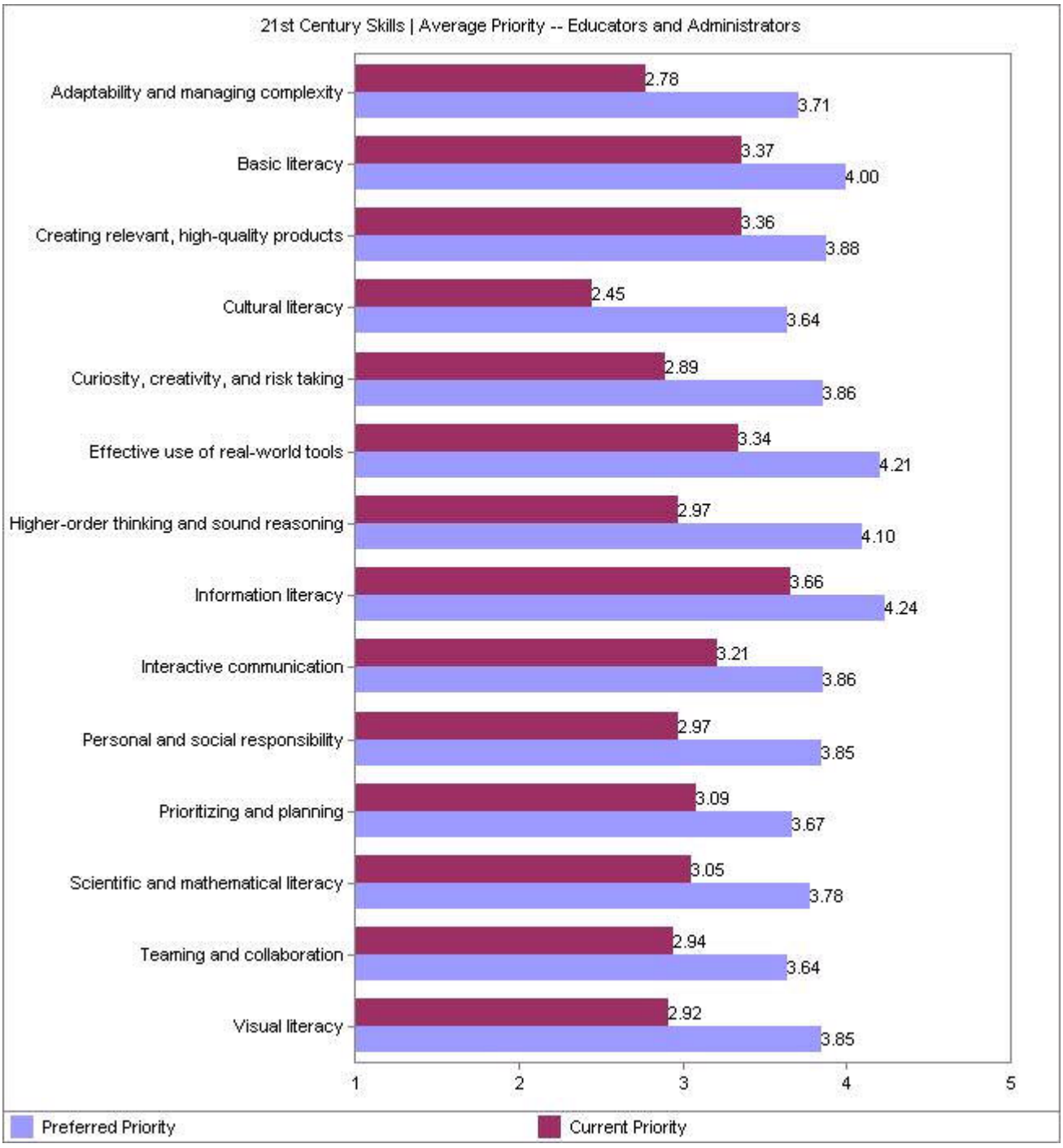
Executive Summary: 21st Century Skills

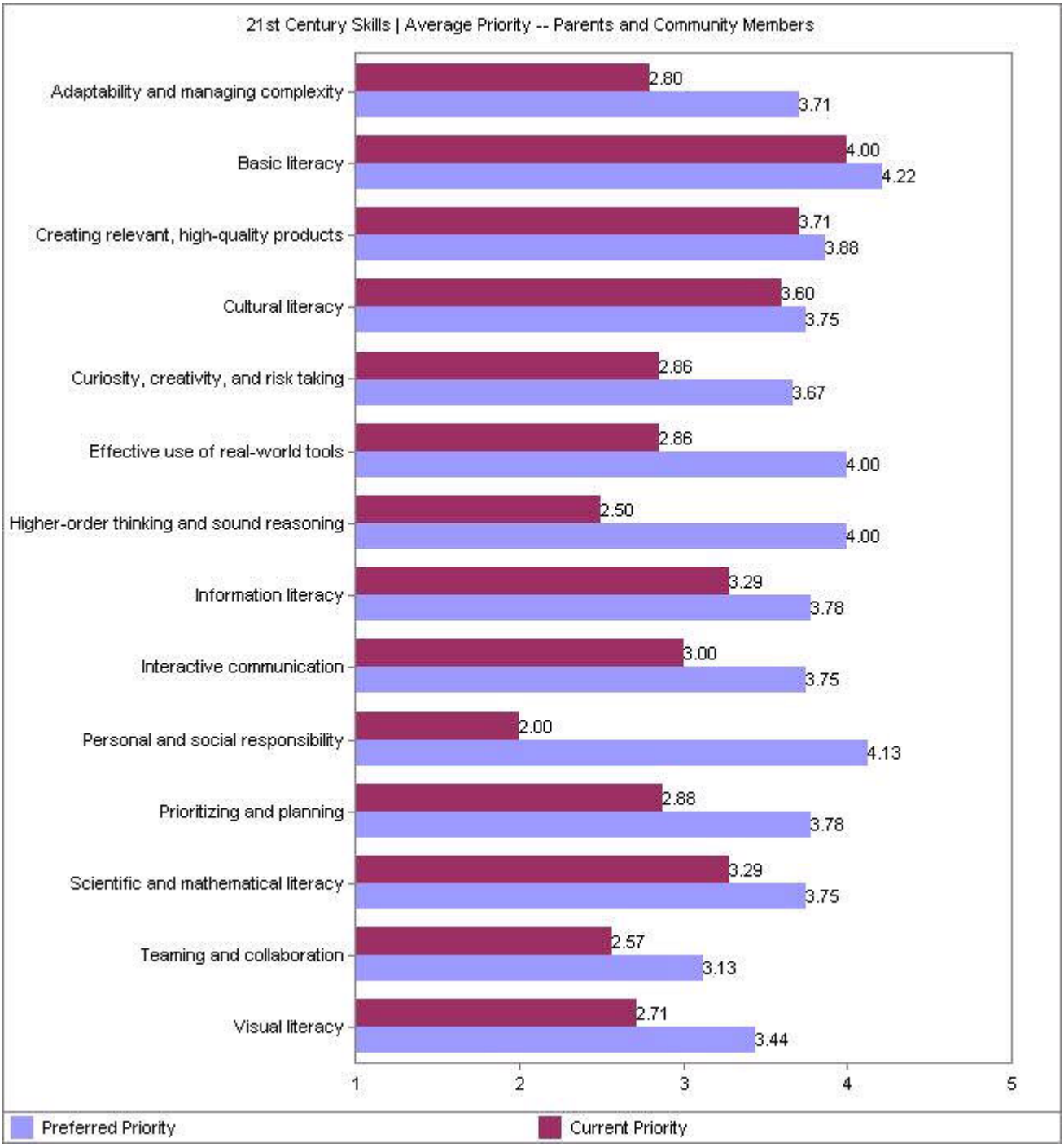
The *enGauge* Web site includes a description of 21st Century Skills that will be important in the lives of students in an increasingly technological world.

The tables below show how the respondents rated these skills in terms of:

- Current priority
- Preferred priority

Low priority equals 1; high priority equals 5.





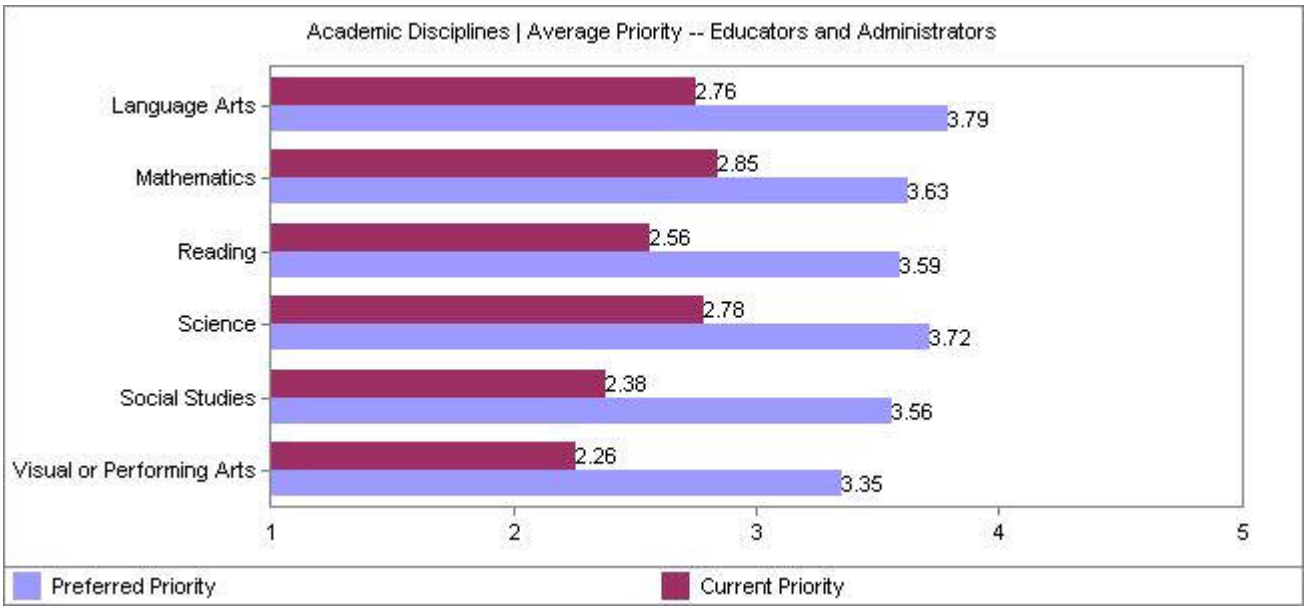
Executive Summary: Academic Focus

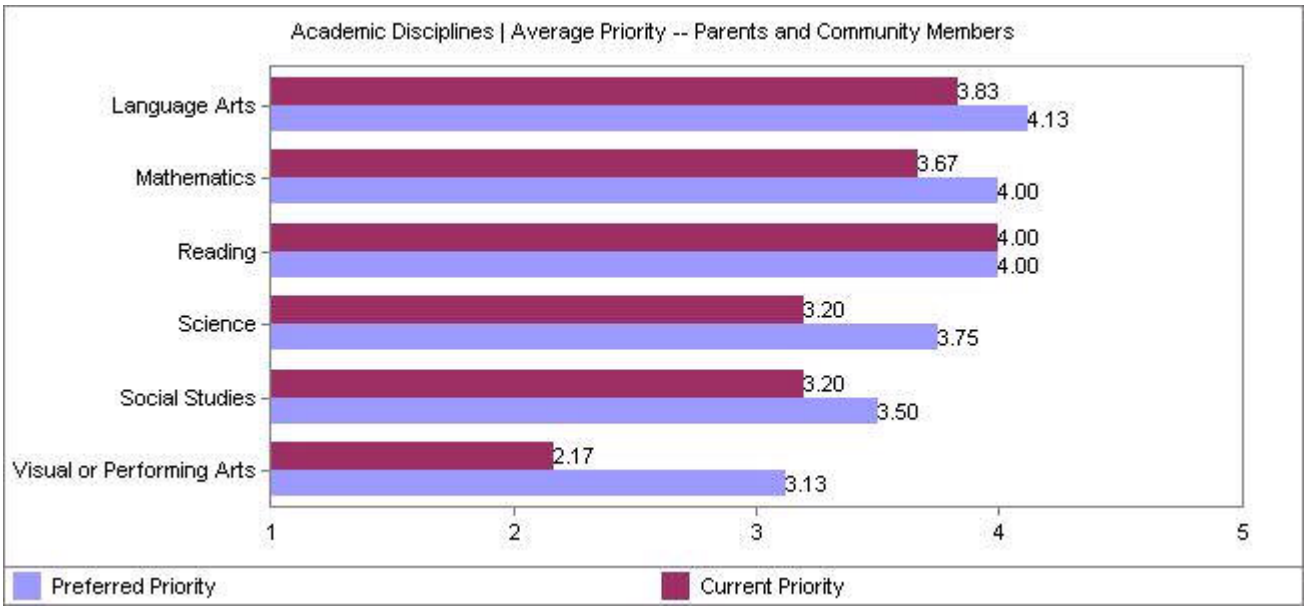
There is compelling evidence to suggest that, under the right conditions, effective use of technology can strengthen and deepen students' understanding of academic disciplines.

The tables below show how the respondents rated the importance of integrating technology into various disciplines in terms of:

- Current priority
- Preferred priority

Low priority equals 1, high priority equals 5.





Six Essential Conditions: The Details

This section of the profile provides an in-depth look at each of the Six Essential Conditions required for effective use of technology in schools and the Indicators that can be used to assess those conditions.

For each Essential Condition:

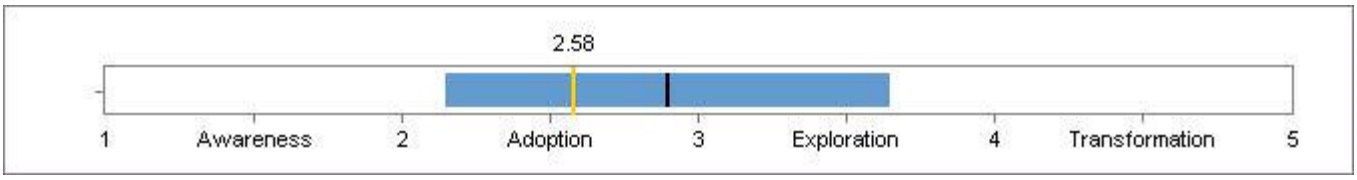
- The overall status is reported, placing SHIOCTON EL on the 4-stage continuum.
- The status for each Indicator is charted on the continuum.
- A description of the stages for each continuum is provided.
- Recommendations for improvement are provided.

Condition Details: Forward-Thinking, Shared Vision

How is the education system building a shared, community-based vision that prepares students to learn, work, and live successfully in the Digital Age?

The 21st century brings with it significant changes that are due, in large part, to technology and telecommunications. As society changes, the skills that citizens need to negotiate the new complexities of life also change. Further political, social, and economic advances will be possible only if the intellectual potential of American youth is realized. To thrive in this environment, students need clearly defined 21st-century proficiencies.

Respondents were asked questions about Indicators related to Vision. The combined answers across the Indicators places your school as follows in the Condition:

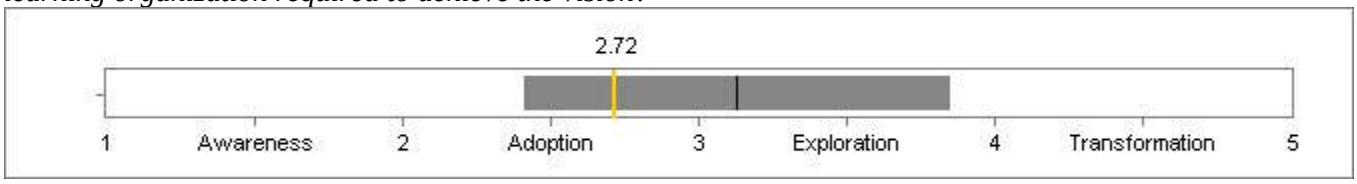


Mean = 2.9 Variation = 0.75 Database Average = 2.58

Scores for each Indicator in the Condition follow.

Condition: Forward-Thinking, Shared Vision
Indicator: Digital-Age Vision for Learners

Does the vision define what it means to be "educated" in a knowledge-based society? Does it describe the type of learning organization required to achieve the vision?



Mean = 3.13 Variation = 0.72 Database Average = 2.72

Indicator Continuum Description:

Awareness

At this level, the vision does not address the shift from an industrial and information age to a digital, knowledge-based age. The focus is often on how technology can advance the current content standards. The purposes of public education and societal shifts affecting them are not discussed. The school community has little, if any, common vision of the type of learning supported by technology. The vision assumes the traditional boundaries of classroom, school, and time.

Adoption

At this level, the vision recognizes the shift to an information age, but does not fully address the changes brought by today's knowledge-based age. Schools focus on the traditional purpose of public education. The vision is focused on how technology is advancing that purpose. The school's vision is focused primarily on technology used to accelerate students' achievement of content skills and literacy skills. The vision describes innovations through technology to meet learner needs—but only in the traditional setting of classroom and school.

Exploration

At this level, the vision thoroughly addresses the digital, knowledge-based age, but may not fully extend its analysis to the definition of an "educated" person it implies. The school and community are beginning to move from a traditional understanding of the purposes of public education to identifying skills critical to success in the 21st century. The school's vision focuses on technology-supported problem-solving and critical thinking in real-world contexts. The school community envisions a public education system that uses technology to meet the needs of learners, respecting but flexing the traditions of time, curriculum, and place.

Transformation

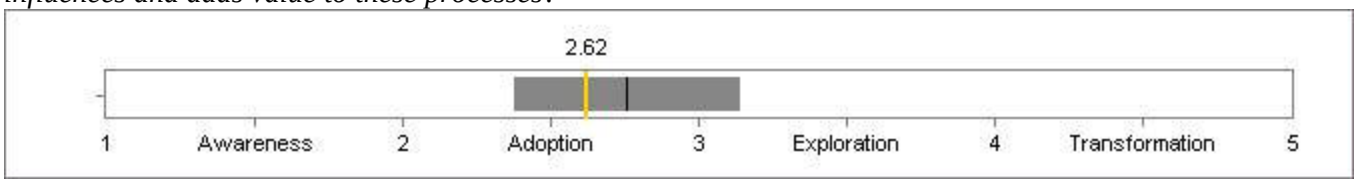
At this level, the vision aptly describes the digital, knowledge-based age, acknowledging its global aspects and stressing the importance of intellectual capital and the learners' ability to communicate, team, continuously learn, and function in a visual/data-rich society. The school and community emphasize the increasing importance of learning to learn in light of the shift to a digital age where intellectual capital is valued. The vision redefines the purpose of public education. The school's vision seeks to create learners who have the self-confidence, independence, and high-tech proficiencies to continuously learn—meeting challenges innovatively and creatively. Schools recognize the need for anywhere, anytime, anyplace learning in order to meet the needs of learners.The political, geographic, content, and time boundaries imposed by traditional schooling become secondary to the needs of the student.

Recommendation:

Once the vision has been established for some stakeholders in the school community, it is crucial that this be expanded, refined if necessary, and widely communicated. One of the best ways to do this is to seek out examples of students and classrooms that exemplify the vision within the school and district. Local examples that illustrate the application of these digital age skills will make the vision come to life.

Condition: Forward-Thinking, Shared Vision
Indicator: Sound Base in Research and Best Practices

Is the vision for technology use grounded in sound research on how people think and learn and how technology influences and adds value to these processes?



Mean = 2.76 Variation = 0.38 Database Average = 2.62

Indicator Continuum Description:

Awareness

Local best practices are considered, but no research informs the vision.

Adoption

The vision is based on a few well-known studies on how people learn and the impact of technology on learning. Best practices in the local and regional setting are considered—complemented by best practices highlighted at conferences and workshops and in professional journals.

Exploration

The vision is informed by published research in cognition, learning, and technology applications, but mostly at a meta-analysis level. The nuances of special populations, variant purposes, and implementation conditions are not considered. Local action research is considered, but not regularly included. The vision is informed by a comprehensive, national review of best practices. While well researched, this view does not take into account nuances based on conditions of implementation.

Transformation

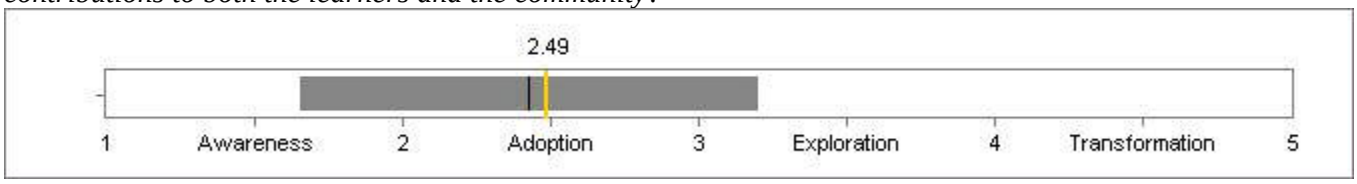
The vision is grounded in a comprehensive base of both historical and emergent research on how people think and learn. Processes are in place for continually updating the research base. The vision is informed by an extensive review of research on how technology impacts learning with various student populations, for different purposes, and under variant conditions. The review includes results from local action research initiatives. The vision is informed by a comprehensive review of best practices documenting effectiveness by purpose, level, instructional approach, and implementation strategy.

Recommendation:

One of the dangers in the visioning process is that false assumptions about crucial issues related to students and learning will cause the vision to be flawed. Early in the process, and throughout the process, all stakeholders should be exposed to the research base that underlies the assumptions in the vision. Plenty of information should be provided, in a digestible format, about research related to learning, technology, and digital-age skills.

Condition: Forward-Thinking, Shared Vision
Indicator: Community Linkages

Does the vision recognize the linkages that technology has created to local and global communities as critical partners and stakeholders in the teaching and learning process? Does it capitalize on the potential benefits from and contributions to both the learners and the community?



Mean = 2.43 Variation = 0.77 Database Average = 2.49

Indicator Continuum Description:

Awareness

The school is viewed as a self-contained system. There are few, if any, partnerships. Those that exist are typically limited to events. School is perceived as a self-contained system with limited, if any, partnerships or linkages. There is no electronic interaction between the community and the school. Few linkages with the community are in place.

Adoption

The school considers the community a valuable resource to be tapped and taps into community resources on an ad hoc basis. Partnerships feature external sponsorship of school-developed projects. Electronic communications are used as a vehicle for dissemination of information only. The school periodically taps into commonly available resources from the electronic communities.

Exploration

While not yet formally included in the vision or mission of the school, school and community leaders see value in linkages and interact on an ongoing basis. Collaborative partnerships are evident, but opportunities are not systematically identified, and partnerships are not formalized. The school is open to collaborative, two-way partnerships and has several underway, but they are not yet the norm. Interactive linkages via telecommunications are being explored, with a variety of communication technologies used, though not consistently or systematically. The school consistently uses telecommunications to tap into commonly available resources from local and global communities, occasionally customizing the interaction.

Transformation

The school is considered an integral part of the community, with school leaders working with community leaders on an ongoing basis. The community linkages are collaborative and formalized. Opportunities and resources for partnering are systematically identified and pursued. School-community partnerships are often and intentionally mutually beneficial. Linkages with the community are enhanced, and in many cases enabled, by a variety of interactive technologies that are consistently and systematically employed. The school interacts with both local and global communities, customizing interactions to maximize learning.

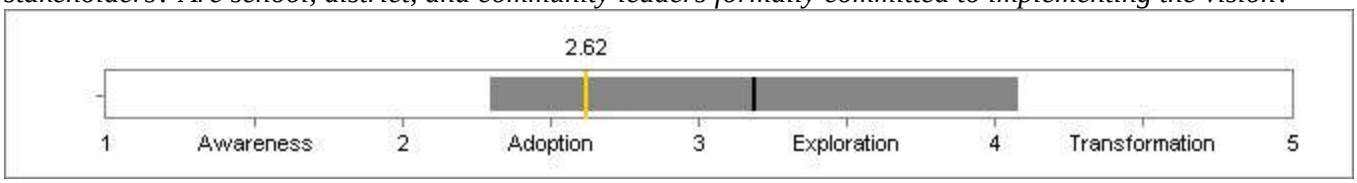
Recommendation:

An important component of the visioning process is the inclusion of the community as both a contributor and a beneficiary. To ensure this happens, community members should be included on the team responsible for crafting the

vision. The district's vision for technology should specifically address the role of and benefits to the community.

Condition: Forward-Thinking, Shared Vision
Indicator: Stakeholder Commitment

Were all stakeholders involved in creation of the vision? Is the vision understood and committed to by the full range of stakeholders? Are school, district, and community leaders formally committed to implementing the vision?



Mean = 3.19 Variation = 0.89 Database Average = 2.62

Indicator Continuum Description:

Awareness

All key stakeholders were not represented in the visioning process. Educators whose job responsibilities include learning technology crafted the vision. There was little or no opportunity for building awareness provided to stakeholders. Stakeholders are unaware of the vision. The stakeholders are not supportive or committed to the vision.

Adoption

The vision was developed by educators with review and commentary by key stakeholders. Stakeholders were provided extensive background material prior to visioning. Stakeholders are generally aware of the vision, but do not fully understand its implications for teaching and learning. While the stakeholders are supportive of the vision, they have yet to commit to implementing it.

Exploration

All key stakeholders provided input into the visioning process. Stakeholders participated in a formal process for raising awareness prior to the visioning process. Stakeholders understand the vision and how it translates into practice at some, but not all, levels of the system. The stakeholders have committed to implementing the vision and pending action by the school.

Transformation

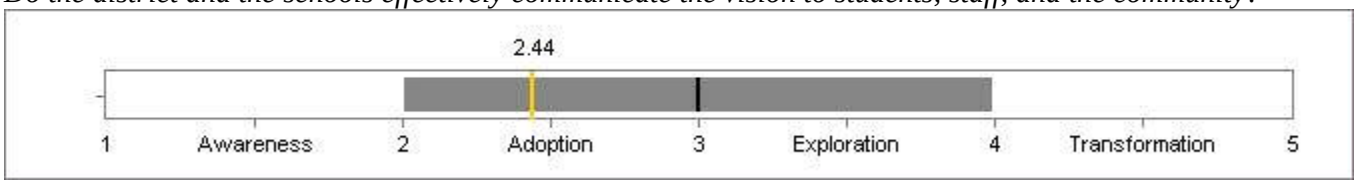
All key stakeholders were fully engaged in the visioning process. All key stakeholders were provided ample opportunities to build awareness prior to engaging in the visioning process. All key stakeholders fully understand the vision and how it will translate into practice and can communicate that to others. Stakeholders are committed to and have a defined role in advancing the vision.

Recommendation:

Stakeholders should be involved throughout—from visioning through the implementation and assessment stages. Advisory roles tend to become perfunctory unless meaningful, critical roles are created for stakeholders that engage them in decision-making processes where their opinions count.

Condition: Forward-Thinking, Shared Vision
Indicator: Communication

Do the district and the schools effectively communicate the vision to students, staff, and the community?



Mean = 3 Variation = 0.99 Database Average = 2.44

Indicator Continuum Description:

Awareness

The stakeholders in the school and community are not familiar with the vision for technology in learning. The vision has not been communicated to most of the stakeholders. Stakeholders do not have opportunities to discuss the vision in the context of school-community sessions. Communiqués are rarely exchanged between school and community. No technology is used.

Adoption

Some stakeholders are aware of the vision, but it is neither internalized nor driving decisions and actions. Stakeholders did receive an initial copy of the vision at the time it was established. While it has not been incorporated into the culture, stakeholders are beginning to discuss the implications. The various schools and community groups are beginning to discuss the translation of the vision into practice, but have not done so jointly. The vision statement has been disseminated using print only. It is beginning to show up in presentations to staff inside schools.

Exploration

Most stakeholders are aware of and make some decisions based on the vision. Evidence includes ongoing, interactive communications (e.g., media news, public forums, and talk about the community). There is evidence that the vision is being discussed and communicated often, albeit only by key, higher-level stakeholders. The school is in the process of developing a communication plan. The stakeholders do jointly discuss the vision for learning technology—but only at the key stakeholder/district levels. The vision is conveyed using standard technologies of desktop-published flyers and links on Web pages. The technologies are being used not only to disseminate, but also to elicit discussion and feedback.

Transformation

Nearly all school and community stakeholders are aware of and make decisions based on the vision. Communication among stakeholders is focused on the action level, suggesting that stakeholders have internalized the vision. Discussions and conversations about the vision are evident in every aspect of the schools' work with the community—a communication plan is in place to highlight the artifacts, products, and services that represent the vision in action. The shared vision for learning technology is discussed and communicated jointly at all levels of the community and the schools. A variety of technologies are used to interactively communicate the vision in the context of policy and practice (e.g., interactive video sessions of technology meetings, desktop-published communiqués, Web pages, PowerPoint slides in teachers meetings).

Recommendation:

The communication committee should establish specific targets, core messages, and artifacts, such as fact sheets, that can be used by media and others as the opportunity presents itself. The Web, local news centers, and school events should be used to further the message. One of the lessons often learned by "technologically mature" sites is that the parent and community population turns over. It is important to periodically repeat communication of the vision and to revise the vision to include those new to the school community.

Condition Details: Effective Teaching and Learning Practice

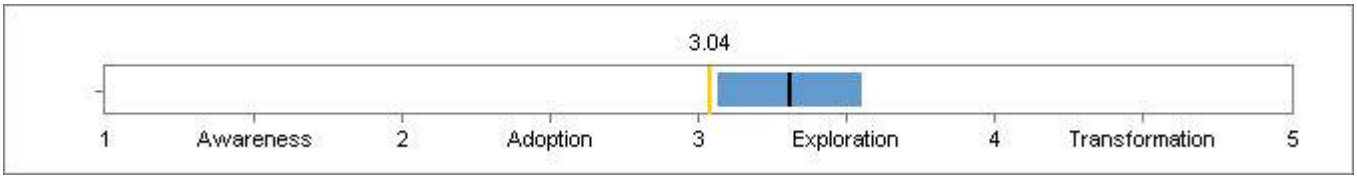
Are learning environments characterized by powerful, research-based strategies that effectively use technologies?

Effective Teaching Using Technology—Truly effective teachers are actively engaged in an ongoing process of inquiry into research and best practices surrounding both teaching and learning. The range of technology use should be broad and selective, ensuring added value and alignment across curriculum, instruction, and assessment.

Effective Learning Using Technology—Learning is most effective when it is relevant in personal, professional, or societal ways. In addition, learning environments must be supportive, technology-rich, and conducive to meaningful student engagement.

Research suggests that under the right conditions, technology does enrich and improve student learning.

Respondents were asked questions about Indicators related to Practice. The combined answers across the Indicators places your school as follows in the Condition:

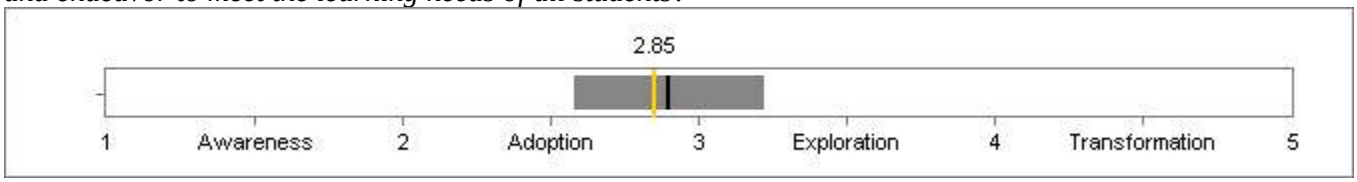


Mean = 3.31 Variation = 0.24 Database Average = 3.04

Scores for each Indicator in the Condition follow.

Condition: Effective Teaching and Learning Practice
Indicator: Learning Environment

Do the school and classroom cultures engage and motivate students, honor individual differences, support innovation, and endeavor to meet the learning needs of all students?



Mean = 2.9 Variation = 0.32 Database Average = 2.85

Indicator Continuum Description:

Awareness

At this level, the learning environment is traditional. The teacher is at the center of most learning activities and provides all direction. If technology is used, the teacher typically schedules it, and students are assigned equal slots of "computer time." Students play a fairly passive role. Most work with technology is done by individuals. Collaboration is rare and may be considered "cheating." Students are primarily grouped strictly by age with some ability grouping in reading and math. At the high school level, students may be tracked. Assessment is seen primarily as a means for summary judgment of the quality of student work.

Adoption

At this level, technology is used to motivate students within the context of traditional learning activities. While the teacher is still at the center of most learning activity, technology in the classroom may be encouraging student independence. Much of student learning with technology is still done by individuals, but opportunities for collaboration are beginning to appear. Students have opportunities to work outside of traditional grouping structures. If significant technology resources are available, teachers at this level often notice that students are becoming more independent in their learning although this has not been a goal of the teacher. Assessment is still viewed as primarily a summary judgment activity, but new student products and learning modes enabled by technology are beginning to require new modes of assessment.

Exploration

At this level, technology has supported a significant change in the learning environment. Students are increasingly engaged and motivated as teachers begin to experiment with new models of teaching and learning. Collaborative learning is used with increasing frequency. Student grouping patterns are flexible within grade levels, and groups are more often determined by interest and specific learning needs than by a predetermination of ability level. The teacher is more often acting as a designer of the learning environment and a facilitator of student learning within that environment. Assessment is increasingly viewed as a formative activity, providing students with feedback and redirecting their efforts.

Transformation

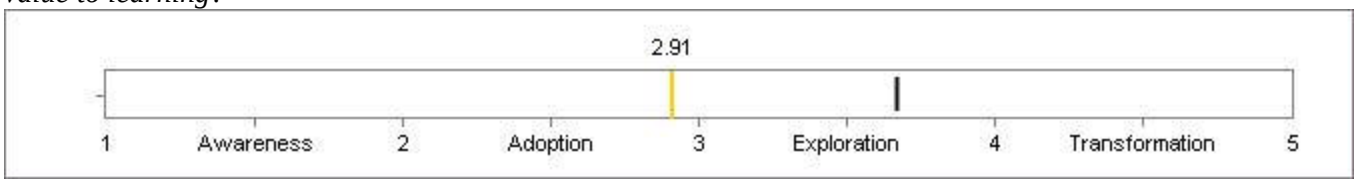
At this level, the characteristics of "Engaged Learning" are firmly in place. Students are regularly engaged in authentic, multidisciplinary learning tasks, and technology is used transparently to support these tasks. Collaboration is a regular part of teaching, learning, and assessment, and collaborative relationships are common among students and staff. Students are flexibly grouped based on interest and need, and these groupings often cross grade-level boundaries. Multi-age grouping strategies are common at this level. The teacher has become the primary architect of the learning environment and purposefully facilitates student learning with overt strategies for nurturing student independence. Assessment is viewed positively by all in the school community and provides information and positive direction throughout the learning process.

Recommendation:

Using technology provides teachers the opportunity to better meet the learning needs of individual students. Research suggests that students learn better when they are actively engaged in relevant, meaningful activities that bridge the gap between conceptual and applied learning. Improving learning through technology requires not only technology, but also requires the right combination of technology, teacher proficiencies, instructional design, and updated curriculum. A school or district can build the capacity of teachers to use technology by providing compelling models of effective uses of technology. Models enable teachers to experience immediate success both for their students and themselves. Until teachers and administrators are immersed in the culture of technology, they will need such models along with advice on the context, content, instructional design, curriculum, and assessment that together shape effective teaching and learning with students.

Condition: Effective Teaching and Learning Practice
Indicator: Sound Base in Research and Best Practices

Is technology use based on both high-impact, research-based practice and field-based, best practices shown to add value to learning?



Mean = 3.67 Variation = 0.01 Database Average = 2.91

Indicator Continuum Description:

Awareness

Schools at this level typically have neither access to nor use of research in instructional planning. Technology use may be limited, and decisions related to its use may be based on time, availability, or other practical concerns. As little information related to current research and practice is available, decisions are often made in isolation and on the basis of craft knowledge.

Adoption

Schools at this level typically make limited use of research in instructional planning. While efforts are, or are assumed, to have been made to ensure that applications of technology to learning are consistent with the topics and content of the curriculum, no specific processes are in place to consider research and best practice related to these applications. Educators may have some access to conferences and professional resources, making them aware of innovative practice, but lack opportunities and support for including these in their classroom practice.

Exploration

Schools at this level typically have access to and make use of research in instructional planning. Significant effort has been made at the district and school level to ensure that a careful review process has been employed in selecting technology for classroom use, but this process may not include consideration of research. Individual educators and/or teams of educators may have initiated review processes for technology use that consider research and best practice, and the school is usually supportive of such efforts. At this level, schools typically do not systematically pilot technology-supported classroom practices or gather data on the use of those practices in the local context. Processes for assessing the effectiveness of teaching and learning strategies may be used on a limited basis for specific initiatives.

Transformation

Schools at this level typically have access to, and make extensive use of, research in instructional planning. They have formal processes for considering and conducting research at strategic points in the planning and implementation process. Technology is a design factor within these processes and all applications of technology are dependent upon them. Data are continuously gathered and used in decision making. All staff have opportunities to attend conferences and observe exemplary programs and teaching. These schools have a climate of professional experimentation and continuous improvement.

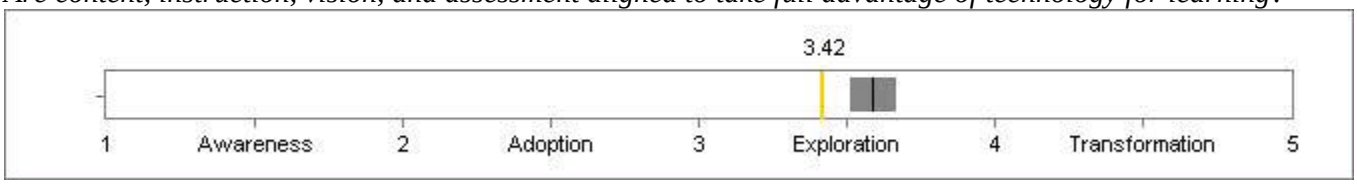
Recommendation:

As teachers in the district and schools become more sophisticated users of technology, it will be important to document

and verify the impact of their work on student learning. One of the best ways in which to do so, beyond literature reviews of others' work, is action research conducted at local sites by local educators. In addition, it will be important for the district to track research and emerging best practices with technology and report the findings periodically to teachers and administrators.

Condition: Effective Teaching and Learning Practice
Indicator: Alignment To the Vision

Are content, instruction, vision, and assessment aligned to take full advantage of technology for learning?



Mean = 3.59 Variation = 0.08 Database Average = 3.42

Indicator Continuum Description:

Awareness

At this level, standards, if present, do not drive the instructional process. Either no effort has been made to include references to technology or digital age skills within the standards or, if the effort has been made at a different level (e.g., the state), that effort is not supported by the school. Assessments have not been aligned with standards and may well be assessing skills that are not explicitly taught. Technology is not a part of the assessment context. Instructional strategies are selected informally and are related to learning standards only by topic. At this level the curriculum is driven primarily by the textbook and teacher interest.

Adoption

At this level, standards are usually present, but technology may not be explicitly referenced in those standards. Some assessments, usually classroom assessments, are partially aligned to the standards. The assessment context is traditional. Technology is not used in the assessment process, and these processes do not deal effectively with thinking, reasoning, and life and workplace skills. Instructional strategies are occasionally aligned with standards, but a formal process does not support this alignment. There is no process in place to periodically assess alignment, though a few staff attempt periodic reviews on their own. Some of these staff include technology as a design factor in the alignment process, but this has not been formalized.

Exploration

At this level, standards are present, and technology and digital-age skills are referenced in some fashion, though often as a separate set of standards. Assessments are usually aligned to the standards. Technology is used in some assessment processes, particularly in less formal classroom assessments, and the school is beginning to include thinking, reasoning, and life and workplace skills. Instructional strategies are usually aligned with standards, and there is a formal process that has been developed for ensuring this alignment that is used by most staff. A process has been designed for the periodic review of alignment and is employed by most staff. Technology has been included as a design factor within the alignment and review processes, and most educators honor those processes.

Transformation

At this level, technology and a vision for the digital-age learner are interwoven throughout the standards for learning. All assessments are aligned to the standards, and this alignment is reviewed on an ongoing basis. In all standards where technology is explicitly referenced and is part of the instructional context, it is available for use in the assessment process. Assessments are broad and include assessment strategies broad enough to include knowledge age versions of skills of thinking, reasoning, and life and workplace skills. Virtually all instructional strategies are carefully aligned with standards and assessments. A formal process is in place to assist staff in the alignment process, and all staff are familiar with and employ this process. This process includes provisions for a periodic review of alignment. Technology has been included as a design factor within the alignment and review

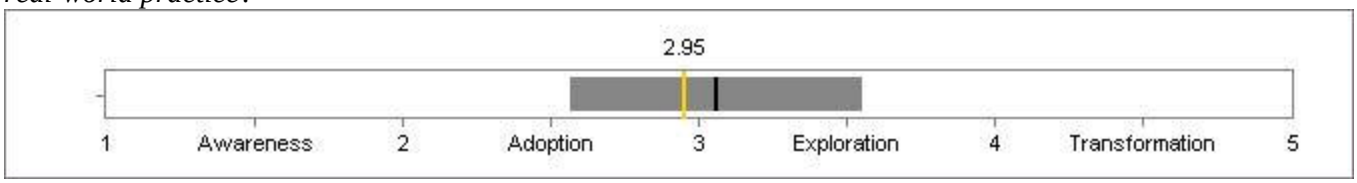
processes and all educators honor those processes.

Recommendation:

As a school begins to redesign and align curricula, instruction, and assessment to the vision, the pioneers lead the charge. But the real impact on learning will be accomplished only when the other 80 percent of the teaching staff are involved. The careful alignment and documentation of impact will be the key to drawing others into this process. They need both the reason for the change and the roadmap to get there. The alignment process can provide both.

Condition: Effective Teaching and Learning Practice
Indicator: Relevance

Are students working on substantive projects addressing issues that have meaning, reaching out beyond the classroom to real-world practice?



Mean = 3.06 Variation = 0.49 Database Average = 2.95

Indicator Continuum Description:

Awareness

At this level, technology use, if any, is exercise-based. This may include use of drill and practice software, computer-assisted instructional programs, and word-processing of written assignments. The products of student work are usually shared only between the student, the teacher, and perhaps an interested parent. Students deal with artificial content and seldom employ the techniques, strategies, and tools of professionals in the field of study. Educators in schools at this level may be aware of the need to bring greater relevance to their instruction, but lack strategies and resources for doing so.

Adoption

At this level, educators use technology to support instructional strategies that were in place prior to the arrival of the technology. Most schools at this level are still primarily teacher-directed featuring work that is exercise-based, though increasingly this work is supported by education technology. The products of student work are usually shared only between the student, the teacher, and perhaps an interested parent. There may be first efforts to increase relevance through participation in online projects, experimental use of professional tools such as science "probeware," or simulation software. Structures are typically not in place to support regular access to outside experts or participation in community-based projects.

Exploration

At this level, technology is firmly embedded in the instructional program. Many educators use instructional strategies such as problem-based or project-based learning and these strategies are supported by technology. Technology resources are dedicated increasingly to applications used by professionals in the field of study. Participation in online projects and analysis of real data sets/primary source data is becoming the norm. Partnerships that link students with outside experts and resources on a regular basis are being established.

Transformation

At this level, the school provides regular opportunities for all students to engage in authentic, challenging work appropriate to their level. Skill development is done in context. Most educators use more constructivist strategies such as problem-based or project-based learning, and these strategies are supported by technology. Most student work in the school is generative, i.e., it results in a product of value to some audience. This may be as simple as creating a book that is placed in the library for younger children to read, or documenting a math problem solved through an interesting or unique approach. It may be as complex as a group of students doing original research for the local historical society and posting the results on a publicly available Web page. Students throughout the school speak as, work as, and use the tools of professionals in the field whenever possible, and technology supports this work.

Recommendation:

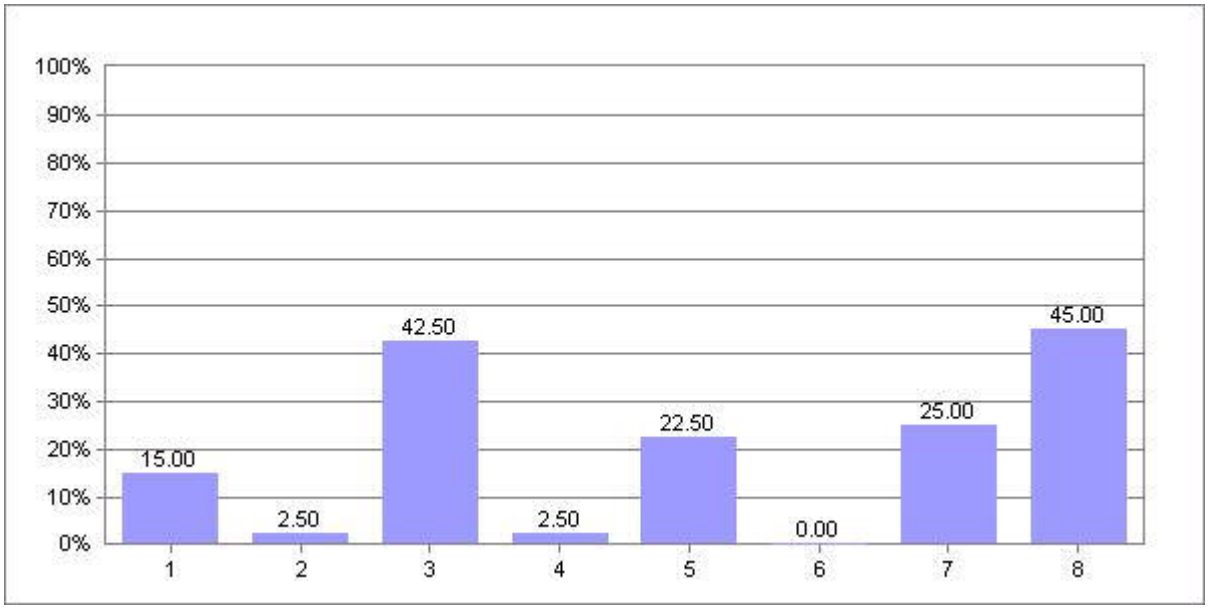
In moving from the exploration of online, real-world applications to the incorporation of such experiences into the formal structure of students' learning, districts and schools will need to develop guidelines, selection criteria, and funding structures for Web experiences and access to digital content. The school should create linkages with community groups to explore local possibilities in addition to the Web-based resources.

Selected Questions From Indicator: Relevance

Educators were asked about the current use of technology in the classrooms:

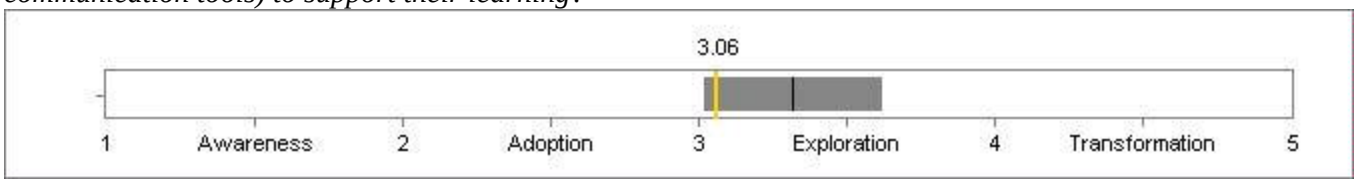
Do students in your classroom regularly use technology to: (Check all that apply.)

1. Consult with experts?
2. Consult with students in other schools?
3. Produce projects of their own design?
4. Collaborate with community organizations or businesses on class projects?
5. Participate in online projects?
6. Publish their work to the World Wide Web?
7. Produce work intended for audiences beyond the classroom (e.g., for students in other grades or schools or community audiences)?
8. None apply.



Condition: Effective Teaching and Learning Practice
Indicator: Range of Use

Do students have opportunities to use a range of technologies (e.g., learning, productivity, visualization, research, and communication tools) to support their learning?



Mean = 3.32 Variation = 0.3 Database Average = 3.06

Indicator Continuum Description:

Awareness

At this level, technology use is either sparse or inconsistent or is focused on a single application. Generally, teachers at this level, even those with similar teaching assignments, may use technology for varying purposes.

Adoption

At this level, technology is used for a limited number of purposes. Technology may be used regularly, but its use is generally clustered around the didactic/artificial/basic skills area of the Range of Use Chart. A Computer Assisted Instruction (CAI) lab, for example, may be well implemented and supported, but technology use is limited to CAI. The Internet also may be used, but for a single purpose such as gathering additional information and materials as a substitute for the library.

Exploration

At this level, technology is used for a range of purposes across the school, but the range is inconsistent. Some educators, for example, may make extensive use of e-communication and simulations, while others use primarily online research and visualization tools.

Transformation

At this level, the use of technology in support of learning has matured. All teachers in the school have a repertoire of technology-supported strategies for learning that spans a wide range of possible uses. The strategies are applied consistently across the school.

Recommendation:

The range-of-use model outlined in *enGauge* could be used as a reference point for analyzing both a school's offerings as well as a student's experience with technology.

Selected Questions From Indicator: Range of Use

Technology can be used to engage and motivate students through access to interesting resources, people, peers, and real-life applications.

Educators were asked the following (numbers are in percents):

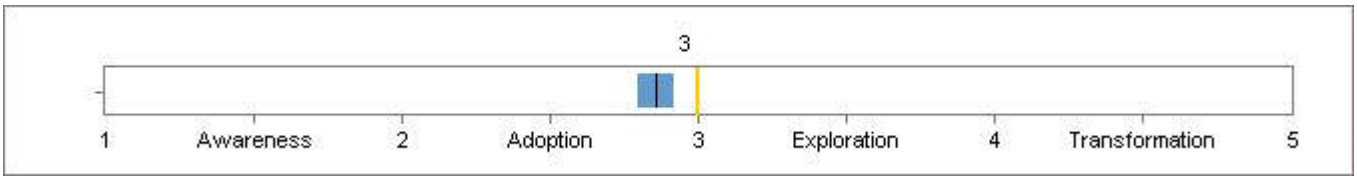
In your class(es), how often do students use technology for the following?	Never	Rarely	Occasionally	Frequently	Does not apply
Drill and practice or tutorial (for example, math and reading games)	10	13	23	48	8
Integrated Learning Systems (for example, Jostens, Plato)	50	20	15	3	13
Productivity tools (e.g., Word, Excel, Access, PowerPoint)	3	15	30	50	3
Online communication	48	25	8	10	10
Online research	13	8	28	48	5
Expression/visualization (for example, graphing and charting, KidPix, Hyperstudio, PowerPoint)	8	23	43	23	5
Simulations (for example, SimCity, Tom Snyder Productions, Stella)	48	25	10	5	13
Problem solving with real data sets	43	30	18	3	8

Condition Details: Educator Proficiency

Are educators proficient in implementing, assessing, and supporting a variety of effective practices for teaching and learning?

In districts across the country, teachers have been trained in operating systems and office software suites, only to discover that it's really "not about technology." The real skills needed by teachers revolve around new modes of teaching and learning—*supported* by technology. Such application of technology in the context of standards-based learning requires a continuum of high-level proficiencies on the part of educators.

Respondents were asked questions about Indicators related to Proficiency. The combined answers across the Indicators places your school as follows in the Condition:

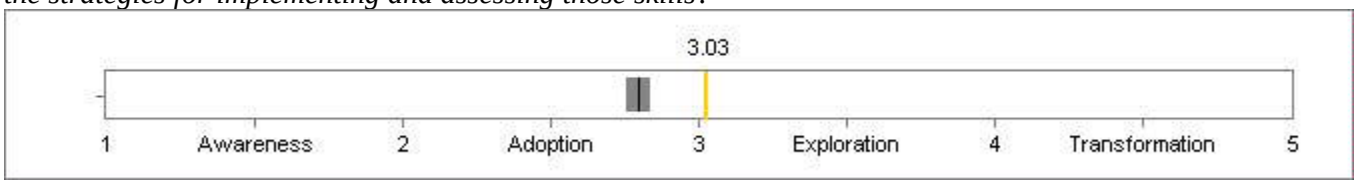


Mean = 2.86 Variation = 0.06 Database Average = 3

Scores for each Indicator in the Condition follow.

Condition: Educator Proficiency
Indicator: Cultivation of Digital-Age Skills and Processes

Do educators understand the span of skills and processes that students need to succeed in the Digital-Age? Do they have the strategies for implementing and assessing those skills?



Mean = 2.8 Variation = 0.04 Database Average = 3.03

Indicator Continuum Description:

Awareness

At this level, the educator is not familiar with the concept of digital-age skills except as platitudes in mission statements and curriculum standards. The skills are not viewed as teachable, and the educator does not seek strategies for developing these skills.

Adoption

At this level, the teacher is aware of digital-age skills, and understands the importance of these skills to students' lives, but lacks specific strategies for developing these skills.

Exploration

At this level, the teacher is beginning to experiment with instructional strategies for developing digital-age skills.

In most cases, these efforts are confined to specific units of instruction, often directly attached to professional development experience. The teacher does not have a generalizable set of skills that can be applied in different content areas.

Transformation

At this level, digital-age skills are a design factor in all unit and lesson planning. The teacher has internalized the characteristics of learning activities that promote the development of these skills and seeks every opportunity to engage students in those activities.

Recommendation:

To cultivate digital-age skills among students requires that the teacher is thoroughly familiar with those skills and processes. One way to accomplish this is to model the use of these 21st-century skills in the school's professional development programs. Requiring that teachers engage in teaming, collaboration, real-world applications, and production of high-quality, state-of-the-art products would immerse them in the kind of activities their students should experience. This also would be an opportunity for the business community and the teachers and administrators to work together to discuss how these skills play out and get assessed in the workplace.

Condition: Educator Proficiency
Indicator: Planning and Design

Are educators skilled in designing teaching strategies and learning environments that maximize the impact that technology has on learning?

Mean = 2.67 Variation = 0 Database Average = 2.85

Indicator Continuum Description:

Awareness

At this level, the teacher may not use a formal design process to plan learning experiences for students. Lesson selection may be based on textbook progression rather than the educator's understanding of research and best practice within the content area. The lack of organizational models for using technology with students also may prevent the teacher at this level from including technology experiences in lesson plans. The educator at this level is unaware of the potential for technology to support the learning of special needs students

Adoption

At this level, the educator begins to include technology-based learning as an option in support of the lesson planning and curriculum design process that was in place prior to the availability of that technology. Technology use may be somewhat mechanical, as the educator does not have a solid grasp of research or best practice to guide that use. The teacher has a limited repertoire of organizational strategies for using technology and tends to rely on uses that match previous practice. Educators who previously instructed exclusively in whole groups, for example, may only be comfortable in a lab setting where all students can be working on the same thing at the same time. The educator at this level is aware that technology can help to better meet the needs of special needs students, but lacks strategies for doing so.

Exploration

At this level, experiences with technology-based learning may cause the educator to begin to experiment with new models of planning and design. The educator may be more open, for example, to individualization as a design option, in part because of the support for individualization that technology can provide. With each of these models, the educator is beginning to build an understanding of the research base that supports the use of technology and applies that knowledge under some conditions. The educator is beginning to experiment with new classroom management strategies that support technology use, and these are increasingly finding their way into her learning plans. The educator also is beginning to include strategies for meeting the needs of special needs students in learning plans.

Transformation

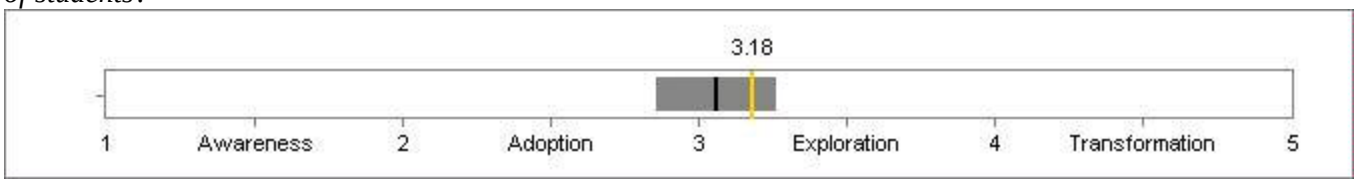
At this level, the educator is familiar with several sophisticated curriculum design strategies and transparently considers technology as a factor within these processes. Each of these strategies includes a reference to research and best practice at appropriate points, and the educator has significant depth of knowledge related to that research base. The educator has mastered a variety of organizational strategies that support the use of technology and easily applies these as appropriate. The educator has significant knowledge and experience with planning for technology support to meet the needs of special needs students and sometimes serves as a resource to others.

Recommendation:

Schools that expect teachers to become proficient in planning and designing learning experiences that effectively use technology should provide models, structure, and design sessions. A focus on specific curricular areas could draw teams of teachers, instructional designers, technology specialists, and curriculum specialists into a collaborative design process, resulting in a new, high-quality model. Coupled with ongoing support and team interactions as these designs are implemented, these district/school actions could build teachers' capacities to maximize the positive impact of technology on learning across content areas.

Condition: Educator Proficiency
Indicator: Implementing Technology-Supported Learning

Are educators prepared to use a variety of technology-supported strategies for teaching and learning to meet the needs of students?



Mean = 3.06 Variation = 0.2 Database Average = 3.18

Indicator Continuum Description:

Awareness

The educator lacks strategies for implementing technology-supported learning. Most educators at this level tend to rely on highly didactic teaching approaches and cannot see how technology might support their instruction.

Adoption

The educator at this level is willing to use technology in support of existing classroom practice. While they have developed some comfort with technology, they have not yet mastered the more constructivist approaches to teaching and learning that are best supported by technology. Learning practices that promote digital-age skills have not been implemented, and the educator lacks classroom management strategies for dealing with technology-rich environment.

Exploration

The educator is comfortable with technology in the classroom and is beginning to experiment with new implementation strategies that might be considered more active or constructivist. These new practices may tend to be implemented only in selected units or lessons and may be related to a specific professional development activity. The educator is broadening the variety of management strategies that they have available and are more comfortable using technology to improve learning for special needs students.

Transformation

The educator at this level is very comfortable facilitating learning in an active, technology-rich classroom. He has a variety of instructional strategies available and is skilled at moving between didactic teaching, where an "information dump" is needed or a specific process must be learned, and more active constructivist learning, which is the primary mode of instruction. The teacher is skilled in recognizing opportunities to apply strategies for encouraging self-direction, pressing for higher orders of thinking and developing other knowledge-age skills. He has a host of strategies, as well, for using technology to facilitate the learning of special needs students.

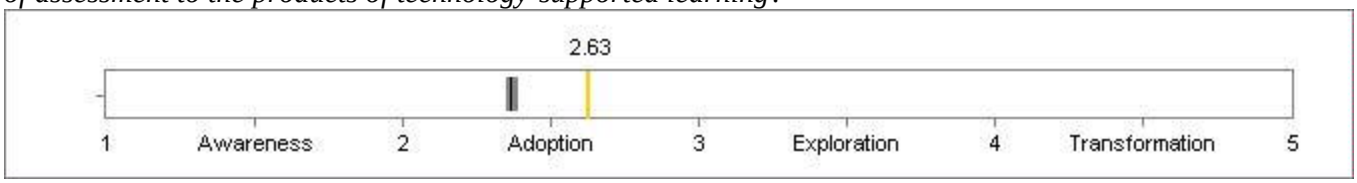
Recommendation:

Implementing technology-supported strategies requires educators to innovate and take risks. Schools would do well to provide teachers with a great deal of support through this process. In many cases the best forms of support are 'teacher coaches' who can team teach with them, model lessons and provide sideline assistance. Another useful strategy is the development of cohorts of teachers who jump into such experiences together-with the school providing formal opportunities for the participants to interact, exchange ideas and share experiences throughout the initial implementation period. To scale these processes, schools should consider video taping excellent models for use by other teachers,

supporting teachers from past cohorts to mentor the new cohorts; and online mentoring, debriefing and advice sessions to provide ongoing support for these risk takers.

Condition: Educator Proficiency
Indicator: Assessment Literacy

Are educators prepared to apply technology in support of the assessment process? Are they prepared to apply new forms of assessment to the products of technology-supported learning?



Mean = 2.37 Variation = 0.02 Database Average = 2.63

Indicator Continuum Description:

Awareness

The educator at this level does not typically use technology to support classroom assessment practices. The educator is unfamiliar with strategies for involving students with technology-based products and lacks the ability to include these products in the assessment process. The teacher lacks strategies for holding students accountable for learning in more active, technology-rich environments, and this may be a contributing factor to her avoidance of these activities. The educator at this level may lack confidence in communicating with others about assessment issues.

Adoption

The educator at this level may use technology to automate existing assessment practices. One of the most common examples of this automation is the use of a gradebook program in lieu of a paper gradebook. This educator may have difficulty in developing assessment strategies for evaluating student products when technology is involved or when the products are the result of the more collaborative, active learning that technology often engenders.

Exploration

The educator at this stage recognizes the value that technology brings to the assessment process and is beginning to use spreadsheets, graphing tools, and various data gathering technologies on an experimental basis. The educator is beginning to build a collection of assessment strategies and rubrics for student products that involve the use of technology. The increasing experience with a variety of assessments is increasing the educator's comfort level in communicating about assessment to parents, community members, and other educators.

Transformation

The educator at this stage considers technology to be essential to the assessment process. The educator uses a variety of technologies, as appropriate, to collect, analyze, and display assessment data. This educator is often tapped as a resource for ideas and tools for assessing technology-based products and for strategies for holding students accountable for learning in technology-rich environments. The educator understands assessment issues in depth and has considerable skill in communicating about these issues to parents, community members, and other educators.

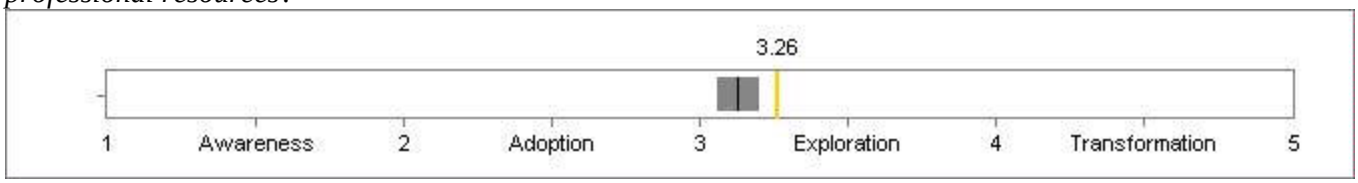
Recommendation:

As students have become more engaged in the learning process, teachers have found it necessary to use alternative forms of assessment to capture the full extent of the students' performance and progress in acquiring skills and attitudes and meeting standards. Teachers must learn to "recognize what they are seeing," to develop rubrics, and to be able to

consistently score students based on those rubrics. They also will be faced with assessing technology-based student products. Again, it will be important that they are introduced to and become proficient with rubrics that capture the multiple dimensions of technology-based products.

Condition: Educator Proficiency
Indicator: Professional Practice and Productivity

Are educators prepared to use technology to increase professional productivity and gain enriched access to professional resources?



Mean = 3.13 Variation = 0.07 Database Average = 3.26

Indicator Continuum Description:

Awareness

The educator at this stage does not use technology in support of professional practice.

Adoption

The educator at this stage is able to use technology at an entry level. While the educator is able to use basic applications (e.g., e-mail and word processing), technology has not impacted professional practice in a significant way.

Exploration

The educator uses technology on a daily basis. Technology is beginning to change the way in which the educator learns and communicates as he gains the confidence to begin to experiment with new applications. Increasingly, the educator participates in decision making regarding the selection and deployment of classroom technologies.

Transformation

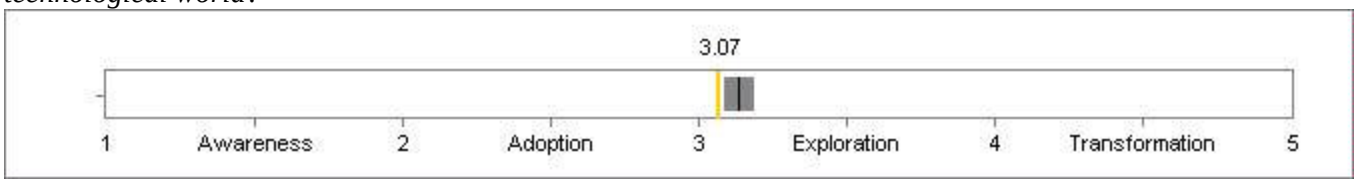
Participation in the selection and deployment of classroom technologies is considered to be a core professional responsibility. Much of the professional development in which the educator participates is enabled by technology. Communication with peers, parents, and community members is greatly enhanced.

Recommendation:

The isolation of the professional educator is rapidly diminishing as more and more educators get online. Teachers need advice and counsel on how to join this virtual, online professional community. Districts and schools should provide teachers with the time, opportunity, and mentors necessary to get them actively engaged in meaningful online professional interactions. Schools can encourage this by providing time and support as well as inservice credit for such activities.

Condition: Educator Proficiency
Indicator: Social, Ethical, and Legal Issues

Are educators prepared to guide students as they deal with the social, ethical, and legal issues related to life in a technological world?



Mean = 3.14 Variation = 0.05 Database Average = 3.07

Indicator Continuum Description:

Awareness

At this level, educators do not have sufficient experience with technology or an awareness of its social, ethical, and legal implications to guide students in this area. Schools at this level do not have guidelines in place for staff or students.

Adoption

At this level, educators are aware of social, ethical, and legal issues raised by technology use, but lack strategies for guiding students. Schools may have established guidelines governing technology use, including copyright, plagiarism, proper citation, and acceptable use, but have not established means for helping educators guide students to self-regulation or awareness of social and ethical issues raised by technology.

Exploration

At this level, many educators are sufficiently experienced with technology and aware of its social, ethical, and legal implications to guide students in this area. Most educators have strategies for guiding students to self-regulation and awareness of social and ethical issues. Schools have clear policies and training to helping educators in this area.

Transformation

At this level, educators are fluent in many of the social, ethical, and legal issues raised by technology, have experience navigating the issues themselves, and can ably guide students to an understanding of the same. Schools have clear policies and strong support for teachers and students in this area.

Recommendation:

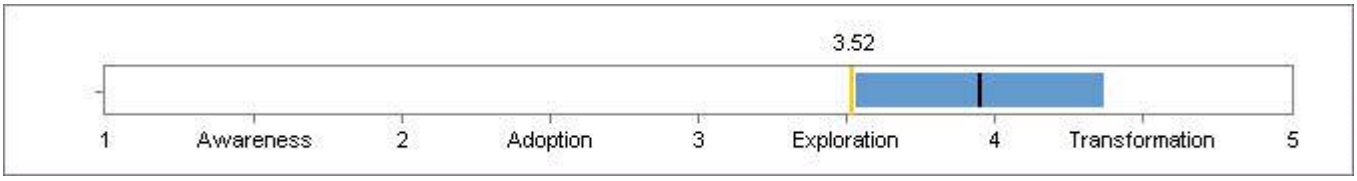
As educators (and school systems) become more expert in dealing with the legal, social, and ethical issues, formal policies should be published (text and Web-based) along with examples of what that means in practice.

Condition Details: Digital-Age Equity

Do resources and strategies address the digital divide by ensuring that all students are engaging in an educational program aligned to the vision?

Computers and Internet access often are portrayed as great equalizers. Equitable, high-quality uses of technology can enable students disadvantaged by gender, race, socioeconomic status, and various disabilities to become just as viable in this Digital Age as their peers.

Respondents were asked questions about Indicators related to Equity. The combined answers across the Indicators places your school as follows in the Condition:

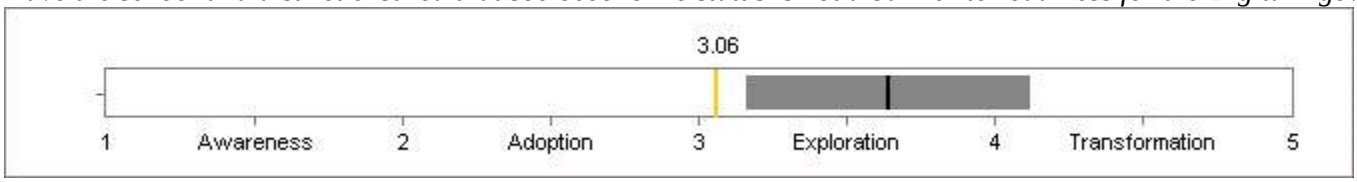


Mean = 3.95 Variation = 0.42 Database Average = 3.52

Scores for each Indicator in the Condition follow.

Condition: Digital-Age Equity
Indicator: Digital Equity: Socioeconomic

Have the school and district ensured that socioeconomic status is not a barrier to readiness for the Digital Age?



Mean = 3.64 Variation = 0.48 Database Average = 3.06

Indicator Continuum Description:

Awareness

Schools at this level have substantial inequity in student experiences with technology within the school, beyond the school day, or both, according to students' socioeconomic status. Schools typically have few strategies for addressing these inequities.

Adoption

Schools at this level are somewhat aware of socioeconomic equity issues and are seeking strategies for addressing them within the school.

Exploration

Schools at this level are aware of socioeconomic equity issues and are actively seeking to address them through curricular changes and projects aimed at students from lower socioeconomic backgrounds.

Transformation

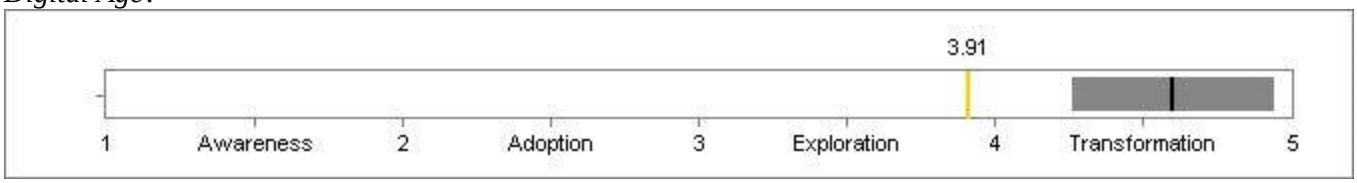
Schools at this level have achieved some measure of equity among students of different socioeconomic backgrounds or have in place a vigorous set of projects addressing the problem.

Recommendation:

As metrics for judging the impact of technology with students are refined, data should be disaggregated and reported by socioeconomic status. Strategies should be devised to address inequities.

Condition: Digital-Age Equity
Indicator: Digital Equity: Gender

Have the school and district ensured that male and female students are equally well prepared to live and work in the Digital Age?



Mean = 4.6 Variation = 0.34 Database Average = 3.91

Indicator Continuum Description:

Awareness

Schools at this level have substantial inequity between boys and girls in experiences with technology. Schools typically have few strategies for addressing these inequities.

Adoption

Schools at this level are somewhat aware of gender equity issues and are seeking strategies for addressing them within the school.

Exploration

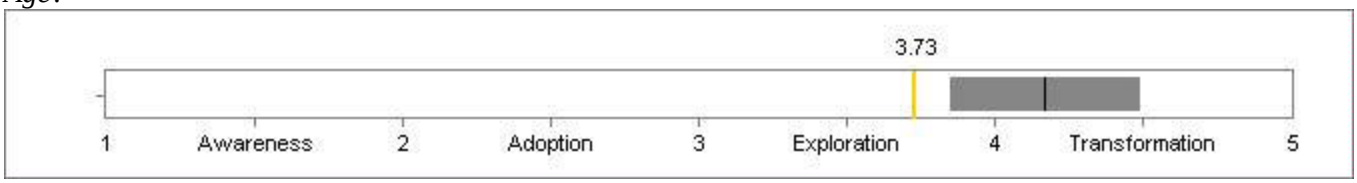
Schools at this level are aware of equity issues between boys and girls and are actively seeking to address them through curricular changes and projects aimed at ensuring full participation of both boys and girls in state-of-the-art technology uses.

Transformation

Schools at this level have achieved substantial of equity among boys' and girls' use of technology or have in place a vigorous set of projects addressing the problem.

Condition: Digital-Age Equity
Indicator: Digital Equity: Race

Have the school and district ensured that students of all races are equally well prepared to live and work in the Digital Age?



Mean = 4.17 Variation = 0.32 Database Average = 3.73

Indicator Continuum Description:

Awareness

Schools at this level have substantial inequity in student experiences with technology, within the school, beyond the school day, or both, according to students' race or ethnicity. Schools typically have few strategies for addressing these inequities.

Adoption

Schools at this level are somewhat aware of racial equity issues and are seeking strategies for addressing them within the school.

Exploration

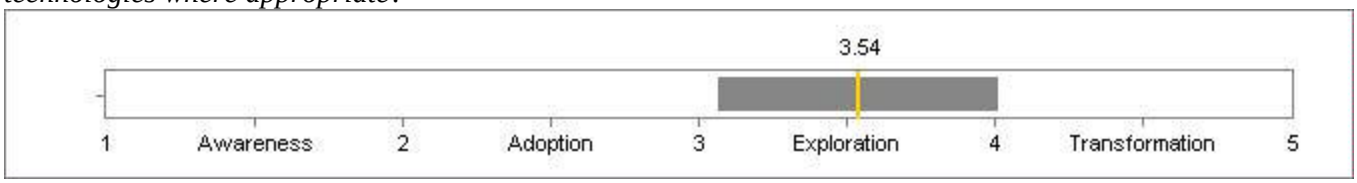
Schools at this level are aware of racial equity issues and are actively seeking to address them through curricular changes and projects aimed achieving parity among students from different racial backgrounds.

Transformation

Schools at this level have achieved substantial equity among students of different races and ethnicities or have in place a vigorous set of projects addressing the problem.

Condition: Digital-Age Equity
Indicator: Digital Equity: Special Needs

Are school and district staff familiar with assistive technologies? Are they prepared to identify and use these technologies where appropriate?



Mean = 3.54 Variation = 0.47 Database Average = 3.54

Indicator Continuum Description:

Awareness

Schools at this level have substantial inequity in students' technology-supported learning between students who do and do not have special needs. Schools at this level typically do not have strategies for addressing this inequity.

Adoption

Schools at this level are aware of special needs equity issues and are seeking strategies for addressing them within the school.

Exploration

Schools at this level are aware of special needs equity issues and are actively seeking to address them through training and acquiring technology resources.

Transformation

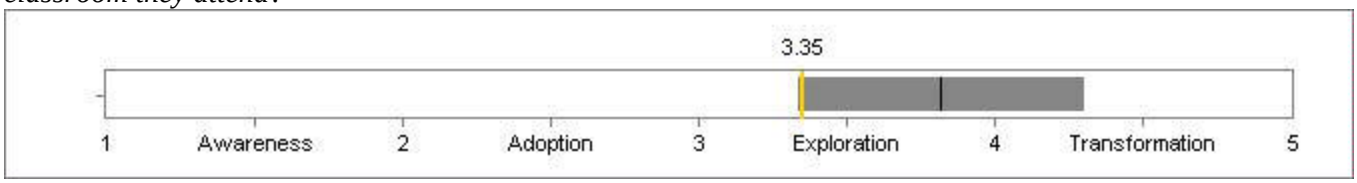
Schools at this level have achieved substantial equity between students with and with out special needs or have in place a vigorous set of projects addressing the problem.

Recommendation:

As metrics for judging the impact of technology with students are refined, data should be disaggregated and reported under special needs. Strategies should be devised to address inequities.

Condition: Digital-Age Equity
Indicator: Digital Equity: Systemwide

Do all students have access to a range of high-quality technology uses within the curriculum, regardless of the school or classroom they attend?



Mean = 3.82 Variation = 0.48 Database Average = 3.35

Indicator Continuum Description:

Awareness

Districts at this level have schools whose students experience substantially different uses and exposure to technology in different schools across the district. Schools at this level are substantially different from the district norm.

Adoption

Districts at this level have schools whose students experience substantially different uses and exposure to technology in different schools across the district. Schools at this level are substantially different from the district norm.

Exploration

Districts at this level have achieved some measure of equity in technology use and access among schools and have a set of strategies for addressing the issue. Students in schools at this level have roughly similar technology experiences as students in other schools across the district.

Transformation

Districts at this level regularly collect data that they analyze by school on student use and access to technology. The district targets funding and opportunities to assure parity among schools. Schools at this level have achieved parity with the district norm or have in place a vigorous set of initiatives to get them there.

Recommendation:

As metrics for judging the impact of technology with students are refined, data should be disaggregated and reported by building. Strategies should be devised to address any inequities.

Selected Questions From Indicator: Digital Equity: Systemwide

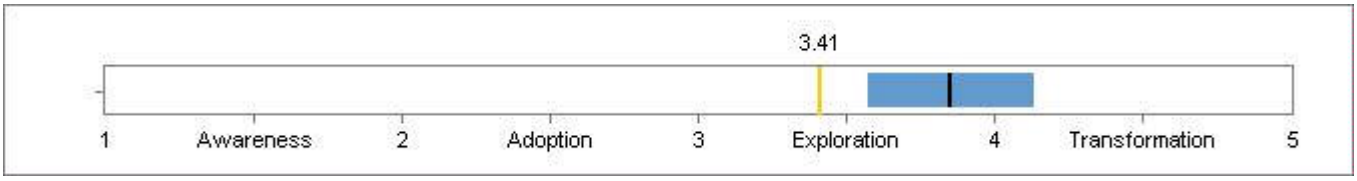
Either there were no responses to this question, or this project was completed before September 2001, so the data is not available.

Condition Details: Robust Access Anywhere, Anytime

Do students and school staff have robust access to technology—anytime, anywhere—to support effective designs for teaching and learning?

Contemporary schools and districts are in a position to exploit technology for lifelong learning. Technology can facilitate change, empower users, multiply access, and expand possibilities rather than minimize options. If access is truly robust, the full exploitation of technology's promise is likely. If it is not, that promise may be an empty one.

Respondents were asked questions about Indicators related to Access. The combined answers across the Indicators places your school as follows in the Condition:

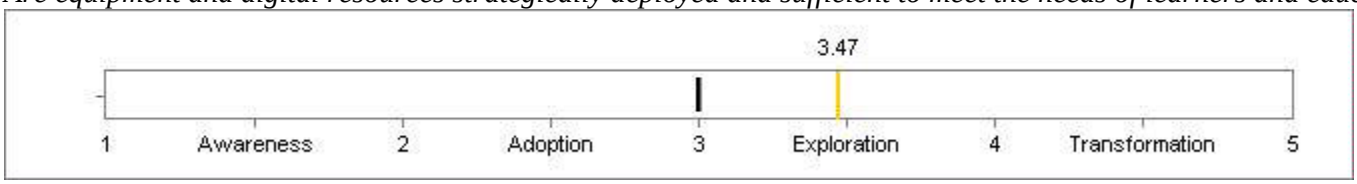


Mean = 3.85 Variation = 0.28 Database Average = 3.41

Scores for each Indicator in the Condition follow.

Condition: Robust Access Anywhere, Anytime
Indicator: Technology Resources

Are equipment and digital resources strategically deployed and sufficient to meet the needs of learners and educators?



Mean = 3 Variation = 0 Database Average = 3.47

Indicator Continuum Description:

Awareness

The installed base of computers is insufficient to meet learning demands and administrative requirements. When new technologies are deployed, they are often not accompanied by orientation and training necessary for full utilization. The school does not standardize on hardware or software, basing purchases more on personal and professional preferences rather than on sound instructional and curricular requirements, research, and best practice.

Adoption

The school's installed base includes modern, up-to-date equipment, though the quantity is not sufficient to meet the learning needs of students. The administrative equipment and software is adequate to the meet the needs of the system, but training is insufficient to enable staff to take full advantage of the investment. Administrative software and equipment is standardized to ensure compatibility. The district may have standardized on instructional computing to a degree that prevents teachers from securing the equipment and software needed to meet diverse needs of a diverse student population.

Exploration

The school has an installed base of multimedia, Internet-compatible computers and other technologies selected and purchased to meet learning and administrative requirements. Digital resources and reference materials are widely available, but digital content specific to curricular designs of teachers is not fully supported. Full deployment of an installed base of equipment is close to almost accomplished. This is designed to strategically complement a robust infrastructure. However, that deployment is not always accompanied with the necessary software and training for full utilization.

Transformation

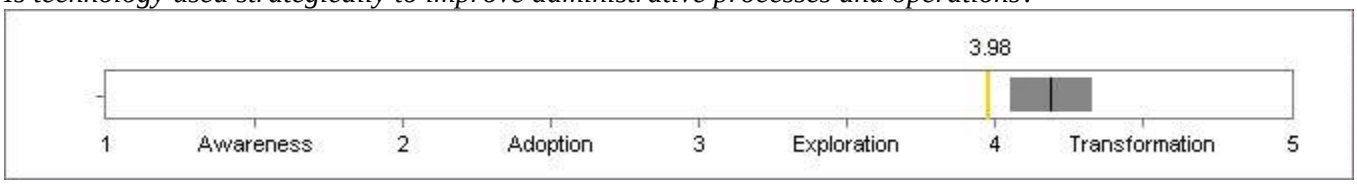
The school has an installed base of multimedia, Internet-compatible computers and other technologies selected and purchased to meet learning and administrative requirements. The installed base is strategically deployed to meet the diverse needs of learners, staff, and community, and to fully utilize the district's connectivity. All software purchases are reviewed to ensure compatibility across the system and among and between applications where possible. However, such standardization does not prevent the district from purchasing software and online resources outside that scope provided they meet specific learning needs of students. Digital content is made available based on research, best practice, identified curricular challenges with the district, and the needs of various student populations. Deployment of high-tech resources is strategic and comprehensive to purposefully ensure that students, teachers, administrators, and community have everything needed—when it is needed—to ensure success.

Recommendation:

As specific technology-based projects are systematically adopted, technology resources should be planned for and deployed accordingly. Maintaining and updating these resources should be managed efficiently and effectively.

Condition: Robust Access Anywhere, Anytime
Indicator: Administrative Processes and Operations

Is technology used strategically to improve administrative processes and operations?



Mean = 4.19 Variation = 0.14 Database Average = 3.98

Indicator Continuum Description:

Awareness

The school system is characterized by centralized decision making and data systems without much integration. For example, all administrators have e-mail capabilities, yet the majority of mission critical communiqués are handled through hard copy correspondence. Information about students is limited to the minimum that is required to comply with law. Little instructional content is available online.

Adoption

The system has computerized the major components of its administrative system, but has yet to integrate the systems—e.g., there is no common chart of accounts or data dictionaries. Electronic messaging systems are in place and are being used, but have yet to replace paper-based systems; the two are used in parallel. All data analysis is conducted through query programs designed as requests for data are made—no personnel have real-time access to any of the data. Information databases have moved beyond that required by law to include some student performance, needs, and interventions, but such information is often collected and recollected by various programs that are not aware of each other's data collection processes. Instructional content is available online, but only at the desk of a library media specialist who makes queries and prints resources based on inquiries.

Exploration

Communication and administrative processes that lend themselves to paperless processes have been converted and are used extensively, but still in parallel to more traditional, paper-based systems. Policies are being considered to establish new, paperless protocols in this area. Information is easily accessed, easy to use, and provided in a usable form that is real-time and provides organizational efficiencies, but only to those personnel who are deemed informed and have a "need to access." The core information moves beyond basic demographics to characterize issues of student performance, needs, and interventions in real-time (e.g., Fiscal, Human Resources, Transportation, Food Services, Library Systems). Such information is being converted into a common core of data housed in a common data warehouse. Rich instructional content is electronically available at some, but not all sites in the school system.

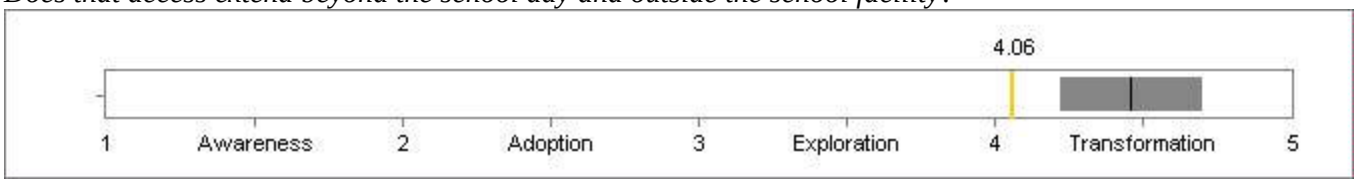
Transformation

Just as business and industry is improving efficiency and productivity, so are schools using technology to streamline their administrative processes. Electronic messaging systems have replaced less efficient communication, and administrative processes that lend themselves to paperless processes have been converted and readily adopted. Information in this area is easily accessed, easy to use, and provided in a usable form that is real-time and provides organizational efficiencies. Information about students is readily available to every person who needs it. Such information moves beyond basic demographics to characterize issues of student performance, needs, and interventions in real-time (e.g., Fiscal, Human Resources, Transportation, Food Services, Library

Systems). The electronic systems in the school district are integrated in that each system informs the other, so repetitive data entry and information analysis has been eliminated. Rich instructional content is electronically available throughout the organization including library holdings, periodical databases, organized Internet content, and distance learning content.

Condition: Robust Access Anywhere, Anytime
Indicator: Connectivity

Does the telecommunications infrastructure provide appropriate, robust communication from every learning setting? Does that access extend beyond the school day and outside the school facility?



Mean = 4.46 Variation = 0.24 Database Average = 4.06

Indicator Continuum Description:

Awareness

Connectivity is not readily available across the district, neither in learning environments nor in administration. The system has yet to establish a systemwide backbone and is not yet aggregating buying power across buildings. Schools are fending for themselves, establishing their own access without waiting for the central office to establish standards and protocols. No plans are in place to provide consistent, robust access to all schools, so the idea of providing access outside the school day is not on the school leadership's radar screen.

Adoption

The school system does provide administrative programs with robust access through a wide area network (WAN), but such access has yet to be made available in all learning environments. As more instructional uses are adopted across the system the WAN is often overextended and overtaxed. Protocols have yet to be established so each school is making decisions individually, often without the benefit of research. While access to Internet and intranet resources is provided inside the school day for students, it has yet to be provided outside the school environment for parents, students, and the community.

Exploration

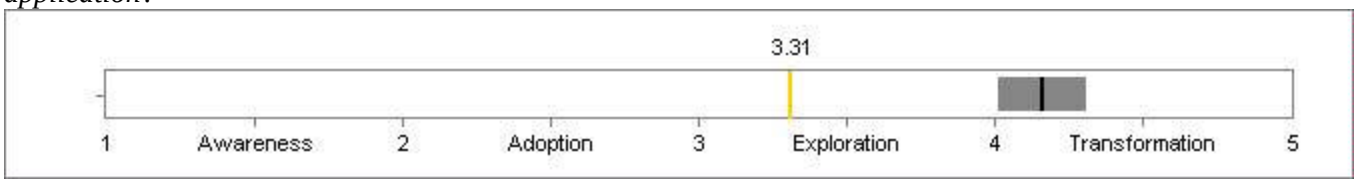
There is appropriate connectivity in most learning and all administrative environments. The local area network (LAN) is constantly upgraded to maintain sufficient bandwidth for existing applications and access. Planning processes are underway to anticipate growth as online access increases. The wide area network is equipped to match or exceed the capacity of the LAN. Personnel are just now beginning to consider scalability to manage future applications such as video. Robust Internet access is provided to all locations with adequate bandwidth, filtering, and caching. Access to Internet and intranet resources is provided inside the school day for students, and outside the school environment for educators, with plans underway to provide appropriate access 24/7 for parents, students, and the community.

Transformation

There is appropriate connectivity in every learning and all administrative environments. The local area network provides sufficient bandwidth for existing applications and access and provides for growth as online access increases. The wide area network is equipped to match or exceed the capacity of the local area network, with scalability to manage future applications such as video. Robust Internet access is provided to all locations with adequate bandwidth, filtering, and caching. Access to Internet and intranet resources is provided outside the school day for students and outside the school environment for parents, students, and the community.

Condition: Robust Access Anywhere, Anytime
Indicator: Technical Support

Do the school and/or district provide adequate and timely support for hardware, software, and instructional application?



Mean = 4.16 Variation = 0.15 Database Average = 3.31

Indicator Continuum Description:

Awareness

The district technical staff maintains the wide area network, but each school is on its own for technical support. For most schools that translates into crisis management, responding to problems rather than providing preventive, proactive measures.

Adoption

Basic support to ensure the operation and maintenance of the wide area and local area computer networks is provided by the school, albeit with limited staff. Support staff have yet to adequately address upgrades and replacements and is underutilizing the life of the technology investments due to long waits by users for installation, configuration, and user training. No video services are supported. The user needs often have a lower priority than standardization and system efficiency.

Exploration

The school provides adequate support for the wide area, but local area network support is not adequately addressed. The system's support extends to the design, management, monitoring, maintenance, and security of the network. Current support for technology hardware includes configuration, troubleshooting, maintenance, repair, upgrades, and replacement for the wide area network, but not necessarily for the end user at the local area network level. The school system is making efforts to provide adequate support for end users including workstation software installation, configuration, upkeep, user training, help desk, and troubleshooting. The school or district provides support for telephone, satellite, and broadcast services, and plans are underway to address the creation and management of Web content, digital video delivery, and videoconferencing. The technical support system does not yet proactively assess and redesign itself to better anticipate and meet users' needs.

Transformation

The school provides adequate support for both the wide area and local area computer network. This support extends to the design, management, monitoring, maintenance, and security of the network. Current support for technology hardware includes user workstation installation, configuration, troubleshooting, maintenance, repair, upgrades, and replacement. There is adequate support for end users including workstation software installation, configuration, upkeep, user training, help desk, and troubleshooting. The school or district provides support for the creation and management of Web content, telephone services, video services (including videoconferencing), digital video delivery, and satellite and broadcast services. The technical support system proactively assesses and redesigns itself to better anticipate and meet users needs.

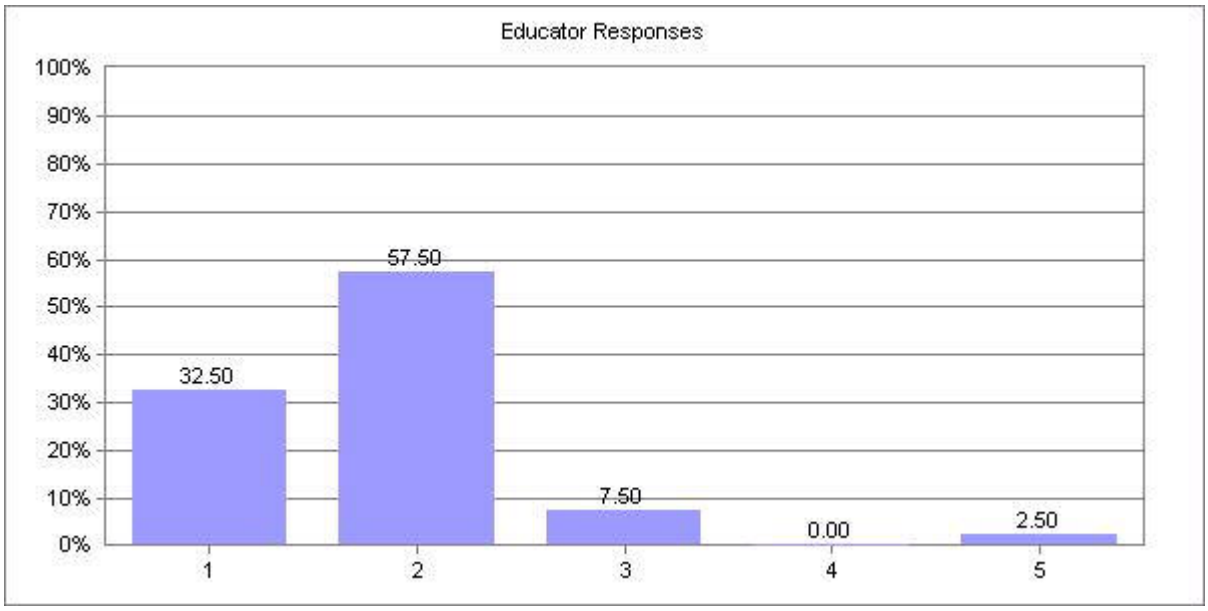
Selected Questions From Indicator: Technical Support

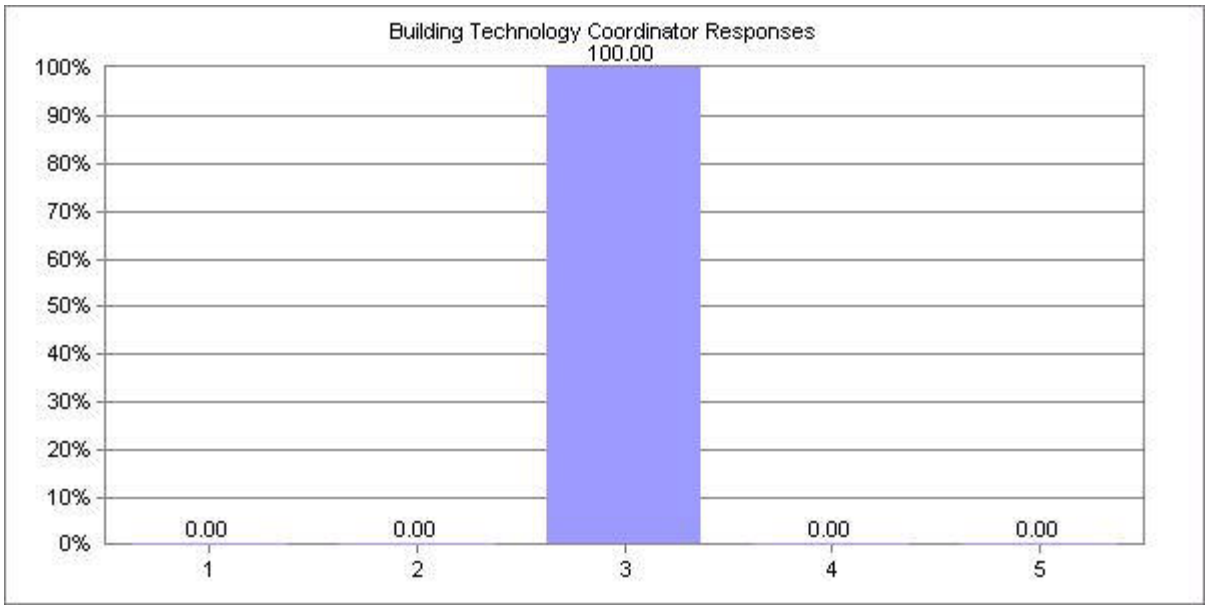
One of the biggest challenges schools are facing today is the efficient and timely operation and maintenance of technology infrastructure and networks. If teachers are not confident that the system will function reliably, they will not use it.

Educators and Building Administrators were asked the following:

How long does it take to get help when classroom computer equipment fails?

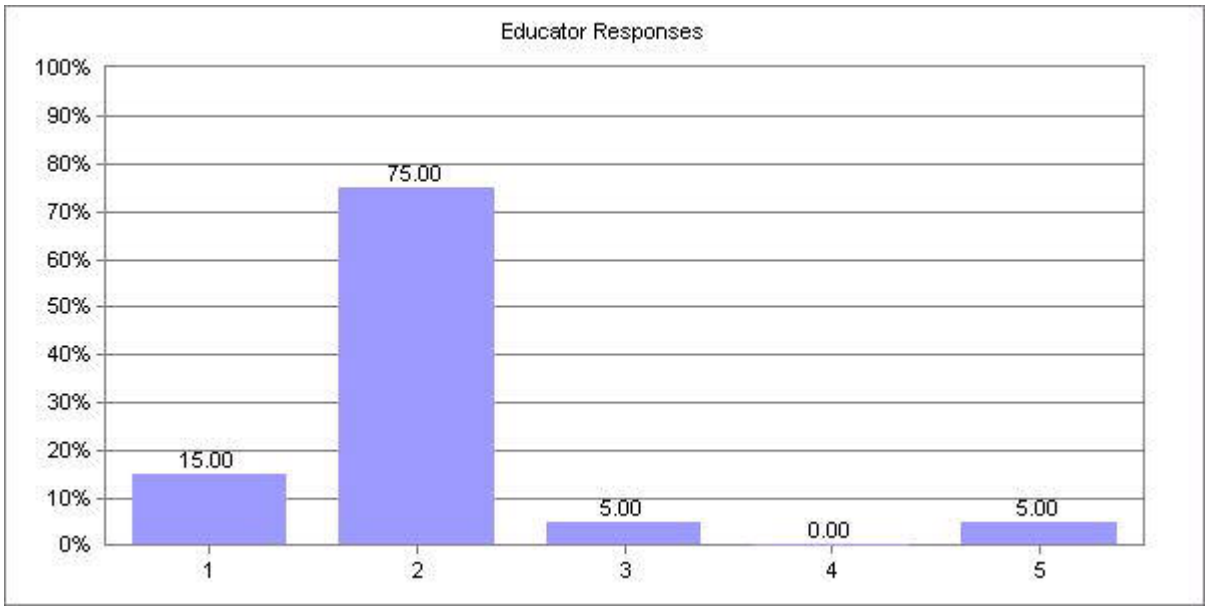
1. Within minutes
2. Within hours
3. Within days
4. Within weeks
5. Unpredictable
6. Don't know

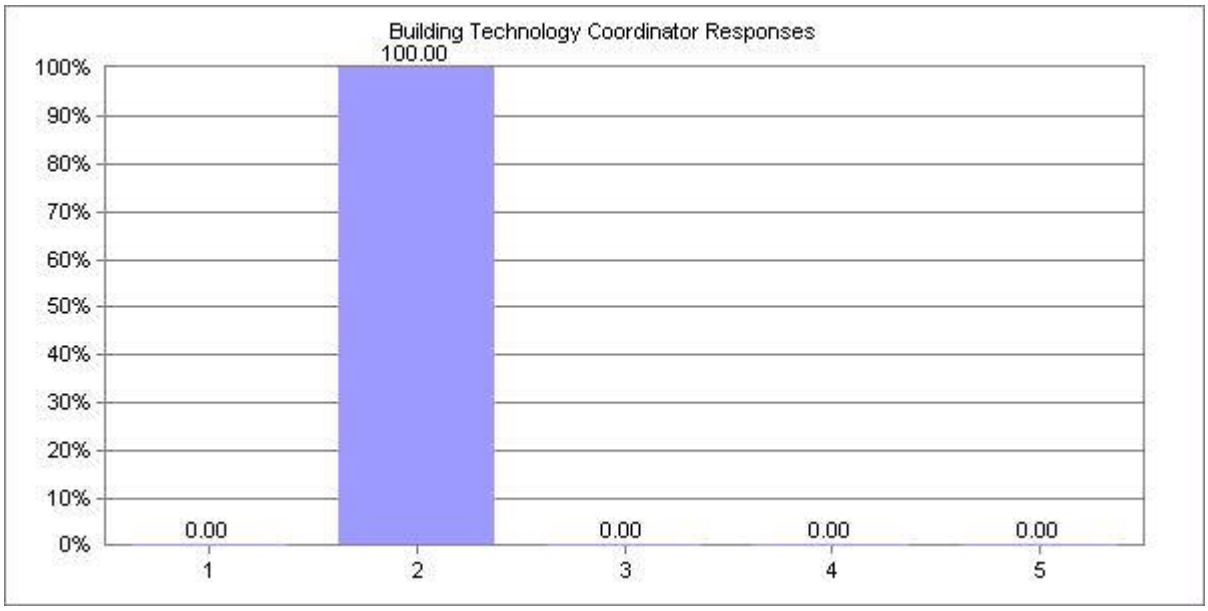




How long does it take to have network services restored when the network goes down?

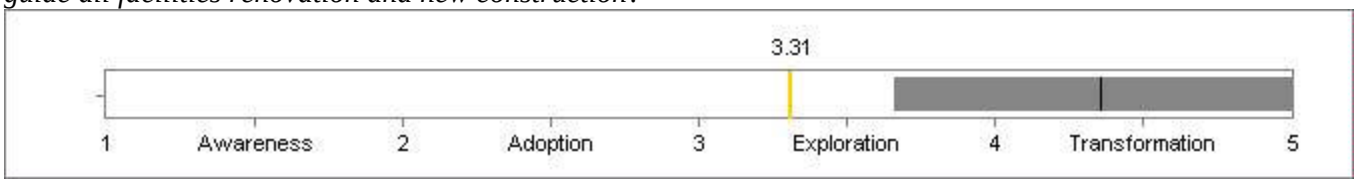
1. Within minutes
2. Within hours
3. Within days
4. Within weeks
5. Unpredictable
6. Don't know





Condition: Robust Access Anywhere, Anytime
Indicator: Technology-Ready Facilities

Do school facilities support connectivity and intensive technology use for learning? Does consideration of such use guide all facilities renovation and new construction?



Mean = 4.36 Variation = 0.7 Database Average = 3.31

Indicator Continuum Description:

Awareness

The facilities do not readily support connectivity. No basic infrastructure exists, and the buildings and terrain make installation difficult. The learning spaces are not of the size or capacity to accommodate extensive use of technology. The community is not able to use the school facility after hours due to inadequate security.

Adoption

The school facilities support the current connectivity requirements of the district, but have limited capacity for expansion. Few of the facilities in the district were constructed with technology requirements in mind. Both the current limited capacity of the facility's connectivity and ongoing capacity limitations are barriers to expanded use of technology for instruction and administration. The facility was not designed for community use but modifications may have been made to enable the community to use the computer labs. Little thought has been given to permanent technology-enabling furniture.

Exploration

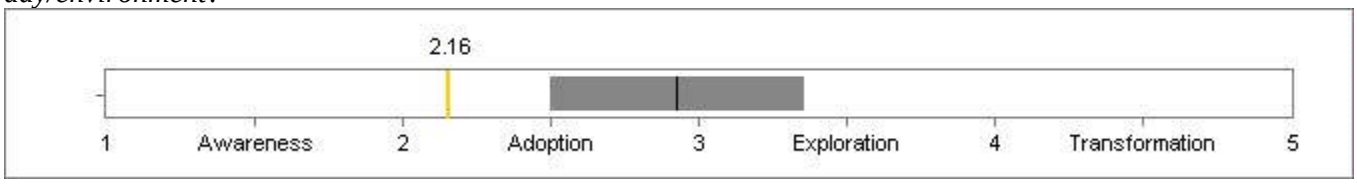
The school facilities support targeted technology use for all administrators (data and voice) and teachers (data and limited voice and video) and for students in specific programs with data and interactive video. The school is well on its way to having infrastructure in place for current and future projection, television, and audio needs of the school. The school system has prepared for future technology needs and possible alternative sources of power, ventilation, and HVAC for maximum technology penetration. For some programs the space provided is consistent with current learning theory, but for the most part only targeted programs have access to those facilities. The facility accommodates use by the greater community including appropriate security systems and easy-to-use technology. Permanent furniture items accommodate existing and planned technology.

Transformation

The school facilities support intensive technology use for all learners and administrative personnel with voice, data, and video. The infrastructure supports current and planned projection, television, and audio needs. The school system has made accommodations for future technology needs and possible alternative sources of power, ventilation, and HVAC accommodations for maximum technology penetration. The space provided not only is consistent with current learning theory, but also supports the changing needs of schools, the increased use of technology, and learning and use beyond the traditional school day and structures. The facility accommodates use by the greater community including appropriate security systems, easy-to-use technology, and automated systems for after-hours users. Permanent furniture items accommodate existing and planned technology.

Condition: Robust Access Anywhere, Anytime
Indicator: Virtual Learning Opportunities

Does the district address unmet learning needs of students by providing high-quality, technology-enriched learning opportunities and online access to digital content for students and teachers during and beyond the school day/environment?



Mean = 2.93 Variation = 0.43 Database Average = 2.16

Indicator Continuum Description:

Awareness

Virtual learning is limited to traditional courses delivered via technology (e.g., interactive video, broadcast, or satellite). The school has yet to investigate and leverage online courses.

Adoption

The school system has identified and offers a few online student courses. For the most part those courses cannot be offered locally and focus on the core content standards. Some mirror traditional instructional approaches, but others use the technology to engage students in relevant, meaningful enrichments of the core academics. The school typically provides no screening of students prior to such enrollments, nor do they provide ancillary preparation to ensure that students have the necessary skills to succeed in online learning environments.

Exploration

Limited numbers of students, educators, and, in some cases, community members have access to a host of virtual learning opportunities. The menu may include interactive video opportunities, electronic field trips, Web-based courses, just-in-time trainings on CD and the Web, and satellite-delivered courses. The school system serves as both a broker and a provider of such services for a limited numbers of students. In the role of broker, the school selects and purchases virtual learning opportunities after careful analyses based on evolving curricular, instructional, assessment, and performance and reliability criteria. The majority of the school curriculum is still on-site, with the virtual learning opportunities supplementary to the students' programs. Policies have yet to be established to govern this emerging area.

Transformation

School personnel support students in the design of that plan, taking into account the students' learning habits/styles and those required of participants in the various online/virtual learning situations. The school system is involved in the development and design of classes through partnerships with universities, private industry, their community, and other schools. Schools have performance assessments in place to track the impact of virtual learning opportunities.

Recommendation:

Virtual learning opportunities are rapidly becoming available to K–12 students and educators. As they become available, schools should match their offerings with student learning needs. To do so will require increased understanding of what type of learners work best in virtual learning situations—and what skill development is necessary prior to placing

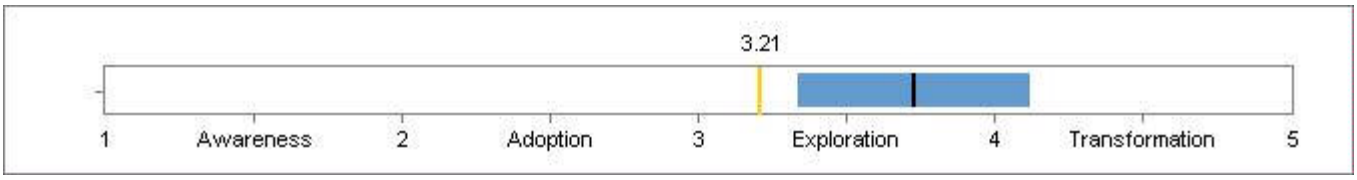
students in such situations. Schools should develop a review process for judging the value of virtual learning opportunities in comparison to alternatives and in light of the costs.

Condition Details: Systems and Leadership

Has the education system reengineered itself into a high-performance learning organization?

The typical school is not able to keep pace with the tremendous depth, breadth, and rate of this change. Educational leaders are expected to make multimillion-dollar decisions about online/virtual learning, telecommunications infrastructures, training programs, student Internet access, intranets, and software in volatile times of shorter and shorter obsolescence cycles, short-lived "dot-com" service providers, and a lack of clarity as to the real impact of technology on learning. Schools can become high-tech, high-performance systems only if they become organizations of people, guided by common principles, who learn, reflect, and change daily.

Respondents were asked questions about Indicators related to Systems. The combined answers across the Indicators places your school as follows in the Condition:

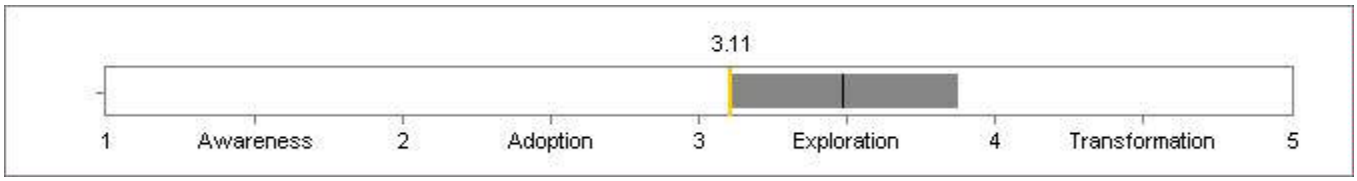


Mean = 3.73 Variation = 0.39 Database Average = 3.21

Scores for each Indicator in the Condition follow.

Condition: Systems and Leadership
Indicator: Digital-Age Standards and Assessments

Do student standards reflect Digital-Age proficiencies? Are curricula, instruction, and assessments aligned to these standards?



Mean = 3.49 Variation = 0.39 Database Average = 3.11

Indicator Continuum Description:

Awareness

Student standards include only the typical content standards. Instructional approaches to learning are limited to the traditional. The school has not yet aligned curriculum, instruction, and assessment to support the vision. The school uses traditional assessments to measure student performance.

Adoption

The curriculum includes a separate strand for digital-age proficiencies.The school includes 21st-century proficiencies in student standards as supplemental to content standards. While teachers use the full range of approaches, most of their teaching leans toward the didactic. The school is intent in developing digital-age proficiencies among learners. The development of teacher and system capacity to design and use appropriate curriculum, learn new instructional strategies, and gain assessment literacy is not aligned or coordinated. Schools

use technology to record and report student assessment.

Exploration

The curriculum includes learning activities that address digital-age proficiencies as students achieve academic content standards. The school has revised content standards to reflect 21st-century proficiencies. For select programs, the school is providing formal processes to ensure alignment of digital-age proficiencies with appropriate instructional design and assessment. Such approaches are being piloted, but are not yet systemwide. Schools are exploring constructivist approaches to learning only with special populations of students or within certain programs. The school is exploring the use of technologies to assess student performance in addition to recording and reporting progress.

Transformation

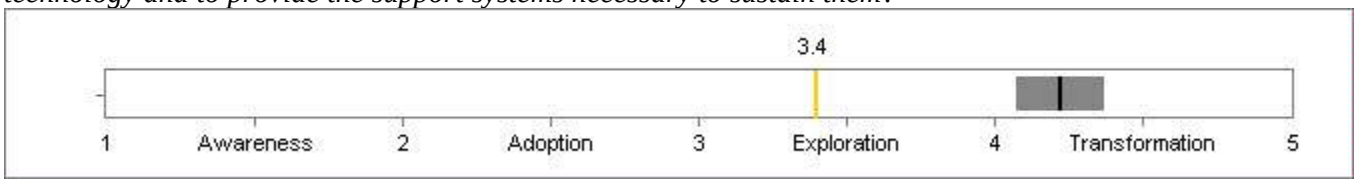
The curriculum reflects digital-age standards. Student standards include 21st-century proficiencies woven into the context standards. The school uses technology to assess and report the student's capabilities more frequently, in a more rigorous manner. The teacher's instructional repertoire includes a range from the traditional to the constructivist. Student standards reflect the vision. The school has formal processes in place to ensure that technology-supported instruction and assessment optimizes the learning of these standards.

Recommendation:

The leadership team should establish a districtwide team to ensure that student standards address the 21st-century skills identified in the vision. The team should establish a profile of a typical student in the school system, documenting the student's access to learning opportunities that would enable him/her to acquire those 21st-century skills. This data should then be used to establish a formal process for incorporating these standards into the curriculum, instruction, and assessment systems.

Condition: Systems and Leadership
Indicator: Comprehensive, Prioritized Funding

Do the school and the district address the full cost of technology as a regular part of district/school budgeting? Is funding prioritized to promote equity across and within schools to establish high-impact, student-centered uses of technology and to provide the support systems necessary to sustain them?



Mean = 4.22 Variation = 0.15 Database Average = 3.4

Indicator Continuum Description:

Awareness

Funding for technology is completely ad hoc. Educators do not have systematic access to information research and best practice in learning technologies. No support systems are in place other than those provided by outside sources. A financial plan for supporting technology has not been developed.

Adoption

Funding for technology is ad hoc, rewarding those who show interest, vision, and ability. Due to limited resources, funds are often targeted to specific programs for specific target populations. Often there are long-term plans to eventually impact all areas. Some attention is paid to research and best practice in learning technologies, but most funding for technology is secured through grants for special projects. Few filters are provided to screen applications for rigor or adherence to this knowledge base. Support is provided for specific projects on an ad hoc basis, but the school system has yet to recognize the new types of support required if the system is to use technology effectively. At this stage, while infrastructure and professional development are line items in the school system's budget, there is no recognition of the total cost of ownership.

Exploration

Districts are planning, funding, and building out infrastructure at the district level, resulting in increased equity of access. Pilot programs are being scaled with the intent of impacting all students. Districts and schools are aggressively seeking new funds and reprioritizing existing funds for more equitable access and opportunity. The school is beginning to systematically provide teachers with a base of knowledge that includes high-impact, student-centered uses of technology. Discretionary funding is tied to these filters. And, as annual allocations are provided to all schools, guidelines are in place to ensure that consideration is given to such solutions. The school system is learning lessons from pilots, understanding what support systems are required to leverage investments. Plans are in the works to provide such support systems on an ongoing basis. The school system is analyzing the total cost of ownership for their district and comparing that to revenue sources available to them.

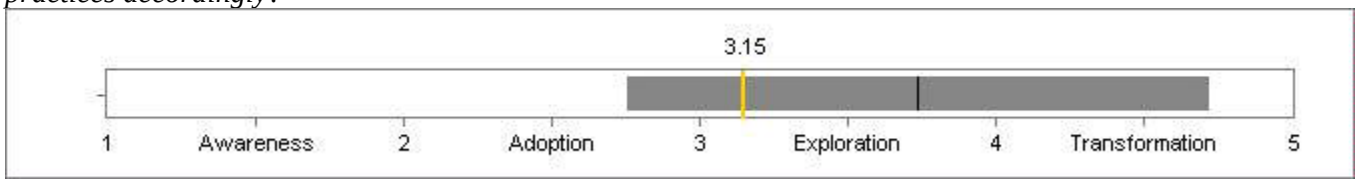
Transformation

The school's budget for technology includes entitlements that ensure acceptable levels of access for all students plus support for research and development to continue innovations, research, and development. The school district has established a formal system for identifying high-impact, student-centered uses of technology. Such applications are given priority for funding—balanced with some funds dedicated to continued R&D with yet unproven solutions.The school system has established the support structures that students, administrators, teachers, parents, and community members require to take full advantage of technology for learning and teaching. The school system

has analyzed the total cost of ownership of technology and is budgeting in the near and long-term in accordance with that analysis.

Condition: Systems and Leadership
Indicator: Systems Thinking and Process Reengineering

Is the school or district transforming itself into a high performance system driven by the digital-age learning needs of all students? Do the school and/or district have formal and informal processes to revise administrative policies and practices accordingly?



Mean = 3.74 Variation = 0.98 Database Average = 3.15

Indicator Continuum Description:

Awareness

School leaders are aware that "more of the same" will not move their schools toward the vision, but they are at a loss as to how the system has to change in order to move the vision forward. Schools and staff are managed, not lead. Rules and regulations rule, literally. School staff must seek out emergent ideas, research, and best practices on their own. There are no expectations that educators and school staff will use technology.

Adoption

The school is aware of what constitutes effective technology use. There are general expectations that every staff member will use technology, but it is not obvious that such expectations will advance the vision, nor are staff members held accountable to achieve expectations. School leaders use inservice days and staff meetings to develop awareness of emergent ideas related to the vision. The school has a formal process in place to identify and remove the barriers that prevent the systematic use of technology. New leadership based on the vision is encouraged, but only within the same, traditional rules and regulations—and without the aid of emerging technologies.

Exploration

The school staff recognize effective uses of technology when they see it. The leadership team expects, encourages, and rewards the effective uses of technology, but only on an ad hoc basis. New leadership is modeled, and leaders are developed. Those leaders are focused on changes in culture due to technology, but are just beginning to explore its development of community—thus their impact is isolated and not systemic. School leaders work together to facilitate the building of a common base of knowledge based on effective technology use. The knowledge base does not encourage interactive dialog, debate, or exchanges—at least not yet. Schools are using pilots of innovative uses of technology to test out the education system for barriers and to identify what support systems the educators and students need to succeed with technology.

Transformation

The school establishes an up-to-date base of knowledge that serves as an interactive exchange of ideas, research, best practices, and discussion on implications for teaching, learning, and leading. The leadership team is fully cognizant of effective uses of technology. Members expect (and reward) progress by staff members and teams in the effective use of technology to advance the vision. Such progress is part of the staff performance reviews. School leaders understand what kind of system they need to reach the vision—they have a vision of the high-performance learning organization required. These leaders are removing barriers and building support systems to establish such a system. Policymakers develop and nurture a new breed of leader—those who build the capacity of others to make wise choices. These school leaders, assisted by technology, work as a system of teams guided by

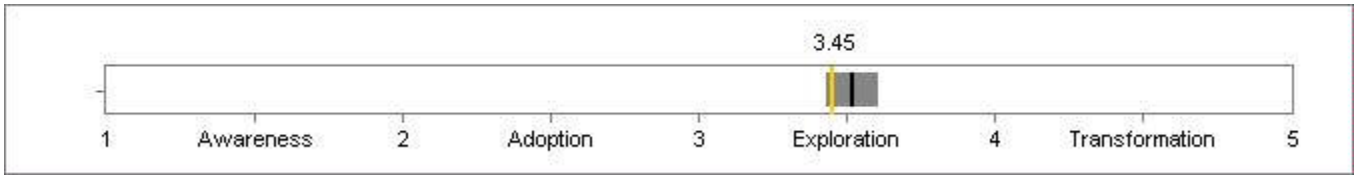
the vision. They advance systemic change—change that breaks down barriers or adds support systems to enable the vision.

Recommendation:

Success in process reengineering lies in the alignment of all processes, procedures, rules, regulations, and policies to support the improvement of student learning through technology. The transition to new systems requires intelligent, thoughtful leadership. One of the most effective ways to lead is through modeling effective practice. For example, use the technology to help educators focus on good teaching and learning practices. Begin by relegating all management details to e-mail transmissions, thus freeing up staff meetings to focus on the mission critical issues, teaching, and learning. Another technique is to set high expectations for all, rewarding incremental progress. For example, the performance reviews of all principals should include an expectation that their schools will make substantial progress in the effective use of technology. Likewise, principals should do the same with teachers.

Condition: Systems and Leadership
Indicator: Culture of Learning and Innovation

Is innovation—with and without technology—supported, encouraged, and actively developed through policies and informal action? Do policymakers use funding, perks, waivers, and special opportunities to provide incentives for schools and educators to innovate?



Mean = 3.52 Variation = 0.09 Database Average = 3.45

Indicator Continuum Description:

Awareness

Very little innovation and creativity with technology is allowed in the culture of the school. The school is aware of the emerging research on the brain, learning, instructional design, and technology and enables staff members, on a limited basis, to attend workshops, conferences, and classes on these topics. The school has yet to philosophically commit to reform measures that would bring such research into play in their schools.

Adoption

Innovation with technology is tolerated as long as it doesn't disrupt the current system too much. The school allows teachers and administrators time to learn more about emergent research and promising practice in teaching and learning. While pioneers are encouraged and supported as long as they secure outside funding, for the most part it is business as usual.

Exploration

Innovation and creativity with technology is considered only within special programs—to be piloted and scaled—and added to the curriculum if deemed successful. But it is beginning to spill over into the core curriculum. The school has committed to reform measures that would open the school culture to ideas generated from emerging research on the brain, learning, teaching, and technology. Such innovations are systematically encouraged and supported by the school. At this stage, they are seen as pilots with assessments designed to determine which will be scaled.

Transformation

Innovation and creativity become part of the culture—an expectation that educators will be well informed and, as a staff, will discuss, debate, and come to consensus on the new innovations to be used with students. The school expects, supports, and encourages teachers and administrators to stay current with and apply emerging research and technology to their learning and teaching practices. The school has established incentives and opportunities for innovative and creative use of technology within a structure that ensures quality, rigor, and continuous improvement based on data through collegial teaming and review.

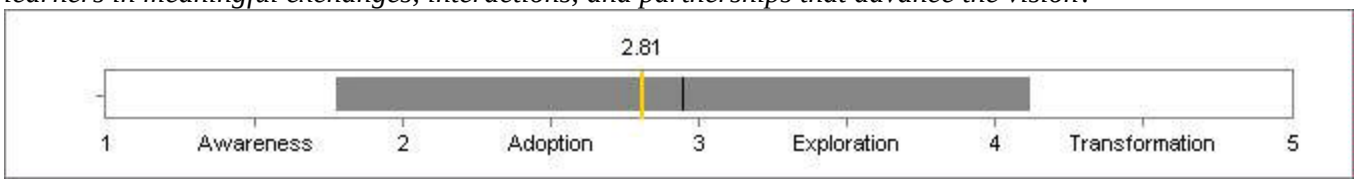
Recommendation:

The school culture should encourage technology-based innovations provided they are grounded in sound theory, research, and emerging practice. Persons in influential positions within the district should be encouraged to lead, rather than manage, focusing on capacity building and pushing decision making to building-based personnel. The district

should establish a long-term leadership program for teams of administrators and teacher leaders linking their work to existing school improvement efforts. The leadership program should be grounded research and best practices focusing on team approaches to solving school-based challenges through innovative uses of technology. Team assessments should be incorporated into the performance review of individuals.

Condition: Systems and Leadership
Indicator: Community Connections

Do formal technology-related structures and processes engage parents, community members, school faculty, and learners in meaningful exchanges, interactions, and partnerships that advance the vision?



Mean = 2.95 Variation = 1.17 Database Average = 2.81

Indicator Continuum Description:

Awareness

The school does not communicate electronically with the community. No technology-supported connections exist or are currently planned for. At this point the school does not interact electronically with the community. Few partnerships involve technology. The school does not formally think about electronic communications with the community.

Adoption

The school is actively reaching out to community members using push technologies—the intent being information dissemination. Limited use of interactive technologies is occurring, most often in the continuation of old practices—but in new ways. Technology connections with the community do exist and are viewed as important in terms of information dissemination—not exchanges of information. The school and community leaders are exploring telecommunications and technology needs. The school is beginning to interact electronically with the community but considers the community secondarily.

Exploration

The school is beginning to use interactive technologies to collaborate with their community-providing opportunity for citizen access throughout the community. The open community connections through networked technology have opened up all sorts of challenges and opportunities. The school is working hard to put formal structures in place that allow the school and community to deepen the nature of the interactions and formally follow up on issues and opportunities arising from such interactions. The school has met with community and business leaders to review its technology-related programs and is forming partnerships in areas of common interest. To date, those areas are limited to infrastructure and technical support. The school is exploring creative linkages with the community through existing networks and communication systems and has identified changes in the system necessary to optimize those interactions.

Transformation

The electronic interactions with the community both push and pull technologies. A safe, well-designed electronic system has been established that serves to connect educators and students to community resources and expertise. Many of the collaborative products and services are celebrated and published through the Web. The electronic interactions not only with parents about a student's progress but also with the community are critical factors in advancing the vision. The connections are meaningful exchanges that enable community members, students, parents, and educators to both contribute to and benefit from the investment in technology. There is a longstanding history of successful, mutually beneficial partnerships that involve technology guided by formal commitments to areas of mutual interest. Many of these projects use the talents of the students in community-based projects. The

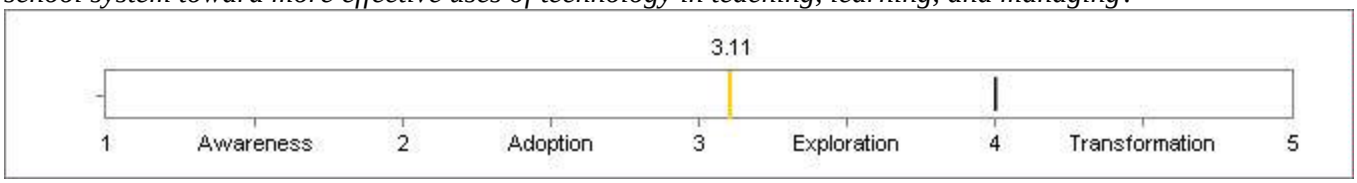
community is considered as a critical client in the design of the school's network and communication systems.

Recommendation:

Districts should invite existing community outreach programs to engage in a "community scan" to identify the potential for mutually beneficial high-tech partnerships. It will be important to establish the criteria for such partnership within a formal process through which partnership proposals are encouraged and solicited. The process should be seeded with information from an assessment of school and community needs, providing a link between community members and teachers to see the possible connections.

Condition: Systems and Leadership
Indicator: Administrator Proficiency

Are administrators prepared to use technology effectively? Are they prepared to work with colleagues to guide their school system toward more effective uses of technology in teaching, learning, and managing?



Mean = 4 Variation = 0 Database Average = 3.11

Indicator Continuum Description:

Awareness

The administrator does not use technology in their professional life. There are no expectations that educators and school staff will use technology. Administrators do not actively engage their staff in activities using technology. Administrator does not use technology personally.

Adoption

The administrator has access to technology as a result of their position. While they may use it peripherally, it is not yet mission critical. Administrators are not fully aware of what effective technology use is. There are general expectations that every staff member will use technology, but such expectations are not tied to advancing the vision, nor are staff members held accountable by administrators to achieve expectations. Administrators actively support and encourage their staff and colleagues to learn more about effective technology uses and then apply it to practice. This is done on an ad hoc basis, often supporting the pioneers. Administrators are taking classes to build proficiencies.

Exploration

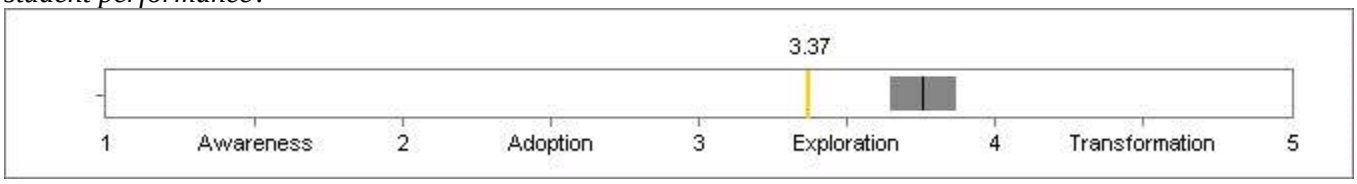
In certain aspects of their responsibilities (mostly administrative/management), the administrator finds technology to be extremely beneficial. He/she is just beginning to explore how this tool can be used in leading staff and students to the vision. Administrators know effective uses of technology when they see them. They expect, encourage, and reward such use in their schools, but only on an ad hoc basis. The administrator encourages and supports individual educators and teams of educators to bring value to student learning and to meet critical educational challenges. Administrators are beginning to internalize the powerful uses of the technology for their personal lives.

Transformation

Technology is mission critical to the administrator. He/she models meaningful, effective uses of technology in their professional lives on a daily basis. The administrator is fully cognizant of effective uses of technology. He/she expects (and rewards) progress by every staff member in the effective use of technology to advance the vision. For those he/she supervises, such progress is part of the staff performance reviews. The administrator establishes formal processes to engage teams of educators in the use of technology to meet identified educational challenges in ways that optimize the use of technology in teaching, learning, managing, and assessing. Administrators are fluent with technology (software, hardware, and connectivity) and the advantages it brings to them as individuals.

Condition: Systems and Leadership
Indicator: Professional Development

Do the school and the district provide comprehensive professional growth opportunities for teachers, administrators, and other staff that build their capacity to advance the vision? Is the effectiveness of professional development linked to student performance?



Mean = 3.76 Variation = 0.11 Database Average = 3.37

Indicator Continuum Description:

Awareness

No significant effort has been made to link professional development to the vision for digital-age learners or to student performance. Professional development opportunities are few.

Adoption

While some effort has been made to link professional development to the vision for digital-age learners and to student performance, this linkage is not readily evident. There are some opportunities for professional development.

Exploration

There are significant opportunities for professional development related to education technology. Many of these opportunities are linked to the district vision for the digital-age learner and student performance.

Transformation

Every proposed professional development program has been established in response to data that are gathered related to progress towards the district vision and evidence of student performance. All staff is involved in analyzing these data and designing programs in response.There is on-demand availability for professional development related to education technology.

Recommendation:

Districts should provide professional development opportunities that engage teachers and principals in long-term solutions to challenging problems. Professional development plans should be required to link educators' activities directly to curriculum, instruction, and student assessment. The professional development models should specifically address participants' content areas and learning styles. The models should be experiential, enabling cohorts of educators to solve meaningful problems as they grow professionally. Participants should have the latitude to design their own professional growth path, while being held accountable for stated outcomes.

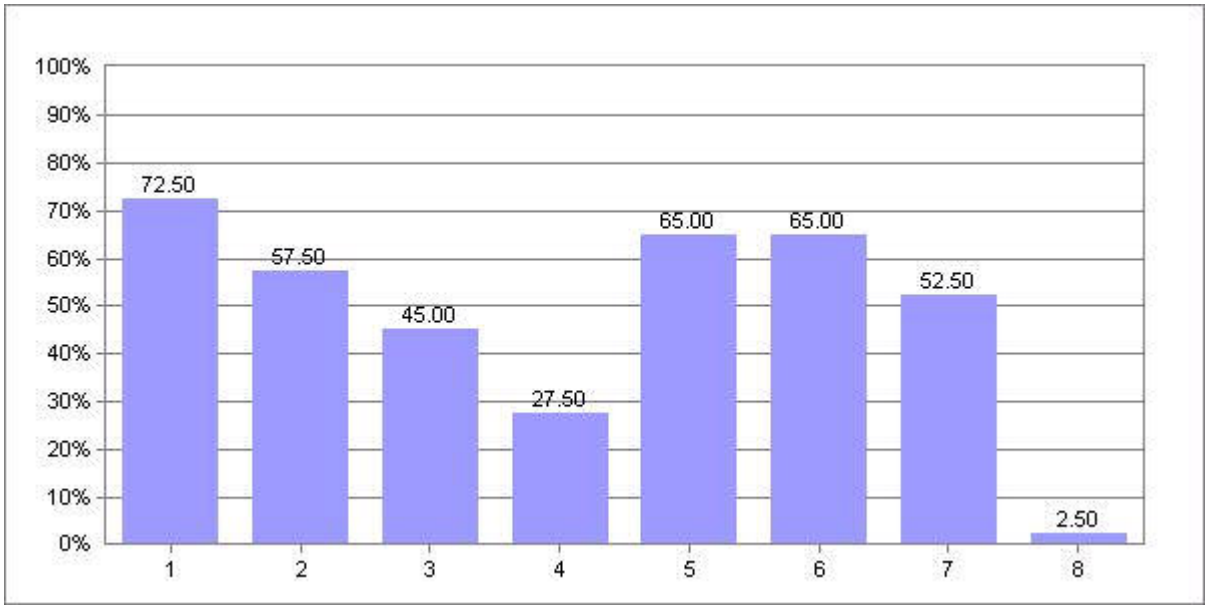
Selected Questions From Indicator: Professional Development

High expectations for administrators' and educators' effective uses of technology must be accompanied by high-quality professional development linked directly to student performance.

Educators were asked the following:

If given a choice, in which types of professional growth opportunities do you prefer to participate? (Select all that apply.)

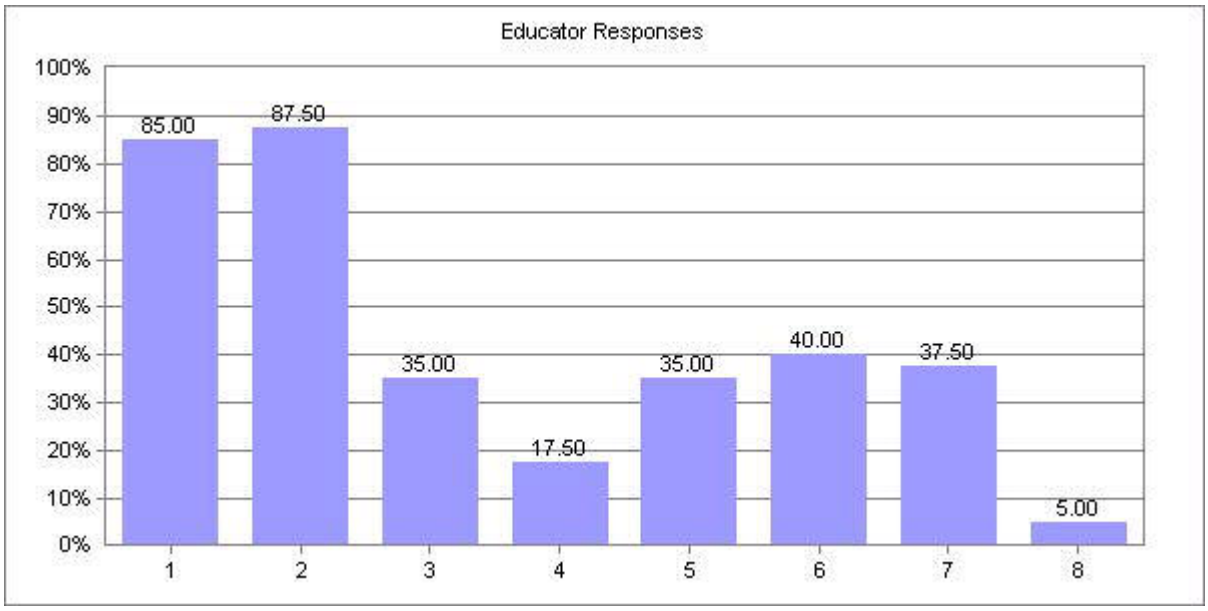
1. Workshops and seminars
2. Attending conferences
3. District or school sponsored courses
4. On-demand, online, or Web-delivered professional development
5. One-on-one or group training with technology coordinators or aides
6. Release time for department or grade level planning related to technology
7. Release time for individual professional development related to technology
8. None apply.

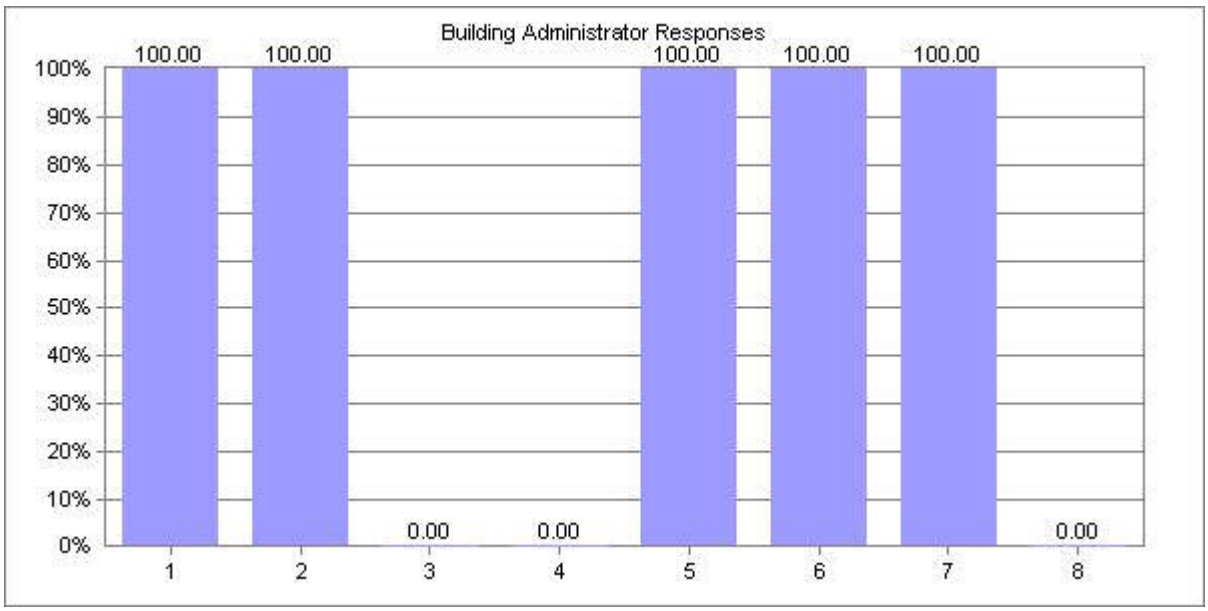


Educators and Building Administrators were asked the following:

Which types of professional growth opportunities are available to educators in your school? (Select all that apply.)

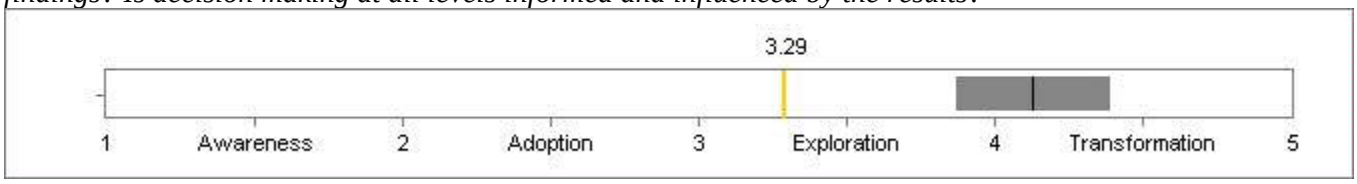
1. Workshops and seminars
2. Attending conferences
3. District or school sponsored courses
4. On-demand, online, or Web-delivered professional development
5. One-on-one or group training with technology coordinators or aides
6. Release time for department or grade level planning related to technology
7. Release time for individual professional development related to technology
8. None apply.





Condition: Systems and Leadership
Indicator: Data-Driven Decision Making and Accountability

Has the school and the district established the metrics and benchmarks for effective uses of technology at the student, educator, and systems levels? Does the school or district collect and analyze data to track progress and correlate findings? Is decision making at all levels informed and influenced by the results?



Mean = 4.13 Variation = 0.26 Database Average = 3.29

Indicator Continuum Description:

Awareness

While the vision may be in place, the school system has yet to establish how they will determine when and if that vision has been reached. The school system is not currently collecting data related to the vision. The school's data collection in this area is very informal. While anecdotal information does influence decisions, hard data is not yet available. The vision for learning in a digital age is either nonexistent or ignored when decisions are made.

Adoption

The vision has been translated into goals for effective practice at the "learning" level. While educators are aware that infrastructure must be put into place and teachers must be provided training, they have not yet fully established metrics for any of the levels. Typically, quantitative data is being collected documenting the building of infrastructure and the professional development opportunities accessed by staff. Metrics for students, educators, and the system have yet to be reviewed and revised to incorporate technology. Decisions on infrastructure and professional development for technology are influenced by qualitative data limited to those areas and by anecdotal information. At this stage, the decisions influenced by the vision are limited to infrastructure and training. The vision is a driver for decision making in grant-funded and other supplementary programs but not in the core services.

Exploration

There is a growing recognition of what teaching and learning could be with technology—and what kind of educational system/organization it will take to provide such opportunities for all students. At this stage, there is a mounting frustration with the misalignment between the existing metrics and the vision. The system has begun the definition of metrics at all levels, but has yet to complete this process or think about incremental benchmarks. At this stage, schools are often dissatisfied with their qualitative data collection and are seeking more substantive data collection to give them a more complete picture of their progress with technology. As they define associated metrics, they are exploring non-intrusive methods for gathering, analyzing, and reporting data on an ongoing basis. Decisions beyond those directly related to technology are being influenced by national research, local best practices, quantitative data, and anecdotes. The vision is a driver for critical decisions in all grant and discretionary programs. In most core areas, it does drive curriculum and instruction decisions, but has yet to significantly impact decisions in critical areas such as assessment and funding.

Transformation

The school and district have defined effective use of technology (e.g., specific measures, benchmarks, and sources of evidence). The student level uses performance measures for achievement of defined goals. The educator level

includes performance measures and benchmarks of educator proficiencies. At the system level, measures and benchmarks for each of the Six Essential Conditions are well established. The school system collects, analyzes, and correlates findings based on established metrics and benchmarks. Results are systematically reported. Every decision in the school system from curricular to administrative is influenced by local, regional, and national data. Progress with technology at the student, educator, and system level is analyzed periodically to inform decision making. The vision is a driver for all critical decisions in the district. Unless mandated, if it doesn't advance the vision, it isn't a high priority.

Next Steps

The information from this profile is best used within a Comprehensive School Improvement process or planning process. Depending on your needs, you may:

- Review your areas of strength. Use the *enGauge* Web site as a resource for ideas and links, and then make plans to maintain and build on your strengths.
- Review areas with potential for improvement. Study those Indicators on the *enGauge* Web site and then decide if they are areas for long-term or short-term growth.
- Revisit how respondents prioritized 21st Century Skills. Plan how these skills will be integrated into your existing curriculum. Develop methods for evaluating student progress in acquiring these skills.
- Examine the results of the prioritized academic disciplines. Find areas where survey respondents feel technology should be integrated.
- Incorporate your technology plan into your overall school improvement plan.
- Communicate the results of this self-assessment—and your next steps in advancing the effective use of technology for learning—to the stakeholders in your school.

Authors of the Framework

The *enGauge* Online Assessment Profile was developed by a team of experts in education led by a partnership between the North Central Regional Educational Laboratory (NCREL), the North Central Regional Technology in Education Consortium (NCRTEC), and the Metiri Group.

The development team included researchers, writers, professional development experts, technology coordinators, principals, state department of education consultants, and other experienced educators.
