A Chronicle of West Virginia's Global21 Initiative (2004-2011)

"Whoever wishes to foresee the future must consult the past; for human events ever resemble those of preceding times. This arises from the fact that they are produced by men who ever have been, and ever shall be, animated by the same passions, and thus they necessarily have the same results."

Machiavelli

Updated September 2011

West Virginia Department of Education

Superintendent/State Board Merits

Sponsored by the West Virginia Board of Education

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Executive Summary

In 2005, West Virginia became the second state in the nation to join The Partnership for 21st Century Skills (P21). P21, an advocacy organization that includes members from the business community, education leaders, and policymakers, was developed to "define a powerful vision for 21st century education to ensure every child's success as citizens and workers in the 21st century" (P21, 2004). Highlighted by four core 21st century student learning outcomes, the unified vision of the Partnership is to develop teaching and learning for the 21st century in order to strengthen education in America. In joining this Partnership, the West Virginia Department of Education (WVDE) collaborated with West Virginia leaders from business, government, and education, who committed themselves to systemic change that will prepare the youth of West Virginia to be productive and successful citizens globally, both now and in the future.

The WVDE, with guidance from the visionary work of P21, has instituted a comprehensive framework of policies, strategies, and resources to implement 21st century learning and instruction. In support of this undertaking, Edvantia, Inc., a not-for-profit educational research and development organization, was contracted to work with the WVDE to create a comprehensive chronicle of West Virginia's experience with P21, formerly named the 21st Century Learning Initiative and now called the Global21 Initiative.

The structure of this chronicle, organized into nine major sections, is adapted from the nine steps to build momentum and seven strategies for a successful statewide 21st century skills initiative delineated by The Partnership for 21st Century Skills in its publications, *Learning for the 21st Century: A Report and MILE Guide for 21st Century Skills* (2002) and *A State Leaders Action Guide to 21st Century Skills: A New Vision for Education* (2006). The sections are organized as follows:

1. **21st Century Vision (Broad Consensus/Shared Vision).** State leaders at the highest level made the case for 21st century learning by educating stakeholders at all levels to promote the importance of 21st century skills. They achieved this by establishing and supporting legislation and state and local policies, funding the integration of 21st century skills and core subjects, and reviewing existing technological infrastructures to determine and provide needed investments. West Virginia developed and created a comprehensive communication strategy and sustains an active coalition of businesses, educators, organizations, and parents. Enlisting the support of educators, employers, and community groups and providing ongoing advice during the planning and implementation of the Global21 Initiative has resulted in broad consensus on a shared vision. The intent of disseminating a strong 21st century vision is to keep everyone focused on the goals of the Global21 Initiative. The state's initiative is guided by a set of core documents and 39 critical implementation elements addressing all aspects and levels of the system.
2. **Data Analysis, Planning, and Process Design.** The state engages in comprehensive analyses of data in order to strategically plan the implementation of the initiative and design the processes that will move the state educational system toward the initiative's goals. Data analyses are ongoing and serve several purposes, including input for the design of the initiative, feedback on the progress of the initiative, and information on the success of the initiative.
3. **Management and Organization.** The WVDE reorganizes its divisions and offices to optimally support the initiative. The Department reviews the allocation of resources and determines how best to allocate, or reallocate, resources to further the initiative's goals.

4. **Standards and Curriculum Aligned with 21st Century Skills.** The WVDE ensures that curriculum standards incorporate 21st century skills, have the appropriate levels of rigor and relevance, and align with national and international standards. In addition, the WVDE applies more rigorous graduation requirements for course completion, technology proficiency, and the integration of 21st century learning skills across the curriculum.
5. **Programmatic Initiatives to Support Rigorous Content and Student Achievement.** The WVDE develops or repurposes programs to support the 21st century learning needs of the state's students, ensuring that a comprehensive array of programs are available to support all aspects of curriculum, instruction, assessment, professional development, and the needs of diverse learners.
6. **Technology Integration to Support Rigorous Content and Student Achievement.** Given the critical importance of technology in the 21st century, the WVDE is modeling the comprehensive and innovative uses of technology by embedding technology integration across the entire initiative, including professional development, instruction, assessment, and instructional resources.
7. **21st Century Assessments.** The WVDE modernizes student assessments to include summative assessment, benchmark assessment, and classroom assessment based on rigorous Content Standards and Objectives that integrate learning skills and technology tools. The comprehensive assessment program is designed to measure a full range of knowledge and skills, explore multiple approaches to student accountability, improve record keeping on crucial learning outcomes, and develop an accreditation and accountability process focused on 21st century learning. Assessments are aligned to the content, context, and learning tools of the 21st century, as defined by P21.
8. **Ongoing Professional Development in 21st Century Skills.** The state has developed a comprehensive professional development initiative that focuses on building the capacity of district-level leadership teams, principals, and teacher leaders. The state supports administrators and teachers with ongoing professional development in 21st century skills, promotes the inclusion of 21st century skills in teacher education programs, and includes competency in 21st century skills in the accreditation criteria of teacher education programs and the requirements for teacher licensure.
9. **Collaboration with Outside Partners.** The state strategically involves a broad array of partners to support all aspects of the initiative, drawing on the best and most innovative programs and organizations to ensure West Virginia's students receive the highest quality 21st century education.

The remainder of this document, which contains many hyperlinks to additional information, elaborates on West Virginia's implementation of the nine core structural elements of the state's Global21 Initiative from 2004 through June 2011. The WVDE is committed to continuing to document the process, structures, and resources to support the implementation of 21st century instruction and learning.

Introduction

In November 2004, Dr. Steven Paine, then West Virginia's Deputy State Superintendent of Schools, attended the Council of Chief State School Officers (CCSSO) conference at Kiawah Island, South Carolina, where he experienced his first substantive contact with the concept of developing 21st century skills. The conference included a session on The Partnership for 21st Century Skills (P21), led by P21 President Ken Kay, who highlighted the key aspects of the Partnership and its intentions. After officially becoming State Superintendent of Schools on July 1, 2005, Dr. Paine realized the value of joining the Partnership.

In August 2005, the West Virginia Board of Education (WVBE) stressed the urgency and need for change in West Virginia's school system. After the release of the state's disappointing scores on the National Assessment of Educational Progress (NAEP), the West Virginia Department of Education (WVDE) began to assess the current curriculum and determined that although the state's content standards met the minimal mastery level defined in the No Child Left Behind (NCLB) Act of 2001, more rigor was needed to truly prepare students for a global society. Dr. Paine—joined by the governor, state legislators, educators, school systems, and businesses—signed onto the Partnership in November 2005 at a statewide event.

West Virginia became the second state in the nation to join The Partnership for 21st Century Skills. An advocacy organization that includes members from the business community, education leaders, and policymakers, P21 was developed to "define a powerful vision for 21st century education to ensure every child's success as citizens and workers in the 21st century" (P21, 2004). Highlighted by four core 21st century student learning outcomes[1], the unified vision of the Partnership is to develop teaching and learning for the 21st century to strengthen education in America. In joining this Partnership, the WVDE collaborated with West Virginia leaders from business, government, and education, who committed themselves to systemic change that will prepare the youth of West Virginia to be productive and successful citizens globally, both now and in the future.

In 2005, and building on existing innovative initiatives, the WVDE implemented a systematic and systemic plan to bring the concept of 21st century instruction and learning to scale. The size and demographic characteristics of the state's educational system place the state at an advantage to implement a systemic initiative: as of the 2007-2008 school year, West Virginia had 696 regular public schools (plus 34 institutional schools, 41 vocational schools, and 3 schools for the deaf and blind) and 281,715 students, of whom 93.0 percent were White and less than 1 percent were English language learners. West Virginia's small size and demographic homogeneity give the state a certain advantage to pilot test a comprehensive initiative to transform a statewide educational system into a strong and rigorous 21st century teaching and learning environment.

West Virginia's process for implementing its Global21 Initiative (previously the 21st Century Learning Initiative) includes targeted stakeholders receiving focused professional development to support successful implementation through the achievement of the following objectives:

- ✓ The WVDE staff receives comprehensive knowledge of 21st century components through 10 days of required professional development.

[1] P21 delineates the following four student learning outcomes: (1) core subjects and 21st century themes; (2) information, media, and technology skills; (3) learning and innovation skills; and (4) life and career skills.

- ✓ School district superintendents and district leadership staff receives comprehensive knowledge of 21st century components through six 3-day leadership conferences.
- ✓ The directors of the Regional Education Service Agencies (RESAs) and support staff receive comprehensive knowledge of 21st century components through six 3-day leadership conferences.
- ✓ All principals receive comprehensive knowledge of leadership skills necessary to create 21st century elementary, middle, and high schools through attendance at a 10-day 21st century leadership institute.
- ✓ All teachers receive comprehensive knowledge of 21st century content and pedagogy to create 21st century classrooms through the process of establishing 600 master teachers trained to support building-level professional development.

This chronicle document describes the processes, structures, and resources that are targeted at building every stakeholder's capacity to understand and support the implementation of the Global21 Initiative. The chronicle is organized into nine major sections: establishment of vision; data analysis, planning, and process design; management and organization; standards and curriculum alignment; programmatic initiatives; technology integration; 21st century assessment; professional development; and collaboration with outside partners.

1. 21st Century Vision

West Virginia is determined that students will be ready for the world that awaits them. The WVDE, along with the Governor, state lawmakers, and key stakeholders, has embraced the four key student outcomes of 21st century learning. Through a systemic approach, the WVDE is implementing a learning model to assure that West Virginia students will have the knowledge and skills needed to succeed and prosper today and tomorrow. The WVBE's vision of developing a 21st century school system aligns with the West Virginia Jobs Cabinet, which was established by the Governor's Executive Order and works to link educational improvement and economic development in West Virginia. The WVDE recognizes the need to ensure that all stakeholders share a common vision for 21st century instruction and learning and a commitment to designing and establishing processes, legislation, policies, and structure to support the effective implementation of this vision. The process of ensuring this systemic involvement of all stakeholders has included the establishment of advisory councils; communication plans; teacher, student, and business forums; conferences; and the creation of a multitude of guiding documents (e.g., frameworks, legislation, and policies).

1.1 21st Century Advisory Council

Central to the vision of creating a 21st century education system is ensuring that the education system is connected locally and globally to business, industry, and other key stakeholders. To that end, the WVDE established the 21st Century Advisory Council to provide input and guidance on the state's Global21 Initiative. The Advisory Council is composed of business and community leaders from all regions of the state. The Council has provided input and focus to the Global21 communications plan in an effort to make the public aware of the initiatives and the benefits it will bring to their community's economic growth.

1.2 Statewide Communication Initiative

The support and engagement of all stakeholders are crucial to the success of the Global21 Initiative. Immediately upon joining the Partnership, the WVDE began building alliances and promoting a sense of collaboration by informing educators, business people, and community groups about the potential long-term impact of the initiative on the state's educational system and soliciting their feedback. The WVDE also developed documents to communicate a common vision and language for the initiative.

1.2.1 Teacher Forums

Voices from the Field was a series of gatherings held around the state in February and March 2006. More than 800 teachers were asked to provide their insights about 21st century skills. At each gathering, the teachers split into small groups and answered two questions:

1. What knowledge and skills does a West Virginia graduate need to succeed in the 21st century?
2. What do you, as a teacher, need to educate a 21st century learner?

Responses are posted online by the county in which each focus group was held (Berkeley, Cabell, Greenbrier, Marion, Ohio, Putnam, Raleigh, and Wood).

21st Century Teacher Effectiveness Forums were held in the fall and winter of 2007-2008; these were designed to solicit information from teachers, administrators, and other key stakeholders and to inform higher education about what teachers needed in teacher preparation programs to prepare them to teach in the 21st century classroom. A white paper on what a teacher needs to know and be able to do in the 21st century was developed and submitted to the West Virginia Commission on Teaching Standards. The Commission is preparing recommendations for the State Board on what a teacher needs to know and be able to do to be an effective teacher.

1.2.2 Business Leader Forums

As education and economic development converge, the WVDE values the input of the West Virginia business community. To solicit business leaders' input on the direction of education to ultimately produce viable employees, the WVDE contracted with an outside vendor to conduct statewide forums with business leaders in late 2006. Eight business forums were held between May 8 and June 2, 2006. Locations for the forums included Beckley, Morgantown, Wheeling, Martinsburg, Mineral Wells, Summersville, Charleston, and Huntington. Attendees included individuals from the business community, past and present educators, State Board members, Chamber of Commerce members, and Workforce Investment Board members from around the state. Information about the then-named 21st Century Learning Initiative was provided.

All forum participants agreed that the direction of the initiative was on track and in line with the needs of their organizations. The participants expressed interest in the integration of parent involvement, professional development, basic job skills, communication skills, and technology skills for all students in the implementation of this effort.

Attendees were committed to helping the state work toward a change and were happy to have been a part of meetings where their concerns could be voiced.

1.2.3 Student Focus Groups

In January 2008, student focus groups were held in four locations across the state. Led by State Superintendent of Schools Dr. Steven Paine, these focus groups asked students their opinions about their school system—what they liked, and what they thought should be changed—and what they need to be successful in the 21st century. Following the site visits, and in an effort to reach all West Virginia students, an online student survey was launched in May 2008. Results from this survey are being utilized to determine needed initiatives, policy changes, or communication requirements.

1.2.4 School System Leadership Team Conference

The school system leadership team conference is a foundational component of West Virginia's systemic approach to developing high-performing schools and school systems. Since 2004, the Division of Educator Quality and System Support has conducted at least two conferences each year to support school systems as they move to address the demands of effectively preparing West Virginia students with the knowledge and skills for work and life in a global digital society. The unifying theme for the more than 10 conferences has been to provide school systems with research, information, and resources to help them serve as catalysts for systemic change.

As a key component of West Virginia's systemic approach to developing high-performing school systems, the West Virginia School System Leadership Team Conference is designed to

- ✓ develop knowledgeable, capable, and visionary system leadership
- ✓ build improvement capacity within the school systems

- ✓ build a foundation of understanding and a common language as counties move to develop a 21st century system
- ✓ provide support to district leadership
- ✓ implement the *West Virginia Framework for High Performing School Systems*
- ✓ provide an opportunity for systems to exchange ideas

The target audience for the School System Leadership Team Conference is approximately 500 participants who make up the School System Leadership Teams from each district in West Virginia and from other educational organizations. District teams led by the superintendent include central office administrators, principals, and teacher leaders, as well as members of the eight RESAs. The teams have opportunities to learn from national and local experts who expand participants' knowledge and challenge their thinking. The Leadership Conference provides an infusion of new ideas through large-group sessions and in-depth clinics. Daily team meetings provide a structure for systems to reflect, self-assess, and extend their learning. For each conference, the instructional sequence changes based on the conference theme, system needs, and current research. Team meetings are a key support and the most important element in the learning sequence. Time is provided for district teams to meet and share their thoughts, conduct self-assessments, and then discuss and plan the changes needed to move their school systems forward. A wide array of outstanding educational leaders, such as Larry Lezotte, Douglas Reeves, Willard Daggett, Jim Sweeney, Phillip Schlechty, Terrence Deal, Tom Guskey, Roland Barth, Thomas Houlihan, Linda Darling-Hammond, and Rick Stiggins, have served as keynote speakers at these informative conferences. The Leadership Team Conferences are discussed in more detail in the Professional Development section of this document.

1.2.5 Communication Plan

In late 2007, the WVDE contracted with a public relations firm to conduct a statewide phone survey exploring the current perceptions of education in general and the then-named 21st Century Learning Initiative in particular. The report was used to develop the Request for Proposal (RFP) for an integrated marketing communication plan.

In December 2008, the WVDE began developing a public relations and outreach plan. Since the new Content Standards and Objectives (CSOs) were implemented at the start of the school year, the WVDE recognized the importance of creating a real understanding of 21st century learning. A key aspect of the public relations plan was to educate parents, students, and the community about the WESTEST 2 and the anticipated outcomes of the first administration of the WESTEST 2. Brochures, press releases, articles, news media interviews, podcasts, talking points, a website, and other well-proven outreach tactics were developed internally for all of the target audiences. The phases of the public relations and outreach initiative addressed (1) why public education is changing, (2) how public education is changing and what it looks like, (3) how 21st century learning is measured, and (4) why 21st century learning takes everyone's involvement.

In January 2009, the WVDE conducted the Superintendent Forums. A principal and a teacher leader from every public school in West Virginia were asked to attend one of the forums. The forums were used as a vehicle to share information with educators about 21st century learning, as well as to ask for their assistance in disseminating information about 21st century learning. Attendees were asked to serve as touch points with their schools and communities and to provide feedback on the draft versions of the soon-to-be released brochures, articles, podcasts, and so forth. A listserv of 1,200 attendees was developed and utilized as a source for two-way communication with every school in the state.

In February 2009, the WVDE secured a public relations firm to assist in promoting and creating a better understanding of 21st century learning. The first task given to the firm was to assist the department in identifying a new name for 21st Century Learning. The WVDE's research conducted in early 2008 had indicated that the name 21st Century Teaching and Learning was not resonating with target audiences. The new name and tagline, "Global21: Students deserve it. The world demands it," and logo were officially launched on April 5, 2009 as part of the kickoff of the outreach and public relations plan. The WVDE plans further use of the public relations firm to develop new media, advertising, and marketing plans to educate the public about Global21.

1.3 Guiding Documents

The West Virginia Global21 Initiative follows several guiding documents. In any major initiative, guiding documents allow all stakeholders to share a common vision and guide the work to be achieved. Guiding documents clearly delineate the expectations for all stakeholders (i.e., the best practices, high-yield strategies, and outcomes that must be accomplished). Guiding documents must reflect (1) a comprehensive review of the research literature on best practice as well as stakeholder expertise and experience in successful processes; (2) legislation that codifies into statutory requirements the fundamental aspects that ensure equity of application; and (3) State Board policy that provides direction and guidance for implementation of structural, programmatic, and procedural requirements.

The vision of every West Virginia high school is to graduate all students with 21st century knowledge and skills; ready to succeed in an appropriate postsecondary education program; and able to responsibly live, learn, and thrive in a digital global society.

1.3.1 Frameworks for High-Performing Systems, Schools, and Classrooms

The *Framework for High Performing 21st Century School Systems* and the companions—*Frameworks for High Performing 21st Century Schools (Elementary, Middle, and High School versions)* and *Frameworks for High Performing 21st Century Classrooms (Elementary, Middle, and High School Classroom versions)*—represent a major initiative to bring quality, equity, and long-term systemic change to West Virginia public schools. The *Frameworks* can be used as a guide for revising policies and a tool for improving strategic planning. They focus on wide-scale improvement by aligning the efforts of state education agencies, local school districts, principals, and teachers toward (1) common agreement on the results to be produced by high-performing schools and schools systems and (2) the structures and processes necessary for achieving those results. All of the *Frameworks* describe conclusions reached from research on the practices and processes of America's best school systems and from reviewing recommendations of national and state reports on creating high-performing schools.

All versions of the *Frameworks* are based on the **three-component model** that describes the following:

- **The importance of cohesive culture**: The foundation of any highly effective school is the quality of the culture. Generally defined as **"the way we do things around here,"** culture is the **underground stream of norms, values, beliefs, traditions, and rituals that have built up over time** as people work together, solve problems, and confront challenges. These expectations and values shape how people think, feel, and act in schools. Thus, culture is a powerful determinant of results, and the degree to which school leaders attend to this determinant will ultimately shape the school's ability to improve.
- **The practices of the 21st century schools and school systems:** The practices used to improve classroom, school, and school system effectiveness center around four broad areas (described as pillars in the *Frameworks*): (1) the quality of **curriculum,** "What we teach"; (2) the quality of **instruction,** "How we teach"; (3) the overall **effectiveness of school,** "Where we teach"; and (4) the unique characteristics and backgrounds of **the students and the support of their families,** "Who we teach." Together, these four variables (pillars) provide a clear organizational model for classroom, school, and school system improvement. The *Frameworks* use these four areas (pillars) as an organizational structure for displaying high-yield practices common among high-performing schools, school systems, and classrooms. Each *Framework* provides a very brief description of each high-yield practice (pillar).
- **The critical elements of district continuous improvement:** High-performing schools not only share common strategies for change, but also share common methods for bringing about that change. They have a basic commitment to everyone getting better all the time in order to improve results for students. They have a **defined collaborative improvement process** that is embedded into the life of the school. They set aside time to study a variety of student data, identify needs, study possible strategies, and set forth an action plan based on a cycle of "plan, do, study, act."

The *Frameworks* are valuable tools for boards of education, district superintendents, central office administrators, principals, and teachers. First, they **create a vivid mental picture** of how high-performing classrooms, schools, and school systems operate. Thus, they can be a basis for staff to analyze their organization's culture, practices, and processes and determine relative strengths and weaknesses. Second, they can set the stage for **creating powerful learning communities** through which the staff can implement strategies necessary to produce 21st century outcomes for students. Third, they can become the basis for working cooperatively with teachers, school administrators, local boards of education, and state and regional agencies to **restructure the school** and change policies and procedures that may be impeding results. Fourth, they are the **basis for a common language and a common vision** of the culture, processes, and practices of a great West Virginia school system. Finally, they can be a basis for **designing sustained, embedded professional development** at the local, regional, and state levels.

Through the *Frameworks*, the WVBE and the WVDE commit to responding to the varied needs of the 55 school systems. Differing in size, culture, and organizational capacity, no two school systems are alike. Nevertheless, all students deserve the same high-quality educational experience wherever they attend school. The concepts embedded in the *Frameworks* not only will unify the state education system's efforts and direct its actions, but also will allow West Virginia to serve its students in a way that they deserve: preparing them for success in today's global digital society.

1.3.2 Vision for 21st Century Education

West Virginia's action to join P21 established a statewide initiative, known then as 21st Century Learning in West Virginia. The intention of the collaboration with P21 is for West Virginia to

transform public education in the state, creating a more rigorous and globally competitive educational system. All West Virginia students will meet or exceed national education standards and prepare for higher learning and the world of work through the programs, services, and offerings of West Virginia's thorough, efficient, safe, and nurturing education system. Within the appropriate *Framework* (system or school level) is a concise statement regarding the vision for 21st century education at that level.

The *Framework* vision for creating a 21st century education at the school level sets forth that by 2014, the WVDE and the eight RESAs will help create systemic conditions, processes, and structures within the West Virginia public school system that result in (1) all students mastering the essential curriculum and beyond; (2) closing the achievement gap among subgroups of the student population; and (3) developing competence in 21st century content, learning skills, and tools.

The vision of the West Virginia elementary school is to ensure that all students are proficient in literacy and math; to help students develop a sense of efficacy and love of learning; to provide a rich foundation in the areas of science, social studies, the arts, health, and wellness; and to integrate 21st century content, skills, tools, and assessments into the learning environment.

The vision of the West Virginia middle school is to create an environment dedicated to academic rigor for all students, where expectations are high and support is strong; to promote students' efficacy as learners; to develop their learning skills and responsibility for achievement; to guide them through the personal issues of early adolescence; and to build the foundation for high school and postsecondary choices.

The vision of the West Virginia high school is to ensure that all students graduate with 21st century knowledge and skills; are self-directed and proactive about their education and future; are prepared for success in an appropriate postsecondary education program; and are able to responsibly live, learn, and thrive in a digital global economy. High schools are "specialists" in adolescents, seeking ways to help every student feel a sense of affiliation with the school, and developing and refining students' academic and personal talents. High schools understand that the middle-teen years are the time for exploration and preparation for careers; therefore, work-based learning, introduction to majors, and community service opportunities must be offered to assist students in making decisions about the future. High school students are guided by and directed toward a rigorous academic program that prepares them for success in postsecondary education (technical credential, two- or four-year degree) and for living and learning in a high-technology digital world.

1.3.3 21st Century Learning For West Virginia Students

The WVDE created a document called *21st Century Learning for West Virginia Students*. This internal document provided a context and rationale for 21st century learning, a definition of the key elements of 21st century learning, and an overview of a 21st century curriculum and anticipated learning proficiencies as defined in the following excerpts:

- ✓ **A System Redesign:** 21st century learning is a redesign of the educational system that affects how district offices, schools, and classrooms are structured and has at its core the mission to develop self-directed, motivated learners who can demonstrate the skills and knowledge that are foundational for the workforce of the future.
- ✓ **Focused on Rigorous World-Class Content and 21st Century Skills**: 21st century learning is built on world-class curriculum standards for both content and skills. It graduates students who have mastered core content while also cultivating an understanding of global awareness; financial, economic and business literacy; civic literacy; and personal health and wellness. It features the importance of 21st century skills, focusing on the

development of (1) Information and Communication Processing Skills (2) Thinking and Problem-Solving Skills, and (3) Personal and Workplace Productivity Skills.

- ✓ **Taught and Assessed Using Engaging, Relevant Processes:** 21st century instructional processes develop learners who have a deep understanding of and the ability to apply knowledge to authentic real-world situations. Instruction in a 21st century classroom places emphasis on student self-direction and developing the ability, confidence, and curiosity to learn. Foundational to 21st century learning is the use of 21st century technology tools and classroom assessments for learning that guide the instructional process.
- ✓ **Prepares All Students to Succeed in the Globally Competitive Society in Which They Will Live:** By focusing the educational system on 21st century learning, students will be prepared to embrace the challenges of the global society in which they will live. By developing a deep understanding of knowledge and enduring thinking and learning skills, students will be able to adapt to a rapidly changing world and assume productive roles as family members, citizens, workers, and leaders in a complex competitive digital age of the 21st century.

The West Virginia curriculum for 21st century learning is delivered through both schoolwide and classroom experiences appropriate to learner needs and characteristics at each programmatic level. These experiences focus on world-class rigorous standards taught and assessed through authentic and contextual processes. Instruction is relevant to learners' lives and is designed to develop a deep understanding of and the ability to apply core concepts and skills to real-world situations. The learner's pre-kindergarten (pre-K) through 12 curricula should result in proficiency in three broad areas:

1. **21st Century Skills and Technology Tools:** 21st century skills are categorized in three areas that integrate the use of technology with the development of specific skills. The areas are (1) Information and Communication Processing Skills (information and media literacy; visual literacy; and oral, written, and multimedia communication skills); (2) Thinking and Problem-Solving Skills (critical thinking, systems thinking, problem solving, and creating and innovating); and (3) Personal and Workplace Productivity Skills (interpersonal and collaboration skills, self direction, adaptability, ethical behavior, social/personal accountability, leadership and project planning and development).
2. **Core Subjects:** The core curriculum for the 21st century is expanded beyond the traditional basics to include the following subjects as essential for all students: reading and English/language arts, mathematics, science, foreign languages, civics and government, economics, history, geography, and the arts. At each programmatic level, specific requirements related to these core subjects are defined in policy. Across the curriculum sequence, there must be an overall emphasis on increased rigor and higher standards for student performance.
3. **21st Century Interdisciplinary Content:** Within the curriculum sequence, 21st century curriculum content themes permeate the life of the school in both classroom and schoolwide activities. These themes are global awareness; financial, economic, and business literacy; civic literacy; and personal health and wellness. These themes are developed at each programmatic level based on the characteristics and needs of the learners; experiences around each theme should result in learners who have the knowledge, skills, and dispositions to be personally responsible and act as informed citizens of their school and community. The specifics of how each area is integrated into the life of the school are determined through a collaborative staff planning process that results in a consistent and pervasive focus on 21st century content.

1.3.4 21st Century Teacher

The *Framework* documents describe the expectations for 21st century teachers, who must expect changes in their roles and responsibilities. For decades, teachers have played a largely autonomous role, being almost totally responsible for making decisions affecting the classroom. However, as Dr. Lawrence Lezotte, noted researcher in the area of effective schools, explains, "Today's school systems are highly complex interrelated organizations in which high levels of collaboration and cooperation are necessary to produce success for all." Teachers need to see themselves as part of a broader school team dedicated to shaping a cohesive schoolwide culture characterized by consistent and pervasive core beliefs and practices, and creating a schoolwide learning community that collaborates, utilizes technology tools, analyzes data, problem solves, and plans strategically to improve schoolwide conditions that lead to student success. Teachers of the 21st century are the master facilitators of learning: They help and guide students through well-constructed instructional strategies that build meaning and understanding. Teachers must see the design of the instructional process differently in the 21st century classroom, where mastery of content, proficiency with 21st century learning skills, relevance to real-world situations, and use of 21st century technology tools become the critical components of good instructional design. Teachers also must understand student assessment processes differently by understanding the importance of a balanced assessment system. In a bell-curve environment, assessments are used primarily to grade students. In a 21st century environment, students are asked to perform authentic assessments that truly demonstrate proficiency and enable teachers to redirect and reconstruct the instructional process. Finally, teachers need to make a personal commitment to grow professionally, all the time learning what will bring greater success to the students they serve. Becoming proficient in the instruction of 21st century content, learning skills, technology tools, and assessments is part of a natural and ongoing progression in professional growth.

1.3.5 21st Century Partnership Application

In the fall of 2005, West Virginia's application for inclusion in The Partnership for 21st Century Skills was submitted and approved. The application described West Virginia's approach to the comprehensive, systemwide change to ensure that students are equipped with the knowledge and skills to be successful citizens in the 21st century. The application includes the names of the initial members of the State Superintendent's Advisory Council for the West Virginia Frameworks for 21st Century Learners.

Also included is the WVDE's professional development plan for implementing the Frameworks. To expand teacher capacity across West Virginia and to assure that students acquire 21st century skills, both the current teacher workforce and the teachers of the future must be provided appropriate professional development. Toward this end, WVBE Policy 5100 (Approval of Educator Preparation Programs) was recently revised to include language that reflects the addition of 21st century learning skills as an expectation within the conceptual framework of teaching and learning in West Virginia. The objectives for professional development include

- ✓ designing and implementing online professional development that provides an orientation for all West Virginia educators to define and provide specific examples of the five content and skills areas that represent the essential knowledge for the 21st century
- ✓ ensuring that all new and ongoing professional development sponsored by the WVDE, the West Virginia Center for Professional Development (WVCPD), and the RESAs incorporates 21st century skills and reflects relevant examples for each content area taught in the public schools

- ✓ having each teacher complete a 21st century skills technology literacy self-assessment to provide information that will form the basis of a technology literacy professional development plan to be used as part or all of a teacher's annual professional development
- ✓ embedding 21st century skills in all core subjects and teacher preparation programs in higher education

The application describes how West Virginia would review its educational standards, increase their rigor, and include key dimensions of 21st century learning: global awareness; civic engagement; financial, economic, and business literacy; learning skills that encompass problem solving, critical thinking, and self-directional skills; and information and communication technology literacy. The WVDE set forth a plan to identify in core subject areas those 21st century learning skills required for students to be successful, audit current academic content standards for the inclusion of 21st century learning skills, and revise current content standards to include 21st century learning skills by 2007.

A fourth major component of West Virginia's plan is the development of a comprehensive and balanced assessment system. The application describes how the WVDE released a RFP to transform the West Virginia Measures of Academic Progress, the statewide assessment program, into 21st century assessments that measure and are aligned to learning skills, which are embedded in the revised content standards by grade level. The objectives of this new assessment program are to create valid and reliable assessments that (1) are aligned to the 21st century skill descriptors and state CSOs; (2) inform instruction; (3) promote school improvement; and (4) produce results that can be used to calculate school, district, and state accountability as outlined by the NCLB Act.

Finally, the application described how West Virginia would approach the P21 Leadership State Expectation of being *communicators of proof of concept*. West Virginia's methods and systems to capture and measure success of the state's initiatives focused on the development of rubrics to measure implementation progress and outcomes of the 39 critical elements of the initiative, systematically embedding evaluation mechanisms into pre-existing information systems, and, ultimately, summative evaluation approaches to assess the success of the initiative. These 39 critical elements target areas of the education system (e.g., professional development, assessment) that must be addressed, altered, or improved to achieve the vision of the Global21 Initiative.

The graphic of West Virginia's collaborative model for developing 21st century learners, which was included in the application, is reproduced on the next page.

West Virginia Department of Education
Collaborative Model for Developing 21st Century Learners
Based on the WV Framework for High Performing School Systems

21st Century Learners

Students able to responsibly live, learn and thrive in a digital global society

- ✓ Proficient in basic skills including 21st century content in global awareness and financial, economic, civic and business literacy
- ✓ Ability to Use 21st Century Thinking Skills and Technology Tools
- ✓ Personal Accountability for Healthy Living, Learning and Responsible Behavior

21st CENTURY CREDENTIAL

Award the Governor's Diploma with scholarship incentives based on high levels of performance on 21st century assessments.

WV CLASSROOMS

Based on the *Framework for High Performing Classrooms*, create classrooms where students are highly engaged in rigorous curriculum through the use of high yield instructional practices that develop the knowledge, skills and attitudes of proficient 21st Century Learners.

21st CENTURY COMPONENTS

-Use up-to-date technology tools to enrich curriculum.
-Develop units and lessons that focus on deep understanding of concepts, ideas and patterns.
-Use instructional strategies that enhance student ability to critically think and problem solve.
-Connect 21st century content to relevant student experiences.
-Use standards-based performance assessments to measure proficiency in ability to apply technology and critical thinking skills.
-Instill a spirit of inquiry, student self-direction and personal responsibility for learning.

WV ELEMENTARY SCHOOLS

Based on the *Framework for High Performing Elementary Schools*, create elementary schools that insure literacy and numeracy for all, develop in students a sense of efficacy and love of learning and introduce students to 21st century content, skills and tools.

WV MIDDLE SCHOOLS

Based on the *Framework for High Performing Middle Schools*, create middle schools that effectively transition students from elementary to high school, continue a strong emphasis on core content, assure proficiency in basic technology and expand student knowledge and abilities in 21st century content, skills and tools.

WV HIGH SCHOOLS

Based on the *Framework for High Performing High Schools*, create high schools that effectively prepare all students for post-secondary education or skilled career opportunities, assure a rigorous and relevant curriculum taught with 21st century content, skills and tools, and culminate with a 21st Century credential.

21st **CENTURY COMPONENTS**

-Create positive context for 21st century learning through teacher support, collaborative planning and disbursed leadership.
-Use effective strategic planning, including technology planning, to implement the Frameworks.
-Enrich curriculum through WVLearns e-learning platform and WV Virtual School.
-Use scheduling and staffing patterns that assure student access to 21st century content.
-Create support systems that encourage all students to be 21st Century credentialed.
-Monitor curriculum, instruction and assessment to assure alignment with 21st century learning.

WEST VIRGINIA SCHOOL DISTRICTS

Based on the *Framework for High Performing School Systems*, create the organizational culture, develop the improvement processes and implement the research-based practices that create conditions for improvement in schools and classrooms and that focus on developing 21st Century Learners.

21st CENTURY COMPONENTS

- Create local stakeholder commitment to graduate 21st Century Learners.
-Use strategic planning, including technology planning to implement the Frameworks and integrate 21st century content, tools and skills.
-Implement comprehensive professional development programs.
-Build local business partnerships to support 21st century tools and skills.
-Develop policies/procedures and allocate resources to support 21st century learners.
-Promote 21st century credentialing.

THE GOVERNOR, THE WV BOARD OF EDUCATION, THE WV LEGISLATURE, THE BUSINESS COMMUNITY AND EDUCATIONAL LEADERSHIP GROUPS

By committing to a common direction, the Governor, the WV Board of Education and the WV Legislature in cooperation with the business community and educational leadership groups can enhance West Virginia economic development and improve the level of educational quality through strong focused leadership, long-term planning and targeted resource allocation dedicated to the development of 21st century learners.

21st CENTURY COMPONENTS

-Promote 21st century skills Pre K-20 as a vehicle for economic development.
-Collaboratively implement a five-year plan that includes support initiatives and policy modifications.
-Improve and expand WV's technology infrastructure and supports system.
-Provide content-specific technology tools to teachers.
-Allocate resources for extensive professional development.
-Revise WVDE curriculum and assessment protocols to include content in global awareness, financial, economic, civic and business literacy with performance measures for 21st century skills and technological proficiency.

1.4 Legislation/Policies

In addition to publicizing the initiative and getting all stakeholders on board, state leaders must shape policies that support the initiative and provide the funding to carry out those policies. This formidable task requires the WVDE to develop overarching policies that support the initiative and requires policymakers to enact laws, policies, and programs that align with the goal of preparing all students for the 21st century.

1.4.1 Legislation

The following are examples of the legislation passed by the West Virginia State Legislature to support the transformation of the state school system as called for in the initiative. §18-5-44.

- ✓ Senate Bill 595 (WV Code §18B-14-9 among others), passed and effective March 8, 2008, outlined "Vision 2020: An Education Blueprint for 2020," which required the State Board of Education to establish a plan with specific goals, policy-oriented objectives, and performance-oriented objectives for public education, consistent with the state's 21st century initiative; and created the Process for Improving Education Council, which would consult with, and make recommendations to, the State Board on issues related to Vision 2020. This bill also established state goals for higher education; outlined elements of accountability for public higher education; and specified postsecondary priorities related to economic and workforce development, education access and affordability, student preparation, degree completion, college recruitment and retention of working-age adults, emphasis on STEM (science, technology, engineering, and mathematics) courses and programs, institutional research capacity, and the functional literacy of adults.
- ✓ Senate Bill 603 (WV Code §18-2E-7), passed March 10, 2007, effective July 1, 2007, provided for 21st century instruction and learning in all public schools. The bill established a 21st Century Tools for 21st Century Schools Technology Initiative. As part of this initiative, the WVDE would develop a West Virginia 21st Century Strategic Technology Learning Plan, and funds would be allocated to school systems to provide equitable access to technology services for students in Grades preK-12.
- ✓ Senate Bill 657 (WV Code §18-2E-5), passed March 10, 2007, effective July 1, 2007, required the revision of education standards, assessments of student performance, and the system for holding schools and school districts accountable for student performance. These revisions would align with the language and intent of the state's 21st century initiative.
- ✓ House Bill 2585 (WV Code §18A-3-11), passed March 10, 2007, effective July 1, 2007, provided for the designation of up to 25 professional educators as 21st Century Learner Fellows, to be employed by a state institution of higher education or a research corporation without losing the benefits received as professional educators.
- ✓ House Bill 4588 (WV Code §18-9A-10), passed March 8, 2008, effective July 1, 2008, relates to the fiscal support of public schools, including a provision for the funding formula for the foundation allowance to improve instructional programs (see the subsection Resources to Support the Initiatives in the Management and Organization section of this chronology). Specific components of the provision govern the allocation of funds for the purposes of and to meet the objectives set forth by the West Virginia 21st Century Strategic Technology Learning Plan (see WV Code §18-2E-7).
- ✓ House Bill 4436, passed March 11, 2010, to be effective June 2010, allows schools that make adequate yearly progress (AYP) to select 1) assessments and 2) instructional strategies and programs that promote student learning, with the exceptions of

WESTEST 2, the Alternative Performance Task Assessment (APTA), the Online Writing Assessment, and the National Assessment of Educational Progress (NAEP). These tests are required as per state code or federal law. The school may not be required, by any state or county policy, to employ any other assessments or specific instructional strategy or program to achieve the standards and objectives for courses required by the state board, except upon approval by the school curriculum team with the concurrence of the faculty senate. Also, the failure to use any specific assessment, instructional strategy, or program may not be cited as a deficiency in any accreditation review of the school.

1.4.2 Executive Orders

In September 2006, then-Governor Manchin created the 21st Century Jobs Cabinet to promote a seamless P-20 education system that encompasses job training and lifelong learning and supports economic development in the state. The Cabinet composed of 25 members, included educators, business leaders, and state legislators, and was co-chaired by then-Governor Manchin's wife and the CEO (a West Virginia native) of the international law firm, Orrick, Herrington, and Sutcliffe, LLP. The members of the 21st Century Jobs Cabinet met with schools and businesses to ensure that students were prepared for the 21st century workforce.

"West Virginia Competes: A Global Vision for the 21st Century" brought together members of the 21st Century Jobs Cabinet, other educators, business leaders, and state officials, to establish a common mission for educational, workforce, and economic development. This forum generated guiding principles for creating a seamless system of education in West Virginia—one that encompasses educational, workforce, and economic development strategies—and developed an action plan for curriculum transformation, communications about educational achievement and college access, teacher excellence, strategic partnerships among stakeholders, and leadership.

During his 2007 State of the State Address, then-Governor Manchin introduced a three-year program to strengthen the relationship between the state's business and education communities. The Jobs Cabinet and the Education Alliance were involved with the Student Educational and Economic Development Success program (SEEDS), which partnered a seasoned business mentor and master educator with a school principal, who had applied to be part of the program.

1.4.3 West Virginia Board of Education Policies

In 2007, the WVBE developed a Strategic Plan to operationalize its policies in support of the Global21 Initiative. The plan is based on five strategic goals and includes performance criteria for measuring progress toward each goal, objectives for addressing the goals, and an overview of activities to accomplish each objective (WVDE, 2007). The five goals state that all students shall

1. master or exceed grade-level educational standards that reflect 21st century skills and learning
2. receive a seamless preK-20 curriculum designed and delivered with broad stakeholder involvement to promote lifelong learning in a global society
3. develop and promote responsibility, citizenship, strong character, and healthful living
4. be educated in school systems that operate and deliver services efficiently and effectively
5. be educated by highly qualified personnel

These established WVBE goals serve as the foundational structure for the development of WVDE and divisional work plans as identified and described in the Alignment of Multiple Planning Documents section of this chronology.

The Board of Education has revised Policy 2510 and its related subpolicies (listed below), which describe the state's educational standards, to allow school districts more flexibility in implementing the Global21 Initiative. It has also revised many of the CSOs to align with the language and intent of the initiative. These policies to increase rigor of the CSOs were effective July 1, 2008, even though much of the work was already accomplished to increase rigor and align standards with 21st century content and skills development prior to the effective date

- ✓ Policy 2510: Assuring the Quality of Education: Regulations for Education Programs
- ✓ Policy 2520.1: 21st Century Reading and English Language Arts CSOs
- ✓ Policy 2520.2: 21st Century Mathematics CSOs
- ✓ Policy 2520.3: 21st Century Science K-8 CSOs
- ✓ Policy 2520.35: 21st Century Science 9-12 CSOs
- ✓ Policy 2520.4: 21st Century Social Studies CSOs
- ✓ Policy 2520.5: 21st Century Health Education 5-12 CSOs
- ✓ Policy 2520.55: 21st Century Wellness PreK-4 CSOs
- ✓ Policy 2520.6: 21st Century Physical Education 5-12 CSOs
- ✓ Policy 2520.7: 21st Century Foreign Language CSOs
- ✓ Policy 2520.8: 21st Century Driver Education CSOs
- ✓ Policy 2520.9: 21st Century Dance CSOs
- ✓ Policy 2520.10: 21st Century Music CSOs
- ✓ Policy 2520.11: 21st Century Theatre CSOs
- ✓ Policy 2520.12: 21st Century Visual Arts CSOs
- ✓ Policy 2520.14: 21st Century Learning Skills and Technology Tools CSOs
- ✓ Policy 2520.18: 21st Century American Sign Language CSOs

In May 2010, the WVBE adopted the Common Core State Standards (CCSS) for English Language Arts and Mathematics. Shortly thereafter, the Office of Instruction assembled a team of stakeholders consisting of representatives of other offices within WVDE and the West Virginia Higher Education Policy Commission (HEPC), as well as classroom teachers of English language arts and mathematics from across the state to (1) study the CCSS for English Language Arts and Mathematics and (2) place these standards into the West Virginia Framework. The team of stakeholders authored performance descriptors that align directly with the CCSS Anchor College and Career Readiness Standards in English Language Arts and the Mathematical Practices in Mathematics. These Standards are referred to as the Next Generation CSOs for English Language Arts and Mathematics in West Virginia Schools.

Policy 2520.1A: Next Generation CSOs for English Language Arts and Policy 2520.2B: Next Generation CSOs for Mathematics will become effective August 15, 2011 for kindergarten; July 1, 2012 for first grade; July 1, 2013 for second grade; and July 1, 2014 for third through twelfth grades.

Other policies have also been adopted by the WVBE that support the Global21 Initiative, including the following:

Policy 2320: A Process for Improving Education: Performance Based Accreditation System (Effective December 17, 2008)

Policy 2320 puts forth six education goals for the state of West Virginia:

1. All children entering the first grade will be ready for the first grade.
2. All students will have equal education opportunity.

3. Student performance on national measures of student performance will equal or exceed national averages, and the performance of students falling in the lowest quartile will improve by 50 percent.
4. Ninety percent of ninth graders will graduate from high school.
5. High school graduates will be fully prepared for college, other postsecondary education, or gainful employment. The number of high school graduates entering postsecondary education will increase by 50 percent.
6. All working-age adults will be functionally literate.

For state law relevant to this policy, see WV Codes §18-1-4 and §18-2E-5. Policy 2320 also includes detail about state policy on the distribution of responsibility, measures for determining adequate yearly progress for West Virginia public schools, annual performance measures for accountability, state annual performance measures for school accreditation status and school system approval status, high-quality standards, indicators of efficiency, the electronic district and school strategic improvement plan process, school accreditation status, exemplary accreditation status, low-performing accreditation status, school system approval, nonapproval status, the appeals procedure, on-site reviews, capacity building, and identification of resource needs.

Policy 2450: Distance Learning and the West Virginia Virtual School (Effective September 11, 2002)

The scope of Policy 2450 establishes requirements for distance, online, and technology-delivered learning programs—including student needs, course content, teacher/facilitator guidelines, virtual classes, funding, and management at the state, district, and school levels. The policy provides a framework for delivering the range of courses and opportunities for students, expanding the range of courses and opportunities for students, filling the need for qualified teachers, providing low-incidence courses where enrollment numbers do not justify assigning a teacher or when scheduling conflicts prevent students from taking a course when it is offered, and providing options for credit recovery. For relevant state law, see WV Code §18-2E-9.

Policy 2419: Regulations for the Education of Students with Exceptionalities (Effective September 11, 2007)

The scope of Policy 2419 covers policies and procedures that apply to preschool, early childhood, middle childhood, adolescent, and adult students whose educational programs require special education and related services. These apply to pre-K 3-year-olds, as of their third birth date, through 5-year-olds with disabilities; students with disabilities aged 5 through 21; all exceptional gifted students in Grades 9 through 12; and all gifted students in Grades 1 through 8 as specified. Rights under these regulations cease to apply at the end of the school year in which the student turns 21 years of age (prior to September 1) or when the student has met graduation requirements for a standard high school diploma. The policy defines the Response to Invention model and documentation of each student's response to intervention (RTI). For relevant state law, see WV Code §18-20-1 et seq.

Policy 2525: West Virginia's Universal Access to a Quality Early Education System (Effective August 13, 2007)

The scope of Policy 2525, a procedural rule, establishes the criteria for approving and operating programs for 3- and 4-year-old children in West Virginia's universal pre-K initiative (for relevant state law, see WV Code §18-5-44).

Policy 2340: West Virginia Measures of Academic Progress (Effective October 13, 2009)

Policy 2340 establishes policies and procedures regulating the administration and operation of the West Virginia Measures of Academic Progress (WV-MAP). The policy's primary purpose is to provide an operational framework to allow the statewide WV-MAP assessment program to operate effectively and efficiently, providing, also, for procedures to protect the integrity of the assessment data. Further, Policy 2340 outlines procedures to support the use of WV-MAP assessment data to improve instruction. For relevant state law, see WV Code §18-2E-1a, §18-2E-2, §18-2E-5, and §18-2E-8(c)(1).

Policy 2200: Parent, Family, and Community Involvement in Education (Effective July 1, 2008)

Policy 2200 outlines rules and policies for the development of local policies pertaining to parent, family, and community involvement in West Virginia schools. The primary purpose of the policy is to provide guidance and guidelines for strengthening parent, family, and community involvement in education in each of West Virginia's 55 counties. The WVBE believes that such partnerships at every level of education (from elementary through secondary) are fundamental to the development and sustenance of a healthy educational system. The underlying philosophy of the policy holds that parents, teachers, and community members can reinforce and build on each other's efforts to promote high student achievement at school, at home, and in the community. Policy 2200 explicitly states that district policies will encourage cooperative efforts between families, communities, and schools to promote 21st century learning (§126-11A-3.1.1). For relevant state law, see WV Code §18-2E-5.

Policy 3233: Establishment and Operation of Regional Education Service Agencies (Effective May 2007)

The revised Policy 3233 amends West Virginia 126CSR72, Establishment and Operation of Regional Education Service Agencies, Policy 3233, filed February 13, 2004, and effective March 15, 2004. This policy focuses on the following RESA services and responsibilities: establishment; governance and administration; finances; strategic plan; standards for service delivery, accountability, and reporting; and severability.

The strategic plan goals of the this policy include providing technical assistance to low-performing schools; providing high quality, targeted staff development; facilitating coordination and cooperation among district boards; and installing, maintaining, and/or repairing education-related technology equipment and software, with special attention to the state-level basic skills and Student Utilization of Computers in Curriculum for the Enhancement of Scholastic Skills (SUCCESS) program.

Policy 5100: Approval of Educational Personnel Preparation Programs (Effective January 14, 2008)

Policy 5100 establishes the processes and procedures required for institutions of higher education to receive approval from the WVBE to operate educational personnel preparation programs. The legislative rule outlines the requisite framework for developing, implementing, and approving such preparation programs. Policy 5100 defines, identifies, and prescribes major program components, assessment instruments and procedures, minimum proficiency levels, and program approval criteria. The Conceptual Foundation for Teaching and Learning in West Virginia, which is Appendix A-1 in the Policy 5100 document, specifically outlines the centrality of 21st century content, knowledge, skills, and tools in providing comprehensive, high-quality education for West Virginia's children. In its recent revision, Policy 5100 was amended to require all teacher and administrator

preparation programs to include at least three semester hours of coursework directly related to instructional technology. This course must be designed to address all respective International Society for Technology in Education (ISTE) National Educational Technology Standards for Teachers (NETS*T) and National Educational Technology Standards for Administrators (NETS*A). In addition, all preparation programs must address the ISTE standards throughout the program. In the fall of 2008, The West Virginia Commission for Professional Teaching Standards presented to the WVBE a revised set of standards pertinent to this policy and the preparation of West Virginia's future teachers. For relevant state law, see WV Code §§ 18-2E-5, 18A-3-1, and 18A-3-1a.

Policy 5202: Minimum Requirements for the Licensure of Professional/Paraprofessional Personnel and Advanced Salary Classifications (Effective January 14, 2008)

Policy 5202 was revised to include an additional category of licensure: The Advanced Credential. The intent of this category of licensure is to reward and recognize educators who complete coursework and professional development beyond the requirements for the Professional Certificate. Categories of credentials include Mentor Teacher, Advanced Placement Teacher, Technology Integration Specialist, and Educator 21. The Advanced Credential endorsed as Educator 21 is designed to recognize educators who completed professional development or coursework with an emphasis on moving beyond basic competency in core subjects to promoting an understanding of academic content at higher levels by integrating 21st century interdisciplinary themes into core subjects. The Technology Integration Specialist Advanced Credential is awarded upon completion of the WVDE-approved program designed to prepare educators to serve as classroom-based instructional support for teachers as they integrate educational technologies into their instruction. In addition, Policy 5202 now requires three semester hours of instructional technology coursework to renew a professional certificate. This coursework must address the ISTE standards.

Policy 6200: Handbook on Planning School Facilities (Effective September 2008)

Policy 6200 was revised at the August 2008 meeting of the WVBE. A committee was formed in January 2008 with superintendents, architects, engineers, regulatory officials, state board of education members, the WVDE director of school facilities, the assistant superintendent in charge of the Division of Support Services, and a representative from the RESAs. Over the course of five meetings, with subgroups working independently between meetings, the committee developed recommendations for how the state needs to design future school facilities to meet energy efficiency and green standards and to accommodate a curriculum for the 21st century. The revised policy pays close attention to the building design requirements that will facilitate project-based learning and technology integration.

1.5 Leadership Development

Implementation of West Virginia's Global 21 initiative requires a different kind of leader at the school and district levels. A Leadership Collaborative made up of representatives from higher education, public education, and appropriate policymakers has framed new aligned 21st century standards for teacher leaders, principals, and superintendents. These standards will be the basis for major changes in code and policy governing higher education preparation programs, succession planning, licensure, induction, professional development, and evaluation of leaders. A master plan to implement code and policy changes is being drafted by the Collaborative under the direction of Dr. Joe Murphy, Vanderbilt University, and staff of the WVDE.

2. Data Analysis, Planning, and Process

The WVDE is committed to making decisions based on effective, collaborative analysis of available data. To that end, the WVDE has consistently convened stakeholder groups to identify concerns, provide guidance and recommendations, and address areas of need. Such stakeholder analyses of data have reviewed studies and reports on student performance by subgroups, professional development, accountability and accreditation, high-need students, high school preparation, and technology.

2.1 Structure for Data Analysis and Closing the Achievement Gap Report

The 2009-2010 *Closing the Achievement Gap Report for 21st Century Learners in West Virginia*, 3rd edition, was designed (1) to establish a structure of comprehensive data analysis and (2) update West Virginia educators on the status and improvement of student achievement in West Virginia as a basis for determining future educational decisions. To enhance the quality of performance, the following areas focused around the (1) review of the literature and research factors that impact student performance, (2) determination of the status and progress of subgroup performance, (3) review of programs and strategies being used to close the achievement gap between subgroups in West Virginia public schools, (4) generation of findings and conclusions related to student performance, and (5) recommendations for consideration as a result of the findings identified. The report is organized into seven areas:

1. Background provides a historical account of the call for accountability from West Virginia to the federal level. It introduces past and current federal and state legislation that drive the initiatives of student achievement and school improvement. This section reviews WVBE policy, goals, and legislation addressing student performance and discusses the emerging organizational structures that address 21st century learners.
2. Introduction addresses the challenges of closing the achievement gap in student performance at different operational levels. This section defines the accountability structures established by the WVBE through policy and initiatives, the West Virginia Legislature through code, the WVDE through the design of the *Framework for High Performing School Systems,* and the plan for implementing 21st century skills.
3. Identified Achievement Gap Groupings and Performance Factors Impacting the Achievement Gap reviews the current literature associated with factors that contribute to poor student achievement and/or the achievement gap. This section identifies the subgroups within West Virginia, their performance on state and national assessments, their associated achievement gaps, performance factors such as school attendance and graduation rates, and other factors affecting performance that need to be improved by the collaborative efforts of West Virginia educators and state leaders through the P21.
4. State Public School Subgroup Impact Data (Assessment and Additional) provides longitudinal assessment data by subgroup for national and state assessments, including WESTEST 2, NAEP, ACT, ACT PLAN, ACT EXPLORE, SAT, Career and Technical Education (CTE) ACT WorkKeys, CTE End-of-Course Exams, and High Schools That Work (HSTW) assessments, as well as summaries and findings. Additional data also provided by subgroup include Advanced Placement, Attendance Rate, Dropout Rate, Graduation Rate, College Going Rate, Retention Rate, healthy literacy data, and CTE Placement in Employment or Postsecondary Education.

5. Closing the Achievement Gap Initiatives in West Virginia describes each program and/or strategy that the WVBE and the WVDE have developed and implemented to improve student achievement and to close the performance gap for all students. A comprehensive listing of systematic, systemic initiatives to promote 21st century instruction, learning, and assessment is followed by a summary of specific programmatic initiatives to address closing the achievement gaps of identified subgroups. Numerous structural initiatives and processes to restructure public education in West Virginia are presented within the framework of before-school, during-school, and after-school programs.
6. Conclusions from the data have been embedded in the Identified Achievement Gap Groupings section. The conclusions drawn are based on State and National Public School Subgroup Impact Assessment Data, Additional Impact Data, and the Closing the Achievement Gap Initiatives.
7. Recommendations are based on the conclusions drawn in this report from each area in which trend data have been collected, as well as for the Closing the Achievement Gap Initiatives.

This 3rd edition maintains the use of original artwork by West Virginia students to enhance divider pages within the document. This student artwork reminds all educational stakeholders of the importance of integrating cognitive, physical, and emotional/artistic intelligences into all students' educational experiences. The report provides (i) revised booklet covers, (ii) updated assessment descriptions, (iii) updated impact assessment data and findings, and (iv) revised WVDE initiatives/program information.

This report presents a comprehensive collection of assessment data for analysis and other valuable indicators that can be used to analyze and monitor West Virginia's progress. Additionally, the use of this report will assist local school district leadership in prioritizing achievement indicators and organizing decision making with regard to student achievement. With the July 2008 online publication of the Closing the Achievement Gap report, it was determined that sections of the report would be updated in alternate years. For example, impact assessment data from the WESTEST 2 and other state and national assessments would be updated in 2009, and other sections of the report would be updated for public release in 2010.

2.2 Professional Development Stakeholders Report

In November 2006, the *West Virginia Professional Development Stakeholder Group Report* was presented to the WVBE. The report included a number of recommendations to guide the development of a comprehensive professional development program that would further the goals of the Global21 Initiative. The following recommendations were made:

- ✓ Develop a comprehensive, results-oriented vision, goal, and plan for the state's professional development system.
- ✓ Ensure collaboration among the state's primary professional development providers—the WVDE, WVCPD, institutions of higher education (IHEs), RESAs, and local education agencies (LEAs). Such collaboration might be reflected in "content academies" that would be collaboratively designed to instruct state leaders in methods to teach West Virginia's new curriculum (revised CSOs, technology skills, and learning skills) necessary for the 21st century learner. This design could also include subject-based networks for teachers to convene as learning communities as follow-up to the content academies.

- ✓ Adopt professional development standards as the foundation of the West Virginia professional development system.
- ✓ Adopt a standards-based approach to the development, licensure, and re-licensure of educators, including standards for school leaders that promote a vision of district and school administrators as educational leaders.
- ✓ Ensure that educators are prepared to effectively use student data and assessment for learning strategies to determine professional development priorities.
- ✓ Recommend revisions to the existing funding formula and school calendar to reduce the barriers of time and resources for professional development.
- ✓ Make teacher competence in cultural understanding and teaching diverse learners a priority for professional development.

The report explicated the WVBE's responsibility to ensure that the state's educators are well prepared to teach today's rigorous academic content in a 21st century context, and to teach the technology skills and learning skills that are part of West Virginia's curriculum. Without a coordinated statewide system of professional development, the WVBE would be hampered in achieving its constitutional obligation of providing this thorough and efficient education. The WVBE is committed to establishing a comprehensive statewide system of professional development for its educators so that West Virginia's students leave the public schools ready to enter the world awaiting them.

2.3 Office of Education Performance Audits Report

The Office of Education Performance Audits (OEPA) assists the WVBE, the legislature, the governor, and the Process for Improving Education Council in establishing and maintaining a system of education performance audits that measures the quality of education and the preparation of students, based on standards and measures of student, school, and school system performance and progress and the processes necessary in providing a thorough and efficient system of education in West Virginia. In October 2006, a report titled *Report on the Recommendations of the Education Performance Audit Study Committee* was issued. The report described the recommendations from each subcommittee involved in the study: (1) Annual Performance Measures, (2) High-Quality Standards, (3) Accreditation of Schools and Approval of Counties, and (4) Education Performance Audit Processes and Procedures. The major recommendations in the report are as follows:

1. Retain all components of the NCLB Act AYP requirements, with the exception of (a) moving the 10th-grade assessment to the 11th grade, and (b) developing a modified assessment on modified standards.
2. Include revised high-quality standards in the following six areas to be used as a self-assessment by schools and districts to replace OEPA checklist and be measured through an online rubric:
    a. Implement a rigorous standards-based 21st century curriculum for all students that is aligned with content standards.
    b. Use 21st century instructional processes that are research based, learner focused, relevant to students, and engage learners in quality meaningful work.
    c. Develop a strong learning-centered cohesive culture built on a set of core beliefs and characterized by the correlates of effective schools.
    d. Meet the academic, physical, and social/emotional needs of all students and develop positive relationships with families and the community.
    e. Utilize principles of continuous improvement and effective strategic planning to meet the needs of all learners.

f. Implement management practices that assure an efficient and effective operation conducive to 21st century learning.

3. Develop a new accreditation and school recognition system that incorporates 21st century expectations and includes an index of assessment measures and other indicators. The NCLB Act requirements would remain, but would not be central in the accreditation of schools.
4. Design an on-site review process that is triggered by performance data that can verify strengths and deficiencies and is based on the six components of high-quality standards.

2.3.1 Creation of County Index System for Determining School Accreditation

As a result of the 2006 recommendations listed above, the OEPA and a group of stakeholders collaborated to create an indexing system to be used for school accreditation in the state of West Virginia. This system takes advantage of more than 20 indicators of school performance to determine a rating for each school, which is then used in conjunction with the federally mandated AYP program. The indicators used by the index include school scores on various required state tests, attendance rate, percentage of highly qualified teachers, availability of Advanced Placement courses, graduation rate, and more. After a score has been determined for each school, the schools are placed in groups by programmatic level—primary, middle, and secondary. Each of these groups is then ordered from highest to lowest by score, and the score range is broken into quartiles. The quartiles are used to determine school performance for that year. For more information, see WVBE Policy 2320.

2.4 Task Force to Improve Results for Students in High-Need Populations Report

During the summer of 2006, the Division of Curriculum and Instructional Services led a cross-office effort to investigate the issues surrounding the achievement gap among subgroups and between subgroups and all students. The Task Force to Improve Results for Students in High-Need Populations focused its inquiry and subsequent recommendations on students who are economically disadvantaged, students with disabilities, and students in minority populations. In mid-August 2006, the recommendations and strategic plan of the Task Force were presented to the Task Force at large. The *Improving Results for Students in High Need Populations: A Strategic Plan*, which addresses these achievement gaps through 16 priority recommendations that emerged from five action work groups, centered the discussion for groups across the state to gain feedback on effective implementation. Each of the 16 recommendations is reviewed on a semiannual basis to determine progress toward the goals inherent in the recommendations.

Bringing each goal to completion so that improved results for these populations can be ensured is a multiyear effort across the WVDE, RESAs, local school districts, and community organizations. The collective goal is to establish a structure through which the WVDE can further the evolving work and establish the foundation for new efforts. As a result, the Strategic Plan will remain a dynamic and flexible document that accommodates insights and new research as the work continues.

2.5 High School Task Force Report

The High Schools for West Virginia's Future Task Force was convened in February 2005 under the leadership of then-State Superintendent of Schools David Stewart. The purposes of the task force were to review the status of West Virginia high schools in the context of the available performance data and research-based practices; make recommendations to the State Board of Education in reference to policies, statutes, and practices that will result in ALL students achieving success in

high school and postsecondary pursuits; and propose a plan of action that will put the agreed-upon recommendations into practice at the high school level. The Task Force released its report, titled *A Vision for Student Success: High Schools for West Virginia's Future*, in August 2005. The Task Force's vision is clear: all West Virginia high school students will graduate with the knowledge and skills needed for success in postsecondary education, the workplace, and life. The Task Force made five sets of recommendations, organized according to the National Governors Association's *Action Agenda for Improving America's High Schools.* Included were suggested action steps and strategies for each recommendation. Below are the recommended action steps organized by the *Action Agenda.*

- ✓ Increase the value of the high school diploma.
  - Assure curricula are aligned to provide relevance and rigor for students' postsecondary and career success.
  - Make the senior year more challenging and meaningful for all students.
  - Provide college and work readiness credentials for all students.
- ✓ Redesign the high school experience to reflect rigor and relevance for all students.
  - Increase learning opportunities for all students.
  - Engage students in relevant and rigorous curricula and instruction.
  - Provide guidance and advisement activities to assist all students in making informed decisions.
  - Improve student transitions from middle grades to high school.
- ✓ Support student success with excellent teachers and principals.
  - Provide teachers and principals with instructional resources, time, and ongoing professional development for implementing new curricula and research-based instructional methods.
  - Recruit, employ, and retain effective teachers and principals.
- ✓ Set meaningful benchmarks and hold high schools accountable for student success.
  - Create a state accountability system that expects high-performing high schools for all students.
  - Build an integrated data system across K-12, postsecondary, and employment security.
  - Provide targeted and aggressive technical assistance to low-performing high schools.
- ✓ Ensure a seamless system of education, pre-K through adulthood.
  - Create a sustainable and effective P-20 council.
  - Engage families and communities as partners in supporting students' social, emotional, and academic needs.
  - Use technology as an avenue to maintain open communication between home and school.
  - Re-engage adults and out-of-school youth without diplomas or GEDs in the educational system.
  - Create a directory and clearinghouse of career and education resources/information accessible to all students and families.
  - Emphasize nutrition and lifelong wellness across the high school curriculum.

The WVBE received a grant from the National Association of State Boards of Education in 2009 to convene stakeholders to re-examine progress made in implementing the recommendations from the 2005 report, *A Vision for Student Success*. Whereas the 2005 report focused primarily on what systems and schools should do, the 2009 initiative focused on improving student outcomes.

2.6 Technology Report and the State Educational Technology Plan

In June 2006, the WVDE released the document *Technology for 21st Century Learners: West Virginia's Comprehensive Report of Findings and Recommendations*, which was developed by a statewide advisory committee of educational technology experts and other stakeholders. This report, known as the CRFR, was presented to the WVBE, West Virginia Legislature, the Governor's Office of Technology, and other educational entities. The 96 recommendations were incorporated into the completion/revision of the State Educational Technology Plan, which was formatted consistently with the online five-year strategic plans developed by West Virginia's school systems and schools. The Technology Plan incorporated recommendations from federally funded Evaluating State Educational Technology Projects conducted on two West Virginia programs. The Enhancing Education Through Technology (EETT) evaluation showed positive impacts on student achievement and instructional utilization of computers by teachers and students. In addition, the West Virginia Virtual School courses were found to be equal to face-to-face instruction and to provide equitable access to courses. The CRFR for educational technology for 21st century learners incorporated the following:

- ✓ Commitment to work with all stakeholders and partners to maximize efficiency of effort and resources
- ✓ Integration of 21st century learning key elements, learning skills, and technology tools
- ✓ Summary of current status of access to equipment, infrastructure, software, professional development, and technical assistance
- ✓ Identification of defined areas of need
- ✓ Determination of interventions to address needs
- ✓ Flexibility to adjust the plan based on developing technology, federal and state requirements, and changing local school and district needs
- ✓ Commitment to implement the recommendations for West Virginia's future

The resulting State Educational Technology Plan for 2007-2010 includes the following goals and objectives:

1. Goal 1 (Integration/Instruction): To continue to advance comprehensive, standards-based technology resources and online opportunities
   - 1.01. To focus on using 21st century digital resources to improve achievement of all students
   - 1.02. To provide students with equitable access to virtual courses for a more complete, rigorous curriculum that otherwise would not be available
   - 1.03. To promote collaboration with various partners for improved collaboration and use of 21st century resources
   - 1.04. To ensure districts and schools are completing strategic plans that address all federal technology compliances and plan for standards-based instruction for improved 21st century instruction
2. Goal 2 (Infrastructure): To advance a comprehensive, standards-based technology infrastructure (computers/presentation stations/bandwidth/Internet access/Student Information System)
   - 2.01. To increase the percentage of West Virginia schools with industry-supported operating systems to provide students with equitable access
   - 2.02. To increase the number of instructional presentation tools (e.g., data projectors, interactive whiteboards, handheld digital devices) to provide 21st century instructional environment
   - 2.03. To purchase and allocate sufficient bandwidth to support 21st century instruction

2.04. To purchase and allocate sufficient Internet access to support 21st century instruction
2.05. To establish and maintain up-to-date contracts to support a standards-based infrastructure for purchasing technology that allows for standardization and cost benefits
2.06. To maintain a current and comprehensive statewide management and information system with a high degree of availability

3. Goal 3 (Professional Development): To transform teachers' instruction with online and on-site collaborative support/technology integration professional development
   3.01. To increase use of online professional development by West Virginia teachers
   3.02. To provide sustained, job-embedded professional development (both online and on-site collaborative support) that prepares teachers to transform instruction by integrating technology into the curriculum
   3.03. To promote and support (based on annual funding) West Virginia teachers receiving technology integration training so they may act as instructional support personnel in the school setting
4. Goal 4 (Assessment/Evaluation): To enhance 21st century instruction based on best practices learned from research-based evaluations and 21st century classroom assessments
   4.01. To design a technology literacy skills self-assessment available for all educators to support 21st century classroom assessments
   4.02. To design and implement an eighth-grade assessment of information, communications, and technology (ICT) literacy
   4.03. To comply with the OEPA regulations and guidelines regarding school and district improvement audits that include the use of technology

2.6.1 Broadband Access

High-speed broadband Internet access for all students is vital to prepare them for a future of global competitiveness. The following are four critical areas of use in WV schools:

- ✓ Access to online rigorous courses (Advanced Placement, foreign language, advanced math and science, etc.) that would not be available in the regular school curriculum. The WVDE's Education Technology for 21st Century Learners Strategic Work Plan recommends that all students complete at least one comprehensive structured online instructional learning experience. These online learning opportunities prepare students for real-world and lifelong learning.
- ✓ Access to comprehensive online assessment. Online assessments provide timely and critical data for assessing student learning, thus allowing for effective data-driven decision making by teachers and administrators. West Virginia now conducts online writing assessments and plans to conduct 21st century skills assessments in the near future, as recommended in the Education Technology for 21st Century Learners work plan.
- ✓ Access to engaging online multimedia resources that provide opportunities for students to engage in real-world problem solving, communication/collaboration, and development of creative solutions to problems.
- ✓ Access for WV educators to online professional development courses providing anytime, anywhere learning opportunities. The need for professional development is high. To address this need, the WVDE has entered into a collaborative effort to build local e-Learning for Educators that will serve the teacher quality and professional development needs of each state.

To address the critical need areas above, West Virginia schools must look beyond the next few years to the 5- to 7-year recommendations of the national broadband report from the State Education Technology Directors Association (SETDA). In June 2008, SETDA released *High-Speed Broadband Access for All Kids: Breaking through the Barriers* to address the growing concern and critical need for high-speed Internet access among the state's districts and schools. In a technology-rich learning environment for the next two to three years, SETDA recommends an external Internet connection to the Internet service provider of 10 megabits per second (Mbps) per 1,000 students/staff and internal wide-area network (WAN) connections from the district to each school and among schools of at least 100 Mbps per 1,000 students/staff. In a technology-rich learning environment for the next 5 to 7 years, SETDA recommends an external Internet connection to the Internet service provider of 100 Mbps per 1,000 students/staff and internal WAN connections from the district to each school and among schools of at least 1 gigabit per second (Gbps) per 1,000 students/staff.

Then-Governor Manchin convened the West Virginia Education Broadband Subcommittee to evaluate schools and classrooms in the state and submit recommendations for connecting all of West Virginia's children to broadband. The subcommittee made the following recommendations:

- ✓ High schools or any facility with a student population of over 500 will have a minimum committed information rate (CIR) of 10 Mbps access into the school by 2011.
- ✓ Middle and junior high schools, or any facility with a student population between 200 and 500, will have a minimum CIR of 4.5 Mbps access into the school by 2011.
- ✓ Elementary schools will have a minimum CIR of 1 Mbps access into the school by 2011.
- ✓ All high schools will have campuswide wireless access by 2011.

During FY2009, the WVDE doubled Internet access bandwidth at each of the two Points of Presence (POP) from 225 Mbps to 450 Mbps for a total of 900 Mbps. Future plans are to double Internet Access at each POP to 1 Gbps during FY2010, based on E-rate funding approval.

3. Management and Organization

In taking on the major challenge of embedding 21st century skills instruction into West Virginia's education system, it was essential that the WVDE make some changes in its organization and structure. This reorganization, directed by then-State Superintendent of Schools Steve Paine, included changes at all levels. In addition to reorganization efforts, the WVDE, along with then-Governor Manchin, established additional support to assist with the planning and procedures involved in incorporating 21st Century Skills in the state.

The newly developed initiatives also created the need for planning documents and additional resources to support the implementation of the Global21 Initiative in the state. The WVDE developed planning documents, or frameworks, that aligned to the goals of the initiative and identified 39 critical elements to be addressed through the development of division, office, school, and district work plans and implementation of those work plans.

In its budget requests to the state legislature, the WVDE has included improvement requests that support programs associated with these new initiatives. They also revised the formula for state-aided funding to align it with the goals of the Global21 Initiative.

3.1 Reorganization of the WVDE

In February 2006, the WVDE began to reorganize to achieve greater focus on 21st century learning. Changes included combining offices as well as moving some offices to new divisions. Also, changes in management personnel within the WVDE were implemented to improve the management and expertise of each unit. The focus of the reorganization was to increase efficiency and capacity of the WVDE to support 21st century instruction and learning in all classrooms.

3.1.1 Current Organization of the WVDE

The current structure of the WVDE consists of five divisions: Superintendent; Curriculum and Instructional Services; Educator Quality and System Support; Student Support Services; and Technical, Adult, and Institutional Education.

3.1.1.1 Office of the Superintendent

The Office of the Superintendent includes the State Superintendent of Schools and his executive staff. The office is led by the Deputy Superintendent, who oversees the work of seven offices: Legal Services, Internal Operations, School Finance, Communications, Human Resources, Information Systems, and the Executive Assistant to the State Superintendent.

The Office of Legal Services provides legal counsel to the WVDE and to the State Board of Education, along with providing state educators and the general public with day-to-day information about applicable law references and the superintendent's interpretations. The office's two attorneys and one investigator also assist in teacher termination hearings, license revocation cases, formal grievances, court cases, and Freedom of Information Act requests.

The Office of Internal Operations provides fiscal services for the following entities: the WVBE, the WVDE, the Cedar Lakes Conference Center, more than 20 institutional education facilities throughout the state, the State Board's Office of Educational Performance Audits, and the West Virginia Schools for the Deaf and Blind (WVSDB). The office's customers also include vendors who conduct business with any of these entities. Areas of service include cash management, grants

management, subrecipient disbursements, purchasing, payment of claims for programs administered by the Office of Child Nutrition, travel reimbursements with or travel reimbursements without stipends paid to consultants, accounts payable, accounts receivable, and payroll.

The Office of School Finance collects, organizes, and summarizes finance information and data about school districts in West Virginia. Data include salaries, enrollment, state aid funding formula, revenues and expenditures, and property tax and levies.

The Office of Communications is in charge of all internal and external communications, including public relations, marketing, news media, and website development. The office also oversees publications, internal printing services, and graphic design, and conducts and/or cosponsors various events for the WVDE. A review of the WVDE's webpage emphasizes the large volume of information provided to state educators, parents, students, and the school community. This office also heads up a department-wide technology team charged with discussing technology issues, planning for future technology use, and building avenues of communication among the WVDE's various offices and their initiatives.

The Office of Human Resources assists WVDE employees by providing a central source of employment-related information and services. From this office's webpage, employees can access job postings, assistance documents for interviewing/hiring/evaluating/terminating employees, the current agency handbook, the agency organizational structure, and employee evaluation and plan of assistance forms. This office oversees the Associate Staff Tuition Reimbursement Program, the Leave Donation Program, the New Employee Mentor Program, the Teacher of the Year Program, the Schools of Excellence for 21st Century Learning Program, and agency parking, in addition to being the point of contact for Equal Employment Opportunity issues, Workers' Compensation, and other personnel matters.

The Office of Information Systems oversees the West Virginia Education Information System (WVEIS), which was created in 1990 to ensure standardized data collection and reporting to the WVDE. By consolidating individual district computer systems into several larger RESA-based systems for reporting, processes were streamlined and individual district expenses were reduced. The WVEIS project has grown to include every district Board of Education office and school in West Virginia and has formed a Wide Area Network (WAN) with links to each of the eight RESA offices and the State Department of Education. Student applications on the WVEIS network include student scheduling, student attendance, student grading, and several custom programs. Financial and employee applications include payroll processing, human resources, fixed asset inventory, warehousing, and purchasing. The WVEIS is the West Virginia public school system's data warehouse.

The Executive Assistant to the Superintendent is responsible for special projects assigned by the Superintendent and for a variety of organizational matters: provides information/responds to inquiries about policy and education laws, including graduation requirements, waivers to State Board policies, veteran diplomas, nonpublic and home schools, and summer school approval; frequently serves as a liaison to the WVBE and performs tasks as requested by the Board; and represents the State Superintendent of Schools when she is unable to attend functions and assists with her correspondence.

3.1.1.2 Division of Curriculum and Instruction

The Division of Curriculum and Instruction, led by a division Associate Superintendent, was reorganized to give leadership and technical support to assist districts and schools to provide classroom instruction that integrates rigorous content skills with learning skills and technology tools within relevant context and through engaging learning experiences. To maximize efficiency

and coordinate efforts, Executive Directors of all four major offices and the Assistant Superintendent form a team to guide and support all activities and functions for each office. The Division consists of the following offices: Instruction; Assessment, Accountability, and Research; Instructional Technology; and Special Programs. The Division has been constituted with offices whose functions are interrelated, and the effectiveness of any one office is interdependent on the work of the other offices. This alignment of function within one division allows for major initiatives to be supported in a cohesive, unified approach to ensure common focus and purpose.

The Office of Assessment, Accountability, and Research (OAAR) is divided into three components: assessments, research, and special education monitoring. In the fall of 2009, the office name was changed to include research and reflect the increased role of research in the department. The assessment staff design, develop, and administer state tests and provide training to local school districts on administration and use of results. The research staff provides technical data in the assessment development process and interacts with the vendor psychometricians to assure technical quality. In 2008, the WVDE created a Research group within the OAAR. The Research group provides the WVDE with expertise in literature reviews, research studies, internal program evaluations, joint external evaluations, data analysis, and the framework to conduct ongoing systematic evaluation activities. The group's website provides proposals, selected projects, external research reviews, and research studies completed by the group. The Research group will assist the WVDE in evaluating departmental efforts to restructure the state's educational system for 21st century instruction, teaching, learning, assessment, monitoring, and reporting. The special education monitoring staff oversees local school districts with regard to implementing federal regulations and guidelines, and provide technical assistance to district special education directors.

The Office of Instruction is headed by an Executive Director and there are two Assistant Directors. One works with the English, arts, social studies, and instructional materials coordinators, and the other works with the math, science, math/science partnership, and professional development coordinators. The work of this office centers on developing teacher leaders who understand quality lesson design and effective instructional strategies. This is done through professional development such as the Teacher Leadership Institute, the Model Classroom initiative, the Social Studies Institute, Elementary Mathematics Model Lessons, and the new kit-based science initiative for elementary teachers. Teachers who work in this office have become skilled practitioners through participation in the development of curricular materials such as standards-based units, Instructional Guides, model lessons, and Power Standards, all of which can be found on Teach 21, an online comprehensive resource for educators.

The Office of Instructional Technology concentrates on the instructional implementation of 21st century tools and resources into the classrooms and curriculum areas. Instructional technology integration is based on the national ISTE standards and P21 frameworks. The office oversees and implements several statewide initiatives, including distance learning through the West Virginia Virtual School, Internet and intranet infrastructure and filtering, e-mail accounts for educators and K-12 students, WVLearns e-learning platform, district and school online technology plans, and the Technology Tools for Schools program at both the elementary and secondary levels. Also housed with the Office of Instructional Technology are the federal and partnership initiatives, including Title II, Part D EETT, two U.S. Department of Education (ED) Scientifically Based Research Grants, Technology Integration Specialists, E-rate, Intel, Thinkfinity, SAS inSchool, Oracle's Think.com, Southern Regional Education Board (SREB), SETDA, Consortium of School Networks (COSN), and Web 2.0 professional development for educators.

The mission of the Office of Special Programs (OSP) is to improve results for children and youth with exceptionalities, primarily through leadership and financial support to LEAs. The OSP is responsible for the administration of the federal Individuals with Disabilities Education Act of 2004

(IDEA) and implements the West Virginia special education monitoring, compliance, and dispute resolution systems. Professional development activities and technical assistance are coordinated and provided to LEAs, WVSDB, and the Office of Institutional Education Programs in special education programmatic areas and literacy initiatives. Furthermore, the OSP is also responsible for collecting, verifying, analyzing and reporting all federally and state required special education data and submitting reports to the ED, WVBE, and the legislature. The OSP works closely with the Assessment, Accountability, and Research Office focusing on the special-needs populations and their rights, ensuring assessments are accessible and accommodations are appropriate. The OSP also works with the Technology Office to ensure all special education and other teachers are using all available instructional technology resources to provide alternate resources for instruction that meet different learning styles. The Title I staff work with local Title I directors throughout the school year to implement the federal regulations and guidelines and to provide technical assistance.

3.1.1.3 Division of Educator Quality and System Support

Led by the Assistant State Superintendent, the Division of Educator Quality and System Support oversees five offices—the Office of Professional Preparation; the Office of Title I; the Office of Title II, III, and System Support; the Office of Healthy Schools; and the Office of School Improvement. The Division provides professional development opportunities; distributes federal grant funding; conducts monitoring of programs; and provides leadership, support, and technical assistance to districts and school systems through a wide variety of services.

The Office of Professional Preparation (OPP) is responsible for processing applications for licensure and reimbursement for all West Virginia educators. In addition, the OPP coordinates the state's educator recruitment and retention efforts, as well as the state's higher education educator preparation programs. The OPP also coordinates the state's mentoring website, the National Board for Professional Teaching Standards (NBPTS) program, the Transition to Teaching program, and the Troops to Teachers program.

The Office of Title I staff work with local Title I directors throughout the year to implement the federal regulations and guidelines and to provide technical assistance. Title I staff provides financial assistance to LEAs and schools with high numbers or percentages of low achieving children to help ensure that all children meet challenging state academic standards. LEAs target the Title I funds they receive to schools with the highest percentage of children from low-income families. LEAs also must use Title I funds to provide academic enrichment services to eligible children enrolled in private schools. A state education agency (SEA) coordinator is assigned to each LEA for the purpose of providing focused technical assistance. In addition, several coordinators provide assistance to particular content areas (i.e., reading, mathematics, technology) and some are specifically assigned to work with schools identified for improvement.

The Office of Title II, III, and System Support works with local Title II and Title III directors throughout the year to implement the federal regulations and guidelines and to provide quality professional development. The office builds the capacity of teachers to more effectively educate students through teacher recruitment efforts and supports efforts to train leadership teams, collaborative teams, and school improvement specialists in processes leading to school improvement focused on increased student learning and achievement. This office also oversees the implementation of federal Title III programs that serve students with limited English proficiency, world language programs that increase student proficiency in foreign languages, global awareness initiatives, the Chinese Guest Teacher program, and the West Virginia International School, which enables international students to successfully maintain their native language and culture.

The Office of Healthy Schools is committed to helping students develop the health literacy and wellness skills that are included in the 21st century content. The office does this by providing

leadership and coordination for the instructional programs of health education, physical education, and driver education; health services, including school nursing care, and linkages to mental and oral health services; and environmental health initiatives, including positive school climate, tobacco control, safe and drug-free schools, and local school wellness councils.

The Office of School Improvement provides leadership, support, and technical assistance to districts and schools by offering a wide variety of services and resources customized to meet specific needs. In addition, the office provides leadership and coordination for the programs of school counseling, dropout prevention, innovation zones, schools of excellence, 21st Century Community Learning Centers, strategic planning, and principal mentoring are coordinated through the office. The West Virginia Standards for High Quality Schools is the basis of all of the office work and enables schools to see the importance of continuously moving all schools forward.

3.1.1.4 Division of Student Support Services

The Division of Student Support Services is composed of five offices: Child Nutrition, Internal Operations, School Facilities, School Finance, and Transportation. Headed by a division Assistant Superintendent, the Division of Student Support Services provides services to school districts to assure that all students have the appropriate educational support services needed to successfully participate in the learning process. The Division also oversees the Department's initiative to help districts increase parent and community involvement in the educational process.

The Office of Child Nutrition oversees the national school lunch program, the school breakfast program, the child and adult care food program, the summer food service program, and the family day care home program. The office's purpose is to administer federal nutrition programs to ensure children receive nutritious meals and to provide federal reimbursement to sponsors (e.g., schools, child care centers, Head Start facilities, residential centers). The office ensures program integrity through monitoring for compliance and adherence to federal regulations.

The Office of Internal Operations provides fiscal services for the following entities: the West Virginia Board of Education, the West Virginia Department of Education, the Cedar Lakes Conference Center, over twenty Institutional Education facilities throughout the state and the Department's Office of Educational Performance Audits. Our customers also include vendors who conduct business with any of these entities. Areas of service include: cash management, grants management, subrecipient disbursements, purchasing, payment of claims for programs administered by the Office of Child Nutrition, travel reimbursements with or travel reimbursements without stipends paid to consultants, accounts payable, accounts receivable, and payroll.

The Office of School Facilities oversees the state's 727 education buildings in regard to indoor air quality and compliance with health and safety standards, provides technical assistance and training to school district maintenance directors, conducts professional development for energy awareness and conservation through efficiency studies to counties, and reviews all plans for new construction for compliance and approval. The office also writes the guidelines for and approves every district's 10-year comprehensive educational facilities plan.

The Office of School Finance is responsible for administering the Public School Support Program, providing guidance and support to the 55 school districts in the state, approving school calendars, school district budgets and other documents, and providing statistical information concerning school finance issues.

The Office of Transportation annually certifies every bus driver in the state and ensures the Web-based training of all bus drivers. The office provides bus inspections in all school systems to ensure compliance and safety for the students. The major objective is to ensure that students get to and

from school safely every day and are transported by certified and qualified bus drivers. The office also oversees the funding of transportation needs in the state.

3.1.1.5 Division of Technical, Adult, and Institutional Education Services

Led by a division Assistant Superintendent, the Division of Technical and Adult Education Services is designed to prepare adults and secondary students for employment and lifelong learning. This division offers education programs and training through career and technical sites at more than 300 schools across the state. It is composed of five offices: Adult Education and Workforce Development; Career and Technical Accountability and Support; Career and Technical Innovations; Career and Technical Instruction; and Institutional Education Programs.

The Office of Adult Education and Workforce Development oversees adult basic education, preparation for the General Educational Development (GED) test, and grants by the West Virginia Department of Health and Human Resources (WVDHHR) for the retraining of adults, providing services for underemployed and unemployed workers. The office works directly with other agencies for workforce development in the state and is in charge of training for public service workers, such as firefighters, emergency medical technicians, waste water management employees, hazardous materials workers, and first responders.

The Office of Career and Technical Accountability and Support oversees the state's implementation of the Carl D. Perkins Act legislation and maintains the accountability system for career and technical education. The office also is in charge of North Central Association accreditation, civil rights, assessment, Cedar Lakes Conference Center, state and local planning, and school service personnel testing.

The Office of Career and Technical Instruction provides instructional supervision for all secondary and adult career and technical programs in the public schools and correctional institutions. The office administers and supervises all eight career/technical student organizations (e.g., Future Farmers of America, Future Business Leaders of America). It is both a technical assistance and professional development provider, working with schools and career and technical teachers and administrators. The office has also revised all career and technical education content standards to reflect 21st century skills, increase rigor, and align with national industry standards. Subsequently, the office revised courses to enhance rigor and alignment. The office develops programs of study for career concentrations and administers online, end-of-course assessments in more than 120 courses.

The Office of Institutional Education Programs is responsible for the administration of education programs for institutionalized juveniles and adults in state pre-dispositional juvenile detention centers, correctional institutions, and regional jails. The office provides direct services in 43 institutions statewide.

3.2 Alignment of Multiple Planning Documents

The West Virginia Global21 Initiative is guided by a set of dynamic, interdependent, cohesive, and comprehensive planning documents. The planning documents are supported by the P21 partnership application and the delineation of 39 critical elements of West Virginia's initiative.

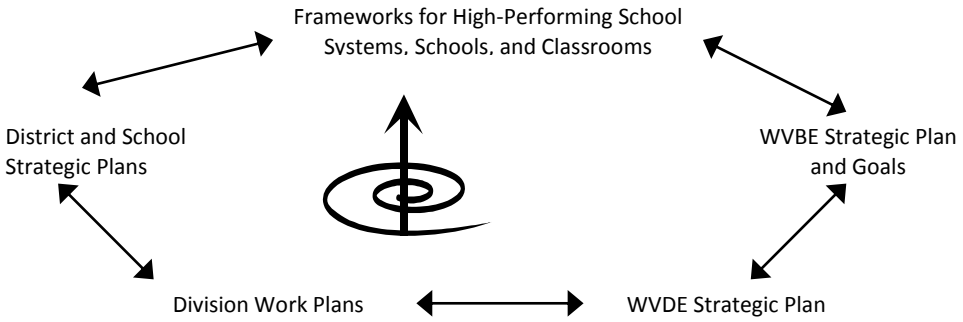
The West Virginia frameworks for high-performing school systems, schools, and classrooms serve as key planning documents that guide all levels of the educational system toward providing a 21st century education. The WVBE's Strategic Plan and goals have been developed to align with the frameworks, West Virginia's P21 application, and the 39 critical elements. The WVDE Work Plan is

developed directly from the Board's Strategic Plan, and each division within the WVDE must align its work plan and strategies with the Strategic Plan. The offices within each division contribute their work plans to the creation of the division strategic plan. The division work plans include specific strategies and activities, responsible parties, and timelines intended to meet objectives that are aligned with the goals of the WVDE Strategic Plan. Also included are rubrics for evaluation and intended impacts on instruction and student achievement. The online structured district and school strategic plans must describe how the systems and schools will address the 21st century goals of the initiative using a structure similar to the work plans.

These aligned planning documents influence one another in a cyclical process—as the state's initiative becomes more mature, initial improvements are institutionalized, and the next phase of the improvement process begins.

West Virginia Department of Education
Cyclical Process for Planning

39 Critical Elements P21 Partnership Application



3.2.1 WVDE and Division Work Plans

The WVBE and the WVDE are committed to improving the educational proficiency of all students in West Virginia. To this aim, the Board developed a set of five strategic goals. These goals have been translated into the WVDE and Division strategic plans, which include objectives for achieving the goals; timelines, activities, and responsibilities to implement the plan; and evidence to measure progress toward achieving each goal.

3.2.2 District and School Strategic Plans

Every year, the districts and schools of West Virginia engage in creating strategic plans for their major improvement goals and funding for federal programs. Each year, school systems are required to submit revisions and additions to their existing Five-Year Online Strategic Plans due on September 15. The district plan serves as the basis for the school Five-Year Online Strategic Plan due October 15. The components of both the district and school plans include *plan committee, core beliefs and mission, data analysis, goals/objectives/actions, compliances, budget, utilities, and resources*. District strategic plans are reviewed by appropriate WVDE staff utilizing a rubric, while school strategic plans are evaluated by district personnel.

The WVDE's Five-Year Online Strategic Planning Tool was revised in spring 2008 to streamline the requirements and enable a more strategic and less operational process. Strategic Planning Tool

Professional Development related to the revised planning tool used in both districts and schools is currently being offered by the WVDE Office of School and School System Improvement.

3.3 Resources to Support the Initiatives

The WVDE has moved to request additional resources to support newly developed initiatives aligned with 21st century skills. The WVDE's 2009 budget request, presented by the Deputy Superintendent to the state legislature, prioritized the budgetary needs of the Department. Six of the top 10 improvement requests supply funding to programs associated with the Global21 Initiative. These allocation requests were to support the improvement of virtual schools, technology tools for 21st century schools, the World Language program, entrepreneurship career technical academies, high schools of business, and model 21st century HSTW.

In addition, the WVDE revised the formula for state-aided funding as outlined in the Public School Support Program (PSSP), a foundation allowance program that provides funding to local school districts for personnel salaries, employee benefit costs, transportation operation costs, administrative costs, general operating costs and allowances for faculty senates, and improvement of instruction programs. Prior to the recent changes, the PSSP provided districts with funding based on an adjusted enrollment count, which included the net enrollment plus twice the number of students enrolled in special education. The Executive Director of School Finance for the WVDE proposed a formula change in March 2008 that phases in changes over a five-year period; the formula change was passed by the state legislature and includes funding all West Virginia counties by net enrollment, eliminating adjusted enrollment. This change to net enrollment was driven by efforts toward earlier intervention for special education students as well as efforts to reduce the number of students identified as special needs—highlighted by RTI practices resulting from recent revisions to federal special education regulations.

4. Curriculum and Resources

The Partnership for 21st Century Skills incorporates rigorous and relevant content as an essential component of a comprehensive educational system designed to prepare students to be productive 21st century citizens. To ensure a strong 21st century curriculum for all students, West Virginia embarked on a comprehensive revision of its CSOs in 2007. The revised standards were subjected to a rigorous review by outside experts, revised, and adopted by the WVBE in 2008 (see policies under 21st Century Vision section). The number of standards was reduced from the previous CSOs and aligned with 21st century content and skills, with increased cognitive demand. The adoption of rigorous standards is not enough, however, to develop high-level skills among the state's student population. With rigorous standards must come teacher resources and supports. This section describes West Virginia's experience with enacting more rigorous standards aligned with 21st century learning goals and the resources that the WVDE is providing to ensure that a rigorous and relevant curriculum is enacted in every classroom. The WVDE's TEACH 21 website provides detailed indicators of quality for WV's 21st century CSOs, learning skills, and technology tools.

4.1 Aligning State Standards to the Rigor of National and International Standards

In March 2006, groups of West Virginia teachers, identified as masters of their content, were assembled to begin work on creating new, more rigorous CSOs. Before they began work, teachers were trained on the 21st century initiative and assessing the depth of knowledge of an objective. The teachers looked at national and international assessments and wrote CSOs and performance descriptors designed to ensure that West Virginia students would have the skills needed to achieve at high levels.

Upon completion of the CSOs, the Department sought external state and national reviews and comment. The CSOs were reviewed by a variety of groups and experts that included local and national content experts and business and community members. Members of P21 reviewed the CSOs and provided feedback to the WVDE based on 21st century content, rigor, and context. Additionally, Dr. Norman Webb of the University of Wisconsin reviewed the standards to determine the depth of knowledge for each of the objectives and provided comments to the WVDE on how to increase the rigor in the CSOs by grade level. These comments were studied and used to improve the quality of the grade-level CSOs. A third review of the standards was compiled by Dr. William Schmidt of the University of Michigan; he commented on the standards as they aligned to the frameworks of the Trends in International Mathematics and Science Study (TIMSS). The comments from the reviews were studied and adjustments to the CSOs were made when deemed appropriate.

After a number of revisions, the CSOs were placed out for further comment from West Virginia educators. All comments were collected and studied for final revisions. The WVBE approved the CSOs effective July 1, 2008, to address the rigor and relevance requirements of a 21st century curriculum as recommended by P21 and other reviewers. The comprehensive revisions and improvements to the standards are intended to align education in West Virginia with the demands of the 21st century, providing students with the knowledge and skills to compete in a global economy. The following list includes some examples of how the CSOs were revised.

Mathematics CSOs	
Former Policy	**Revised Policy**
MA.3.16: Solve grade-level appropriate story problems using multiple strategies.	M.O.3.1.14: Create grade-appropriate real-world problems involving any of the four operations using multiple strategies, explain the reasoning used, and justify the procedures selected when presenting solutions.
MA.8.2.3: Use ratio and proportion to create and solve equations.	M.O.8.2.2: Identify proportional relationships in real-world situations, then find and select an appropriate method to determine the solution; justify the reasonableness of the solution.
AL.2.10: Determine the equation of a line given a graph of a line, two points on the line, the slope and a point, and the slope and *y* intercept.	AL.2.8: Extrapolate data represented by graphs, tables, and formulas to make inferences and predictions on rate of change (slope) and justify when communicating results within a project-based investigation.
Reading and English Language Arts CSOs	
Former Policy	**Revised Policy**
RLA.4.1.10: Determine a purpose for reading across the curriculum.	RLA.O.4.1.09: Determine author's purpose in literary and informational texts and use supporting material to justify author's intent: 1) to persuade; 2) to entertain; 3) to inform; 4) to determine a specific viewpoint.
RLA.12.1.7: Analyze and evaluate persuasive language and techniques (e.g., advertisements, junk mail, websites, news stories)	RLA.12.1.12: Analyze and evaluate persuasive language and techniques (e.g., advertisements, junk mail, websites, news stories) for intent, purpose, audience, type [inductive or deductive], and effectiveness.

In 2009, the CSOs for English and mathematics were reviewed by Achieve, Inc.'s American Diploma Project. West Virginia is now one of 16 states to meet the criteria for alignment with the Achieve Mathematics Standards and one of 12 states to meet the criteria for alignment with the Achieve English Standards. The Office of Instruction staff worked with teams of content teachers to revise the performance descriptors for 21st century CSOs for reading, English, mathematics, science, and social studies with two specific goals: (1) to make these descriptors more concise and teacher-friendly, and (2) to provide guidance in the clustering of objectives in a manner that will promote deeper student conceptual understanding.

In May 2010, the WVBE adopted the CCSS for English Language Arts and Mathematics. Shortly thereafter, the Office of Instruction assembled a team of stakeholders consisting of representatives of other offices within the WVDE and HEPC, as well as classroom teachers of English language arts and mathematics from across the state to (1) study the CCSS for English Language Arts and Mathematics and (2) place these standards into the West Virginia Framework. The team of stakeholders authored performance descriptors that align directly with the CCSS Anchor College and Career Readiness Standards in English Language Arts and the CCSS Mathematical Practices in

Mathematics. These standards are referred to as the Next Generation CSOs for English Language Arts and Mathematics in West Virginia schools. The WVBE has approved the following rollout process for the Next Generation Standards: kindergarten, 2011; first grade, 2012; second grade, 2013; and third grade, 2014. The Office of Instruction has designed a professional development plan to support the early implementation of the Next Generation Standards in county school systems wishing to implement prior to the official date of 2014-15 for Grades 3-12. The professional development will be provided through the Teacher Leadership Institute and other venues and will follow this schedule: kindergarten in 2011; Grades 1, 4, 5, and 9 in 2012; Grades 2, 3, 6, 7, and 10 in 2013; and Grades 8, 11, and 12 in 2014.

4.2 Developing State Standards for Learning Skills and Technology Tools

In March 2006, a group of West Virginia teachers, identified for their technology, curriculum, and instruction expertise at specific grade levels (elementary, middle, or high), were selected to revise the technology CSOs. After receiving professional development on the Department's Global21 Initiative and the process for determining the depth of knowledge of an objective, the teachers reviewed national standards endorsed by the ISTE and P21. The overarching goal was to build a rigorous, relevant, and challenging learning skills and technology tools curriculum that reflected both the content and the level of rigor of national standards and would prepare students for the 21st century.

Based on the national standards from ISTE and P21, Policy 2520.14 is organized around three standards and accompanying program-level objectives. The standards are as follows: Standard 1 – Information and Communication Skills; Standard 2 – Thinking and Reasoning Skills; and Standard 3 – Personal and Workplace Skills. The standards and related objectives are organized by program levels, Grades PreK-2, Grades 3-4, Grades 5-8, and Grades 9-12. The intent is to provide the school principal and staff with the flexibility to collaboratively design a model of implementation at each level that will help all students to develop proficiency in the three standards.

Seen in whole, the West Virginia Standards for 21st Century Learning reflect the belief that quality, engaging instruction must be built on a curriculum that triangulates rigorous 21st century content, 21st century learning skills, and the use of 21st century technology tools. West Virginia teachers are responsible for integrating the learning skills and technology tools objectives appropriately into the learning environment to prepare our youth to be successful students today and productive workers tomorrow.

4.3 Collaborating with Higher Education on College Readiness Standards

A committee of mathematics and English/reading language arts teachers at the high school and college levels met with WVDE staff in September 2007 to determine the College Readiness Standards. The HEPC convened a group of representatives from West Virginia colleges and universities to define college readiness skills in English and mathematics. These College Readiness Standards were compared to the 11th-grade 21st century reading and English language arts and mathematics CSOs provided by the WVDE. The committee agreed on a set of 11th-grade consensus standards and objectives in English and mathematics. The Grade 11 WESTEST 2 Reading/Language Arts and Mathematics tests will align to the West Virginia College Readiness Standards as defined by the committee.

The Grade 11 WESTEST 2 reading/language arts and mathematics results will identify college readiness by a defined cut score, which will be determined by the WVDE and HEPC. Students who

perform at or above these cut scores will be deemed ready to enroll and succeed in college-credit-bearing freshman-level mathematics and English courses. Students who perform below the mathematics cut score will be placed in a college transition course for mathematics as outlined in Policy 2510. They will have the option to retest in 12th grade to receive a college readiness endorsement from the WVDE in the area of mathematics.

The HEPC and WVDE agreed to use the student's score on the Reading/Language Arts and Mathematics WESTEST 2 tests to determine college readiness. If the student meets the college readiness cut score, that information will be used for freshman placement into entry-level courses. The student's cut score will not be used to determine college admissions.

Additionally, the WVBE Policy 2510: *Assuring the Quality of Education: Regulations for Education Programs* requires students in the professional pathway and college-bound students in the skilled pathway who do not meet the State assessment college readiness benchmark in mathematics, to take the appropriate college transition course during their senior year. Schools are required to offer an elective college transition course for students who do not meet the State assessment college readiness benchmark in the area of mathematics. The Office of Instruction has created college transition units to support the newly created course, College Transitions Mathematics. The units align to the college readiness standards selected by a group of K-12 and higher education mathematics faculty. Successful completion of the units and course will prepare West Virginia's students to succeed in their first credit-bearing mathematics course in college or technical school. These requirements became effective for students entering ninth grade in the school year 2008-2009, and the first transition courses will be implemented during the 2011-2012 school year.

The adoption of the Next Generation CSOs for English Language Arts and Mathematics for West Virginia schools, aligned to the CCSS for English Language Arts and Mathematics, presents the WVDE with a set of College and Career Readiness Standards aligned to the College and Career Readiness Standards found within the CCSS. Teams of content specialists representing institutions of higher education and public education are in the process of reviewing and revising the Transitions Mathematics course, and during the 2011-2012 school year the Office of Instruction will supervise a pilot of an English Transitions course that is aligned to the Next Generation College and Career Readiness Standards, adopted from the CCSS for English Language Arts.

4.4 Teach 21 Website

In November 2007, the WVDE launched the Teach 21 website, an interactive online tool developed by teachers to assist their colleagues in planning and delivering 21st century instruction. Teach 21 allows educators to quickly access 21st century content standards, learning skills, research-based instructional strategies, technology tools, and other resources. The content on the Teach 21 website grows steadily, with additions and revisions to the content expected to be continuous. As of mid-2011, the site contains over 650 instructional resources for teachers at all grade levels and in all content areas.

The interactive instructional guide component of the Teach 21 website is organized by grade level and the four core content areas. These guides provide classroom teachers with models of quality instructional design that include authentic performance or project-based assessments with accompanying rubrics. The instructional guides focus on the knowledge, skills, and understandings inherent in the identified power standards and model effective strategies for integration of learning skills, technology tools, and content standards. All instructional guides are written by West Virginia teachers.

Another component of Teach 21 is the online instructional units. These standards-based units provide the classroom teacher with models of quality instructional design that include both formative and summative assessments with accompanying rubrics. The units focus on the knowledge, skills, and understandings inherent in the 21st century CS Os, learning skills, and technology tools. They contain research-based strategies that involve students in real-world application. The units, written by West Virginia teachers, are uploaded as they are written.

Over 245 project-based learning plans are also available on Teach 21. These plans challenge students to use their content knowledge to solve challenging real-world problems. Inquiry based lesson plans for grades K-5 in mathematics and science are currently being added to the site. Electronic resource packages for social studies teachers will furnish them with online resources for instruction. There are currently 25 of these on the site with more planned for development this summer.

Power standards were developed by West Virginia teachers as a model of one way the curriculum might be grouped to support more effective instruction and help students see the connections in what they are learning. These standards will assist teachers as they design their own units, instructional guides, or project-based learning experiences. A detailed description of the process for curriculum grouping is available on the Teach 21 website.

Strategy Bank was created, based on a request from teachers, as a place where they could find good, effective instructional strategies for vocabulary, comprehension, and summarization. This section of Teach 21 also contains strategies for activating prior knowledge, improving comprehension, writing across the curriculum, getting to know students, and using technology tools. Graphic organizers, folded books, and other ideas for hands-on teaching and learning are included. Teachers have reported using these strategies as part of the curriculum materials they are creating during their professional development with the WVDE.

The interactive CSOs and the searchable learning skills and technology tools help teachers quickly locate information for their content, grade level, and programmatic level. Teachers can quickly access all materials on the Teach 21 website that contain a specific objective by clicking on the magnifying glass next to it. This search will bring up related units, instructional guides, and power standards. Many of the objectives have a small V next to them, indicating that there is an academic vocabulary lesson available to help teachers build their students' word knowledge.

The assessment section of the Teach 21 website contains sample questions from the new WESTEST 2 so teachers can get an idea of the rigor that is required. Sample writing prompts and the ACT/SAT guides will give teachers a look at other assessments commonly used. The Informal Math Assessments for K-3 furnish teachers at those grade levels with a way to gauge their students' progress. The Classroom Assessment for Learning document gives teachers an overview of West Virginia's stand on formative, benchmark, and summative assessments. A section on formative assessment was added in November 2010 and has been very popular across the United States. The opening page provides the definition of formative assessment and the subsequent pages offer examples and ways to use them to monitor student learning and make instructional adjustments as needed.

The professional development page contains links to the 21st Century Learning Frameworks for elementary, middle, and high schools. The Model Classroom link presents an overview of the project and links to the released videos that demonstrate 21st century instruction and learning in the model classrooms. Also on the professional development section of the site are links to professional development modules that can be used by teachers to deliver training in 21st Century Learning, Reading Across the Curriculum, and Mathematics Program Improvement Review. The Achieve 21 presentations, also available on the site, were developed to assist teachers who are

working with students in the Achieve 21 program, but will prove valuable to teachers in all classrooms.

Teach 21 is a dynamic site with new content being added or released daily. Teachers who create materials for this site are deepening their understanding of quality lesson design and effective strategies to reach all learners. The site has received national and international recognition, with over 600,000 visitors from 160 countries or territories. The Buck Institute for Education has recognized Teach 21 as the number one website in the world for its project-based learning materials.

4.5 Distance Learning Standards

Policy 2450, Distance Learning and the West Virginia Virtual School, provides that virtual courses offered for credit shall be approved by the WVDE. Distance learning course content will be reviewed for correlation with the WVBE CSOs and the SREB's Standards for Quality Online Courses.

4.6 Revising Professional Teaching Standards

The WVBE directed the West Virginia Commission for Professional Teaching Standards to revise the state's professional teaching standards to assure alignment with the Global21 Initiative. The newly developed professional teaching standards are the basis for teacher preparation, assessment of teacher practice, and professional development. The professional teaching standards provide a common language that describes what a teacher needs to know and must be able to do. The curricula for West Virginia higher education teacher preparation programs that lead to certification should reflect and be aligned to these teaching standards. Work is currently underway to assist institutions of higher education in the analysis and revision of teacher preparation programs to align with these new standards.

4.7 TeachWV Website

The TeachWV website was created by a cross-section of WVDE personnel and was made possible with funding from the Claude Benedum Foundation. Designed to be a recruitment tool to attract individuals into the teaching profession, the website provides information in an easy-to-understand format and connects prospective educators to essential resources. Additionally, the website features video clips from West Virginia educators about what inspires and motivates them about teaching profession. Since its inception, the website has received 66,733 total page views, 47,484 unique views, and 9,820 absolute unique visitors. The website also serves as a resource for current educators by providing information germane to their professional growth and development.

5. Programmatic Initiatives

The WVDE designed various programmatic initiatives to implement its strategic plan for 21st century learning. Some of these initiatives were in place prior to the Department's Global21 Initiative, while others have been implemented directly to support the goals of the initiative. Regardless of the date of implementation, this comprehensive set of initiatives brings West Virginia's educational system closer to the goal of preparing all students with 21st century knowledge and skills. The Closing the Achievement Gap Report for 21st Century Learners in West Virginia, 3rd edition, update West Virginia educators to the status and improvement of student achievement in West Virginia which may then be utilized as a basis for determining future educational decisions. The report addresses the background, literature, data and initiatives that are associated with student performance and the current concentrations on closing the achievement gap. The 2nd edition of this report provided a summary of systematic, systemic initiatives to promote 21st century instruction, learning and assessment, followed by a summary of specific programmatic initiatives to address closing the achievement gaps of identified subgroups of students.

5.1 Universal Pre-K

The West Virginia Universal Pre-K System promotes oral language and pre-literacy skills and reduces the deficit of these skills by early intervention. Currently, 14,610 students are served in all 55 counties from a total estimated population of 21,000. West Virginia is one of five states in the nation with a state legislative mandate for a universal pre-K system. West Virginia Code requires that all 4-year-olds, as well as 3-year-olds with individualized education plans (IEPs), have access to a no-cost pre-kindergarten program by 2012. West Virginia believes a strong pre-K system will improve high school graduation rates and reduce the number of special education placements and grade-level retentions. A study[2] funded by the Benedum Foundation provided evidence that for every dollar invested in high quality public pre-K education, the state will realize a $5.20 savings because of fewer special education placements, fewer grade retentions, and higher graduation rates for students who participate in pre-K. Another recent study[3] found that West Virginia children improved their language and mathematical abilities through attending a preschool program regardless of their ethnic or economic background.

In West Virginia pre-K classrooms, the number of students is limited to no more than 20. All pre-K classrooms not administered by the WVDE or Head Start, but are contracted with the school system, must be licensed through the WVDHHR Day Care Licensing.

The hallmark of the West Virginia pre-K program is its collaborative framework. County plans are developed by a county collaborative team and reviewed by a team that includes three representatives from the WVDE, three from the WVDHHR, and three from Head Start. This review team evaluates the quality and content of the county plans and audits the counties as they reach the 2012-13 deadline for universal access, ensuring compliance with WVBE Policy 2525 and

[2] Padak, N., & Rasinski, T. (2003, April). *Family literacy programs: Who benefits?* Ohio: Kent State University.

[3] Barnett, W. S., Lamy, C., & Jung, K. (2005, December). *The effects of state prekindergarten programs on young children's school readiness in five states.* New Jersey: The National Institute for Early Education Research, Rutgers University.

collaborative requirements. All students in West Virginia pre-K classrooms are registered with the school district in which the classroom is located and are included in state funding allocations for the district.

In *The State of Preschool 2010* from the National Institute for Early Education Research, West Virginia ranked 3rd in the nation for pre-K enrollment and adequately funded its preschool program, coming in at 10th for spending per child when based on state spending. However, West Virginia's ranking improves to 4th in the nation for "all reported" spending. This increase in ranking is due to the collaborative model in West Virginia. Because of the high level of collaboration and maximization of resources, state and community partnerships have a dramatic impact on available resources for West Virginia's children in pre-K.

Counties are making steady progress toward universal access. Fifteen counties reached universal access and met the requirements of WVBE Policy 2525 prior to 2012-13. Beginning in July 2010, the WVDE created the Office of School Readiness to support the needs of a high quality early education system and strengthen the collaborations and transitions for school readiness. Professional development offered to support Universal Pre-K is described in Section 8.25. During 2010-2011, 70 percent of the classrooms were in collaboration with community partners.

5.2 Reading First

Reading First is a federally funded program under the NCLB Act designed to improve reading instruction and ensure that students are reading at grade level by the end of Grade 3. In 2003, West Virginia received funding to administer the program in eligible counties over a six-year period. Counties designed reading instruction based on scientific research. Reading First components include assessment, a core reading instructional program and materials, professional development, access to print media, management teams, and evaluation. Reading mentor teachers are used in Reading First schools to assist with implementation of the program.

The initial Reading First cohort consisted of 36 schools identified as eligible to participate; these schools completed their participation during the 2008-2009 school year. Cohort 2 was established in 2007 and completed participation during the 2009-2010 school year. A total of 41 Reading First schools in West Virginia received extensive professional development opportunities related to Reading First (described in Section 8.26). The Reading First grant ended on September 30, 2010.

5.3 Phonemic Awareness

In 2001, the WVDE initiated the Phonemic Awareness Project. This research-based early literacy initiative aims to increase the number of students reading at grade level by emphasizing the importance of phonemic awareness as an early teachable reading skill. Focusing on early literacy skills at the kindergarten and Grade 1 levels, school teams are trained to implement intensive intervention for students who exhibit deficits in phonemic awareness and to provide daily phonological awareness instruction to K-1 students. Data gathered during the pilot project strongly supported the use of this intervention as an effective means for enhancing the literacy skills of students at risk for reading problems. Subsequent evaluation information continues to validate the success of this intervention. The project has been implemented in approximately 300 schools in West Virginia, including all Reading First schools and RTI project schools. Training has been conducted in all RESAs; ongoing technical assistance is provided to schools by RTI specialists.

5.4 Response to Intervention Model

The Office of Special Programs (OSP) initiated the RTI process in 2006. A 36-school pilot project expanded to state-level implementation in 2007 when Policy 2419: Regulations for Education of Students with Exceptionalities incorporated RTI as the identification method for specific learning disabilities. The OSP offers ongoing professional development for district and school leaders, teachers, school psychologists and other professionals responsible for implementing RTI. An RTI website is maintained to communicate guidance and support educators and parents. Additionally, eight RTI Specialists, based in each of the state's RESAs provide school and district level technical assistance and professional development to assist in the scaling up process. The OSP will continue to provide the variety of supports necessary to ensure full implementation of RTI across all programmatic levels and relevant content areas. The first timeline for elementary reading was met as of July 1, 2009. By July 1, 2010, elementary schools have been slated to use RTI for mathematics. Timelines for middle school and high school implementation of RTI are July 1, 2011 and July 1, 2012, respectively.

5.4.1 Response to Intervention for Mathematics

RTI is the practice of providing high-quality instruction and intervention matched to student needs. At the core of RTI is the belief that each student has the right to quality mathematics instruction. Each individual student should receive mathematics instruction that enables him/her to develop an understanding of grade-level West Virginia CSOs. Within the West Virginia Model of RTI for Mathematics, Tier 2 intervention is delivered by the classroom teacher within mathematics instructional time using resources provided within the adopted core materials. Tier 3 intervention is provided to students who do not respond to Tier 1 instruction and Tier 2 intervention. Tier 3 intervention is in addition to Tier 1 instruction and Tier 2 intervention that is provided by the classroom teacher.

5.5 WVDE Online Standards-Based Individualized Education Plans

An IEP must be developed at least annually for each student with a disability or other special education need. The IEP is designed to demonstrate compliance with the IDEA, as well as to document the progress and goals of the student relative to academics and behavior. The WVDE has determined that the IEP can be more effective as an instructional plan if it is easily accessed for viewing and planning and includes data from formative and summative assessments. As a result of the collaborative efforts of WVDE staff in all offices that address students with disabilities and other special education needs, the statewide student data management system, the accountability requirements for students served by federal programs, and input from many stakeholders in the field, the West Virginia online IEP system moved forward into statewide implementation in January 1, 2011. The online IEP is part of the WVEIS and will be free to all schools. It will allow for assessment data stored on WVEIS to be transferred seamlessly to IEPs as they are developed.

The online IEP initiative was further expanded through the activities of a three-year General Supervision Enhancement Grant received by the WVDE's OSP. One component of this federal grant aims to increase the capacity of special and general educators to provide more effective instruction for students with disabilities and other special education needs. The West Virginia online IEP provides structure and resources to assist educators in the development of standards-based IEPs. Teams constructing IEPs with this tool will use their knowledge of each student to make a series of selections from concepts, skills, and behaviors drawn from research-based content continuums,

aligned to the West Virginia CSOs and provided within the online IEP system. As IEP teams work through this decision-making process, they create more precise pictures of a student's current performance levels and set a course to more effective instruction.

In collaboration with the Office of Assessment, Accountability, and Research (OAAR), the OSP has developed the TEACH IEP website. This new site offers resources specifically targeted to meet the needs of special educators and to serve as a 21st century communication tool for the development of standards-based IEPs. The website also makes training tutorials, webinars, and self-training modules available to special educators and administrators, as needed, for ongoing professional development. Another newly initiated component of the infrastructure supporting the West Virginia Online IEP is the establishment of county-level core teams to provide local management and a digital Help Desk system to manage questions and concerns that must be referred to the team at the WVDE.

5.6 No Label Pilot (Alternate Identification and Reporting) Project

In 2008, the OSP, in consultation with the ED Office of Special Education Programs, initiated the Alternate Identification and Reporting (AIR) project in 24 schools representing six West Virginia school districts. The purpose of the four-year project is to explore and evaluate a model of eligibility for special education absent the assignment of a specific disability label. AIR project goals include the establishment of student-centered, needs-based special education service delivery, removal of potential stigmas and low expectations associated with labeling, and contribution to the national dialog addressing early intervention and RTI. The OSP continues to provide technical assistance and professional development to participating schools and will use program evaluation information and data to consider a statewide scale of AIR processes and practices for special education eligibility.

5.7 Closing the Achievement Gap Program

West Virginia House Bill 4669 identified 39 schools that had high poverty, high minority, and low achievement. Funding was set aside to assign a Closing the Achievement Gap (CAG) liaison (academic coach) to each school as part of an initiative called Closing the Achievement Gap Professional Development Demonstration Schools. Each CAG coach follows the Plan-Do-Study-Act model, which involves hundreds of hours of professional development, and each coach serves approximately three schools. Since the inception of this program, one school won the 2008 Panasonic School Change Award (one of six awards given nationally), and a second school was in the top 21 to win the Panasonic award. The first five years of funding for this program ended in 2009. A progress report on the CAG Professional Development Demonstration Schools program was issued in 2007, and a follow-up WVDE internal evaluation will be completed in 2010.

5.8 Special Education Monitoring System

Each state has a responsibility, under federal statute and regulations, to have a system of general supervision that monitors the implementation of the Individuals with Disabilities Education Improvement Act of 2004 (IDEA) by LEAs. The system should be accountable for enforcing the requirements and ensuring continuous improvement. As stated in the IDEA, the primary focus of federal and state monitoring shall be on improving educational results and functional outcomes for all children with disabilities and ensure that states meet program requirements, with a particular

emphasis on the requirements that are most closely related to improving educational results for children with disabilities.

The IDEA emphasizes that integrated monitoring activities should focus primarily on (1) improving educational results and functional outcomes for all children with disabilities; and (2) ensuring compliance with Part B[4], with particular emphasis on those requirements that are most closely related to improving educational results for children with disabilities. Multiple data sources and methods are used to monitor every LEA, every year. Data is reviewed and publicly reported annually and certain State Performance Plans (SPP) indicators require a review of data for all LEAs each year with subsequent reviews for LEAs that fail to meet the state's criteria.

Monitoring reviews may be conducted on-site or off-site, and on-site focused monitoring activities are geared toward identifying areas in which there can be improved performance as well as correcting noncompliance, as appropriate. There are a number of monitoring activities the OSP must engage in as part of meeting the general supervision requirements. The OSP places equal focus on meeting the compliance requirements and ensuring growth in the performance of students with exceptionalities. The OSP is explicit in the expectations, attempting to support districts, while continuing efforts to assist districts in the improvement process.

The West Virginia Compliance Monitoring System includes various monitoring activities which occur either annually or on a four-year cycle. All districts are required to participate in the annual desk audit. Each district also receives an on-site monitoring visit no less than every four years and is expected to participate in the activities described in these procedures. There are four formal monitoring processes conducted. West Virginia must implement the following ED Office of Special Education Programs verification and correction requirements:

(1) Compliance On-Site Monitoring: Occurs on a four-year cycle and is comprehensive. This activity is conducted through an on-site visit in the selected districts. The monitoring team consists of WVDE staff and other educators determined by the lead monitor. Districts selected for a Free Appropriate Public Education on-site monitoring will engage in pre-monitoring activities, on-site monitoring activities, and the corrective improvement process.

(2) Annual Desk Audit: Completed each year as a review of the SPP indicators, both performance and compliance. Fourteen of the 20 SPP/Annual Performance Report (APR) indicators are based on the data collected and are required to be publically reported on the District Data profiles website. Districts will receive written notice regarding compliance indicators not met with 100% accuracy and will be informed of corrective action. If targets are not met, the LEA must submit an improvement plan.

(3) Focused Monitoring: An on-site monitoring process where a district may receive a visit based on an identified need or other data brought to the attention of the OSP. This process may occur concurrently with a comprehensive on-site monitoring visit or outside of that process. A focused monitoring visit will drill down within the district to identify root causes and solutions to an ongoing issue, either compliance, performance, or both. Each focused monitoring visit is individualized to the district and the situation.

[4] Children and youth (ages 3-21) receive special education and related services under IDEA Part B.

(4) Dispute Resolution Process: The dispute resolution process includes complaints, mediations, and due process actions. The dispute resolution processes regularly reviews issues raised and uses a continuum of resolution options to resolve disputes as early as possible. Dispute resolution data identifies patterns or trends of implantation of local policies and procedures to inform corrective actions and improvement activities through targeted technical assistance and professional development.

5.9 Elementary and Secondary Education Act Monitoring System

The WVDE conducts consolidated monitoring of federal programs with the purpose of increasing the overall efficiency and effectiveness of the process for improving achievement for all students, while ensuring compliance with federal regulations. The WVDE disseminates funds to local education agencies (LEA) and eligible entities under the Elementary and Secondary Education Act (ESEA). It is the responsibility of the grant recipient (grantee) to meet the requirements of all Titles funded under this Act.

The goals established for the WVDE monitoring process include the following:

- ✓ To ensure compliance with the federal monitoring requirements of the Elementary and Secondary Education Act (ESEA) Title I programs
- ✓ To promote student achievement
- ✓ To provide recommendations for professional development, technical assistance, or enforcement of corrective actions

Specific components of the monitoring system include (1) an on-site monitoring visit conducted in the Title I schools and the district office to verify data for ensuring compliance, (2) interviews with selected persons, and (3) the exit conference and the monitoring report.

Monitoring teams, consisting of WVDE Title I staff, conduct periodic on-site reviews in a three-year cycle. However, monitoring for specific issues and/or programs may be conducted at any time at the discretion of the WVDE. An entrance conference is conducted with the grantee's designated personnel. The purpose of the visit and the planned activities are reviewed during the conference. A summary of the district data analysis is led by the monitoring team leader (WVDE Title I Coordinator). District administrators are asked to participate in a discussion of the district initiatives being implemented for the improvement of student achievement and the coordination of federal funding.

School on-site visits are conducted as part of the consolidated monitoring process. Verification of the implementation of the compliance components at the school level is reviewed. Recommendations for Title I program improvement are included in the monitoring reports.

Interviews with selected persons are conducted, either individually or as a group, for the purpose of verifying and gathering information. Interviews are conducted at the LEA and the school sites. Federally funded academic coaches and/or technology integration specialists are asked to participate in the interviews.

The exit conference provides the LEA with an opportunity to clarify information gathered in the interviews and/or the review of documentation. Members of the monitoring team meet with the superintendent and/or designated grantee personnel to discuss the information gathered during the monitoring visit. Preliminary information regarding commendations, recommendations, and findings is discussed during the exit conference.

A written monitoring report is issued to the grantee by the WVDE within 30 business days of the exit conference. Each member of the monitoring team submits information pertaining to the programmatic area(s) in which the individual conducted the on-site review. The team leader coordinates the preparation of the final report. This report identifies programmatic commendations, recommendations, findings, and/or areas in need of further professional development and/or technical assistance. Any findings identified in the report include the required corrective action and a date by which such correction action shall be implemented. Technical assistance plans may be developed to assist districts with compliance. For more information, see the WVDE Title I website.

5.10 Cognitive Tutor

Thirty-seven counties in West Virginia have been using the Cognitive Tutor Program during the past two years (17 of these counties are new to Cognitive Tutor). It is a total program for Algebra I students. Studies have shown that high-needs populations have much success with this program. Students in the 17 new counties received pre and posttests to evaluate the effectiveness of the program. Counties have received approximately $9,000 per school from the Benedum Foundation. During this yearlong program, 60 percent of program time is spent in the classroom with teacher instruction, and the other 40 percent is spent with the computer program. Teachers deliver the lesson and students then have time to practice their skills on the computer, with the cycle recurring weekly. During the 2008-2009 school year, two districts piloted the use of a related product, Bridge to Algebra, for use with eighth grade students and/or algebra/geometry preparation. Summers and Wayne counties are now using the Bridge to Algebra program. Grant funds are currently being sought in anticipation of providing hardware and software statewide.

As an outgrowth, the WVDE was awarded a Benedum Foundation Grant to help support a $350,000 initiative. Randolph and Harrison counties are being funded with algebra readiness technology-based materials for students and professional development for middle/high school teachers for a 20-month period. Evaluation information on the Algebra Readiness Initiative will be made available in fall 2012.

5.11 Math/Science Partnerships

The Math and Science Partnership (MSP) Program was created under the NCLB Act, the 2001 reauthorization of the ESEA. The MSP Program is intended to increase the academic achievement in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. Partnerships between high-needs school districts and the science, technology, engineering, and mathematics (STEM) faculty in institutions of higher education are at the core of these improvement efforts. Other partners may include SEAs; public charter schools; or other public schools, businesses, and nonprofit or for-profit organizations concerned with mathematics and science education.

Currently, the West Virginia MSP Program has two active partnerships located across the state. Eleven retired projects have completed their funding cycles. During the lifetime of the program, the MSPs have had an impact on approximately 450 teachers from 24 counties. Ten higher education institutions have partnered with the various projects.

5.12 State Arts Emphasis and Arts Alive!

To promote the incorporation of the arts into the state's rigorous 21st century curriculum, the WVDE has implemented the Arts Alive! program. This program has four major goals: (1) provide a statewide venue showcasing the excellence in arts achievement and exhibitions; (2) support developing and emerging arts programs in West Virginia public schools; (3) inspire local initiatives to connect arts experiences for all preK-12 students to 21st century learning goals; and (4) empower the greater West Virginia learning community as stakeholders in an arts-based learning experience, development, and celebration.

Each spring since 2007, outstanding student artists in dance, theatre, visual arts, and music from across the state have been featured at the WVDE's signature event to celebrate the arts achievement of public school children. The fifth annual Arts Alive! event was held at The Clay Center for the Arts and Sciences in Charleston on Friday, April 29, 2011, beginning with a lobby art exhibit and pre-show performance at 6:30 p.m. and the main showcase event at 7:00 p.m. The event was free to the general public. The Arts Alive! link on the WVDE website provides easy access to information about the showcase and provides teachers with the opportunity to learn more about the role the arts play in the 21st century classroom.

5.13 Financial Literacy Initiatives

The WVDE is committed to integrating financial literacy expectations throughout K-12 education. The following activities have been designed to support this commitment:

- ✓ A weeklong project on entrepreneurship held at the 2007 Teacher Leadership Institute (TLI), in which every teacher was engaged in the establishment of a business and learned about gain, loss, purchasing, sales, income, choice, cost, and opportunity.
- ✓ Heavy emphasis was placed on personal and business finance at the 2006 and 2007 Social Studies Summer Institutes, which included many presenters and workshops conducted by national and local speakers from business, education, government, and professional organizations.
- ✓ The WVDE social studies coordinator has conducted several workshops for district teachers in which both financial literacy and global awareness were emphasized, especially how closely the two topics are connected.
- ✓ The WVDE social studies coordinator works with the West Virginia State Auditor's Office and West Virginia State Treasurer's Office to ensure that teachers are receiving educational materials and professional development in financial literacy, including investment and debt management.
- ✓ The WVDE social studies coordinator works closely with the Federal Reserve of Richmond and the National Council on Economic Education (NCEE) to bring the newest material and instructional strategies regarding all areas of K-12 financial education to the teachers.
- ✓ The WVDE social studies coordinator is working with a national committee on policies to ensure financial literacy programs in K-12 education.
- ✓ Presentations and workshops were conducted at both of the 2007 Principal's Academies.
- ✓ Instructional guides in personal finance have been created by teachers and posted on the Teach 21 website to provide K-12 classroom teachers with models of quality instructional design that include authentic performance in financial literacy across the

curriculum. The instructional guides for personal finance integrate social studies, mathematics, and language arts CSOs.

- ✓ Project-based learning units in personal finance have been created by teachers and posted to the Teach 21 website for the 12th-grade civics course in the social studies curriculum.
- ✓ Representative from both the West Virginia State Auditor's Office and the West Virginia State Treasurer's Office will conduct workshops with teachers at the 2011 Social Studies Summer Institute.

5.14 Global Awareness Initiatives

Social Studies Summer Institutes in 2007 and 2008 focused on global awareness and the development of a true understanding of globalization in the 21st century. Topics of these institutes included the following:

- ✓ Language
- ✓ Culture
- ✓ Economic decisions
- ✓ Citizenship
- ✓ Environmental issues
- ✓ Poverty
- ✓ Political issues
- ✓ Immigration
- ✓ Trade
- ✓ Employment

In addition, the Teacher Leadership Institute of 2007 held informative presentations during the day sessions, and the evening clinics were hands-on workshops that emphasized the true meaning of global awareness and the impact that each person, country, and region of the world has on others in all of the areas listed above.

Other related activities have included or will include the following:

- ✓ The Teacher Leadership Institute of 2008 provided a weeklong project-based learning experience to immerse teachers in global awareness and economic literacy. The focus was environmental economics.
- ✓ Presentations and workshops were conducted at both the 2007 Principal's Academies.
- ✓ The WVDE social studies coordinator has conducted several workshops for district teachers that emphasized both financial literacy and global awareness, especially how closely the two topics are connected.
- ✓ During the spring of 2008, a WVDE task force developed a global awareness school self-assessment continuum of implementation. The rubric defines global awareness using national and regional research and provides schools and classroom teachers with an opportunity to self-assess their current level of competency in the areas of international knowledge, skills, and disposition.
- ✓ The WVDE Office of International Schools in collaboration with the WVCPD presented two Immersion Academies in the summer of 2008. Participants were afforded the opportunity to explore global awareness, multiculturalism, and language immersion by participating in either the Passport to Japan or the Passport to Spain Immersion Academies. Individuals experienced interactive language immersion sessions while reflecting on the products, perspectives, and practices of other cultures.

- ✓ In the summer of 2009, two Go Global Academies were presented to afford school teams an opportunity to integrate an international education project into their existing programs. Through collaboration with the WVCPD, the Office of International Schools developed the Go Global Academies to assist teachers in preparing students to understand and interact within a culturally diverse and globally interconnected world. During a dedicated two-year process, the Go Global program facilitates the creation of school professional learning communities specifically focused on international content and the development of international learning opportunities for teachers and students. In summer training, Go Global participants are immersed in an interdisciplinary project-based learning unit conducted in the language of Japanese or Spanish while simultaneously receiving a foundation in international education. Participants work together to strategically plan a similar schoolwide project that they will implement in an ongoing process throughout a two-year period. Teams receive assigned mentors and ongoing technical services to assist with the process.
- ✓ The 2010 Longview Foundation Grant for multistate initiatives on critical issues provided the opportunity for the states of West Virginia, Washington, and New Jersey to work together toward the following project goals:
    - Initiating and fostering a lasting relationship among the three states focused on the common goal of preparing students to be responsible global citizens
    - Collaborating to develop resources using the Global Competence Matrix created through EdSteps and to provide professional development opportunities for educators
    - Attracting teachers who have not previously participated in workshops focused on developing global competence through a Web 2.0 presence. The WVDE Office of International Schools will use the Go Global Academy as a platform to initiate the grant project.
- ✓ The Teacher Leadership Institute of 2009 provided clinics to model the integration of globalization in the 21st century. Teachers were given examples of project-based learning projects that integrate globalization, and the project-based units designed by the Institute participants were to be written in a 21st century context using 21st century content, learning skills, and technology tools objectives.
- ✓ The WVDE social studies coordinator is a member of the Global Competence Workgroup, a CCSSO initiative funded by the Bill and Melinda Gates Foundation. The initiative is building a national framework to guide and measure global competency among students in classrooms across the United States. This link provides access to explanations of the program and an overarching matrix that encompasses the essence of the program. In addition, scenarios reflecting global competence are provided to give classroom teachers guidance and relevant ideas for student inquiry. A professional development toolkit is in progress.
- ✓ On March 17-18, 2011, the Office of Title II, III, and System Support in collaboration with the WVCPD convened a follow-up Go Global Conference. A cohort of eight Go Global school teams from across the state attended this event to learn how to examine student work from a global perspective. Margaret Reed Millar and Kirsten Taylor from the CCSSO introduced participants to the EdSteps Global Competence Matrix and referenced the knowledge, skills, and dispositions needed to understand and act creatively on issues of global significance. Veronica Boix Mansilla, principal investigator from the Harvard Graduate School of Education's Project Zero, guided the teams through an interactive workshop that afforded the teachers an opportunity to assess collected student work for global competency. A new cohort of Go Global schools will be starting in the summer of 2011.

5.15 West Virginia Model for Positive School Climate

The West Virginia Model for Positive School Climate is based on the positive behavior model developed from Hazelden's *Respect & Protect: A Practical, Step-by-Step Violence Prevention and Intervention Program for Schools & Communities* and it is aligned with WVBE Policy 4373–Student Code of Conduct and the goals of the federal Title IV Safe and Drug Free School program. It provides strategies and practical guidance to help all schools create a positive school environment that promotes academic success. Positive school climate strategies focus on prevention, early intervention, reporting, parent and community involvement, and evaluation.

In partnership with the WVCPD, the WVDE is offering training and support to school teams who wish to implement the West Virginia Model for Positive School Climate. Additionally, in October 2010, West Virginia received a Safe and Supportive Schools (S3) grant from the ED to improve school climate in the state's 23 identified low-performing high schools. These schools will receive intensive technical support and financial resources for four years to develop interventions aimed at improving school climate.

5.16 Coordinated School Health

West Virginia implements the Center for Disease Control's Coordinated School Health program model. The program brings together the resources of families, schools, and communities to help students stay healthy and make the most of their educational opportunities. The eight-component model, as described on the CDC website, includes the following:

1. Health education: A planned and sequential curriculum addressing multiple dimensions of health.
2. Physical education: A sequential curriculum that provides cognitive content and learning experiences in a variety of activity areas.
3. Health services: These services are designed to ensure access or referral to primary health care services and foster appropriate use of primary health care services.
4. Nutrition services: Qualified child nutrition professionals offer services that provide students with a learning laboratory for classroom nutrition and health education, and serve as a resource for linkages with nutrition-related community services.
5. Counseling, psychological, and social services: Counselors and psychologists provide individual and group assessments, interventions, and referrals to improve the health of students and the school environment.
6. Healthy school environment: Schools attend to the physical and aesthetic surroundings and the psychosocial climate and culture.
7. Health promotion for staff: Health assessments, education, and fitness activities encourage school staff to pursue a healthy lifestyle that contributes to improved health status, morale, and commitment to the school's overall coordinated health program.
8. Family/community involvement: School health advisory councils, coalitions, and broadly based constituencies for health build support for school health program efforts. Schools' activities solicit parent involvement and engage community resources and services to respond more effectively to the health-related needs of students.

Beginning in the 2010-2011 school year, each RESA has employed a Regional School Wellness Specialist (RSWS) to provide technical support and expertise to county school systems in the implementation of the Coordinated School Health model. This regional network of RSWSs is funded through a partnership between the WVDE and the WVDHHR. Their first year scope of work has focused on building the capacity of local wellness councils to function as a collaborative team that

can address the full continuum of health related and interconnected issues that impact student success.

5.17 LINKS Program

The Learning Individualized Needs, Knowledge, and Skills (LINKS) program is a framework for student advisement programs in West Virginia that was piloted during the 2008-2009 school year. LINKS, which is easily adapted to each school's design, culture, and other schoolwide programs, provides a structure for the delivery of specific academic, career, and personal/social content standards to every student in West Virginia. LINKS fulfills the requirements of WVBE Policy 2510, stipulating that every student should have an adult mentor who takes an interest in the student's success and WVBE Policy 2315, which outlines requirements for teacher/advisor training in curriculum requirements, mentoring and advocating for students, and developmental guidance.

The primary purpose of the LINKS advisement programs is to use personal relationships between students and adult advocates to advance student learning and development and encourage student success in a proactive and deliberate manner. The LINKS program specifically seeks to foster relationships between and among students, school staff, parents, the community, businesses, and other organizations to enhance each student's educational experience by connecting rigor, relevance, and relationships. LINKS can help students build dreams, give hope for the future, and connect students with caring adults.

In addition to fostering the interconnection of rigor, relevance, and relationships, LINKS promotes the systemic change that is required in 21st century schools to prepare students for the global workplace. In the changing world of the 21st century, students must be able to solve problems, think critically, communicate effectively, and work in teams. LINKS provides a framework for meeting these challenges by outlining strategies for involving schools, parents, and the business community in a collaborative effort. LINKS program elements—particularly the relationship between student and adult advocate/mentor—seek to deliberately, strategically, and broadly foster students' sense of belonging to the school and community, help students develop and enhance life skills, assist them with decision making, and provide them with guidance for career planning in the 21st century. LINKS resources are available online.

5.18 Model High Schools That Work Sites

In August 2006, 16 high schools were chosen as pilot sites for the 21st Century HSTW program. The schools are receiving targeted technical assistance as they incorporate 21st century skills into an enhanced model of SREB's school improvement initiative, High Schools That Work. The goals of the initiative are for the selected high schools to create, implement, and sustain school structures, policies, and practices related to learning culture; structures for supporting student learning; 21st century teaching and learning; literacy and numeracy; and, across the curriculum, transitions from middle school to high school and from high school to postsecondary education and careers.

The initiative includes 10 key practices, which provide direction for comprehensive school improvement. These practices are: (1) higher expectations, (2) career/technical studies, (3) academic studies, (4) program of study, (5) structured experiential learning, (6) teachers working together, (7) students actively engaged, (8) guidance, (9) extra help, and (10) keeping score. This link provides further clarification of these key practices.

The WVDE staff worked with Edvantia, Inc., a not-for-profit educational research and development organization, to conduct baseline instruction and learning appraisals during the 2006-2007 school

year. Ongoing meetings between school staff and WVDE liaisons monitor the schools' efforts, and a series of professional development sessions has been conducted (project-based learning, effective questioning techniques, comprehensive guidance and advisement) to focus on common issues. Instruction and learning appraisals were conducted during the late fall and early winter of 2008 to assess implementation progress; appraisal team members included WVDE staff and administrators and teachers from the 21st Century HSTW sites. HSTW assessments were re-normed in terms of benchmarks and cut scores in 2008. In 2010-2011, a final series of instruction and learning appraisals will be conducted in all model schools to assess progress.

5.19 Project Lead the Way

The WVDE has implemented a program called Project Lead the Way (PLTW), which includes a pre-engineering program designed to encourage students to enter engineering fields, in 16 high schools and career technical centers across the state. The project exposes students to a hands-on, project- and problem-based approach to the development of knowledge and skills in engineering, biomechanics, aeronautics, and other applied math and science arenas. The goal is to demonstrate the real-world relevance of math and science in order to develop students' understanding of how the skills they are learning in the classroom can be applied to everyday life. The national PLTW website describes how research has shown that schools practicing activities-, project-, and problem-based learning experience an increase in student motivation, an increase in cooperative learning skills and higher-order thinking, and an improvement in student achievement. To date, 17 PLTW programs have been initiated in high schools and technical centers statewide.

5.20 High School of Business

In 2006, the WVDE implemented the High School of Business program, which prepares students for entry into university-level colleges of business. This accelerated, project-based curriculum includes rigorous work that encourages student to become involved with real business problems and concepts. High School of Business is designed to integrate academic concepts into courses that explore wealth management; leadership; and basic principles of economics, finance, marketing, management, and business strategies.

5.21 Careers in Education

West Virginia's Careers in Education program is an innovative approach designed to attract talented young people to the teaching profession through a challenging introduction to 21st century teaching and learning. The program seeks to provide high school students with insight into the nature of teaching, 21st century instructional tools and learning skills, and the critical issues affecting the quality of education in America's schools. The Careers in Education program is proving to be valuable coursework for secondary students who are interested in pursuing education as a career choice. Courses provide students with a broad perspective on the history, current issues, philosophy, and management skills used by a classroom educator. In addition to the Foundations in Education course, West Virginia's Office of Career and Technical Instruction added three courses: Human Growth and Development, Exceptionalities and Diversity, and Educational Psychology and Learning. Partnerships with higher education teacher preparation programs are being developed that will lead to advanced standing and college credit for completers of the Careers in Education program.

5.22 Online Learning Pilot for Secondary Mathematics

The Online Learning Pilot for Secondary Mathematics deployed a true online environment in Algebra 1 classes at South Charleston, Herbert Hoover, and St. Albans High Schools in Kanawha County. This pilot project was in place for six months and was closely monitored. It included continued support for the Cognitive Tutor software, Carnegie Learning Algebra 1 Digital Textbooks, Carnegie Learning 24/7 Math Help Tutor, and all necessary implementation services. This project has led to widespread use of online learning materials for secondary mathematics in a number of counties.

5.23 WESTEST 2 Logo Contest

The WVDE OAAR sponsored a student contest to design a logo for the new WESTEST 2. All public school students enrolled in Grades 3-11 were eligible to submit entries. More than 3,000 students submitted designs that were subjected to three levels of evaluation. Using a scoring rubric, a committee consisting of teachers, administrators, technology and communications experts, and the community evaluated the entries. One winner was selected at each grade level, and the overall winner was selected from this group. Crysta Long, a ninth-grade student at Tyler Consolidated High School, designed the winning logo. The other grade level winners were

- Daisy McCune, Grade 3, Divide Elementary
- Emma Pino, Grade 4, Rosedale Elementary
- Emily McNeil, Grade 5, Woodsdale Elementary
- Bryan Stone, Grade 6, Hamilton Middle School
- Adam Church, Grade 7, Hedgesville Middle School
- Josh Chancey, Grade 8, Ripley Middle School
- Victoria (Tori) Shepherd, Grade 10, Parkersburg South High School
- Sonya Mullins, Grade 11, Matewan High School

The students were recognized by members of the WVBE, and then-State Superintendent, Dr. Steven Paine, who presented each with a digital camera; the overall winner also received a laptop computer. Every student who entered the contest received a certificate of recognition. Crysta Long's logo is being used on all WESTEST 2 related documents.

5.24 Foreign Language Initiatives

The Language Trekkers Pre-K World Language program provides pre-K teachers with a curricular resource for introducing a world language to an audience of early learners. The program presents lesson plans based on common thematic enriched study projects that include world language sources aligned with the West Virginia Early Learning Standards Framework and State Curriculum. The lessons have been designed to be implemented in the classroom with flexibility and are intended to enhance an awareness of a second language for young children. Digital media resources have been developed for the languages of Chinese, French, Japanese, and Spanish. Pre-K teachers are encouraged to use the available materials, lesson plans, and activities as an enrichment resource in their planning. The program was piloted in the spring of 2009, with the complete program scheduled to be released through RESA coordinated professional development in the summer and fall of 2009.

The LinguaPod program is the result of an ED grant issued to the state of West Virginia for the purpose of expanding foreign language programs. LinguaPod is a digital media-based program

designed to introduce a world language to an audience of middle school learners. The program has been produced in the languages of Chinese, French, Japanese, and Spanish. Each language series consists of 10 contextualized episodes that follow the story of a foreign exchange student who comes to West Virginia. An accompanying set of curricular materials complements each language episode and provides opportunities for a classroom teacher to facilitate language learning activities. The program goal is to provide students with a concentrated exposure to a selected world language, allowing them to begin the process of developing active interpretive listening skills, and to foster appreciation for other cultures and languages. The program also affords students the opportunity to download program episodes to a personal MP4 video player from home for repeated listening and language input. LinguaPod was piloted in six West Virginia middle schools, with classroom implementation scheduled for the fall of 2009.

To nurture the growth of West Virginia's youngest 21st century learners, the WVDE is working to create opportunities for students to engage with language learning at earlier ages. When students are exposed to a second language at an early age, they have the opportunity to begin the lifelong process of developing proficiency in a world language in order to communicate and collaborate effectively in a globally connected society. Two specific WVDE initiatives are designed to address early language learners.

- ✓ Language Leaper Program: In August of 2009, the WVDE was granted one of only three SEA Foreign Language Assistance Program grants from ED to develop an elementary content-related and media-enhanced program for Grades K-5. The program is under development and has been piloted for the languages of Chinese and Japanese in Grades K and 1 during the 2010-2011 school year and will expand to Grade 2 for the 2011-2012 school year. The comprehensive program is tentatively slated for development in the languages of Chinese, French, Japanese, and Spanish. When fully completed, Language Leaper will provide an articulated elementary language program for West Virginia.
- ✓ STARTALK Summer Camp Program: Through funding provided by the National Security Agency, the WVDE and its partner, Monongalia County Schools, have presented the WVDE Language Leaper Immersion Summer Camp Program for elementary students. During the summers of 2010 and 2011, Monongalia County Schools elementary students in Grades K-5 have had the opportunity to participate in a two-week thematic and content-based summer camp experience in Morgantown, West Virginia. Students have developed initial Chinese proficiency as they engaged with program instructors and the newly developed media-enhanced West Virginia Elementary Language Leaper curriculum. Learners explored Chinese language and culture within the experience of contextualized content-based learning. Students documented their initial accomplishments and language proficiency and have had the opportunity to continue their learning in the fall through formal Chinese classes in Monongalia County public schools.

Through collaboration with the College Board, Hanban, and the National Council of State Supervisors for Languages Chinese Guest Teacher Program, the WVDE has endeavored to increase and support the number of critical need Chinese language programs within the state. Specifically, the number of programs in West Virginia has increased from four counties in 2007 (Barbour, Cabell, Kanawha, and Lincoln) to a total of 10 counties in 2009 (Barbour, Cabell, Greenbrier, Harrison, Kanawha, Lincoln, Mason, Monongalia, Putnam, and Wood). The WVDE supports these programs directly through the following:

- ✓ An annual state orientation for all of the Chinese guest teachers in August
- ✓ Ongoing technical assistance to local county administrators throughout the year to assist with application renewals/submissions, teacher acclimation, national reporting, and teacher training

- ✓ Visits/instructional observations of each Chinese guest teacher
- ✓ An annual winter meeting with program administrators and Chinese guest teachers to review progress, share Chinese language initiatives, and prepare for the forthcoming year

5.25 Building Bridges to Literacy

West Virginia's State Personnel Development Grant, Building Bridges to Literacy, is designed to improve reading achievement of students in Pre-K through Grade 12 and reduce inappropriate referrals to special education through professional development opportunities focused on building an infrastructure to support a tiered instruction model and the appropriate instructional expertise to support reading proficiency for all young children. The grant has four goals structured to support the different stakeholders in this work:

- ✓ Goal 1: Ensure that young children ages 3-5 years enter kindergarten with the necessary emergent literacy skills as a result of expanding literacy training for Pre-K teachers and providing parent training in early literacy skills.
- ✓ Goal 2: Increase the reading achievement of students with disabilities and other students at risk of identification through the implementation of a systematic model of professional development for teachers, administrators, and parents in Tier II and Tier III intervention across grades K-3 in all West Virginia schools.
- ✓ Goal 3: Extend the RTI process into middle and high schools to meet the needs of students with disabilities and others who demonstrate the need for targeted instruction and progress monitoring.
- ✓ Goal 4: Increase the retention of special education teachers through the recruitment and support of up to 15 new candidates per year for National Board Certification as Exceptional Needs Specialists.

5.26 FRAMEWORK for Literacy for Reading PreK-12

The FRAMEWORK for Literacy PreK-12 was designed as a 21st century tool to assist school teams in the identification of needs as they assess, plan, implement, and support funding for literacy programs. To ensure the development and implementation of a comprehensive literacy program that will prepare students with 21st century knowledge and skills, each school should have a Literacy Leadership Team. The team is composed of faculty members who represent the range of grades and curricula in the school. Each of the members should be highly skilled, motivated, and committed to improving literacy for all students. The Literacy Leadership Team is central to the school's literacy success.

The FRAMEWORK for Literacy PreK-12 is organized into four components, with a checklist of related elements coordinated to each component. The first three components, which define the instructional components of literacy, are the core, intervention, and independent/extension programs. The fourth component defines the critical element of infrastructure and includes professional development, leadership, technology, school climate, utilization of resources, evaluation, and staffing. The instructional components are often dependent on the funding and availability of infrastructural components. As plans and decisions are made to support literacy, schools and districts may utilize Title I, IDEA, Title II, federal stimulus funds, and/or state funds for both instructional and infrastructural improvements. The FRAMEWORK for Literacy PreK-12 will

serve as a guide and needs assessment to assist schools in the development and implementation of comprehensive literacy programs to ensure students are receiving a 21st century education.

The next logical step after the development of a framework was to engage stakeholder groups from across the state in a focused effort to improve literacy. In 2011, a statewide stakeholder group devoted to literacy was formed. This group is charged with developing a strategic plan that will bring focus to the literacy needs of all citizens within our state, birth to adult. Stakeholders represent public agencies, superintendents, principals, teachers, parents, and students. The work of this stakeholder group served as the foundation for a Striving Readers grant submitted to ED.

5.27 State Social Studies Fair

The West Virginia State Social Studies Fair is a culminating event that begins each year in social studies classrooms across the state. Students begin their journey to the state fair by researching a theme or concept that interests them. They complete their research, write an abstract, build a physical display, and write and deliver an oratory about their chosen topic. They must first compete within their school fair, after which the winners progress to the county. County winners proceed to the regional fair, and finally the regional fair winners proceed to the state fair. Since 2006, the WVDE has strived to align the social studies fair with the social studies curriculum standards. Rigor, relevance, technology integration, 21st century learning skills, and global competence have been emphasized. For more information about the fair, use the link above to view the goals of the fair, rules, judges' score cards, abstract, archived fair projects, winners' lists, and calendars.

5.28 School Improvement in Title I Schools

The WVDE received a $22 million federal grant for the purpose of providing funding to support school improvement efforts in Title I schools identified as in improvement, corrective action, or restructuring, and, for the first time, for secondary schools eligible for, but not currently receiving, Title I funds. These funds are being focused on "tiered" levels of schools identified by each state accepting funding. Tier I schools are defined as a state's persistently lowest-achieving Title I schools in improvement, corrective action, or restructuring. Tier II schools are the state's persistently lowest achieving secondary schools that are eligible for, but do not receive, Title I, Part A funds. Eligible LEAs may also use school improvement funds in Title I schools in improvement, corrective action, or restructuring that are not identified as persistently lowest-achieving schools and, if a state so chooses, certain additional Title I eligible schools ("Tier III schools"). Eligible LEAs may apply to serve any school on the state's eligibility list with a grant that can be renewed for up to two additional years through September 30, 2013.

5.29 Robot Algebra Support

The WVDE Robot Algebra Support initiative is housed on the West Virginia University (WVU) campus. The primary instructional components are Dimension M educational software, algebra materials related to robotics, and Teach 21 algebra materials. Twenty-five middle school teachers have been trained on these components and will implement them in their classrooms during the 2010-2011 school year. The Robot Algebra Project-Based Learning (PBL) project is creating new modules with fidelity to be added to the algebra mathematics curriculum and be posted on Teach 21 website. Controlled evaluation data of this project will also be available by fall 2011.

5.30 College Transition Mathematics

WVBE Policy 2510 states that "students in the professional pathway and college-bound students in the skilled pathway, who do not achieve the State assessment college readiness benchmarks for mathematics, shall be required to take a college transition mathematics course during their senior year." In keeping with this policy, representatives from the WVDE and HEPC assembled classroom teachers and professors of mathematics to establish college readiness benchmarks for mathematics. Using those benchmarks as a guide, a collaborative team of classroom teachers and mathematics professors developed objectives for the college transition mathematics course. The objectives are arranged in three clusters—Algebra, Algebra II, and Geometry/Trigonometry—and are aligned to the ACT College Readiness Benchmarks. To support instruction to meet these objectives, college transition mathematics units were created by a team of high school and higher education mathematics professionals. This team of writers provided four days of face-to-face professional development to more than 200 high school mathematics teachers on the implementation of the newly designed College Transition Mathematics Online Units. Thirteen presenters (five higher education faculty members and eight high school teachers) provided quality sessions on the units. High school mathematics teachers experienced the units as participants in an engaging, inquiry-based environment. Participants had the opportunity to explore the interactive java applets accompanying each unit during the computer lab sessions.

5.31 Science with Inquiry Modules and Problem-Based Learning Experiences

The Science with Inquiry Modules and Problem-based Learning Experiences (SIMPLE) program is a problem-based, inquiry-centered, hands-on professional development for elementary teachers and teachers of special education. SIMPLE is based on four kit-based science modules per grade level that are developmentally appropriate in the following science integrated disciplines: Life Science, Physical Science, and Earth Science. The instructional materials in the modules are intended not to replace textbooks already in the classroom but to augment texts with rich hands-on exercises integrating rigorous mathematics and science content. Each module takes the students through an in-depth study of the topic, highlighting key science concepts and relevant major themes. Assessment for learning will be embedded with measurement and accountability. Students will emulate real scientists. Teachers will be trained over the course of four years in content and pedagogy to deliver problem-based learning and inquiry-based lessons that develop creative elementary science students who will be critical thinkers and problem solvers with collaborative skills. The modules have been developed using the prototype from the Delaware Science Coalition and draws upon 10 years of research and resources from the West Virginia Handle on Science Project, a previous National Science Foundation-funded grant in West Virginia's RESA 6, and work with Marshall University's June Harless Center for Rural Educational Research and Development.

5.32 WV SenseAbilities

The WVDE OSP coordinates a federally funded statewide project that provides technical assistance to children, families, teachers, therapists, and others responsible for the education of children, ages 0-21, with combined vision and hearing loss. Formally known as the West Virginia Deafblind Project, the project was recently renamed SenseAbilities, serving West Virginia children with combined hearing and vision loss. Meeting the needs of the families and educators of children with low incidence disabilities is a challenge in a rural state like West Virginia. Materials, professional development opportunities, information, technology, educational resources, and other technical assistance specific to learners who have combined vision and hearing loss, their families, and their

educators are provided to early intervention agencies, schools, and community and state agencies by West Virginia's SenseAbilities project.

5.33 School-Wide Positive Behavior Support

The OSP provides ongoing support for School-Wide Positive Behavior Support (SWPBS), a decision making framework that guides the selection, integration, and implementation of the best evidence-based academic and behavioral practices for improving important academic and behavior outcomes for all students. West Virginia SWPBS schools organize their evidence-based behavioral practices and systems into an integrated collection or continuum in which students experience supports based on their behavioral responsiveness to intervention.

5.34 West Virginia Music Education

The Office of Instruction has begun piloting innovative approaches to the delivery of the middle school general music curriculum as the part of recommendations from the General Music Task Force. Four general music teachers have developed project-based learning units that focus on the use of technology and higher order thinking skills in Grades 6, 7, and 8. During the 2011-2012 year, 10 or more middle school general music programs will be selected to receive grants for program development and professional development for teachers using these innovative approaches. For more information on West Virginia's music education program, please visit the WVDE's music content page.

5.35 West Virginia Dance Education

The WVDE will be piloting a dance education project in up to 20 elementary schools during the 2011-2012 school year. Students at the 20 schools, yet to be selected, will receive instruction in dance once a week from a teaching artist. Lessons will focus on creative movement, cross-curricular connections, and health and wellness. More information on this initiative can be found on the WVDE's dance content page.

6. Technology Integration

The WVDE Office of Technology and Information Systems (OTIS) has established a State Educational Technology Plan 2007-2010 to support rigorous content and student achievement. It presents a comprehensive state educational technology plan to support the goals, policies, and standards of the WVBE and statutes of the West Virginia Legislature. The document also addresses the federal technology goals and objectives of the NCLB Act, the Schools and Libraries Program of the Universal Service Fund, and the goals and objectives of P21. The plan addresses 91 recommendations developed by four working committees composed of educators, parents, state and federal agencies, and business and community representatives, and the achievement of equity of access for all students and educators. Equity for all students and educators has been at the core of a major court case in West Virginia to provide a thorough and efficient education. Clearly, West Virginia must have technology integration that is accessible to all in order to teach and learn for a 21st century education and beyond.

6.1 Technology Integration Specialist Training—Expansion

The Technology Integration Specialist (TIS) program is designed to provide educators with the 21st century skills and tools necessary to assume the role of a technology integration specialist. The WVDE piloted the TIS program through Title II, Part D technology funds provided by ED. The program was so successful that it has now been expanded to include library media specialists, special educators, Title I teachers, and career and technical education teachers. Offices within the WVDE are releasing grant applications for TIS professional development. Participants in this initiative receive laptops and the equivalent of 40 days (320 hours) of professional development. Upon completion of the program, participants may apply for an advanced credential in instructional technology integration awarded by the Office of Professional Preparation.

During September 2007, more than 90 TISs (special education teachers, career and technical teachers, Title I teachers, etc.) were trained in the Universal Design for Learning, an approach to making all products and environments as usable as possible by as many people as possible regardless of age, ability, or situation. In addition to this training, the Appalachia Regional Comprehensive Center at Edvantia created an online Universal Design for Learning blog and book study for teachers. During the summer of 2008, approximately 100 West Virginia educators joined TIS cohort groups in the program areas of Enhancing Education Through Technology (EETT), Title I, Special Education, and Career Technology Education for training related to technology integration.

The TIS program continued the delivery of professional development related to technology integration for West Virginia educators in the 2010-2011 school year. Cohorts for 2011-2012 include special education, career and technical, and county-funded teachers. To date, the program has been completed by 120 special educators. Training is based on the ISTE NETS*T and includes all statewide resources (techSteps, SAS Curriculum Pathways, Thinkfinity, Writing Roadmap, Acuity) as well as web and copyright literacy, 21st century assessment, digital imaging content, podcasting, Web 2.0, and online learning development. Participants perform action research, participate in online learning communities, complete book studies and online classes, and create personal e-portfolios. The special education TIS program is formally evaluated by the WVDE OAAR.

6.1.1 T1 Project: Teaching Technology for 1% Population

It is anticipated that the WVDE will be transitioning to an online version of the Alternate Performance Task Assessment (APTA) in 2014-15. In order to assure that teachers and students are prepared for this transition, the Teaching and Technology for the 1% project (T1) was initiated. The goal of this project is to include integrating technology for students with significant cognitive disabilities by providing best practices approaches toward curriclum, instruction, and assessment for all students on alternate achievement standards. The T1 project collaborates with the RESAs and districts to identify mentors in the region, provide targeted professional development to identified mentors, specify best practice considerations for the 1% classroom, provide continuing web-based professional development opportunities for mentors, and coordinates with the RESAs and districts for sustained professional development for all teachers of the 1% population.

6.2 Intel

Education is critical to every citizen's ability to thrive in the knowledge economy. Today's students must develop such key 21st century skills as familiarity with information and communication technology (ICT), problem solving, critical thinking, and collaboration. They must also excel in mathematics, science, and engineering—the building blocks of technical innovation. Intel currently invests more than $100 million per year in more than 50 countries to promote education efforts in these arenas. The WVDE and Intel, both members of P21, have begun a professional development plan that will initially train 500 teachers in the Intel products. The Intel Foundation has also awarded the WVDE a $100,000 grant through its Intel Teach Program. The program provides two courses for teachers—Essentials and Teaching Thinking with Technology—and a Leadership Forum for administrators.

The Intel Teaching Thinking with Technology course focuses on three free and robust technology tools, plus new methods of learning and assessment. This course helps teachers modify old lesson plans that emphasize facts into new, engaging lesson plans that emphasize thinking and reasoning. Professional development is accomplished via a train-the-trainer model. There are three levels within the Teaching Thinking with Technology course: Senior Trainer, Master Trainer, and Participant Teacher.

Expansion of the Intel program added additional grant dollars from Intel and additional courses for educators. The Essentials course was revised by Intel, and new trainings took place for Senior Leaders. The WVDE began delivery of the revised course to educators during the summer of 2008. In 2009, Intel added a new course, Elements, to be piloted by the WVDE during the summer. Professional development for Essentials and Teaching Thinking with Technology is ongoing. In 2010, the WVDE piloted another new Elements online course offered by Intel with the 2010 TIS cohort groups.

6.3 Oracle ThinkQuest

In August 2007, the WVDE and Oracle formed a partnership designed to help teachers better prepare students for the 21st century. It gives educators the opportunity to use online resources and have access to protected intellectual property.

ThinkQuest (formerly known as Think.com) is a protected, online learning community used by 300,000 students and teachers in 48 countries worldwide. It has been embraced by educators as an effective way to engage students while teaching fundamental skills in project management,

research, teamwork, web publishing, collaboration, and writing. The online learning platform enables teachers to integrate learning projects into their classroom curriculum and helps students to develop 21st century skills. Teachers and students have their own personal webpage space, and teachers can build projects within the accompanying project space. The site is safe and secure from outsiders, yet offers a means for classrooms to collaborate with others down the hall or on the other side of the world.

6.4 Thinkfinity

The WVDE partnered with the Verizon Foundation to roll out Thinkfinity, which provides free 21st century learning resources for educators, parents, students, and after-school program providers. Thinkfinity offers more than 4,000 lesson plans, which will soon be aligned to the West Virginia CSOs, and more than 55,000 student interactivities, movies, websites, and other educational content provided by national organizations. The content is organized into several subject areas, including arts integration, economics, humanities, mathematics, language arts, science, geography, American history, and literacy.

To provide 21st century learning resources to ultimately improve student achievement, the West Virginia Thinkfinity professional development goals include having one national cadre member in the state; establishing certified teachers in each RESA area, the WVCPD, and the WVDE; establishing one field trainer in each school; and providing professional development to 20,000 educators, parents, administrators, and community leaders.

Thinkfinity field trainers in West Virginia conducted more than 185 training sessions across the state in 2008, and four of the trainers were selected as Thinkfinity Field Trainers of the Month from among thousands of trainers nationwide. Daton Dean, Phoebe Levine, and Mehdi Seyedmonir, all from West Virginia State University, received the honor in September. Sharon Stump at Richwood Middle School received the award in August. The trainers of the month are chosen based on how many people they train and the scores received from attendees. Of the 24,026 educators in West Virginia, 3,385, or 14 percent, had been trained to use Thinkfinity by the end of 2008.

In November 2008, the WVDE received additional funding from Verizon to train about 100 field trainers and about 2,100 users, including current teachers and future teachers enrolled in education preparation programs at several West Virginia colleges. The grant also allowed the WVDE to align its CSOs with Thinkfinity content, a first for the program.

6.5 West Virginia Virtual School

The West Virginia Virtual School was created by legislation on July 1, 2000, to offer high-quality educational courses to students via Internet technology. WVBE Policy 2450 was expanded October 18, 2000, to establish requirements for distance, online, and technology-delivered learning programs. The West Virginia Virtual School Handbook documents the history of the virtual school, identifies the various roles of individuals associated with the virtual school, and summarizes relevant policies and procedures.

The reasons for requesting virtual school courses can include expanding the range of courses and opportunities for students, filling the need for qualified teachers, providing low-incidence courses where enrollment numbers do not justify assigning a teacher, resolving scheduling conflicts that prevent students from taking a course when it is offered, and providing options for credit recovery. The courses that appear in the course catalog have been reviewed by a team of content specialists. The SREB's Standards for Quality Online Courses and Standards for Quality Online Teaching are

used as benchmarks for course approval. The courses align with the corresponding West Virginia CSOs and all courses provide online instructors who guide students through the learning process.

Students enrolled in courses through the West Virginia Virtual School have the opportunity to learn and use a variety of 21st century learning skills and technology tools, including communications via the web, e-mail and instant messaging, information access and evaluation, self-direction, time management, critical thinking, and problem solving.

6.6 21st Century Tools for 21st Century Schools Technology Initiative

Part of ensuring that West Virginia students receive a 21st century education is providing the necessary resources to meet the needs of 21st century learners. To acquire 21st century skills, students and teachers must have access to the appropriate technology tools and resources so they can access information; solve problems; communicate clearly; make informed decisions; acquire new knowledge; and construct products, reports, and systems.

The 21st Century Tools for 21st Century Schools technology initiative, codified by the West Virginia Legislature in the 2007 session, provides for 21st century instruction and learning in all West Virginia public schools. By providing a standards-based technology infrastructure supported by quality professional development for educators, the initiative helps students develop proficiency in 21st century content, technology tools, and learning skills needed to succeed and prosper in a multifaceted, technology-driven world. Twenty-first century technology and software resources are provided to students in Grades pre-K through 12 to help meet the goal that West Virginia high school graduates will be prepared fully for college, other postsecondary education, or gainful employment. Teachers receive professional development in aligning technology resources and assessments with standards and curriculum to help students attain proficiency in academic content and 21st century skills.

The Tools for Schools (TFS) initiative is a combined program previously known as the Basic Skills/Computer Education Program for K-6 students and the SUCCESS (Student Utilization of Computers in Curriculum for the Enhancement of Scholastic Skills) Initiative for students in Grades 7 through 12. Both programs had been studied and documented by researchers as providing a positive impact on student achievement, student learning capacity, and student development of specific skills. Design of the 21st Century Tools for 21st Century Schools initiative incorporated the success factors delineated in these research projects, as well as focusing on providing the necessary resources for 21st century learners to learn relevant and rigorous academic content and acquire information and communication skills, thinking and problem solving skills, interpersonal and self-directional learning skills, and proficiency.

Through the TFS initiative, more than $15 million was allocated directly to schools in 2008-2009 to purchase hardware, software, staff development, and technical support essential to the successful integration of technology into the curriculum. These funds, allocated by the West Virginia legislature on a per-pupil basis, were used to purchase more than 7,500 laptop and desktop computers, more than 700 interactive whiteboards, more than 600 days of professional development, cabling and network infrastructure, dedicated technical support help desk services for all elementary and secondary schools, and Symantec antivirus and security software for more than 275,000 computers. With the coordination and support of the WVDE Office of Technology, counties purchased equipment and services from the statewide TFS elementary and TFS secondary contracts, held by IBM and Pomeroy respectively, based on needs identified in each district's five-year strategic technology plan. More information may be obtained by visiting the WVDE TFS project Wiki page.

6.7 Writing Roadmap 2.0 - Formative Assessment

In the 2008-2009 school year, the WVDE began providing schools with Writing Roadmap 2.0—formative writing assessments that offer students unlimited opportunities to improve their writing skills and better prepare for life in the 21st century. All student responses are electronically scored and returned to students for review and to teachers as evidence of student performance.

Based on the results of a 2006-2007 detailed study, West Virginia students/schools that participated in online writing practice sessions increased their performance on the 2007 Online Writing Assessment. This is important because Writing Roadmap 2.0 and the Online Writing Assessment have different rubrics and scoring engines. Subsequently, the WVDE purchased Writing Roadmap 2.0 for all students in Grades 3-11 for the 2008-2009 school year. Writing is a crucial skill for success in the 21st century world and a necessary skill in achieving college readiness. Additionally, research indicates that students are more engaged and write longer essays online than they do using paper and pencil.

The goals of Writing Roadmap 2.0 are as follows:

- ✓ To strengthen student writing skills
- ✓ To encourage the writing process at all grade levels
- ✓ To establish a platform where students can be guided through the writing process while writing essays online
- ✓ To better prepare students for state and future national online writing tests, (e.g., NAEP online writing in 2011)
- ✓ To provide a program that gives instant feedback on student writing in the analytic writing dimensions:
  - Ideas and Content
  - Organization
  - Voice
  - Word Choice
  - Conventions
  - Fluency
- ✓ To provide instructional hints, including grammar, spell-checking, and word choice
- ✓ To provide teachers with a program where they can create an unlimited number of their own prompts to be automatically graded
- ✓ To diminish the burden of teacher time spent reading and scoring essays
- ✓ To provide teachers with detailed reports on student and group proficiency and writing gains

The following link provides extensive information about the Writing Roadmap 2.0: http://www.ctb.com/ctb.com/control/productFamilyViewAction?productFamilyId=459&p=products.

6.8 Technology Integration Certification

The Office of Professional Preparation created a credential for the TISs. The requirements to acquire and renew the credential, which is added on to a teaching certificate, include completion of 40 days (320 clock hours) of professional development credit related to technology integration programs offered or approved by the WVDE. The TIS is a type of academic coach, specifically tied to providing professional development and technical assistance to teachers to integrate technology

into the curriculum. The TISs model instruction for teachers, support instruction for teachers, provide resources, and assess weaknesses of the school.

6.9 e-Learning for Educators Online Professional Development

The e-Learning for Educators initiative is funded by an ED Ready to Teach grant involving eight states (AL, DE, KY, MS, MO, NH, PA, and WV). The central goal of the initiative is to establish an effective and sustainable model of online professional development that will help address statewide teacher quality needs and have an impact on student achievement. Since June 2006, more than 3,000 West Virginia educators have completed e-Learning for Educators professional development courses.

The West Virginia e-Learning for Educators program will make available more than 50 e-learning workshops, each of which is standards-based and comprised of seven sessions requiring approximately 45 hours of work time by the participating educators. These workshops address a wide variety of topics across preK-12 grade levels and subject areas, including universally applicable content such as Finding the Best Educational Resources on the Web and Differentiating Instruction to Accommodate Learning Styles. Also included is content for specific grades and subject areas, such as Helping Struggling Readers Improve Comprehension and Using Technology in the Elementary Math Class.

6.10 The WVDE Online Professional Development Catalog

WVDE professional development opportunities are accessible to all West Virginia educators. The professional development calendar features the following information: session name, description, location/lodging, date, cost, provider, available course credit, and audience.

6.11 WVLearns

Via the WVLearns gateway established in 2004, the WVDE realizes its vision of creating and centralizing many learning options and resources for students, parents, teachers, school personnel, and WVDE staff. WVLearns provides the electronic delivery methods by which a wide variety of content can be developed and disseminated to appropriate audiences. The content varies from just-in-time tutorials designed to target specific skills and knowledge to complete courses for K-12 students, teachers, and personnel. A new feature of the e-Learning platform, the Learning Object Repository, enables organizations to effectively manage and share content across institutions, programs, courses, and sections. Learning objects based on the West Virginia Virtual School Spanish courses are currently being developed and are available for use in face-to-face classrooms in West Virginia. Electronic portfolios (ePortfolios) help the WVDE assess users' progress toward learning outcomes, technology integration, and shared learning and collaboration.

6.12 Educational Technology Standards for Teachers

Revised in 2008, the West Virginia Educational Technology Standards for Teachers in WVBE Policy 5100 have been modeled after the NETS*T promulgated by ISTE. The revised standards identify the knowledge and skills that teachers must have in order to design, implement, and assess learning experiences that engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. During the summer of 2009,

institutions of higher education were invited to participate in the Statewide Technology Conference to develop ways by which these standards can be introduced to pre-service teachers.

6.13. The Big Picture

The WVDE created a site on Teach 21 titled The Big Picture, which provides an analysis of West Virginia's 20th Century CSOs leading to the development of the new 21st Century CSOs. This site presents in-depth reports on the West Virginia 21st Century CSOs, learning skills, and technology tools as well as specific indicators of quality, including depth-of-knowledge levels and integration of 21st century emerging content: financial and economic literacy, global awareness, and civic literacy. The Big Picture also provides stakeholders with focused resources to support 21st century standards-based curriculum; identifies CSOs, learning skills, and technology tools aligned with the focused resources; and identifies examples of assessments with focused resources.

6.14 Professional Teaching Standards and Second Life

The new West Virginia Professional Teaching Standards have a Second Life application affiliated with the standards that will allow the user to become familiar with the standards, see the progression of instruction from 20th century to 21st century, and gain experience in a Second Life environment.

7. 21st Century Balanced Assessment

A balanced assessment system includes a combination of summative, benchmark, and formative classroom assessments. Professionals at all levels must evaluate and implement assessments based on their intended purpose and appropriate use. All assessments provide evidence of student learning, which must be clearly communicated to the intended users in order to assure student success. Assessments must measure more than knowledge acquisition. A balanced assessment system must measure information and communication skills, thinking, reasoning and innovation skills, performance and productivity skills, and product development through the use of multiple measures. Assessment systems will increasingly utilize technology as a means of test administration, reporting, record keeping, and monitoring student progress.

The WVDE is increasing the rigor of its student assessment program to measure a full range of knowledge and skills defined in the content standards by incorporating multiple approaches to student accountability, improving record-keeping on crucial learning outcomes, and developing school certification in 21st century learning. Assessments are aligned to the content, rigor, context, and learning tools of the 21st century as defined by P21. The WVDE has designed a comprehensive balanced assessment system that goes beyond summative assessment to become a tool that also elicits data that inform instruction. The WVDE continues to develop and refine summative assessments that measure student achievement after the learning, but the comprehensive balanced assessment system now includes benchmark assessment and formative classroom assessment as primary tools purposed to redirect and adjust instruction during the student learning process.

Formative classroom assessment is a strategic part of the planning-instructing-assessing cycle during learning that provides crucial information to both teacher and student. Formative classroom assessment provides specific, timely feedback to both teachers and students. Teachers use these data to plan for the next steps in instruction; students use these data to monitor their own learning and set goals for improvement.

7.1 WESTEST 2

In 2007, the WVDE entered into a contract with CTB/McGraw-Hill to develop the next iteration of the WESTEST, called WESTEST 2, which is aligned with the revised CSOs that include 21st century content, rigor, context, and learning skills. The purpose of WESTEST 2 is to measure student mastery of the CSOs and thinking skills, including problem solving, creative thinking, and information and communications skills. The assessment results are used to redirect instruction and assist in school improvement efforts in reading/language arts, mathematics, science, and social studies. Additionally, WESTEST 2 results are used to calculate accountability to meet the NCLB accountability requirements in Grades 3-8 and 11 in reading/language arts and mathematics. WESTEST 2 was field-tested in the fall of 2008 and became the official state standardized test in the spring of 2009. In the winter of 2010, the 2009 WESTEST 2 results were used to increase the rigor of both the cut scores and the achievement level descriptors. Federal peer review documents were completed and submitted in the winter of 2010. Development of WESTEST 2 science for Grades 10 and 11 began in 2009 after the corresponding 21st century CSO revisions were completed. Sample test items are available at http://wvde.state.wv.us/teach21.

7.2 Predictive and College Readiness Assessments

Students in Grades 8 and 10 will take ACT predictive tests (EXPLORE in Grade 8 and PLAN in Grade 10) in the areas of English, mathematics, reading, and science to determine college readiness and predict performance on the ACT college admission test. Results are used to improve student college readiness.

Grade 11 students will be administered a WESTEST 2 to determine college readiness in mathematics. The assessment will be designed around the college readiness consensus standards developed by mathematics educators from higher education, high schools, and the WVDE. The HEPC and WVDE will determine a college readiness benchmark score for WESTEST 2. Eleventh-grade students who score above that level will be considered college ready, while those who fall below the college readiness score will be provided coursework to build their college readiness skills. The college readiness score has been operationalized as Mastery. In Grade 12, the students who fall below Mastery will be enrolled in a college transitions math course. As part of this course, students will be tested to assess their math readiness for college and careers.

7.3 Writing Assessment

The West Virginia Writing Assessment, or WESTEST 2 Online Writing, is a criterion-referenced test of the West Virginia Writing Standard and the related objectives, which are part of the West Virginia CSOs by grade level. The purpose of this assessment, which includes versions for Grades 3 through 11, is to promote the improvement of communication and writing skills of students in all grades by assessing narrative, descriptive, persuasive, and informative passages and prompts. The writing sample is assessed using analytic scoring based on a six-point rubric, which includes the following analytic traits: organization, development, sentence structure, word choice/grammar usage, and mechanics. Development of the WESTEST 2 Online Writing Assessment began in 2006. The assessment, which was piloted in the fall of 2007 and field-tested in the spring of 2008, became operational in the spring of 2009. Writing rubrics for WESTEST 2 are available online.

The WESTEST 2 Online Writing results are being used to make instructional decisions and assist in school improvement efforts in reading and writing. Additionally, the writing scores are incorporated into the overall reading/language arts results. The WESTEST 2 reading/language arts and mathematics results are used to calculate school, district, and state accountability status on the NCLB test requirements in Grades 3 through 8 and Grade 11.

7.4 Assessment for Learning and Assessment of Learning

Assessment for Learning: Formative/Classroom Assessment for Learning

As an integral part of the instructional cycle, formative classroom assessment provides students, teachers, and parents with a continuing stream of evidence of student progress in mastering the learning targets that are guided by the following characteristics:

- ✓ Formative classroom assessment is conducted throughout teaching and learning to diagnose student needs, plan next steps in instruction, and provide students with descriptive feedback they can use to improve the quality of their work.
- ✓ Formative classroom assessment is learner-centered, rooted in effective teaching strategies, context specific, and supports ongoing student motivation and growth.

- ✓ Formative classroom assessment information is clearly communicated and provides feedback to students and parents for monitoring student progress toward achieving learning targets.
- ✓ Formative classroom assessment is increasingly authentic in nature and includes multiple performance and product-based measures.

Assessment of Learning: Benchmark/Interim Assessment

Benchmark assessments, also known as interim assessments, are summative in nature because they are designed to assess at the standard/objective level to determine whether or not mastery has been achieved. They are used for instructional feedback, not for accountability purposes. Benchmark/Interim assessments are guided by the following characteristics:

- ✓ Administered typically by the district or school at predetermined points during the instructional cycle to measure student/group mastery of specific instructional objectives.
- ✓ Provide feedback to teachers, schools, and the school system on students' relative progress toward mastery of identified instructional objectives.
- ✓ Provide timely information that allows "in course" correction before students are held accountable for those objectives on a summative assessment.

Summative Assessment

Summative assessments must be appropriately balanced with benchmark assessments and formative classroom assessment to adequately evaluate the full range of student proficiencies. Summative assessments are guided by the following characteristics:

- ✓ Measure core subjects aligned to the West Virginia CSOs that include 21st century content, learning skills, and technology tools.
- ✓ Document individual and group achievement status at a point in time.
- ✓ Used for accountability and to inform students, parents, educators, and the community of student, school, and system performance.

7.4.1 Formative Assessment—Classroom Assessment Network Initiative

The Classroom Assessment Network (CAN) initiative, under the direction of the Division of Educator Quality and System Support, is a statewide network of RESA-based collaborative teams whose purpose is to support and enhance the growth of formative assessment practices. These teams will guide districts and schools in West Virginia to understand the necessity of balancing 21st century assessment practices to include student-involved formative classroom assessment. This initiative is a key component of West Virginia's systemic approach to developing 21st century schools and school systems. The team goals are to develop expertise in the principles and practices of formative classroom assessment through collaborative team processes (professional learning communities, or PLCs). The RESA teams will ultimately provide support and technical assistance to districts and schools as they develop their own expertise in using the PLC collaborative team process to build assessment literacy. For this project to be successful, educators must have the time and support they need to develop classroom assessment expertise and must use the team approach to professional learning to support, initiate, and sustain change in assessment practices. Providing a team structure and protocols for ongoing, job-embedded collaborative learning will increase the likelihood that teachers will translate new learning into classroom practice. It is important to note that continuous practice of collaborative teaming processes and protocols requires educators to engage in the 21st century skills of critical thinking and reasoning as well as personal and

workplace productivity skills. If learned well in PLCs, these skills translate into more effective classroom practices with students.

7.4.2 Benchmark Assessment Support: Acuity

Acuity is a learning-based classroom assessment program developed by CTB/McGraw-Hill to measure students' progress in math and reading in Grades 3 through 8. The system includes web- and paper-based assessments aligned to West Virginia's CSOs and the Learning Targets of Knowledge, Reasoning, Performance, and Product. Instructionally targeted assessment/classroom assessment provides teachers with more frequent instructional feedback on student performance to regularly redirect instruction throughout the school year. The Acuity product includes (1) a delivery platform, (2) item banks, (3) diagnostic assessments, (4) reports, and (5) personalized instructional exercises. Beginning in November 2008, schools across West Virginia will have access to the Acuity platform, and school districts will be provided with professional development to develop instructionally targeted assessments for use in classrooms across the state. Acuity will also serve as the platform for the benchmark assessment "testlets" for the four core subject areas in Grades 3 through 11. These benchmark assessments may be modified by each school district based on individual maps.

7.4.3 K-3 Informal Math Assessment

The goal of the West Virginia K-3 Informal Mathematics Assessment (IMA) is to enable teachers and schools to stimulate, nurture, and monitor students' progress and knowledge in three cognitive mathematical categories: conceptual understanding, procedural skills, and problem solving. The tasks have been revised to reflect West Virginia's 21st century CS Os. These tasks support classroom assessments for learning, as they are intended to provide the teacher with information on student understanding and learning of mathematical concepts. The IMA supports standards-based assessment and should drive standards-based instruction in the classroom.

7.5 techSteps

The NCLB requires students to be technology literate by the eighth grade. In West Virginia, technology literacy is defined by the 21st century learning skills and technology tools CSOs, presented in WVBE Policy 2520.14. The WVDE's goal is that within four or fewer years, 90 percent of West Virginia's Grade 8 students will demonstrate fluency in the 21st century information, technology, and communication knowledge and skills defined by the policy. Such fluency will be demonstrated via a multiyear technology profile that evidences a skilled, authentic, and ongoing application of technology to support the learning process. In support of that goal, the WVDE is providing techSteps to all K-8 schools in West Virginia to assist districts and schools in ensuring that all students develop technology literacy within the context of 21st century learning. The techSteps resource allows teachers to plan, teach, and assess K-8 technology literacy in an integrated 21st century context. techSteps includes:

- ✓ K-8 technology literacy framework built on the National Educational Technology Standards for Students (NETS*S) and the work of P21
- ✓ K-8 technology literacy curriculum, which includes electronic activity books for each grade level
- ✓ online and off-line assessment and reporting options, including assessment rubrics for each learning activity that are tied to the technology literacy standards

During the 2007-2008 school year, 10 counties piloted techSteps and sample assessment data were collected. Of the 671 students assessed, 93percent demonstrated the sample skills successfully. During 2008-2009 school year, the following activities took place.

- ✓ A statewide license to techSteps was purchased for all WV K-8 schools.
- ✓ An assessment protocol for reporting to the federal government under NCLB requirements was developed:
  - techSteps records the associated skills demonstrated for each student and uses this information to build a technology literacy assessment profile for each student.
  - The profiles are begun in fifth grade and accumulate assessment scores for each student throughout Grades 3, 4, and 5.
  - A separate tech-literacy profile is created for each student in Grade 8 using accumulated assessment data from the student's activities throughout Grades 6, 7, and 8.
- ✓ A kick-off introduction to curriculum mapping/implementation for district technology directors, assessment directors, and curriculum specialists was held.
- ✓ Individual curriculum mapping planning meetings with districts took place.
- ✓ Webinars with district leadership teams, regional principal leadership seminars, TISs, and teachers were conducted to introduce techSteps implementation.
- ✓ Presentations were conducted at multiple conferences, both state and national.

7.6 FITNESSGRAM

The FITNESSGRAM performance-based fitness test is administered to all students in Grades 4 through 12 through their required physical education courses. Tested and reported categories include aerobic capacity, body composition, curl-up, upper body strength, flexibility, and trunk lift. Physical education teachers report grade-level FITNESSGRAM results through the WVEIS Tenth Month Report. For each test category, teachers report the number of students tested and the number of students performing in the "healthy zone" as defined by the FITNESSGRAM. School and district-level data are to be used to drive physical education program improvement. Individual student data are to be used to assist students in the development of individualized fitness plans.

7.7 Health Education Assessment Project

The Health Education Assessment (HEA) project fulfills the statewide assessment of health education that is required by State Code §18-2-9b. The HEA is administered online to all sixth-grade, eighth-grade, and high school students as part of their required health education courses. Assessment categories and questions were taken from the State Collaborative on Assessment and Student Standards - Health Education Assessment Project (SCASS-HEAP). Assessment items were selected based on the extent to which they align with the West Virginia Grades 5-12 Health Education CSOs in the health education topic areas of nutrition, physical activity, growth and development, alcohol and other drugs, and tobacco. Injury prevention questions are included for Grade 6 and mental health questions are included for Grades 8 through 12. Results are provided at the district, school, and classroom levels in order to make program improvements that increase student health literacy levels.

7.8 Golden Horseshoe Test

The Golden Horseshoe Test measures student knowledge of West Virginia civics, economics, geography, history, and current events. It is not a mandated test but rather a student competition. The WVDE partners with the West Virginia Division of Culture and History, which embeds all the test questions on the website for the West Virginia Cultural Center under its Archives and History tab. The site includes a Question of the Day on West Virginia history, and these questions are included as items on the exam. The exam was a fact-based multiple-choice test. To bring it into the 21st century, the WVDE and West Virginia Division of Culture and History have instilled more critical thinking and problem solving into the questions, such as having students analyze information from multiple data sources to come to conclusions about the answer to a question. In addition, the exam now places more emphasis than in the past on current events and economic development in the state, making these more relevant and current. The test is also now an online exam. In the past, when it was a paper-based test, the districts would use a qualifying exam to limit the number of students who took the exam to a total of approximately 2,200. Beginning in 2008, every eighth-grade student in the state receives a password and may choose to take the test. There is also an online practice test that students can take multiple times, with different combinations of items generated for each practice exam.

7.9 Career and Technical Education Assessments

Extensive testing is done with all students who participate in career/technical courses and concentrations. Online standards-based end-of-course testing is done in all core career and technical education (CTE) courses. ACT WorkKeys assessments in reading, mathematics, and locating information are required of all CTE completers. The focus of the CTE assessment program is to assure that students master the CSOs and exit the program with the academic and 21st century skills needed for success in postsecondary education or the modern workplace.

7.10 National Assessment of Educational Progress Support

The WVDE has established a NAEP training plan that will target schools sampled by the National Center for Educational Statistics (NCES) to take the fourth- and eighth-grade NAEP. The NAEP is commonly referred to as the "Nation's Report Card." The WVDE worked with local school district staff, principals, and teachers to better inform them of the level of instructional rigor needed to perform well on NAEP 2009 assessments in Grades 4 and 8.

As a part of the support provided to local school districts, the Department provided professional development showcasing the rigorous 21st century CSOs for NAEP schools. This professional development began with an overview of the NAEP assessment, followed by a rationale for and description of the CSOs revision process. One goal during the revision process was to achieve a 100 percent alignment of the West Virginia CSOs to the NAEP assessment frameworks. The majority of the day's training focused on understanding and deconstructing the rigor of the CSOs. Teachers looked at the underlying skills for a particular CSO and learned how to scaffold the instruction to bring all students' understanding to the knowledge depth and rigor expected for the CSOs and NAEP. In addition, schools were provided with a sample of NAEP assessment items each month for use in the classroom. These samples were developed from items released by the NCES after each NAEP assessment. Items released by the NCES are available for public use on the NAEP Questions Tool website.

Throughout the school year, additional information concerning school preparation and the administration of the assessment was conveyed to the principal and school coordinator via the NAEP listserv. Additionally, NAEP 2009 marked the beginning of Grade 12 state-level NAEP assessments. West Virginia participated with 10 other states in a pilot of Grade 12 State NAEP, which will determine the skills that graduating seniors have obtained as they depart the K-12 educational system.

West Virginia's participation in NAEP 2011 will include participation in a NAEP-TIMSS Linking Study. West Virginia NAEP science and mathematics scores for Grade 8 will be linked to the TIMSS scale. This study will be completed using NAEP-TIMSS braided booklets in both the NAEP assessment window (January to March) and the TIMSS assessment window (April to May).

7.11 Trend Data Assessment Section on the NCLB Secure Site

The WVDE maintains assessment data by school and by class (grade), and these are available to the public as long as cell sizes are greater than nine students or 5% of students, and less than 95% of students. The publicly available interactive site provides four years of data—percent proficient by school, difference between percent proficient in the current year versus the prior year. Users can disaggregate by grade level, subject area, and subgroup category (students with disabilities, race, and socioeconomic status). Users also are able to combine types of schools within a county, such as all elementary schools or all Title I schools. A user can follow a general cohort of students by examining data by grade across multiple years.

In addition to the information on the public site, the secure site includes all students, not just the cells that contain 10 or more. Principals can see test results for individual students. The assistant superintendents at the WVDE also are able to look at individual student scores across time to analyze progress by comparing scale scores in the first year to predicted scale scores in following years.

7.12 Evaluation Design for Tracking and Assessing Progress in Attaining 21st Century Critical Element Implementation

West Virginia's initiative includes formative (process) measures of progress in every step. The WVDE is committed to ongoing systematic evaluation of progress toward 21st century learning goals. Leadership teams and objective outside evaluators are developing rubrics of progress for each critical element in the implementation plan. The rubrics will define developmental levels of implementation for each element. Key stakeholders, such as state and local education leaders, will review the rubrics regularly and determine at what level the system is operating and what the next steps need to be. Hence, the rubrics will be used for diagnosis of needed changes or next steps in addition to serving as assessments of current status. Feedback to relevant levels of the system regarding the current status and next steps will be an integral part of the initiative.

7.13 Preliminary SAT Pilot for 10th Graders Training

The purpose of the 10th-grade Preliminary SAT (PSAT) pilot was to identify 10th-grade students with the potential to take Advanced Placement (AP) courses, increase the number of students taking AP courses, support and increase the rigor of classroom instruction, and support the requirements of WVBE Policy 2510 that high schools offer at least four AP courses each school year. All professional pathway 10th-grade students and other 10th-grade students in West Virginia

public schools with the interest and ability for advanced or college preparatory work were to take the PSAT during the October 2008 administration at no cost to the counties or schools. A total of 7,383 10th-grade students from 138 schools in 40 counties participated. The PSAT measures reading, mathematics, and writing. Results of the PSAT predict how students will perform on the SAT and may be used to identify students who have the potential to be successful in AP courses and score a three or better on the AP exam.

A webinar was held in September 2008 to present the rationale and objectives of the pilot, as well as to explain the protocol and procedures for administering the PSAT. A follow-up webinar was held in November 2008 to discuss data utilization and PSAT online tools and to address school administration, issues, and concerns. The College Board, in collaboration with the WVCPD, sponsored webinars on utilizing the PSAT online tools in January 2009.

7.14 21st Century Assessment Monthly Communication Update

In January 2008, the WVDE OAAR began to write, edit, and publish the 21st Century Assessment Monthly Communication Update. The newsletter provided assurance to the National Technical Advisory Committee and to the West Virginia Assessment Advisory Committee that the restructuring process of West Virginia's 21st century educational system was as transparent as possible. The newsletter continued publication on the TEACH 21 website through the final issue in March 2009.

In each issue of the Monthly Communication Update, the WVDE provided reliable, timely information regarding the components of instruction and student learning and assessment, which work together to create a synergy that allows for maximum change and positive progress within the state's vigorous educational system. This newsletter served as a valuable resource for the educational community and the general public throughout the state, both through its placement on the TEACH 21 website and through its distribution via a state listserv. Some issues of the newsletter were arranged primarily in question/answer format, while other issues presented brief articles, charts, graphs, and links to pertinent information/resources. Information presented included timely, conversational letters from the then-State Superintendent of Schools, Dr. Steven L. Paine; field test and operational test information about WESTEST 2 and Online Writing; Online Writing field test survey information from students, teachers, and administrators; NAEP, ACT EXPLORE, and ACT PLAN data; benchmark assessments; instructional/assessment support programs such as Writing Roadmap 2.0, Acuity, and techSteps; questions from readers; and other information related to West Virginia's 21st century educational system. Back issues of the newsletter can be accessed at TEACH 21.

8. Comprehensive Professional Development

The WVDE provides a wide variety of professional development opportunities for educators across our state. Professional development is delivered in such a way that participants are engaged with the learning, not just passively listening. Twenty-first century professional development focuses on the integration of 21st century skills, tools, and teaching strategies to promote student learning. Educators learn how to form PLCs where they can share ideas, solve problems, and discuss the latest research about effective instruction. Training is offered for superintendents, principals, county leadership teams, and teachers. Higher education representatives also are involved to help create a seamless transition between preservice teachers and those working in the classrooms. The WVDE professional development plan includes nine days of training for WVDE staff. The purpose is to make sure all stakeholders have a common language and understanding of what is meant by the Global21 Initiative.

8.1 Professional Development for WVDE Staff and Institutions of Higher Education

From January through March 2007, 200 WVDE staff, WVCPD staff, RESA staff, and teams from the state's 19 IHEs received nine days of professional development. The goal of the professional development series was to establish a common vision of the Global21 Initiative. At the end of the training series, work groups and IHEs presented their plans to align their work with the statewide initiative.

8.2 West Virginia School Leadership Team Conferences (Superintendent Leadership Institute)

A total of 51 superintendents and representatives from seven RESAs, the OEPA, the Office of Institutional Education Programs, and the West Virginia School for the Deaf and Blind attended the Superintendents Leadership Institute. The Institute continued building a knowledge base of the influence district superintendents have on student learning by introducing the superintendents to the Mid-continent Research for Education and Learning (McREL) research conducted by Robert Marzano and Tim Walters, *School District Leadership that Works: The Effect of Superintendent Leadership on Student Achievement*. It also generated discussion about what actions district superintendents could take to bring about improved student learning.

Launching the Global21 Initiative requires highly skilled, knowledgeable, and committed leaders at the district level. The West Virginia School System Leadership Team Conference brings together a 5- to 10-member leadership team from each of the state's 55 school districts for two 3-day conferences annually. There are approximately 500 to 600 attendees at each conference. The conferences have taken this group of leaders through professional development, focusing them on understanding why there is an urgency for change. This professional development series has focused on several topics over time (including curriculum; instruction; assessment; and student, parent, and family support) and how they are different in the 21st century. Major issues for the participants to consider are why 21st century teaching and learning is needed, and how to change the school systems to address the issues of 21st century instruction.

8.3 West Virginia Institute for 21st Century Leadership (Principal Institute)

The West Virginia Institute for 21st Century Leadership is a key component of West Virginia's systemic approach to developing 21st century schools. Rarely does an organization improve without knowledgeable, capable, and visionary leadership. There are no simple recipes for creating 21st century schools. However, there are significant "road markers" that guide the way. Thus, the Institute provides in-depth professional development and support for West Virginia's outstanding school leaders. This yearlong experience promises to expand the principals' understanding of the *Frameworks for High Performing 21st Century Schools* and to develop the leadership skills necessary to transform schools to engaging and rigorous 21st century learning environments for both students and staff.

The Institute is a yearlong program for practicing principals. The inaugural class of the Institute began in July of 2006, when initial membership was 75 principals. Currently, 200 principals are served each year in the Institute. The five-day July residential session is coupled with two follow-up residential sessions of three days each in November and April. During the three residential experiences, principals have the opportunity to examine the urgency and rationale for changing the schools of today into 21st century schools. Using the Frameworks for High Performing Schools and High Performing Classrooms for each programmatic level, the principals begin to see the components of what the 21st century school and classroom look like. These understandings are further supported through keynote speakers and other activities to fully develop their knowledge base of what we must do to prepare our students for the challenging world of this century. Programmatic leaders and critical friends assigned to each programmatic group helped to fully develop and expand the knowledge base of the principals through their experience and understanding. The November residential experience has its focus on the leadership characteristics needed to transform organizations and to lead change. The April residential experience focuses on the systemic continuous improvement process and the components of the process that can be employed in schools.

At the conclusion of the Institute experience, principals complete their e-portfolios, which serve as artifacts of their experience and can be used to document their work in achieving the goals mutually agreed on with their county-level supervisors to meet the evaluation requirements. (For more information on agendas, presenters, or the e-portfolio, see http://wvde.state.wv.us/principalsinstitute.) Between residential experiences, the principals are involved with a focused research topic of their choosing. This online discussion forum and Wiki construction are facilitated by WVDE staff members, as well as critical friends from higher education and other venues. In the course of the Institute year, principals will complete two areas of focused research topic investigations.

The area of focus discussion forum and Wiki creation expand the personalization opportunities and learning of the Institute participants and connects professional development to the required principal evaluation process of WVBE Policy 5310. This process should enhance collegiality among principals and create an online PLC using 21st century tools.

8.4 Teacher Leadership Institute

The TLI is an intensive, weeklong professional development experience that is designed to assist districts in building the capacity to move forward with 21st century instruction. The first TLIs were held in Charleston and Morgantown in June and July 2007. Superintendents were allotted slots based on the size of their districts and selected teams of teachers who had exhibited leadership ability. The focus of each week was getting to know digital learners so that teachers could design

effective instruction using the backward design process. Participants arrived on Sunday afternoon; received their laptop computers containing everything they would need for the week, including their reading assignment (*Teaching for Tomorrow*); and attended an opening session. On Monday through Friday, teachers participated in training by content or programmatic level. Evening sessions offered a choice of extended learning opportunities during which participants could learn more about wikis, blogs, lesson design, and hands-on strategies. Teachers also met with their district team to develop an action plan for sharing their new knowledge with other teachers in the district. During this week, teachers practiced their learning by beginning work on a standards-based unit in their content area. The final units were due in October. Quarterly webinars were held to deliver follow-up training and stories about county successes.

The focus of the 2008 TLI was project-based learning. Participants received the *PBL Handbook* from the Buck Institute and their laptops with all materials imaged. They began the design of a project-based learning experience for their students with assistance from the TLI staff. Participants also selected five of the 55 clinic sessions on such topics as podcasting, geographic information system (GIS) software, digital cameras, standards-based units, electronic portfolios, kit-based science, and Challenger e-missions. The Office of Instruction provided monthly webinars to support the teachers throughout the following school year, and the TLI staff facilitated peer reviews of the PBL units in each RESA using the rubric designed by the Office of Instruction for Project Based Learning.

The TLIs in 2009 and 2010 developed a deeper understanding of quality project-based learning design for teachers. The Office of Instruction staff, the 35 teacher members of the TLI staff, and members of the national faculty of the Buck Institute for Education worked collaboratively to provide guidance to approximately 600 teachers representing both school-based and county-based teams from across the state. Throughout this institute, teachers focused on the 21st century content, learning skills, and technology tools standards and objectives relevant to the grade level and content area they teach. By learning to unpack the content standards, to organize those objectives into conceptual clusters, to identify learning targets within those objectives, and to integrate the learning skills and technology tools objectives within those clusters, teachers were able to identify relevant issues, challenges, or problems around which their PBL units could be designed. When teachers designed an entry event or document to launch the project in Quadrant D of the International Center for Leadership in Education's Rigor and Relevance Framework, they could then assess student products/performances in Quadrant D, and the teachers recognized the value of classroom learning experiences balanced across all quadrants. The institute also provided opportunities for teacher collaboration and support through focused PLCs. The principals of school-based teams attending the 2009 TLI joined their teachers at the institute on Thursday afternoon and learned about their role in supporting the implementation of PBL. The school teams also developed plans for the expanded implementation of PBL within their schools.

Due to the adoption of the Next Generation CSOs for English Language Arts and Mathematics, standards aligned with the CCSS for English Language Arts and Mathematics, the 2011 TLI will have a new face. This two-prong Institute will consist of (1) a Kindergarten Academy during which the Academy staff will provide professional development for teams of kindergarten teacher leaders from each county school system relevant to the implementation of the Next Generation CSOs for English Language Arts and Mathematics in kindergarten classrooms in the fall of 2011 and (2) an Institute for elementary, middle, and high school-based teams focused on developing an understanding of the Next Generation CSOs for English Language Arts and Mathematics; the Common Core Literacy Standards for science, social studies and history, and career and technical courses; electronic resources in social studies; learning progressions, formative assessment and performance tasks/assessments aligned with the work of the SMARTER Balanced Consortium.

8.5 TEACH 21

The TEACH 21 website was designed by teachers to assist colleagues in planning and delivering effective 21st century instruction in West Virginia classrooms. It enables educators to quickly access 21st century CSOs, learning skills, and technology tools for West Virginia schools, as well as other resources that exemplify rigorous and relevant instructional design and delivery. Information is easily accessible by teachers, administrators, parents, and students. Standards-based units, instructional guides, and project-based learning units model the integration of content, learning skills, and technology standards, research-based instructional strategies, differentiated instruction, and rich classroom assessments, including a culminating performance, product, or project with an accompanying rubric. The interactive CSOs feature links to vocabulary strategy lessons that assist teachers in ensuring that students master content vocabulary, standards-based units, project-based learning plans, and inquiry-based lesson plans.

8.6 Health and Physical Education Leadership Academy

The goal of the West Virginia Health and Physical Education Leadership Academy is to build the capacity of health and physical education professionals to improve school health and wellness initiatives, with a specific focus on the instructional programs of health and physical education. The Academy is a series of sustained professional development activities that promote individual professional growth in the areas of pedagogy, leadership, advocacy, grant writing, and technology, while at the same time promoting a professional network of support. A statewide Academy was held in the 2005-2006 school year and regional Academies have been held in subsequent school years (RESA 5 in 2006-2007; RESAs 1, 3, 6, and 7 in 2007-2008; RESAs 2, 4, and 8 in 2008-2009). During the past two school years (2009-2010 and 2010-2011), statewide North/South Academies were conducted.

8.7 Online Courses in Communicable Disease Control, Medication Administration, and School Nurse Orientation

Required courses for school nurses and other school staff have been developed and made available through the WVLearns platform to improve accessibility to all school staff and to decrease the costs associated with statewide professional development.

8.8 Model Lessons/Videos

The Teach 21 Model classroom project, under the direction of the WVDE Office of Instruction, focused on using the Teach 21 site to provide all West Virginia teachers access to online video clips that demonstrate quality student engagement within a 21st century context. Each video clip is accompanied by a lesson plan and commentary from the featured teacher that targets the various strategies implemented as well as the integration of identified 21st century skills. This project captures student and teacher work across all content areas in 61 K-12 classrooms across the state. It is not enough to tell teachers what they should be doing; the WVDE must provide them with examples that allow them to see what rigor, relevance, and relationships look like in West Virginia classrooms. This project is about state teachers working with their local districts and the WVDE to build capacity for quality 21st century learning across the state.

The first 36 participating teachers took part in the 2007 TLI and submitted applications to be selected as model classroom teachers. As part of the process, the WVDE committed to providing each teacher with a $5,000 grant to purchase technology or materials they identified as necessary for creating the 21st century classroom described in their application. The teachers agreed to allow the WVDE to film in their classrooms. The WVDE staff met with the teachers to assist them in purchasing their requested items and to inform them of the filming process. The teachers were provided with a lesson plan template based on the backward design process and the three essential questions for preparing the script for filming: *What message do I want to convey to the viewer of the video? What type of student engagement do I want to show? What 21st century learning skills and/or tools will be featured?* The WVDE also engaged the participants in a discussion related to quality filming (background noise, orientation of the room, lighting, preparation of students, etc.). In June 2008, the first video clips became available.

The second round of model classroom videos focused on exemplary elementary mathematics lessons. Teachers were selected and received training on quality lesson design. They developed a lesson plan focused on one of the five National Council of Teachers of Mathematics standards, the same five standards that are reflected in the West Virginia 21st Century CSOs for Mathematics. Each posted video shows how a teacher might deliver a standards-focused, inquiry-based mathematics lesson in Grades K-5. Since January 2010, all of the Teach 21 model classroom videos have been featured on the P21 site.

8.8.1 Elementary Mathematics Model Lessons

Fifty elementary teachers from across West Virginia participated in professional development sponsored by the Office of Instruction. The teachers attended a series of trainings focused on quality lesson design, standards-based mathematics, and inquiry-based learning strategies. The teachers created their own quality lessons following the WVDE peer review process adapted from Wiggins and McTighe's *Understanding by Design*. Covering kindergarten through fifth grade, the lessons feature mathematics from all five strands (number and operations, algebra, geometry, measurement, and data analysis). The elementary model lessons are posted on the Teach 21 website along with classroom videos and lesson plans for each lesson. A critical viewing guide is posted with the model lessons to assist viewers in using the videotapes for professional development with other elementary teachers. The videos have since been featured in numerous professional development offerings and continue to be a rich resource for elementary mathematics professional development.

8.8.2 Fourth-, Fifth-, Sixth-, and Eighth-Grade Mathematics, Algebra I, Geometry, Algebra II, and Trigonometry Project-Based Learning Resources

As part of their professional development, elementary and secondary mathematics teachers designed rigorous and relevant standards-focused projects to engage students in authentic learning activities and teach 21st century skills while focusing on the mathematics requirements at the fourth-, fifth-, sixth-, and eighth-grade; Algebra I; geometry; Algebra II; and trigonometry levels. The Buck Institute materials used through the TLI were incorporated during the professional development. The teachers participated in the WVDE peer review process adapted from Wiggins and McTighe's *Understanding by Design* to ensure the quality of their plans. These math PBL plans are posted on the Teach 21 website.

8.8.3 Standards-Based Mathematics Units

Standards-based mathematics units based on the West Virginia CSOs were developed by a cadre of West Virginia teachers. The units are located on the WVDE website, Teach 21. These units develop

the West Virginia CSOs within the context of a 21st century learning environment and model quality classroom instruction. Each unit includes formative and summative assessments, research-based instructional strategies, computer applets, and application to real-world scenarios. Professional development on these units has been created and delivered by the units' authors.

8.9 Professional Modules on 21st Century Learning

The WVDE has prepared professional development modules on 21st century learning for educators across the state. There are two versions of the professional development, including a one-hour and one-day version. The purpose of the one-hour module is to gain an understanding of 21st century learning and to think about what needs to be accomplished in West Virginia. The module provides an overview of 21st century skills, the urgency for implementing 21st century learning, video segments of classrooms, and probing questions about West Virginia's status with regard to implementing 21st century learning. Materials, resources, Web links and other videos are included to help presenters customize the professional development for various audiences, which could include educators, parents, community members, business leaders, and other stakeholders.

The purpose of the one-day module is to provide face-to-face professional development to school staff. The one-day module is designed to be presented in three 2-hour sessions in numerical order. The module can be delivered in a day. However, TLI county teams can present the sessions on separate days to foster small learning communities, limit the total time spent on professional development in a given day, or spend more time on certain sessions depending on the audience and where they are in their learning. The three sessions address West Virginia's 21st century content technology tools, balanced assessment, and instructional design.

8.10 County Mathematics Leadership Teams

The goal of the County Mathematics Leadership Team initiative is to build districtwide leadership in mathematics from kindergarten through Grade 12 in order to improve instruction in mathematical computation, application, reasoning, engagement, and understanding. District teams consist of five members, including an administrator and a representative from each of the following grade spans: K-2, 3-5, 6-8, and 9-12. The teams also have conducted the mathematics program improvement reviews and received Quantiles training in the fall of 2008. Teams have developed plans to further train mathematics teachers in their own districts on Quantiles. These plans are recorded on the County Mathematics Leadership Team Wiki. Technical assistance is provided to teams upon request and the teams are registered on the K-12 mathematics listserv.

8.11 National Science Teachers Association Online Elementary/Middle School Science Training

The core of the SciPack professional development will be provided through two online National Science Teachers Association (NSTA) courses that take about 10 hours each. Content areas that teachers may choose from include lessons in physical science, life science, and earth science. Computer simulations are used to manipulate variables as participants replicate lab activities and make conclusions. Appropriate pedagogy instruction is included with each course. Periodic assessments that provide feedback are embedded in each course, and final assessments are used to determine proficiency. A one-day training is required for the targeted middle school teachers to learn how to access the online coursework. When participants successfully complete the two

SciPack courses and assessments before the end of the fall semester grading period, they earn graduate credit from Marshall University.

8.12 Social Studies Summer Institute

The purpose of the summer institute is to provide social studies teachers with resources and instructional strategies that will support their efforts as they provide their students with a true understanding of the past and an appreciation of their heritage as West Virginians. In July 2006, the Social Studies Summer Institute in civics, economics, entrepreneurship, geography, and history was held at the Charleston Civic Center (the focus was mainly on civics, entrepreneurship, and economics). In June 2007, the Second Social Studies Summer Institute was held at the Charleston Civic Center, and its focus was to provide teachers with resources and instructional strategies to help students take up the challenges of globalization; become economically judicious; and engage in local, state, national, and world civic experiences.

The third institute, held in June 2008, focused on how to engage the digital learner in social studies content, particularly history, and on economics and civics. There were sessions on writing in the social studies, strategies to help students understand what they are reading and how to convey information in writing, and PBL. Social studies teachers, business teachers, administrators, members of the business community, representatives of higher education, and civic leaders were invited to the conference.

The fourth institute was held in July 2009 and focused on PBL, document-based questions, economics, geography, civic literacy, and GISs. In addition to these topics of focus, attention was given to personal finance, social studies fairs, Teach 21, and technology integration instructional strategies.

The fifth institute was held in July 2010 at two locations. In Bridgeport, training, guidance, and resources were used to assist teachers in building electronic resources packages for their respective grade levels. Teachers have continued throughout the school year building these packages, which are being housed on the Teach 21 website, for all teachers to use. In Morgantown, the WVDE partnered with WVU, the National Aeronautics and Space Administration (NASA), Environmental Systems Research Institute (ERSI), and the West Virginia Geographic Alliance to provide GIS school software licenses, global positioning satellite (GPS) units and exception training by national trainers to prepare teachers to use GIS and GPS software and hardware to raise student achievement levels in the classroom.

8.13 Career and Technical Education Career Cluster Institutes

In 2008, summer institutes were presented by WVDE program leaders in each of the six career cluster areas. As a result, more than 600 career and technical teachers learned to use their new 21st century CSOs, gained new knowledge about national industry standards, and shared 21st century instructional techniques. Instructional technology was demonstrated, along with techniques to better integrate 21st century content and context. By the 2009-2010 school year, 167 career pathways had been defined within the career clusters, allowing students to receive time-shortened 2+2 programs from secondary to postsecondary technical preparation.

8.14 Instructional Technology in Career and Technical Education Conference

"Teaching 21st Century Kids in Career Tech Classrooms" is the theme of the latest addition to the professional development programs offered by the Office of Career and Technical Instruction. More than 120 CTE instructors, including three cohorts of TISs in CTE, will spend three days learning about 21st century instructional tools and techniques. Two-hour and four-hour clinics explore 17 topics, including:

- ✓ digital portfolios
- ✓ wikis and blogs
- ✓ cell phones as teaching tools
- ✓ clickers in the classroom
- ✓ educational gaming
- ✓ podcasting
- ✓ GIS and GPS

8.15 Special Education Teacher Leadership Academy

The first Special Education Teacher Leadership Academy (SETLA) was created for district teams and includes special education teachers and administrators. The WVDE's intention is to build a strong corps of special education teacher leaders who understand (1) that every student must experience rigorous 21st century instruction supported by the 21st century tools that are now fundamental to our culture and (2) that the strength of the link between instruction and assessment contributes to the measured progress for every student.

The Academy is designed in conjunction with the WVDE's TLI but encompasses unique instructional challenges that face teachers of students with IEPs. The goal is to have the annual TLIs and SETLAs complement each other and increase the capacity of schools to provide 21st century instruction with 21st century tools to the broadest range of students.

As a result of the Academy, special education teacher leaders have been trained to

- ✓ apply 21st century CSOs to their instructional planning and delivery
- ✓ teach 21st century content using 21st century tools
- ✓ demonstrate use of benchmark and classroom assessments to determine student instructional needs
- ✓ transition to a paradigm that focuses on students' needs and not their areas of disability
- ✓ articulate their roles and responsibilities in each tier of a tiered instruction process
- ✓ use problem-solving skills to analyze data and apply it for instructional change
- ✓ develop an understanding of their responsibilities as teacher leaders in their schools
- ✓ develop a district plan to engage all special education teachers in professional development around 21st century teaching and learning

The first SETLA was held in July 2008 as an opportunity for West Virginia's special educators to enhance their 21st century individual skills and assist in professional development for effective integration throughout their districts. Two hundred special educators attended as part of district teams from across West Virginia. Throughout the week of the SETLA, participants increased their personal capacities to create curricula appropriate for the 21st century, explored instructional resources with state-of-the-art computers, and worked with district leaders to create professional development plans that supplement district strategic plans. As a follow-up activity, SETLA teachers developed modified unit plans from Teach 21 by analyzing an individual student's needs and

differentiating the instructional plan. Resources and additional information are available regarding SETLA 2008.

The OSP, Extended and Early Learning conducted SETLA 2009, "Special Educators: Leading the Change," in July 2009. Two hundred fifty West Virginia special educators participated as district teams in the event. Keynote speaker Ted McCain set the stage with an analysis of the digital learner. SETLA 2009 curriculum focused on individualizing standards-based Global 21 instruction and the role of the special educator as a teacher leader. District teams created plans for sharing their gained knowledge in their county, facilitating a book study, and supporting teachers in the follow-up action research project. One hundred sixty teachers completed action research projects during the 2009-2010 school year. Teachers met again in December 2009 to create digital portfolios to document their achievements. Resources and additional information are available at SETLA 2009.

8.16 Digital Resources for 21st Century Learning Administration

In September 2006, the WVDE and partners unveiled the online 21st century digital resource to support local district and school leaders as they develop 21st century schools. The Learning Community Digital Resource provides leaders with reflection questions and responses to three big ideas: *The Changing World, 21st Century Learning,* and *Creating 21st Century Schools*. In June 2008, a new collaborative initiative began to rename and revise the previous resource through the creation of the 21st Century Leadership Resource. The focus of this new tool is to provide relevant and engaging 21st century resources to aspiring principals, new principals, and existing principals. Content is being created by West Virginia education leaders, who will model the research-based elements of the 21st Century Leadership Institute utilizing 21st century leadership tools. The 21st century digital resource will become a leadership training tool for K-12 leaders and a resource for the institutions of higher education in the state.

8.17 e-Learning Grant

The e-Learning for Educators initiative is the latest effort from the WVDE and West Virginia Public Broadcasting. Through a grant from ED, this initiative provides West Virginia educators with quality professional development opportunities designed to address content knowledge and the skills required to improve student performance. The e-Learning for Educators initiative aims to help bridge the barriers of time, distance, and inequity for all West Virginia teachers by providing access to web-based professional development opportunities. Educators in West Virginia have the opportunity to continue learning and collaborating while addressing the needs of West Virginia students.

Via the "WVLearns" gateway, the WVDE is creating and centralizing many learning options and resources for students, parents, teachers, school personnel, and WVDE staff. As educators begin to realize the potential for these resources, a wide variety of content will be developed and disseminated to appropriate audiences via this electronic delivery method. The content will vary from just-in-time tutorials designed to quickly demonstrate a specific skill to complete courses for K-12 students, teachers, and personnel. Since rolling out the web portal, demand for the e-learning courses has been high, with courses filled to capacity.

8.18 National Board Resource Website

National Board Certification, developed by teachers, with teachers, and for teachers, is a symbol of professional teaching excellence. Offered on a voluntary basis, it complements but does not replace state licensing. While state licensing systems set entry-level standards for beginning teachers, National Board Certification has established advanced standards for experienced teachers. The NBPTS assessments for certification include having teachers construct a portfolio that represents an analysis of their classroom work and participate in exercises designed to tap the knowledge, skills, disposition, and professional judgment that distinguish their practice. West Virginia will reimburse one half of the enrollment fee to each individual who *enrolls* in the National Board Certification program and one half of the fee to each individual who *completes* 10 scorable entries as verified by the NBPTS. In addition, each teacher who *completes* 10 scorable entries may be reimbursed up to $600 for expenses incurred while obtaining the certification, unless used as a retake fee waiver. This reimbursement program is subject to legislative appropriation and shall be limited to 200 teachers annually as funding allows.

8.19 Mentorship Website

The *From Classroom to Classroom: 21st Century Guide for New Teachers* website is designed as a tool to help both the mentor and the new teacher redefine what their relationship, communication, and classrooms might look like in the 21st century. The West Virginia Teacher Mentorship Program provides teachers who are new to the classroom with a mentor to observe the new teacher's classroom and provide evaluations. The website has six sections, as follows:

- ✓ **Getting Started:** This section includes the framework for teaching and identifies the different types of resources available on the site, including talking points, online resources or articles, PowerPoint presentations, activities, and videos.
- ✓ **Inside the Classroom:** Classroom management and instruction resources are provided.
- ✓ **Special Needs:** This section of the website provides novice teachers with information about how to manage a special needs class and help special needs students.
- ✓ **Family Outreach:** Tips and strategies are identified for how to hold successful parent-teacher conferences, establish and maintain positive parent communication, involve parents in a meaningful way, and develop family involvement activities.
- ✓ **Teacher as a Leader:** This section provides information to novice teachers on ways they can become teacher leaders. Information on professional development, National Board Certification, and integrating technology is included.
- ✓ **Communication:** This section introduces the concept of 21st century communication, including learning to communicate with the digital native population in the native language and style of their students.

8.20 Annual Statewide Technology Professional Development Conference

The latest annual conference was held on August 2-4, 2011, at the Waterfront Place Hotel in Morgantown, West Virginia. The theme for the conference was "Unlocking the Potential of Technology," and the goal was to provide sessions, exhibits, and events of interest to a wide range of constituents including K-12 education, higher education, and state agencies. The conference sessions were divided into the following categories to appeal to the various interests of the participants:

- ✓ Statewide Technology Partnerships and Resources
- ✓ Teaching and Learning with Technology
- ✓ Security and Network Management
- ✓ Web Development
- ✓ Virtual Learning
- ✓ Telecommunications Technologies
- ✓ Rural Education Technology
- ✓ Social Media

The conference website provides up-to-date details about the conference each year as they are released.

8.21 Southern Regional Education Board Online Teacher Center

The SREB has assembled a variety of resources in the SREB Online Teacher Center to help meet the unique needs of online teachers. The site offers information about instructional, academic, and technical issues, as well as general topics about online teaching and online learning. An interactive forum provides a mechanism for online teachers to communicate with each other and share resources.

8.22 Virtual School Professional Development

Individuals identified as school or district Virtual School contacts complete an online course, housed in WVLearns, on the process for student registration and course approval. Contacts must complete this course to receive a password to the online registration approval system. A separate course for virtual course facilitators outlines the duties and responsibilities of a facilitator and provides tips and techniques for supporting the virtual learning process. Each year in August, face-to-face professional development is provided for teachers and other school personnel facilitating virtual Spanish courses taught by West Virginia teachers employed by the Virtual School. The Virtual School also sponsors a one-week professional development program for K-12 classroom teachers that demonstrates how to use WVLearns to design hybrid courses in face-to-face and distance learning environments. Sessions focus on best practices for developing digital content, supporting student-to-student and student-to-teacher communications, assessment techniques, and integration of Web 2.0 tools. Face-to-face and online follow-up activities reinforce lessons learned and support course implementation.

8.23 Professional Development for Teachers of Gifted Education

The OSP has developed an electronic communication system to provide ongoing professional development for teachers of gifted education in West Virginia. The monthly newsletter is distributed to teachers electronically and includes information, training opportunities, resources, and access related to instructional support. In addition, a listserv for teachers of gifted education and others interested in the field is maintained to provide updates and developments in the field of gifted education. Professional development has also been provided through training workshops in each RESA on Intel, Thinkquest, Thinkfinity, The College of William and Mary Teaching Models, and teaching with technology and project-based learning. The OSP collaborates with the West Virginia Association for the Gifted and Talented to provide additional professional development opportunities through a statewide annual conference each fall for teachers and by teachers of gifted

education. Resources, including presentations from the conference, are posted online. In addition, guidelines for implementing gifted education services are disseminated electronically and in print, if requested.

8.24 English as a Second Language and Foreign Language Summer Institute

The purpose of this summer institute is to provide English as a Second Language (ESL) and world language teachers with meaningful professional development that merges second-language acquisition practices with 21st century innovation in teaching. In July 2008, the summer institute, which was held in Huntington, was cosponsored by Marshall University and the Harless 21st Century Model School at Kellogg Elementary. Program participants explored 21st century innovation in the areas of assessment, technology, and international collaboration. In June 2009, the institute moved to Charleston, and program participants explored the concept of building language proficiency through project-based learning.

In 2010, the WVDE partnered with Berkeley County Schools to present the Summer Institute for ESL teachers. Participants had the opportunity to explore strategies to develop the content knowledge and academic oral and literacy skills of ELLs. The 2010 Summer Institute for World Language Teachers gave participating teachers the opportunity to observe the WVDE STARTALK Summer Camp. While attending the camp, participants learned how to integrate the following principles for effective teaching into their instruction:

- ✓ Implementing standards-based and thematically organized curriculum
- ✓ Facilitating a student-centered classroom
- ✓ Using target language for instruction
- ✓ Integrating culture into language instruction
- ✓ Adopting and using authentic materials
- ✓ Conducting performance-based assessment

The 2011 Summer Institute introduced program participants to LinguaFolio and the West Virginia Classroom Assessment for Learning Model. Teachers will learn how the LinguaFolio assessment instrument can be used to support learners in setting and achieving their goals for language learning. Specific topics to be covered during the institute include: West Virginia balanced assessment approach, building your own LinguaFolio, reflective learning and teaching in an autonomous environment, developing LinguaFolio-like activities, stressing the importance of interculturality, assessing language performance, goal-setting, LinguaFolio implementation, and Web 2.0 tools to support language learning.

8.25 Professional Development to Support Universal Pre-K

Beginning in July 2008, the WVDE partnered with each RESA to begin developing a statewide, regional support system for West Virginia Universal Pre-K. An annual summer institute for county pre-K coordinators and county early childhood leadership teams was initiated with a 91 percent participation rate for counties; nearly 100 district administrators attended the inaugural institute in 2008. School administrator workshops were designed to provide systematic professional development for school leaders implementing universal pre-K. More than 50 workshops were conducted throughout the state during the first year. The topics included WVBE Policy 2525, Early Childhood Environment, Early Childhood Curriculum, Early Childhood Assessment, Curriculum Leadership in Early Childhood, Transportation, Transistors, and Head Start Performance Standards.

After three years of workshops for school administrators throughout the state, the workshops are now available as an administrator's toolbox and resource online. The WVDE-RESA partnership has continued and strengthened. The 2011 West Virginia Pre-K Summer Leadership Institute will include leaders from each county collaborative team, including LEAs, Head Start, and child care. This framework and initiative continues to strengthen the county collaborative team in order to support continuous quality improvement in the state's pre-K system. Additionally, each RESA is developing an Early Childhood Leadership Symposium for 2011-12. The symposium will target all levels of leadership and administration working with the county collaborative early childhood team to improve and implement pre-K in West Virginia. In January 2010, the WVDE launched the WVDE Pre-K Continuous Quality Improvement Advisory Council, which is charged to review, participate, and respond to West Virginia pre-K and school readiness projects and initiatives. Projects focusing on program assessment and school improvement, curriculum and instruction, and school readiness have been initially targeted. A secondary focus of the council is to ensure projects and initiatives are vetted thoroughly with early childhood professionals throughout the state, as well as collaborative partners. The Advisory Council meets quarterly to review and comment on updates to the specified tasks and work group initiatives. Each work group has individual goals, timelines, and members that are directly related to the overall work tasks and goals of the Advisory Council.

The OSP supports a variety of professional development opportunities for teachers to increase high-quality experiences for young children enrolled in Universal Pre-K classrooms. The statewide early childhood conference, Celebrating Connections, was attended by approximately 2,000 early childhood educators. Sessions focused on a wide range of early childhood topics, including 21st century elements and their relationship to today's early childhood classroom. An assistive technology summer professional development activity, Camp Gizmo, provided professionals with an opportunity to learn how to adapt and integrate assistive technology in early childhood classrooms. The Early Childhood Positive Behavior Supports (ECPBS) initiative offered training to 150 new classrooms bringing the total number of classrooms trained to 350. Additionally, the EC PBS initiative trained 25 individuals as trainers. There are 100 individuals trained as trainers/coaches for district implementation.

8.26 Professional Development for Reading First

Professional development is a key concept in the Reading First framework. Initially, a state reading cadre was established, and a state reading academy was conducted to build the capacity for providing professional development in teaching reading skills. In lieu of a state reading academy in the summer of 2005, the WVDE expanded professional development opportunities by assisting RESAs and counties in offering this same quality of professional development to additional teachers. In 2006, a Teacher Reading Academy was offered through the WVCPD as a collaborative effort between the WVDE and the WVCPD. In the summer of 2007, this concept was broadened to reach K-3 teacher teams in all elementary schools in West Virginia, and extensive professional development was offered throughout the state by the OSP, Extended and Early Learning. In March 2008, approximately 1,000 K-3 teachers attended the 7th Annual Reading Research Symposium, which focused on research-based tools and strategies to help students develop the reading skills necessary for success in the 21st century digital world.

During the 2009-2010 school year, the Reading First program offered professional development opportunities focusing on vocabulary and comprehension at state, district, and school levels. This professional development was designed around a "Before, During, and After" Reading framework. Teachers became familiar with focusing instruction around a predetermined set of elements. In

continued efforts to scale up the tenets of Reading First, this set of modules was used across all districts in West Virginia. The Reading First program concluded on September 30, 2010.

8.27 Professional Development in Mathematics for Title I Schools

In October 2009, the WVDE began a professional development initiative for K-8 teachers in Title I schools not making AYP in mathematics. The initiative focused on changing instruction in fractions, decimals, and percents to increase student understanding and mastery of rational number operations. More than 270 teachers from 30 schools participated in this project, which continued through the 2010-2011 school year. Teachers in each school participated in a PLC and studied the book *Teaching Fractions and Ratios for Understanding: Essential Content Knowledge and Instructional Strategies for Teachers*, by Susan J. Lamon. Working in their school-based PLCs during the 2009-2010 school year, teachers viewed four webinars related to the book study and have discussed the book and the results of implementing activities from the book in their classrooms. Also during the 2009-2010 year, a group of participating teachers developed Manhattan Classrooms targeting three grade spans—K-2, 3-5, and 6-8—on five different representations of rational numbers: part-whole relationships, rational numbers as quotients, rational numbers as operators, rational numbers as measurement, and rational numbers as ratio and rate. These Manhattan Classrooms are available through the web and were used by teachers in the participating PLCs to guide their study through the 2010–2011 school year.

8.28 Professional Development Related to Teacher Preparation Programs

The 20 West Virginia IHEs that prepare teacher candidates for licensure have been integrally involved in the WVDE professional development offerings. The intent is that the participation of IHEs in the professional development will result in the knowledge, skills, and strategies being incorporated into the teacher preparation programs and communicated to teacher preparation candidates. Additionally, the WVDE Office of Professional Preparation coordinates professional development specifically targeted for the IHEs. During the 2009-2010 school year, two specific sessions were offered: Technology Integration in Teacher Preparation Programs, and Program Re-Approval Process for the West Virginia Professional Teaching Standards.

8.29 Mathematics Academies

The purpose of this initiative is to improve student achievement in mathematics by deepening special educators' understanding of mathematics and providing them with the experience of learning math in a student-centered classroom. Carnegie Learning math experts challenge the educators' understanding and beliefs about mathematics and the teaching of math. The Mathematics Academies create a targeted learning experience for specific math content areas and grade levels. Teachers gain a better understanding of the connection between early math concepts and algebraic thinking. In addition, each special educator will have access to a research-based web-based learning tool, Cognitive Tutor, to use throughout the year to reflect on their own mathematical understanding and teaching practices. Expected project outcomes will include (1) enhanced teacher content knowledge and instructional practices in math and (2) resulting student achievement gains in math, especially among special education students. An indirect outcome is to begin creating math communities of practice throughout each RESA.

8.30 Literacy Academies

The OSP, in partnership with the eight RESAs is offering to develop the instructional expertise of special educators serving students in Grades 5-9 who struggle with literacy and the compromised access to informational text that follows. This opportunity will build the capacity of these educators to strategically analyze, socialize, contextualize, and personalize instruction to increase student engagement and to teach students to use a set of learning strategies to independently access, more deeply process and respond to content in ways that align with the expectations of the Next Generation CSOs across all content areas. In addition to increasing students' access to content, achievement in reading/language arts is expected to increase where these strategies are used consistently by students. The global climate of elevating student expectations and an ever widening array of literacy demands in conjunction with West Virginia's commitment to giving all our students what they deserve, make this initiative particularly relevant.

8.31 Camp GIZMO

Assistive technology is the key to providing students with disabilities the opportunity to participate in the general curriculum and increase educational opportunities. For the past 13 years, the WVDE has coordinated Camp GIZMO, a summer camp focusing on assistive technology for young children with significant and multiple developmental needs. The structure of the camp is organized to generate a professional development site for West Virginia to train speech pathologists, physical therapists, occupational therapists, and other professionals. Numerous workshops and labs are available including a computer lab, augmentative communication lab, sensory integration lab, cortical visual impairment lab, mobility lab, play lab, sibling workshop, and a resource library. The staff includes professionals from throughout the state who have extensive experience in their respective fields. Camp GIZMO offers professionals "hands-on" experience with students in addition to the equipment, strategies, and technology necessary to ensure a professional development experience that will impact student achievement. The camp is held on the campus of the West Virginia Schools for the Deaf and Blind in Romney.

9. Collaboration with Outside Partners

Collaboration with outside partners is a key step to creating a successful statewide Global21 Initiative. In its publication *Learning for the 21st Century: A Report and MILE Guide for 21st Century Skills* (2002), P21 describes how many different kinds of stakeholders (e.g., parents, higher education institutions, employers, content providers) can make important contributions to educational systems. Each stakeholder brings a unique perspective on and vital resources for areas of importance and need in the 21st century world. The Partnership, believing that "improving education for the 21st century is a community-wide endeavor" (p. 24), recommends that states "create an active coalition of business, education, non-profit, and community organizations" (p. 7) to most effectively develop a broad consensus and shared vision, convey the urgency of the need for 21st century learning, and plan for successful statewide implementation. To these ends, the WVDE has established partnership with many and diverse entities to provide sufficient, appropriate resources, training, and support for West Virginia educators. The WVDE's partnerships include, but are not limited to, the organizations described in this section.

9.1 Partnership Agreement

In November 2004, Dr. Steven L. Paine, then-Deputy State Superintendent, attended the CCSSO conference at Kiawah Island, South Carolina, where he experienced his first substantive contact with the concept of developing 21st century skills. The conference included a session on P21, led by then-President Ken Kay, who highlighted the key aspects of the Partnership and its intentions. Following this conference, the WVDE began developing the state application to join P21. The application brought together primary stakeholders, including the Governor's Office; the Legislature; and principal, superintendent, and leader organizations committed to changes in public education in West Virginia. The application was approved by P21 in 2005, and West Virginia became the second state in the nation to join the Partnership. The Partnership agreement was signed in November 2005 at the district-level conference attended by leadership teams from every district. Those present to sign the agreement included Ken Kay, President of P21; Dr. Steven Paine, State Superintendent; Dr. Lowell Johnson, West Virginia State Board President; Governor Joe Manchin; Senate Education Chair, Sen. Robert Plymale; House Education Chair, Robert Campbell; West Virginia Education Association President, David Haney; West Virginia American Federation of Teachers President, Judy Hale; and other business leaders and policymakers. All stakeholders committed their support to the Coalition of 21st Century Learners Statement of Support and pledged to do all they can to support a 21st century learning community in West Virginia.

9.2 American Federation of Teachers-West Virginia

The American Federal of Teachers' West Virginia affiliate, AFT-West Virginia, is a large education employee organization in the state. AFT-West Virginia also is affiliated with the West Virginia AFL-CIO. The federation engages in a variety of activities, including (but not limited to) offering professional development to its members through the AFT's award-winning Educational Research and Dissemination program; researching, advocating, and disseminating information about policies, federal regulations, and NCLB; and ensuring that members are kept abreast of state and local education news and union activities. AFT-West Virginia contributes its support to the Global21 Initiative by providing leadership in the education community, reviewing WVBE policies, attending Board meetings, and working with the WVDE staff on statewide 21st century initiatives.

9.3 Appalachia Regional Comprehensive Center

The Appalachia Regional Comprehensive Center (ARCC) at Edvantia is one of 16 regional technical assistance centers funded by ED. The comprehensive center provides SEAs with technical assistance that is designed to increase the state's capacity to address NCLB requirements and meet student achievement goals. The ARCC has provided technical assistance to the WVDE in its efforts to implement several components of the Global21 Initiative. First, ARCC staff has worked with the WVDE since 2005 to enhance its capacity to assess eighth-grade students' technology and problem-solving skills. As a result, the WVDE has selected and is piloting a comprehensive, sequential technology curriculum and authentic assessment system in 13 school districts. The WVDE was featured in an ARCC webcast, *Technology Proficiency: A Moving Target*, on October 25, 2007. Presenters for the webcast included SEA staff from North Carolina and West Virginia, as well as representatives from the ISTE and P21. In 2009, the ARCC supported work that resulted in the WVDE's development of videos showing implementation of the *techSteps* program in West Virginia classrooms. The WVDE will use these videos for professional development for educators statewide.

Second, the ARCC assisted the WVDE in identifying, training, monitoring, and supporting a statewide cadre of TISs, who train and model for teachers the meaningful use of technology in instruction. To ensure that all teachers—not just general education teachers—have access to technology integration support, the TIS cadre includes special education and Title I teachers as well as media specialists.

Third, the ARCC collaborated with the WVDE to develop and conduct instructional appraisals for use with the state's 21st century High Schools That Work program. The appraisals are customized to reflect the priorities of the WVDE's Global21 Initiative. The WVDE uses data from the appraisals to help schools improve instructional practices and achieve the instructional goals of the Global21 Initiative.

Fourth, in 2009, the ARCC provided support to WVDE staff working to develop new teacher, leader, and school counselor standards that would serve as the framework for a new educator evaluation system. In 2010, the ARCC worked with WVDE staff as they developed and piloted the new educator evaluation system designed to measure and reward teacher and leader effectiveness. To help the WVDE better prepare students for college and the workplace, the ARCC also advised the WVDE on district and school improvement strategies and resources, as well as facilitated comprehensive technical assistance to districts and schools in need of improvement.

9.4 Appalachian Education Initiative

The Appalachian Education Initiative, the WVDE, and the West Virginia Division of Culture and History collaborated on a successful application to the National Endowment for the Arts. As a result, West Virginia was one of four states that participated in the National Endowment for the Arts' Education Leaders Institute (ELI) in Chicago in March 2009. The ELI is an intensive three-day institute designed to help state policymakers, educators, and advocates design an arts education plan for statewide public school curricula.

9.5 Buck Institute for Education

In 2008, the WVDE established a partnership with the Buck Institute for Education to support the department's work with high-quality PBL in K-12 education. Through the partnership, the Buck Institute has provided training for staff members of West Virginia's TLIs in 2008 and 2009. TLI

staff, in turn, provide a week of intensive professional development (to include PBL) to participating teachers from around West Virginia (approximately 600 each summer).

Staff from the Buck Institute continue to collaborate with WVDE personnel as the Department provides ongoing support and training to teachers across the state. Currently, the Buck Institute and WVDE are collaborating on the development and sharing of resources. Further, the two entities have extended the partnership to include research, joint publications, and a proposed advanced teaching credential in PBL.

9.6 Calculator Usage Guide for K-16 Educators

The WVDE, in cooperation with HEPC, has created a calculator usage guide for K-16 educators. The guide describes the benefits of calculator usage at all programmatic levels and emphasizes the need to carefully consider appropriate uses of the calculator. Research is cited and graphic illustrations are provided to help guide a teacher in determining appropriate uses of the calculator. A team of 22 K-16 educators (including seven higher education mathematics faculty) worked on this document during the 2009-2010 school year and presented the guide at the West Virginia Council of Teachers of Mathematics Conference in March. West Virginia mathematics teachers at all levels were encouraged to provide feedback during the comment period. The guide was presented to the legislature in the spring of 2011 as evidence for the need of continual student access to calculators.

9.7 Center for Civic Education

The WVDE has partnered with the national Center for Civic Education to provide training and resources to West Virginia teachers. Some of the Center's programs include *We the People* (The Citizen and the Constitution), *Project Citizen,* and the *Campaign to Promote Civic Education*. Since 2005, representatives from the Center for Civic Education have come to West Virginia to provide training in the Center's programs and speak with teachers about the importance of civics and, in particular, civics in the 21st century. Further, in 2006, the Center's Campaign to Promote Civic Education recognized West Virginia for the state's efforts to encourage civics education in schools. The Center for Civic Education will be conducting workshops for teachers at the 2011 Social Studies Summer Institute.

9.8 Center for Disease Control's Division of Adolescent and School Health

On March 1, 2008, the WVDE entered into a five-year cooperative agreement with the Center for Disease Control's Division of Adolescent and School Health (DASH). This marked the third time West Virginia has been approved through a competitive process to improve the health of the state's young people by promoting healthy behaviors and discouraging unhealthy behaviors such as poor eating habits, physical inactivity, and tobacco use. These programs aim to reduce young people's risks for chronic diseases later in life.

The DASH Cooperative Agreement enables the WVDE and the West Virginia Bureau of Public Health (BPH) to work together efficiently, respond to changing health priorities, and effectively use limited resources to meet a wide range of health needs among West Virginia's school-age population. With this support, the WVDE and BPH are able to (1) provide high-level staff members to coordinate support and evaluate local school health programs, (2) build a training and development system for health and education professionals at the state and local levels, and (3) bring together various

organizations to develop and coordinate strategies for reducing the risk behaviors among young people.

Reducing youth health risk behaviors is a complex effort that requires cooperation and collaboration among many partners at the state, regional, and local levels. At the state level, structures for intra-agency, interagency, and community partnerships must be developed. Some of the partnerships that the WVDE and BPH have formed include West Virginia Partnership for Community Well-Being; West Virginia Healthy Lifestyle Coalition; West Virginia Action for Healthy Kids Network; West Virginia Tobacco Control Coalition; West Virginia State AIDS Task Force; West Virginia Task Force for Teen Pregnancy Prevention; State Health Education Council; Governor's Cabinet on School-Based Health Services; WVU Prevention Research Center; Marshall University Prevention Resource Center; Tobacco Prevention Youth Empowerment Team; West Virginia Nutrition Advisory Council; West Virginia On the Move; West Virginia Association of Health, Physical Education, Recreation and Dance; West Virginia Council of School Nurses; and the West Virginia School Nurse Association.

9.9 West Virginia Center for Professional Development

The mission of the WVCPD is to advance the quality of teaching and management in the schools of West Virginia through (1) the implementation of statewide training, professional staff development, and technical assistance programs and practices to assure the highest quality in teaching and management; and (2) the provision of technical and other assistance and support to regional and LEAs in identifying and providing high quality professional staff development and training programs and implementing best practices to meet their locally identified needs.

The WVCPD works with the WVDE to support professional development to implement 21st century instruction and learning through the following initiatives:

- ✓ **Governor's Academy for Teaching Excellence (GATE):** GATE is the cornerstone of the center's professional development programs. Designed to keep educators' skills sharp and up-to-date, GATE sessions are held across the state to give teachers and administrators around West Virginia access to this critical training resource.
- ✓ **Principals' Leadership Academy for Experienced Principals:** This academy delivers innovative leadership training to meet principals' professional development needs.
- ✓ **Principals' Leadership Academy for New Principals:** This academy for new principals is an intensive six-day program culminating in a comprehensive action plan.
- ✓ **Evaluation Leadership Institute (ELI):** Like most of the Center's professional development programs, the ELI is mandated by the West Virginia Legislature. The ELI provides principals and central office administrators with training to build the skills for effectively evaluating personnel. The sessions are held each year in each RESA.
- ✓ **Mentoring and Teacher Induction:** West Virginia is one of only eight states that support new teacher mentoring programs. The center's Beginning Teacher Mentor Institutes provide teachers new to the profession or to the state with workshops and training to ensure a smooth transition into the world of teaching. This includes pairing each one with a veteran teacher who will mentor them during their first year in the classroom.
- ✓ **Advanced Placement:** Research shows that students who participate in Advanced Placement classes are more likely to perform well in and graduate from college in less than four years. The WVCPD's AP initiative is a comprehensive professional development program that prepares teachers to challenge students with rigorous subject matter that allows them to gain college credits while still in high school.

9.10 Connections Conference

The WVDE and the state's higher education institutions continue working together to align West Virginia's 21st century teaching and learning initiative in both teacher preparation programs and preK-12 schools.

The Connections initiative helps West Virginia's institutions of higher education become familiar with the technology software, hardware, and technology integration efforts currently offered in preK-12 schools. This opportunity placed proven technology-based instructional strategies in the hands of the people who will be training future teachers.

An overview of the WVDE instructional technology initiatives was provided along with hands-on practice. The agenda consisted of general sessions, nationally recognized keynote speakers, interactive/hands-on breakout sessions, and team planning time for higher education faculty to create action plans designed to incorporate the initiatives within their institutions' teacher education preparation. Nationally recognized keynote speakers provided updates on innovative technology integration initiatives and new standards for teachers relevant to higher education preparation programs.

This technology professional development conference came as the WVDE and the state's higher education institutions had already been working together on implementing Classroom Assessments for Learning through a series of professional development sessions. Higher education faculty members are also currently participating in the West Virginia leadership development and support collaborative to create recommendations and proposals to better prepare principals for 21st century schools.

Historically, a lack of connection between K-12 and higher education in the U.S. has hampered implementation of education policy. The country's two separate systems of mass education—K-12 on one hand and universities and colleges on the other—rarely collaborated to establish consistent standards. But a new willingness among K-12 and higher education to work together and effect significant change has been emerging as the public demands greater accountability from its schools.

9.11 Celebrating Connections

The WVDE has joined with other agencies to coordinate the annual West Virginia early childhood education conference, Celebrating Connections, for the past 14 years. The statewide conference features nationally known early childhood education experts, highlights successful local early childhood programs and offers several days of workshops on a variety of early childhood topics. In addition to the OSP, other conference sponsors include the WVDHHR, West Virginia Birth-to-Three Program, West Virginia Head Start State Office, Bureau for Children and Families/Division of Early Care and Education.

9.12 Delaware Science Coalition

In May 2008, the WVDE began a partnership with the Delaware Science Coalition (DSC). Representatives from the WVDE built on personal contacts with the Delaware State Science Coordinator through the Council of State Science Supervisors and the NSTA. WVDE representatives sought out the Delaware State Science Coordinator; the Assistant Superintendent of the Division of Curriculum & Instruction saw a presentation on the DSC's progress in science education and wanted to find out more. The partnership between the WVDE and DSC focuses on West Virginia's elementary science initiative, which was begun in 2008. The WVDE modeled the initiative on the

DSC model, which includes science kits and units developed using the *Understanding by Design* approach. The WVDE has adjusted the program to meet West Virginia's CSOs. However, DSC has agreed to allow the WVDE to use the full DSC program. The DSC has further provided information on creating databases, providing professional development, purchasing, and assessment. Lead instructors from the DSC traveled to West Virginia to provide professional development to 50 West Virginia science teachers. In 2011, the DSC continues to provide support to the elementary science initiative.

9.13 Department of Education and the Arts

The Department of Education and the Arts provides statewide leadership and innovation, enhancing arts and minds throughout West Virginia. Serving on Governor Earl Ray Tomblin's cabinet, the Secretary of the Department of Education and the Arts, Kay Goodwin, provides counsel to the executive officers and legislative members on issues concerning the diverse character of education and the arts.

Composed of five agencies and a number of special programs originating from the Cabinet Secretary's Office, the Department seeks to reinforce the rich heritage of culture, education, and artistic creation in West Virginia. Education and the Arts celebrates the resilience of the "mountain character" through public broadcasting, libraries, rehabilitation, professional development, community volunteerism, and culture and history.

The Department of Education and the Arts represents the spirit of West Virginia. Programs by the Division of Culture and History enhance the artistic lives of our citizens while preserving the artifacts and documents that authenticate West Virginia's history. The Department assists the disabled in seeking better lives through the Division of Rehabilitation Services, provides professionals with educational tools to further their expertise through the WVCPD, and promotes volunteerism in communities through the West Virginia Commission on National and Community Service. The Department seeks to maintain public access to manuscripts and electronic volumes of literature and information through the West Virginia Library Commission and seeks to provide the best in public radio and television programming via the Educational Broadcasting Authority to educate, entertain, and enlighten. The Department of Education and the Arts is part of the executive branch that provides Governor Earl Ray Tomblin with support to bring progress to the State of West Virginia.

9.14 Environmental Systems Research Institute

As part of the partnership begun in 2008, the WVDE and ESRI are working together to provide GIS software to all middle schools and high schools in West Virginia. The WVDE has acquired a statewide license for ArcView GIS software for Grades 5-12 classrooms, a program that enables users to visualize, manage, create, and analyze spatial and geographic data. The WVDE established a teacher professional development week—July 26 through July 30, 2010—with the assistance of WVU, NASA, the West Virginia Geographic Alliance, and ESRI, as well as follow-up classroom support for ArcView users through the GeoMentor program for teachers in Grades 5-12 classrooms. The weeklong professional development session will include teachers from social studies, science, and career technical classrooms.

During the 2010-2011 school year, the WVDE and ESRI has continued its partnership and has provided the software and training for using the ArcView GIS Software in their classrooms. The WVDE is currently compiling lesson plans from teachers across the state to eventually be published

on the Teach 21 website. During the summer of 2011, the WVDE will again partner with NASA and WVU to provide advanced GIS training for teachers.

9.15 Globaloria Education Program

In June 2007, the Office of then-Governor Joe Manchin III was seeking game-based learning programs with strong potential for economic and 21st-century learning advancement, and invited the World Wide Workshop Foundation to conduct a five-year pilot test of its Globaloria program in West Virginia. The WVDE partnered with the World Wide Workshop Foundation soon after. Now in its fourth year, Globaloria WV has reached over 1,255 students and educators in 41 middle schools, high schools, community colleges, and universities in 19 counties across the state. Globaloria students are designing and programming original web-games about educational topics and using an online social network for learning. They work independently and in small teams to develop their original games from idea to a finished product. They learn hands-on through an online game design and programming curriculum (a customizable textbook) while utilizing the most pervasive Web 2.0 tools. They learn to use a wiki, make social profile pages and team game pages, produce and post interactive game content, prototype videos, simulations, graphics, music and sound effects, and write blogs about their gaming ideas and content research. They collaborate and receive feedback from classmates, educators, students at other schools, and professional game makers. And they learn how to create and publish their own Flash web-games. The WVDE established a Globaloria Stakeholder Committee in the spring of 2011. This group is charged with making recommendations that will lead to the development of a comprehensive implementation plan for Globaloria in West Virginia public schools beyond the five-year pilot. The plan will be submitted to the WVBE in August 2011 for consideration of Legislative funding.

9.16 Higher Education Institutions

The 21st century partnership between the WVDE and higher education institutions began at the time of the P21 signing in December 2005. The WVDE included representatives from the 19 IHEs that house teacher preparation programs in nine days of professional development offered to WVDE staff. On the final day of the training, representatives from each department, organization, and institution at the training outlined how they planned to change their practices as a result of the training.

In January 2007, the president of the WVBE requested that the State Superintendent of Schools form a committee, in collaboration with the HEPC Chancellor, to make recommendations to the Board about incorporating 21st century teaching and learning skills into West Virginia's teacher preparation programs. The WVDE's Office of Instructional Technology, Office of Professional Preparation, and the 19 IHEs partnered to request a grant from the Benedum Foundation for seed money to review each higher education institution's teacher preparation program. As a result of the examinations of and reflection about the requirements of teacher preparation programs, certificate renewal, and receipt, changes have been made that incorporate additional mathematics, reading, and technology courses. Teachers must also participate in at least three hours of technology integration training to renew their teaching certificates. The WVBE approved the changes made in all teacher preparation and certification programs to reflect a new emphasis on 21st century knowledge and skills.

Because higher education institutions currently do not have a professional development program for professors to teach them how to integrate technology into instruction and teach future teachers how to do so, the WVDE and the 19 IHEs held a conference called 21st Century Connections in May

2008. Four national presenters discussed and demonstrated the technological resources available to the institutions that could be incorporated into teacher preparation programs. These resources help teachers-in-training to become more technology savvy and to use technology to teach students how to seek out information.

9.17 Intel

The partnership between the WVDE and Intel, which expanded in 2006 to include the Global21 Initiative, was built on existing connections between the two entities through the State Educational Technology Directors Association (SEDTA) and through Intel's participation in the national P21. Through these existing connections, the WVDE was familiar with Intel, what the partner was already doing, and what it could offer the initiative. As of May 2008, Intel and the WVDE had been working together for a couple of years specifically on the programs included in the Global21 Initiative. Intel provides free tools and curricula to the WVDE to help students develop familiarity with information and communication technology, problem solving, critical thinking, and collaboration. Two primary courses are available to West Virginia teachers: Intel Teach Essentials and Intel Teach Thinking with Technology. Intel also provides training to enable West Virginia teachers to use these courses with their students. West Virginia teachers can become Master Trainers (who train Participant Teachers) or Senior Trainers (who train Master Trainers). As of 2007, three West Virginia teachers had begun training to become Senior Trainers; the WVDE planned to have 50 Master Trainers and 500 Participant Teachers by summer 2007. Intel also provided a grant to the WVDE to help the Department provide professional development at the school level. Among the free tools Intel has provided are tools for thinking, tools for learning essentials, tools to meet CSOs in technology, and rubric tools for assessment. The partnership with Intel has helped across the content areas.

In 2009, the WVDE received a third grant from Intel to continue the support for professional development. Intel has developed a new course—Elements—which was released in July 2009.

9.18 International Society for Technology in Education

The ISTE is a source for professional development, knowledge generation, advocacy, and leadership for innovation. A nonprofit membership organization, ISTE provides leadership and service to improve teaching, learning, and school leadership by advancing the effective use of technology in preK-12 and teacher education. Home of the National Educational Technology Standards (NETS), the Center for Applied Research in Educational Technology, and the National Educational Computing Conference, ISTE represents more than 85,000 professionals worldwide.

ISTE's NETS have served as a roadmap for improved teaching and learning by educators across the United States. The standards, used in every state and many other countries, are credited with significantly influencing expectations for students and creating a target of excellence relating to technology.

9.19 Learning First Alliance

The WVBE has partnered with the national Learning First Alliance to establish a West Virginia affiliate. West Virginia's alliance is a partnership of 30 education and business organizations that have come together exclusively to: improve student learning in the 21st century, foster complementary efforts at state and national levels, increase support for public education, provide a

venue for discussion of important education related issues, determine common statewide education issues, and strive for consensus on issues.

9.20 MetaMetrics

The WVDE's Office of Instruction developed a partnership with MetaMetrics to obtain Lexile and Quantile measures for the state's adopted textbooks in reading and mathematics (respectively). The MetaMetrics Lexile Framework uses students' reading ability to inform instruction and select appropriate reading materials; the Quantile Framework uses students' mathematics mastery to inform instruction. This initiative followed the WVDE OAAR's work with CTB/McGraw-Hill to obtain Lexile (reading) and Quantile (mathematics) measures on the state's assessment reports. In addition to the provision of these measures for the state's textbooks, the partnership with MetaMetrics will also provide professional development to assist K-12 teachers understand Lexile and Quantile measures and how these measures can and should inform their instruction with individual students. The WVDE-MetaMetrics partnership will provide teachers with just-in-time training and information to assist them in planning daily instruction—including the design of instruction and the use of instructional materials. The partnership also includes a training program designed to teach parents how to use the Lexile Framework in helping their children select appropriate reading material to help develop reading comprehension skills.

9.21 NASA Challenger Center

The partnership between the WVDE and the NASA Challenger Center began in 2008, based on personal contacts between WVDE personnel and staff at the NASA Challenger Center. After consultations, the WVDE decided to showcase the Challenger Center's e-missions program at the 2008 TLI. Challenger Center staff provided three free clinics to train teachers to carry out an e-mission in their classrooms and also gave six teachers free e-missions for their students. The Challenger Center provided a clinic for both sessions of the 2009 TLI and provided two free e-missions for the teachers with their students. The WVDE and the Challenger Center continue to support one another.

9.22 NASA IV and V Education Resource Center

The WVDE, using the existing personal connections of Department personnel, began a relationship with the NASA IV and V Education Resource Center (ERC) in 2008. The ERC provides professional development for teachers in applications such as GPS technology, robotics, podcasting, and LEGO robotics in the classroom. WVDE personnel have attended ERC sessions on such topics as enhancing engineering in education. ERC personnel are sharing NASA's multimedia content by making available to West Virginia teachers fully loaded iPods that contain the ERC's 250-video library. Representatives from the ERC provided training on podcasting and LEGO robotics to West Virginia teachers during the 2008 West Virginia TLI. ERC personnel continue to provide regular training and resources to all West Virginia teachers and were involved in the 2009 TLI and GIS in Education program. In 2010, ERC personnel provided support and training for West Virginia teachers on the GIS.

9.23 National Board for Professional Teaching Standards

The WVDE has collaborated with the NBPTS and the Benedum Foundation to provide resources, professional development, and an online network of facilitators and other support people to assist teachers in pursuing National Board Certification. The WVDE also assists teachers pursuing National Board Certification by providing each year's cohort of candidates with a facilitator who guides them through each step of the certification process. For those West Virginia teachers who receive National Board Certification, the state legislature has set aside a salary supplement of $3,500 each year for 10 years—the length of the national certification; further, National Board Certified teachers' expenses related to the certification are reimbursed. The WVDE also worked with local school districts to persuade them to provide additional supplements to the salary supplement offered by the state. The goal of these efforts is to increase the number of expert teachers in West Virginia classrooms. Further, WVDE officials hope that these efforts—particularly the financial support—will encourage teachers to stay in the classroom in West Virginia rather than leave the profession or the state.

9.24 National Council on Economic Education

The WVDE has partnered with the NCEE to provide professional development and resources to West Virginia teachers for economics education. Since 2006, representatives from the NCEE have traveled to West Virginia to work with teachers (particularly social studies teachers) to help them be better prepared to teach economics. The NCEE provides materials and assistance to the WVDE at a reasonable cost. The WVDE has sent representation to NCEE annual conferences to present West Virginia's financial literacy plan and professional development.

9.25 National Dropout Prevention Center for Students with Disabilities

The OSP has been selected to receive technical assistance in dropout prevention for students with disabilities from the National Dropout Prevention Center for Students with Disabilities to develop a dropout prevention tool for use by LEAs to create a customized dropout prevention program in the district. Priorities of the technical assistance include guidance for districts to understand the calculation of graduation and dropout under ESEA (cohort), awareness and use of data related to SPP/APR transition indicators (graduation, dropout, transition planning in the IEP process, and post school outcomes), and development of the LEA tool. Stakeholders will include WVDE special education staff, other WVDE staff, agency/organization staff, and LEA staff.

9.26 National Geographic Society

The WVDE and the National Geographic Society have partnered through the West Virginia Geographic Alliance since the early 1990s. The National Geographic Society has provided a great deal of professional development for West Virginia teachers, and the National Geographic Education Foundation has provided grants to enable students to study issues related to geography. The WVDE also partners with the National Geographic Society in sponsoring the State Geography Bee, held each spring at Concord University.

9.27 Office of Education Performance Audits

The mission of the OEPA is to assist the WVBE, legislature, governor, and the Process for Improving Education Council in establishing and maintaining a system of education performance audits that measures the quality of education and the preparation of students based on standards and measures of student, school, and school system performance and progress and the processes necessary in providing a thorough and efficient system of education in West Virginia. The OEPA is independent from the WVDE. The OEPA goals are as follows:

- ✓ Determine school accreditation and school system approval status for each school and each school district in the state
- ✓ Assure that each school and school system is accountable for the efficient use of existing resources to meet or exceed standards
- ✓ Require each school and school system to annually target resources to improve student, school, and school system performance
- ✓ Provide accreditation information to the legislature, governor, the general public, and any individual who requests such information
- ✓ Establish early detection and intervention programs to assist underachieving schools and systems in improving performance
- ✓ Assure that all statewide assessments of student performance are secure
- ✓ Establish, as part of the process for improving education, the development of the capacity of schools and school systems to meet or exceed standards
- ✓ Train/retrain a cadre of people for on-site reviews
- ✓ Identify exemplary schools and school systems
- ✓ Monitor and evaluate the components of the OEPA

9.28 Office of the State Auditor

Beginning in 2005, the WVDE and the Office of the State Auditor built on existing relationships to strengthen and extend their collaboration regarding investment education as part of financial literacy in the classroom, particularly for Grade 12. In 2009-2010, West Virginia teachers, the WVDE, and the State Auditor's Office collaborated to create four PBL units focused on investment, investment fraud, the stock market, and retirement. These PBLs have been posted on the Teach 21 website and contain material for Grades 9-12.

9.29 Oracle

The partnership between the WVDE's Global21 Initiative and Oracle, begun in 2007, was built on existing connections through SEDTA and P21. Because of these connections, the WVDE was familiar with Oracle, what the partner was already doing, and what it could offer to the initiative. Planning for the partnership began during June and July of 2007 at the National Educational Computing Conference. In November 2007, the WVDE sent 11 educators (including two WVDE staff members) to California to participate in a multinational weeklong training on PBL hosted by the Oracle Institute. The WVDE educators had already spent time in an Oracle online course about PBL. Further, they had the opportunity to learn about Oracle's Think.com, which gives teachers a safe place online to set up projects to share with other classrooms in the same school, other schools in West Virginia, or others around the world. When the educators returned from the training, they began implementing in their schools what they had learned at the training. With Oracle's help, the

WVDE is providing professional development to West Virginia teachers to help them use Think.com. Professional development on ThinkQuest is available upon request.

9.30 Parent and Community Involvement

The WVBE believes that parent, family, and community involvement at early childhood, middle, and adolescent levels is absolutely fundamental to a healthy system of public education. The Board launched the Parent and Community Involvement initiative to strengthen crucial partnerships with family and community stakeholder groups. In the fall of 2008, a task force was formed and a strategic plan approved by the Board that outlines three key goals: promote parent and community involvement, develop resources in and for districts, and develop a support infrastructure in each county. In spring 2008, the state revised WVBE Policy 2200 to better align with 21st century learning. The policy guidelines specify requirements for promoting parent, family, and community involvement through district policy and strategic planning in order to ensure that parents, families, and communities are effectively involved in the education process of children. During the 2008-2009 school year, the following progress was made toward each of the three goals.

Goal 1: Promote parent and community involvement. In September and October 2008, students in the 21st Century Community Learning Centers and the K-12 Learn and Serve programs participated in a postcard competition to publicize National Parent Involvement Month. Contest winners were recognized by the WVBE. In addition, the WVDE partnered with West Virginia Parent Connections and the West Virginia Congress of Parents and Teachers, Inc., to enable West Virginia's participation in National Parent Involvement Month. In the fall of 2008, home-school communication was addressed as parent contacts and central office parent liaisons were assigned by West Virginia's 55 district superintendents. Monthly e-mail updates are sent to the parent contacts with relevant news, research, and training announcements. In April 2009, parents from Title I improvement pilot schools participated in parent forums during a luncheon and two after-school meetings. The purpose of the forums was to gather input from parents and families regarding their schools' parent training modules, welcoming environments, and linking to learning. Results from the forums were shared with all participating pilot schools during a summer 2009 training.

Goal 2: Develop resources for parents and community. In November 2008, the WVDE launched a parent website that provides a comprehensive 21st century resource guide for families, *Parent Involvement Appraisal*. In December 2008, parent/community minigrants of $1,000 each were awarded to support parent and community involvement initiatives in West Virginia school districts. Applications were distributed at the eight regional Parent Academies, and the grants were awarded to 29 grantees based on the impact of proposed activities on welcoming school environment and linking to learning parent training modules. In early 2009, the WVDE collaborated with the Office of Healthy Schools to implement the We Can! Program. We Can! is a national program designed for parents and caregivers to help children ages 8-13 stay at a healthy weight. An ongoing collaboration with the Office of Secondary Schools involves the development of one parent/family financial literacy activity at each grade level to be used to promote parent/family involvement in the LINKS program. The WVDE also partnered with Edvantia to develop a *Parent Involvement Appraisal*, which has been implemented in 15 Title I pilot improvement schools. Participating schools receive a report and technical assistance aimed at developing an action plan from the appraisal.

Goal 3: Support infrastructure. In October 2008, a statewide Parent and Community Advisory Council was formed that includes representatives from the WVBE, Parent Teacher Association, parents, community liaisons, and school personnel. The Advisory Council will meet twice a year to

discuss and advise the WVDE on activities under consideration. In November 2008, the RESAs conducted eight regional Parent Academies that provided training focused on welcoming school environments and linking to learning for district leadership teams. Fifty district teams were represented at the Academies, each consisting of up to four individuals—a principal, parent, Title I coordinator, and parent contact. Each district developed an action plan for creating welcoming environments and linking parent activities to student learning. In March 2009, a guidance document was developed that spells out WVBE Policy 2200 planning requirements for parent involvement in the Five-Year Strategic Plan. Training will be provided for all districts and will include a rubric that evaluates the county Parent Involvement Plan.

Parent involvement in education has proven to be a key factor in the success children achieve in school. In an effort to encourage participation from families, the OSP has coordinated the WV Parent-Educator Resource Center (PERC) project since 1983. The purpose of the project is to ensure that children receive the highest achievement possible by building partnerships between parents and educators. Twenty seven (27) counties participate in the project by establishing centers to work with families of children in the school system, educators, and others. Each PERC is staffed with the parent of a special needs child and an educator. Responsibilities include providing information, resources, and training for parents on important issues; assisting families to better understand their children's educational needs; connecting families with appropriate community services; and offering information, resources, and training to educators to increase the skills, knowledge, and attitudes needed to encourage and strengthen family involvement and positive school-to-home partnerships. PERCs are housed within various locations throughout the state. LEAs provide the financial support for their PERCs by blending fiscal resources such as special education, Title I, state and local funds, and grants.

9.31 Reasoning Mind

The WVDE in collaboration with Marion County Schools was recently awarded a grant from the Bill and Melinda Gates foundation for Reasoning Mind. A Reasoning Mind classroom is a hybrid of online and face-to-face instruction, where the teacher gives each child individual help and attention. The grant is focused in two elementary schools. Evaluation data will be available in June 2013. Reasoning Mind is a non-profit organization founded in 2000.

9.32 Regional Educational Laboratory (REL Appalachia)

The REL Appalachia is composed of a team of nationally recognized education research scientists employed by the CNA Corporation in Alexandria, Virginia. Serving Kentucky, Tennessee, Virginia, and West Virginia, the REL Appalachia's mission is to provide high quality research, analysis, and technical assistance that help state and local education systems in the region achieve higher educational standards and close the achievement gap. REL Appalachia achieves its mission through core activities: the assessment of regional education needs, applied research, and long-term studies that evaluate the efficacy of educational interventions. REL Appalachia is supporting the Global21 Initiative with field research analysts to conduct research studies for the State Superintendent of Schools. A half-time field research analyst worked with West Virginia from October 2007 to October 2009. A full-time field research analyst has been working with West Virginia since October 2009, and his appointment will end in October 2011.

9.33 SAS inSchool

An existing partnership between SAS inSchool and the WVDE was aligned with the goals of the West Virginia Global21 Initiative. In 2004, F. Selby Wellman made a gift through SAS inSchool's Partners in Education program to allow West Virginia secondary teachers to use the SAS Curriculum Pathways. Mr. Wellman's gift enables the WVDE and schools to use the program at affordable rates. Curriculum Pathways provides Grade 8- 12 teachers with resources in math, science, English, social studies, and Spanish; these resources, which meet West Virginia's CSOs and promote higher order thinking relating to 21st century skills, are intended to enhance teacher effectiveness and promote improved student achievement. Through the partnership with SAS, WVDE personnel receive training from SAS and, in turn, provide professional development to West Virginia schools.

SAS Curriculum Pathways is now available, free of charge, to every educator in America. The move comes in response to an education system in crisis and in need of resources that engage 21st century students. SAS CEO Jim Goodnight announced the change as a reaffirmation of the company's more than 30-year commitment to education.

9.34 Southern Regional Education Board

Founded in 1948, SREB is a nonprofit, nonpartisan organization that works with leaders and policymakers in 16 member states to improve pre-K through postsecondary education. Through many nationally recognized programs and services, SREB's mission is helping states achieve the 12 *Challenge to Lead* Goals for Education.

The SREB Educational Technology Cooperative, composed of state higher education and K-12 coordinating and governing boards, focuses on ways to help state leaders create and expand effective uses of technology in schools and colleges. This unique, multistate cooperative represents more than 3,300 school districts and nearly 800 colleges and universities in the 16 SREB states. It monitors and reports on a wide array of educational technology topics and works with states to use technology wisely. As schools and colleges implement and use technology, they need to see the connection between technology and higher student achievement. In the *Technology Counts 2008* report issued by *Education Week*, West Virginia, one of the 16 SREB states, was rated number one in the nation for educational technology.

Task groups address specific initiatives and topics of interest as time permits or as the topics become increasingly important for SREB states. The task groups for 2007-2008 were

- ✓ Online learning
- ✓ Teaching and learning
- ✓ Information technology

As mentioned earlier in this chronicle, the WVDE is adapting SREB's HSTW program and implemented the 21st century HSTW program across the state.

9.35 Regional Education Service Agencies

In 1972, the West Virginia Legislature enacted legislation that caused the WVBE to establish multidistrict RESAs for the purpose of providing high quality, cost-effective educational programs and services to school systems. Technical, operational, programmatic, and professional services are among the types of programs and services appropriate for delivery on a regional basis.

In 2002, Senate Bill 4319 established certain areas of service in which the RESAs can best assist the WVBE in implementing a standards-based accountability model for education in West Virginia. According to the legislation, the areas of service include the following:

- ✓ providing technical assistance to low-performing schools and school systems
- ✓ providing high quality, targeted staff development designed to enhance the performance and progress of students
- ✓ facilitating coordination and cooperation among county boards in such areas as cooperative purchasing; sharing of specialized personnel, communications, and technology; curriculum development; and operation of specialized programs for exceptional children
- ✓ installing, maintaining, and/or repairing education-related technology equipment and software with special attention to the state-level basic skills and SUCCESS programs
- ✓ receiving and administering grants under the provision of federal and/or state law
- ✓ developing and/or implementing any other programs or services as directed by law or by the WVBE

9.36 State Educational Technology Directors Association

With West Virginia as one of its founding members, the SETDA was founded in the fall of 2001. SETDA is the principal association representing the state directors for educational technology. SETDA's goal is to improve student achievement through technology. Its mission is guided by three key principles:

- ✓ To promote national leadership in educational technology to support achievement in lifelong learning
- ✓ To provide professional development in educational leadership for members
- ✓ To build partnerships and provide leadership to advance learning opportunities

9.37 Verizon Foundation

The WVDE's partnership with Verizon began in 2006 when Verizon purchased WorldCom/MCI. The Verizon Foundation provides a web portal called Thinkfinity (formerly known as MarcoPolo) that provides organized, active links to partners who provide free educational content in multiple content areas for teachers. Partners in Thinkfinity include the Kennedy Center for the Performing Arts (arts integration); the NCEE (economics); the National Endowment for the Humanities (humanities); the National Council of Teachers of Mathematics (mathematics); the International Reading Association (language arts); the American Association for the Advancement of Science (science); National Geographic (geography); the Smithsonian National Museum of American History (American history); and the National Center for Family Literacy, the National Council of Teachers of English, and ProLiteracy Worldwide (literacy network). Thinkfinity and its partner sites include lesson plans, interactivities, movies, and other types of educational content. Through a grant provided by the Verizon Foundation, lesson plans provided through Thinkfinity will be aligned to West Virginia's CSOs. The Verizon Foundation also provides a nationally certified trainer who works with West Virginia teachers to train others to use the Thinkfinity resources; all training is provided free of charge.

WVBE members recognized Mark Moore for being named the 2008 Thinkfinity Trainer of the Year. Moore, an employee of the WVDE, earned the national distinction for providing Thinkfinity training to nearly 800 West Virginia teachers during 2008. The WVDE and ThinkFinity renewed their

partnership in 2008, and Verizon provided the WVDE with additional funds to support professional development.

9.38 West Virginia Action for Healthy Kids

At the 2002 Healthy Schools Summit in Washington, D.C., former U.S. Surgeon General David Satcher asked America to address the burgeoning crisis of childhood overweight and obesity, and Action for Healthy Kids was formed in response.

A public-private partnership of more than 60 national organizations and government agencies representing education, health, fitness, and nutrition, Action for Healthy Kids addresses the epidemic of overweight, sedentary, and undernourished youth by focusing on changes in schools to improve nutrition and increase physical activity.

Out of this summit was born the West Virginia Action for Healthy Kids (WVAFHK); 44 representatives from the state legislature, state agencies, public and higher education, nongovernmental organizations, and private citizens participate in this network. Staff from the Office of Child Nutrition and Office of Healthy Schools represent the WVDE.

In the eight years that the WVAFHK has been in existence, several initiatives have been undertaken. The Success Shared project recognized and rewarded the accomplishments of schools making positive sustainable changes in nutrition and physical activity. Also, the WVAFHK, in collaboration with the WVDE, developed Recipe for Success, a CD-ROM toolkit. The toolkit was developed to assist principals in training their peers and identifying key areas of change that model healthful eating and promote physical activity. These key areas of change included school breakfast expansion, behavior-based curriculum and instruction, physical activity, physical education, and healthy snacks.

In collaboration with the WVDE, the WVAFHK created a comprehensive physical education survey. Survey questions covered the amount of physical education offered at school, types of physical activity/ education offered, and details on recess. The survey was distributed to physical education teachers at all 826 West Virginia schools. Completed surveys, representing approximately 36 percent of WV schools, will be used to establish baseline data for guiding statewide physical activity/ education policy development. The Cardiac project and West Virginia On the Move, two organizations in the WVAFHK network, donated time and personnel to analyze the completed surveys.

9.39 West Virginia Autism Collaborative Community of Practice

At the direction of the WVBE, an Autism Task Force has worked since November 2010, to develop guidance for LEA personnel serving students with Autism Spectrum Disorder (ASD) and families of ASD students in identification and intervention planning. The goal is to provide decision making guidance that incorporates current research. The WVDE is collaborating with the Autism Training Center and Marshall University College of Graduate Studies in this effort.

9.40 West Virginia CELL/TACSEI Partnership

West Virginia is one of two states recently selected to participate in a technical assistance and training partnership with the Center for Early Literacy Learning (CELL) and the Technical Assistance Center on Social Emotional Intervention (TACSEI) funded by ED. Through this excitin

partnership, the state will develop an integrated early childhood training system to promote social, emotional, and early language and literacy competence, and prevent challenging behaviors in all young children birth to age five. The West Virginia CELL/TACSEI partnership is dedicated to building state capacity to foster professional development of the early care and education workforce that

1. enhances knowledge and skills
2. supports the implementation and sustainability of evidence-based practices
3. increases the size of the workforce skilled in supporting the early literacy, learning and social-emotional development of young children (birth–5 years) in inclusive, natural environments

9.41 West Virginia Education Association

The West Virginia Education Association (WVEA) is an education employee organization for classroom teachers and other licensed professional staff, education support professionals, higher education faculty and classified staff, future teachers, retirees, and others who care deeply about children and public education. Among its many services and activities, the WVEA monitors education laws; advocates for more education funding, and takes a public stand on issues related to quality education; offers professional development and consultation; supports conferences and other networking opportunities for members; and disseminates accurate, timely information about current laws, regulations, and policies. The WVEA contributes its support to the Global21 Initiative by providing leadership in the education community, reviewing WVBE policies, attending Board meetings, and working with the WVDE staff on statewide 21st century initiatives.

9.42 West Virginia Department of Health and Human Resources

In the spring of 2009, leaders from WVDE and the WVDHHR Bureau for Public Health formed the West Virginia Coordinated School-Public Health Partnership (CSPHP). The state CSPHP is focusing on building and sustaining a system to support school-based public health efforts rather than simply supporting individual programs. The system design will organize a variety of existing state and regional program resources in such a manner that communities, schools, and families will receive appropriate supports, resources, and services to respond to the needs of children. The system will engage county school wellness councils with regional and state CSPHP teams in collaborative planning and program implementation that incorporates both state directed activities and locally selected activities. Considerable effort will be made to supply appropriate support and guidance throughout the process via regional CSPHP teams.

9.43 West Virginia State Treasurer's Office

In 2005, the WVDE and the West Virginia State Treasurer's Office built on existing relationships to strengthen and extend the collaboration to include a specific focus on 21st century learning skills. In 2008-2009, the WVDE, classroom teachers, and the State Treasurer's Office worked together to create instructional guides in personal finance for Grades K-12, which were posted on the Teach 21 website. Over the summer months, the members of this partnership delivered professional development and support focused on the new online instructional guides for teachers. In fall 2009, a new group of teachers began another round of instructional guide development, and pilot schools began using the instructional guides in their classrooms. Student achievement has been demonstrated through pre and post assessments. The new instructional guides were being posted to Teach 21 in June 2010, and additional professional development was planned for the summer.

Conclusions

When West Virginia became the second state to join P21, the WVDE committed itself to a long-term, comprehensive, and systematic improvement effort to transform a state educational system into a system both dedicated to and capable of preparing learners for the globally competitive economy of the 21st century. This chronicle is a testament to the incredible amount of effort that has been put forth in the past six years to address every level of the educational system in a logical and holistic manner, driven by a single focus of ensuring all West Virginia students receive a high quality and rigorous 21st century education.

An analysis of this document finds structures in place to provide for involvement and, ultimately, commitment from all stakeholders including the governor, legislature, WVBE, WVDE staff, superintendents, district leadership, principals, teachers, higher education, community representatives, and business leaders. No one is excluded from this initiative. It is only through consensus on a common set of goals—a vision for the future of West Virginia's children—that the Global21 initiative will succeed.

The initiative is grounded in a set of policies and guiding documents that derive from this common set of goals. The WVDE reorganized to support these goals and deliver its services in an efficient and effective manner. All major purposes of the WVDE have been touched by this initiative. There has been a transformation of curriculum and instruction based on rigorous state standards that resulted from months of strenuous work by a dedicated and diverse group of stakeholders and several reviews by outside experts. Technology is infused throughout the educational system; this state has received national accolades for its instructional technology. Assessments are being aligned to fully monitor the success of this initiative through the knowledge and skills students have gained.

None of this could be accomplished without a massive and coordinated professional development effort. West Virginia's system of professional development for educators is multilayered, multimedia, and multiyear. There is no "one-shot" professional development; more comprehensive efforts are necessary if the state is to achieve the vision of the Global21 initiative. Plans are wasted if they are not implemented where they count the most: in the classrooms of every school across this state. To this end, personnel at all levels of the state's educational system must share a common understanding of the goals of the initiative and the processes and actions it will take to achieve those goals.

West Virginia's educational leaders also understand that "no man [or state] is an island." The state must collaborate with its own stakeholders and with key organizations and institutions that add value to the rigor and comprehensiveness of the educational system. West Virginia has embraced collaboration, seeking out the very best and most innovative of partners and programs and boldly implementing programs expressly designed to engage and develop the 21st century learner.

This document represents a snapshot of a journey of transformation. It represents what is, and what has been, but not yet what will be. This initiative continues to unfold and evolve. It has grown considerably, but must develop further, carrying on the momentum gathered thus far. There is no finish line—just a determined and optimistic willingness to continue this journey for the sake of our future.

We hope readers in other states find this chronicle to be a valuable resource as they engage in the process to implement 21st century instruction and learning.