TRANSFORMING LEARNING ENVIRONMENTS THROUGH GLOBAL INITIATIVES AND DIGITAL EDUCATION FOR STUDENTS AND TEACHERS

"Most young people entering the U.S. Workforce lack critical skills essential for success."
Partnership for 21st Century Skills (October 2006).

Section 1.0: Project Abstract

How can the Broward County Public Schools best prepare its students to be successful in the rapidly changing global economy of the 21st century? This is a question of paramount importance to the leadership, teachers, parents and community. No Child Left Behind recognizes the importance of technology in the global world that surrounds our students and challenges educational leaders to ensure that 21ST Century literacy becomes a "basic skill" needed for success in our students lives.

What kind of world do our students face? Students will spend their adult lives in a multi-tasking, technology-driven, multi-cultural, energetic world and they must be equipped to handle it. For many students, everyday life is already technology-driven. They connect with friends via email, instant messaging and chat rooms, search the web to explore their interests, express themselves with multimedia, learn with software, play video games in virtual realities, manipulate digital photos, and take pictures with cell phones. Yet, they come to school and learn primarily through traditional methods. ***Clearly, there is a profound gap between the knowledge and skills most students currently learn in school and the knowledge and skills needed for higher education and in today's communities and workplaces.***

Broward proposes to create student-centered learning environments in 27 schools where students are gaining knowledge of curriculum using technology for communication, information retrieval, and project-based learning. In this transformed environment, the teacher guides the learning process and seamlessly moves students through the learning in an interactive and engaging manner. Content takes on another dimension. Relationships among content, called multi-disciplinary learning, are an integral part of the way students learn and help them make "real-world" connections to the up-to-date information they are receiving and processing. ***These 27 model digital learning environments will be replicated to reach a critical mass of schools by 2010.***

The Partnership for 21st Century Skills coalition of business and education leaders (2003) indicates that six key elements, called 21st Century Literacy Skills, must be present to assist students to gain the knowledge and skills needed for future success. These core elements seek to engage students in their education and prepare them for careers appropriate for 21st century life. The findings of this research-based study will guide the student outcomes of this grant proposal. In addition, the Florida Technology Objectives will provide direction and its related support programs for school districts will assist in the creation of the digital learning environment models proposed in this grant.

The integration of 21st century literacy skills into daily classroom practice in the 27 selected schools is a core objective of this grant proposal and its focus seeks to meet the need of today's students to be prepared to achieve in a global economy. This is essential if we are to provide equal opportunities for our students as it becomes apparent that students without access to technology at either school or at home and without 21st century literacy skills will be at a disadvantage in 21st century society. The proposed model includes a restructured learning environment that takes the best of the future scenarios, integrates the best research on the growth and development of today's students and incorporates 21st century literacy skills including critical thinking skills, high knowledge of core subject matter, use of digital tools for communication and collaboration, and technology-centered real world experiences.

This grant proposal will create 21st century digital schools in the 27 Innovation Zones in Broward County. These schools would widely implement project-based, "real world" learning models. In addition, the grant will help transition school library media centers into information technology centers so that media specialists can play a leadership role in developing information literate students who can access, analyze, use and communicate information. By incorporating the School Improvement Planning process, Principal Leadership and staff buy-in, intensive professional development on entry, intermediate and advanced integration levels and the implementation of project-based learning initiatives, these schools will undergo comprehensive transformation leading to 21st century digital learning environments. Once these schools have undergone school-wide transformation, they will be models that can be replicated in other schools within the innovation zone of which they are part and aligned to the individual student learning needs of that zone. Project-based learning (PBL) teams will be created at the 27 schools or one school from each of the 27 feeder-pattern "innovation" zones in the district. Elementary, Middle and High Schools will be represented and having one school per innovation zone will assure a diverse, socio-economic student population. The teams at the 27 schools that will implement project-based learning will consist of fourteen classroom teachers, the media specialist and an instructional program school administrator per school, preferably the school principal. This team, which will be at advanced integration levels based on the Inventory of Teacher Technology Skills (ITTS) needs assessment tool, will receive professional development through the ***Florida Digital Educator*** summer institutes. The *ITTS* needs assessment tool will be used by the entire instructional staff, including administrators and media specialists, to determine baseline data on skill levels of all staff and be used as a pre and post test tool to measure progress towards integration and readiness for project based learning. Based on ITTS results, teachers will be placed in entry, intermediate or advanced integration categories. Teachers will be guided to the appropriate professional development based on their placement on this continuum. ***The goal will be to move entry level teachers to intermediate level, intermediate level to advanced level and advanced level into immediate implementation of project based learning initiative which Broward is calling "Global Learning Initiative through Digital Education for Students (GLIDES)."*** Upon receiving the professional development, the advanced team will be required to implement a PBL module within the curriculum framework that includes all related state and district content standards and widely incorporates reading skill development and

comprehension. Every project will include a career component that focuses on the basic principles of career planning such as decision-making, self-evaluation and goal setting. The administrator and media specialist will provide essential support to the teachers and students to insure success. The media specialist will specifically support **reading initiatives** that will both supplement and enhance student achievement. The PBL will culminate in student presentations that will be presented to parents, students, teachers, administrators and community members. Assessment of student work will be done through authentic rubrics that focus on attainment of 21st century literacy skills and understanding of core curriculum content. Data on student success in meeting learning outcomes will be recorded and this data will be analyzed for achievement.

All of the student work produced digitally and the **project-based** learning plans produced by the teachers will be made available through the Broward Education Enterprise Portal (BEEP). This portal contains curriculum and instructional resources available to students and teachers on a 24/7 basis thus providing opportunities for learning beyond the school day. The PBL initiatives will be available to all Broward teachers for replication with the goal of infusing project-based learning in a critical mass of schools within three years. In addition, a publicly available project web site will be a venue for teachers throughout the State of Florida and the Nation to learn from Broward's experience. Private and charter school teachers will have access to this web resource, to the project based plans created, and to the learning process that can be replicated throughout these schools. Private and charter schools will also be able to access district-wide professional development, collaborate with teachers and students around curricular projects and themes, and access any information or resources needed to replicate at their individual school sites. Charter and private schools will also have available to them the "Podcast" based online course produced by the grant.

Broward County's Human Resources Development (HRD) department will capture best practices from the PBL process and curriculum modules that will be used to create a "Podcast" based PBL course. These best practices will also be incorporated into on-going professional development programs and activities for administrators and teachers throughout the District. This "Podcast" based PBL course will be integrated into the public project web site for educators across the nation and our PBL project partners in other countries. After infusing PBL into daily instruction, the advanced level teachers will mentor and coach a new PBL team in their school with intermediate level teachers who have been prepared to move into advanced level integration, thus assisting in the replication process throughout the school. All the professional development delivered through this grant will align to the Professional Development Standards adopted by the State of Florida and support the framework for standards adopted by the National Staff Development Council.

Media Specialists will be integral to project success. The media specialist will help students and teachers succeed in managing their information needs. They will collaborate with teachers to create high-level learning experiences, **build avid and capable readers**, develop information literate students, and use technology to enhance learning. It is imperative that school districts clarify and standardize the changing role of the media

specialist (certified and paraprofessionals) with respect to the integration of information literacy standards, access to digital content, and support to classroom teachers at the elementary, middle, and secondary levels in teaching Information Literacy Skills and focusing on our reading priorities. *This grant will assist the district in redefining the role of the media specialist and media center and help transition to new "Information Technology Centers"* that more adequately meet the needs of today's students and teachers.

Teachers at entry level of integration will participate in professional development that includes the incorporation of wireless carts into classroom instruction, using video projectors and presentations for whole group instruction, having students access computers for research, and becoming familiar with district software such as Inspiration for concept mapping and become familiar with the resources obtained in the Broward Enterprise Education Portal (BEEP). Indicators of success will be available for these teachers and administrators will be able to conduct classroom walkthroughs in which these indicators are apparent.

Teachers at the intermediate level will participate in professional development that includes strategies for integrating technology into unit and lesson plans, immersion in the resources available through BEEP, replacing traditional activities with technology based activities and simple projects. Up to six teachers per school at the intermediate level will participate in the ***Florida Digital Educator Summer Institutes*** and be prepared to move to advanced, project-based learning integration during the second semester of the 2007/2008 school year.

Teachers at the advanced level will implement the Project-based learning initiative. Teachers will facilitate the learning and have a firm understanding of each student's learning needs because they will have immediate access to data to assist in planning and delivering learning programs. Project-based learning and interdisciplinary strategies will provide students with a well-rounded understanding of curricular content and an atmosphere where discovery, deep thought and reflection, participation, and interaction are encouraged. Up to eight teachers per school at the advanced level will participate in the ***Florida Digital Educator Summer Institutes*** and will implement project-based learning during the first semester of the 2007/2008 school year. In addition, this team of teachers will receive additional professional development to prepare them to mentor and coach other teachers both at their school and within their innovation zone to implement project-based learning strategies.

Students who participate in the project-based learning approach will have access to a learning device (laptop) that is used for research, productivity and communication. The student and teacher will be connected to a wealth of information and curricular content through this tool. Student to student interaction is also an essential component of PBL and will be emphasized throughout this grant initiative. Students will be expected to participate in blogs or wikis and collaborate on group projects and activities. ***Reading comprehension and writing skills*** will be of highest priority and related to the critical 21st century skills are central to the learning and students will learn to be team players, take

on leadership roles, be critical thinkers, and be active citizens in the community. Most importantly, students will be succeeding at high achievement levels and will be part of an engaged, active learning community that believes that every student *will* learn and succeed. This model of student engagement and involvement is where we want to lead the entire school community by actively moving each teacher, each media specialist, each administrator and finally each students into this collaborative, global and comprehensive learning environment.

Instructional Program Administrators will be the school visionaries who lead and support the transition process that is occurring in the classroom. As instructional leaders, the administrators will provide the time, resources, and leadership to enable teachers to take the risk of changing instructional strategies and integrating digital tools. In addition, they will be evaluating teacher performance and analyzing student achievement results using evaluative tools provided through the USF/Center for Instructional Technology research program.

Current District initiatives, along with opportunities provided by the Florida Department of Education including the ***Florida Digital Educator*** *program and the* ***ITTS*** *needs assessment tool,* will be leveraged to assist with the learning environment transformation process. The initiatives that will be leveraged include:

1. Student Technology Refresh Project. This project provided a baseline of student laptops, wireless carts, printers and servers for each school and will be used for research, collaboration, communication, and multimedia presentations by students.
2. Digital Education Teacher Academy (DETA). This partnership with Florida Atlantic University provides teachers with graduate level credit for completing a course focused on integrating technology into the curriculum. DETA teachers will be targeted for participation in the ***Florida Digital Educator*** *program* and be primary teacher leaders in the new digital learning environments created in this grant.
3. Broward Education Enterprise Portal (BEEP). The student and teacher parts of the portal will be the communication tool to share project results including teacher and student work products.

The major goals and objectives support the philosophy that professional development must be coupled with actual classroom implementation to achieve the change in student achievement that is anticipated. In addition, key support from administrators, media specialists and district staff must be in place for teachers to achieve the change.
The four major goals of the grant are:

Goal 1: *Systematically move teachers through the stages of entry, intermediate and advanced levels of technology integration culminating in project-based learning as an instructional strategy that incorporates 21st century literacy skills, focuses on student engagement and provides multi-disciplinary curriculum content delivery.*

Goal 2: *Create a comprehensive professional development program with the* ***Florida Digital Educator*** as a **cornerstone program** that *will position the media specialist as a catalyst and change agent in creating effective Information Technology Centers and consequently learning environments that use technology to enhance teacher delivery of instruction, as well as student achievement*.

Goal 3: *Assist school administrators in taking the Leadership role needed to actively reinvent the school culture to support digital learning environments with 24/7 learning opportunities and highly achieving 21st century literate students*.

Goal 4: *Communicate and disseminate best practices resulting from the implementation of this grant to key stakeholders and implement a strategy to replicate the process undertaken in this grant throughout Broward County Public Schools.*

In summary, the grant will provide comprehensive, on-going and results-driven professional development for teachers, media specialists and administrators at entry, intermediate and advanced levels of technology integration including the ***Florida Digital Educators program****;* project-based, inquiry-based strategies and curriculum units with in-class mentoring and coaching; implementation of project-based learning plans with students; assistance in transforming the role of Media Specialists into Information Technology Specialists; additional classroom technologies (video projectors, interactive whiteboards, digital cameras, MP3 players or iPODS, and document cameras); and stipends and registration fees for professional development. The **ITTS** will be used to place teachers at entry, intermediate and advanced levels of integration. Teachers will then participate in professional development leading to the next level of integration. Advanced level teachers and their students will participate in project-based learning in which student engagement, teacher facilitation, use of digital tools and resources, and alternative assessment are key. Student work will be showcased to the entire school, district and community through authentic presentation venues. Video of lessons and lesson plans will be incorporated into the BEEP Portal for the entire district community. The Human Resources Development department will develop a replicable "Podcast" based course for teachers that trains educators in the project based learning process and can be accessed by teachers throughout the State and Nation. A project web site will disseminate information on student performance and project results for a national and global audience. Most importantly, this grant would be a natural extension of, and significantly enrich and advance the technology integration aspect of a number of key district initiatives enabling Broward to take major steps towards transforming its teaching and learning process and assisting its students with the attainment of essential 21st century literacy skills.

Technology literacy goals as mandated by No Child Left Behind (NCLB) will be incorporated. The relevance of real world applications to high school and middle school reform are aligned with the career components of this grant. Data from the DOE STaR Survey has been an essential part of the selection process of the schools in the proposed program. Using a data point analysis technique, schools were placed into entry, intermediate, and advanced levels of technology integration. Area Superintendents

provided input into the school selection process and the schools identified to participate represent a cross section of the Broward County student population.

The following sections of this grant proposal provide further information on the project need, project design, support for strategic imperatives, dissemination and marketing plan, criteria used for school selection, evaluation strategy and budget narrative.

Section 2: Project Need

Recent efforts to reform schools have focused on closing the academic achievement gap between low-income, minority students and other students, but do schools need to do more? Are we preparing students who are ready for the global workplace of the 21st century? Not according to Ken Kay, president of the Partnership for 21st Century Skills. "The fact is, our young people are woefully under prepared for the demands of today's workplace," he says citing a recent national survey of company human resource officials that found:

- Almost 70% believe that high school graduates fall short in critical thinking skills
- 81% believe high school graduates are deficient in written communications
- Almost a third said they will reduce their hiring of employees with just a high school diploma
- 42% said they will hire more people with advanced degrees
  Source: (http://www.21stcenturyskills.org/)

While academic knowledge remains fundamental to a worker's job success, applied career skills such as teamwork, critical thinking, and communication are essential for success. Recent studies by the U. S. Department of Labor indicate that more than 90% of 21st century careers will require a high understanding of and use of new and emerging technologies. Public support for spending more funds on technology in schools is high with considerably more than 80% of the public supporting this expenditure. Thomas Friedman's book, *The World is Flat*, has made educators, business partners, parents and community members highly aware of the competitive, high tech, global economy that has countries such as India and China challenging the United States for leadership in manufacturing, service industries and engineering fields. Students must be prepared to be knowledge workers who can compete on a global level and educators today have to "re-engineer" their educational models to ensure student success.

Project-based learning is at the heart of 21st century learning because it combines intellectual inquiry, rigorous real-world standards, and student engagement in relevant and meaningful work that prepares students for knowledge-based careers. It is a comprehensive instructional model in which project work is central to student understanding of the essential concepts and principles of the disciplines including mathematics, science, social studies and language arts. This learning strategy:

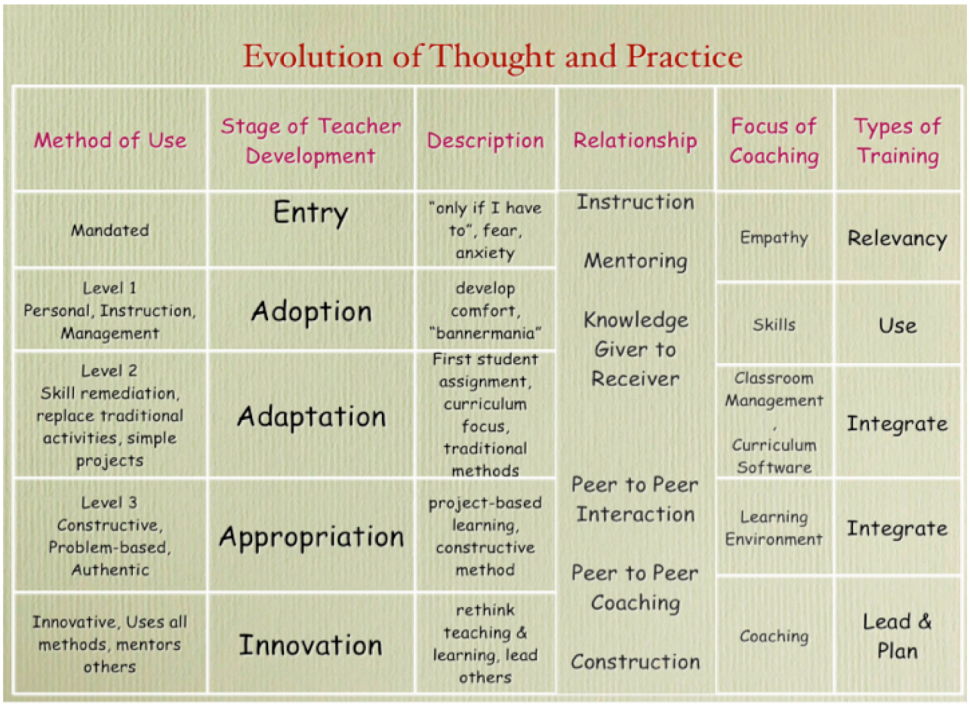
- Engages and builds on student talents, interests and passions
- Provides a meaningful, authentic and global context for learning
- Immerses students in complex, real-world issues with no pre-determined solutions
- Allow students to take leadership roles, making critical choices and decisions
- Connects students with community resources and experts in the field
- Requires students to *demonstrate and apply essential skills and knowledge*
- Draws on an inter-disciplinary approach to solve problems and deepen knowledge
- Provides opportunities for reflection and self-assessment
- Results in useful products that demonstrate what students have learned

- Culminates in exhibitions or presentations to an authentic audience
  Source: Project Based Learning on the Net (2006)
  (http://www.bobpearlman.org/BestPractices/ProjectsontheNET.htm)

Related educational research indicates that students who are active – not passive – participate in the classroom learning at high rates. Brody (2000) states that students benefit from working in pairs or small groups to construct understanding and help one another master skills.

Project based learning, therefore, will be a key instructional strategy used to re-focus classroom instruction to meet the needs of Broward's students who are preparing to enter either the post-secondary or career world of the 21st century.

Research has also shown that teachers need extensive professional development to be able to participate in project based learning approaches, especially those that fully incorporate digital resources and tools. The research from the Apple Classroom of Tomorrow project (ACOT) describes the process teachers undertake as the Evolution of Thought and Practice (ETAP) in which teachers move through stages of teacher development ranging from entry to innovation. The following chart indicates the relationship between teacher development and actual integration results within classrooms with students. This research provides a progressive path to integration that will be used to assist teachers with transitioning their classrooms into digital learning environments. This research will be incorporated in the model proposed in this grant.



Evolution of Thought and Practice

Method of Use	Stage of Teacher Development	Description	Relationship	Focus of Coaching	Types of Training
Mandated	Entry	"only if I have to", fear, anxiety	Instruction Mentoring Knowledge Giver to Receiver Peer to Peer Interaction Peer to Peer Coaching Construction	Empathy	Relevancy
Level 1 Personal, Instruction, Management	Adoption	develop comfort, "bannermania"		Skills	Use
Level 2 Skill remediation, replace traditional activities, simple projects	Adaptation	First student assignment, curriculum focus, traditional methods		Classroom Management, Curriculum Software	Integrate
Level 3 Constructive, Problem-based, Authentic	Appropriation	project-based learning, constructive method		Learning Environment	Integrate
Innovative, Uses all methods, mentors others	Innovation	rethink teaching & learning, lead others		Coaching	Lead & Plan

A pivotal support resource in the school is the Library Media Center. To enable media centers to survive and grow into information and technology resource centers, Broward County Public Schools (BCPS) seeks to reaffirm their critical importance. District-wide, the media centers have been upgraded with technology to enable them to provide wireless Internet access and support voice, video, and data (electronic and hard copy) information resources including the Florida statewide catalogue, SUNLINK. Additionally, while many of the existing media facilities have structural, electrical, and spatial constraints, new construction and renovations of older schools are placing a high priority on creating more innovative centers.

Broward's instructional leadership seeks to provide media centers with access to a developmentally appropriate array of digital and print content. The staff of these new information and technology centers must be comfortable with ideas, technology and functions effective in both print and electronic worlds.

The primary role of the media specialist, to help students and teachers find information resources and to support ***reading***, has not changed significantly over the past one hundred years. But with the advent of technology, the tools of the trade have been revolutionized. The 21st century "cybrarian" needs to be facile at using technology to gather information, analyze its value, and provide it in a format to meet the user's unique learning needs at a given point in time.

Transitioning the role of the media center and its staff into an information and technology resource center is essential to the successful integration of technology and digital content into all curriculum areas. To effectively serve and assist students, teachers, and community members, these innovative centers of the 21st century require a new breed of cybrarians who can collaborate with classroom teachers to ensure students have the information literacy skills and ***reading comprehension skills*** needed to fully function in a "virtual" world that is mirroring the best and the worst that society has to offer.

The need to transition media centers into information technology centers is strongly justified through supportive data. The federal No Child Left Behind (NCLB) legislation requires that schools and districts across the nation invest their federal funds for student achievement on strategies that are scientifically proven best practices. BCPS has embraced the National Educational Technology Standards for Students (NETS•S), which were developed by the International Society for Technology in Education (ISTE). The NETS•S include competencies in technology use, technology integration research skills, and data/information manipulation competencies. ***Assisting the media specialist to transition into the new role of Information Technology Specialist in the 27 schools in this project will also be a major part of this grant proposal. Part of this transition is to insure that the media specialist takes on a central role in assisting students with reading in a "digital age" where comprehension, communication and ethical use of information is key to success.***

The Information Literacy Standards for Student Learning were developed in collaboration with the American Library Association (ALA) and the Association for Educational Communications and Technology (AECT) in 1998. In 1994, the International Technology Education Association (ITEA) launched the Technology for All Americans Project (TFAAP) to advance student attainment of technological literacy. In 2000, ITEA published its twenty Standards for Technology Literacy (STL) that is grouped into five categories. The 21st Century Learning Skills listed in the *Learning for the 21st Century* report from the public-private coalition, the Partnership for 21st Century Skills, identifies ICT (information and communication technology) literacy as a core element of their 21st Century Learning Skills.

Broward County is Florida's second largest school district, the sixth largest in the country, and the largest full-accredited school district in the nation. The district has made progress in academic achievement with 97% or 224 of Broward schools earning a rating of "A," "B," or "C" in 2006 based on the Florida A+ plan. However, of the 262 public schools in Broward County, only 50% met Adequate Yearly Progress (AYP) as defined by the NCLB legislation. In 2006-07, BCPS is serving 262,616 students at 273 schools with 15,800 full-time teachers. The student population is economically and culturally diverse with more than a third (43%) of the district's students coming from low-income families, 9% being Limited English Proficient (LEP), and 67% belonging to a minority. This diversity, which includes a broad range of abilities, disabilities, cultural backgrounds, and ethnic populations, combined with the need to increase AYP, and the need to prepare students for careers appropriate for the 21st century creates a situation in which ***Broward must change its instructional methods and curriculum for a new century and a global economy***.

BCPS has recognized the need to incorporate technology tools into teaching and learning for more than 20 years. As early as 1995, Broward began developing plans to incorporate Internet based networks, hardware, curriculum software, and professional development in classrooms. In 2004, Broward developed a new five-year plan with an Instructional Technology component, entitled, *"Vision into Action: Changing the Learning Environment for Our Students*" which outlines the district vision and action items leading to schools in which students become effective 21st century citizens and lifelong learners capable of using technology for critical thinking, skill development, communication, presentation of knowledge, and virtual learning.

Outside evaluation reports from 2003, 2004, and 2005 of several Broward instructional technology projects document the need for Broward to re-design classroom environments, provide ongoing professional development to teachers and administrators, incorporate digital resources and tools into the teaching and learning process, and support instructional strategies that prepare students for global citizenship. The findings of the report indicate:

- Teachers are more likely to implement technology in their classrooms when collaborative groups of teachers from the same school attend training together.
- Professional development supported by coaching and mentoring allows the teacher to experiment, obtain professional feedback and gain success over time.

- Replicable technology integration methods, models of 'best practices', and updated curriculum are key to effective technology integration.
- Curriculum focused on project-based or inquiry-based learning allows students to appropriately use digital and communication tools to access and manage information, read and understand concepts, construct new knowledge and communicate with others.
- Continuous professional development for teachers must be increasingly focused on advanced, student-centered integration strategies, inquiry-based learning, classroom modeling, and peer–to-peer collaboration.
- Instructional Program Administrator and Principal leadership are essential for success of technology integration initiatives.
- Professional development for leadership that focuses on the principal as instructional leader, visionary, and supporter of the transition to digital learning environment is needed.
- A plan to replicate successful instructional technology strategies or phase in the other district schools is needed to continue the transformation process within Broward classrooms.
- Using mobile technology including student laptops in wireless campuses emulates real-world work environments.

The evaluative results outlined above will be incorporated into the project design strategy outlined in this grant proposal.

Broward data from the 2005 DOE STaR Survey was analyzed to determine progress in creating 21st century learning environments. Specifically, student and teacher use of technology in Broward schools was examined. Student use data revealed that:

- 61% indicated testing and practicing for skill mastery in core curriculum areas was the primary student use of technology. Of that, 49% were elementary schools and the remaining 12% were middle and high schools. Drill and practice techniques through Integrated learning Systems were the chosen methods.
- 33% indicated research and presentation by individual students was the primary use of technology by students.
- 5% reported collaboration to propose, assess and implement solutions to real-world problems was the primary use.
- The remaining 1% chose working with other students to analyze data and evaluate information.

STaR Survey results that indicated the percent of teachers who use technology for instructional and administrative tasks was analyzed. As indicated by both principal and technology staff responses, teachers (75%-100% range) are using technology to send e-mail to staff, to analyze student assessment data, to conduct research and to post grades. Responses further showed that teachers in this 75%-100% range are also using technology as indicated in the following chart:

Delivery of instruction	Supplement to instruction	Tool for providing instruction	Tool integrated into core curriculum	Tool Embedded in daily instruction
14%	48%	39%	30%	23%

The STaR Survey data was cross-referenced with locally produced data including participation in instructional technology initiatives, either school-initiated or district-initiated. Based on the data, each Broward school was given a school readiness indicator to determine progress towards reaching the district goal of transforming its schools into 21st century learning environments. Scores ranged from 1 to 15 with 15 being the highest rating and 1 being the lowest. At the same time, criteria were developed to place schools in entry, intermediate, or advanced levels of integration of technology into the curriculum.

Score Range	Level	% of Schools in range
Score less than 7	Entry	16%
Score between 7 and 10.49	Intermediate	63%
Score between 10.5 and 15	Advanced	21%

Data strongly indicates that despite major technology initiatives, schools are still struggling to transform into the new vision of 21st century learning that is essential for today's students to be successful. The predominant use of technology in elementary schools is highly limited to drill and practice (61%) and the use of integrated learning systems. Teachers predominantly see technology as a supplement to instruction (48%) rather than a tool embedded into daily classroom practice (23%). It appears that 21st century learning skills such as expanding basic competency to the understanding of core academic content at higher levels, the focus on problem solving skills, the use of technology for information retrieval and communication, and the learning of academic content through real-world examples are not prevalent in Broward schools. Yet, it is these skills that are the most needed for our students to be successful in future careers.

The most difficult challenge is to systematically move each school, each administrator, each media specialist, each classroom, each teacher and each student continuously towards the vision of 21st century learning environments, especially in large urban district such as Broward. While Broward instructional technology initiatives have laid the foundation and provided resources for change, this grant will provide 27 schools with the pedagogy, instructional strategies, resources, professional development and mentoring to make the transition into 21st century learning. These models will build the required capacity needed for major replication within the next three years.

School Selection Process

To determine which schools are ready to transform into 21st century digital learning environment and move teacher teams into implementing career-oriented project-based learning initiatives, data from several sources was analyzed and a gap analysis report produced. Data points collected included STaR Survey results, teacher participation in

professional development, school improvement goals and objectives, classroom walkthrough reports, software used in schools, school A+ grade, AYP status, and input from school and district Instructional Technology Specialists. Points were assigned for each of the data points and a school readiness score was obtained. ***Scores enabled schools to be assigned to entry, intermediate and advanced integration categories based on criteria.*** Finally, schools were placed within their innovation zone, ordered by readiness score and sent to Area Superintendents for review and final approval. Schools ranked in the top three per zone based on their readiness score will be asked to commit to participate in this grant initiative. Selection criteria will include principal, leadership team and teacher commitment to the transformation process, willingness to share best practices and lessons learned with the district community and community at large, willingness to participate in the proposed professional development model and willingness to mentor and coach other schools within the zone. One school per zone will be selected for this grant for a total of 27 schools. The other two high- ranking schools will be prepared for implementation during the next school year. Appendix B shows the readiness index by innovation zone for schools in Broward County. The selection of the approved list of schools will be based on final school commitment process.

Teacher, Media Specialist and Administrator Selection Process

Because this grant proposal focuses on participation of all instructional and support staff in the transformation process, every teacher, media specialist, administrator in each grant school will be engaged in a professional development plan and various levels of technology integration with students. However, key leadership staff and advanced or intermediate level of integration teachers will be targeted for participation in the ***Florida Digital Educator (FDEP)*** program. The Principal, as the Instructional leader, will be key to the success of the project. For this reason, the Principal will be targeted for participation in the ***FDEP summer institutes.*** The change in role of the media specialist is also a major goal of this grant. This critical support staff member will also participate in the FDEP. Finally, fourteen teachers at intermediate and advanced levels of integration will lead the classroom change process and hence will be primary participants in FDEP.

Section 3.0: Project Design and Implementation

"The effective teacher facilitates the classroom like a symphony conductor who brings out the best performance from each musician to make a beautiful sound"
(Stronge 2002, 83)

Project-Based Learning Scenario

Shanice is a seventh grade student at a middle school. Her teachers, all part of the project-based learning collaborative team, have capitalized on student interests in celebrities, figures that the students look up to as "heroes" – sports figures, movie stars and musicians – and the media-rich world in which they operate. Her teachers have aligned a project-based learning unit to help students' master benchmarks and curriculum standards for language arts, social studies and math. The project poses two Essential Questions, "What are the qualities of a hero?" and "Do circumstances create heroes or are heroes born?" Their quest to uncover the answers to these questions will pave the way for students to make personal connections to the heroes they research and establish potential personal characteristics needed for success in future careers.

The teachers have checked out a wireless cart with laptop computers with productivity and multimedia software. Laptops also access the Internet through a wireless network available in each of the four classes. In addition, student teams may check out digital still cameras and video cameras for research, archiving, and documenting group processes, which count one-quarter of their grade. Each teacher has a video projector set up in the "collaborative corner" of the classroom where student teams can share findings and their work in progress by projecting content onto a projection screen. Finally, the teachers have set up a Blackboard online course shell for the project as a safe venue for students and teachers to exchange digital content throughout the project. Teachers post assignments and resources, respond to discussion board and Blog postings, and provide feedback to students on work in progress. Students use the discussion board to collaborate, post reflections, publish work on the course Blog, and turn in assignments for feedback and final assessment. This teaching and learning environment cultivates a working situation that mirrors the real world work and higher education scenarios as students collaborate, research, produce and communicate information incorporating 21st century digital tools and resources.

The media specialist plays a pivotal role in supporting this project. Teachers and the media specialist collaborate to insure that students acquire fundamental information literacy skills necessary to accomplish the curriculum objectives outlined in the project. To assist, the media specialist guides Shanice's Social Studies class through the Research Process Model and launches student exploration of heroes through a WebQuest, "Will the Real Heroes Please Come Forward?" to begin answering the essential questions. This inquiry-based activity sets the stage for helping the students create their own personalized definitions of what makes a hero. Shanice's team dialogues through "think-pair-share" the observations and discoveries from the WebQuest and uses Inspiration concept mapping software to create a definition map for the word, "hero." Teams posts

their concept maps to the Discussion Board in Blackboard so the other teams can review, gather ideas from, and use the ideas to refine their own definitions of a hero. Armed with her personal definition of a hero, Shanice uses an academic search engine and other district-provided web-based resources, to compete online research about someone who meets her criteria for "hero." Shanice creates a timeline of the hero's life, noting events that support her position that heroes are born or created by circumstances. Shanice posts her timeline with the others in her class to the discussion board. Students use the discussion board postings to reflect on previously held beliefs about heroes and compare them with their new findings. Research gleaned from this activity serves to define heroic attributes, establish personal values, and help students define self-images, all-important tasks needed for personal and professional success.

*In **Math**, Shanice's team develops a survey using a web based survey tool to collect data from other students in the school. The team posts the URL of the survey on the school website and invites students to participate. Shanice's team compiles their data into a spreadsheet, analyzes it, and presents their findings in a Table or Graph. They post their graph to the discussion board in Blackboard for comments and comparison.*

*In **English**, Shanice has been learning about poetic devices such as Simile, Metaphor, and Onomatopoeia. Using the online textbook, her team – called a "Writing Community" – finds examples of the devices in their literature book. Afterward, they apply their knowledge by playing the "Homespun Poetic Devices" game and create their own examples of the poetic devices.*

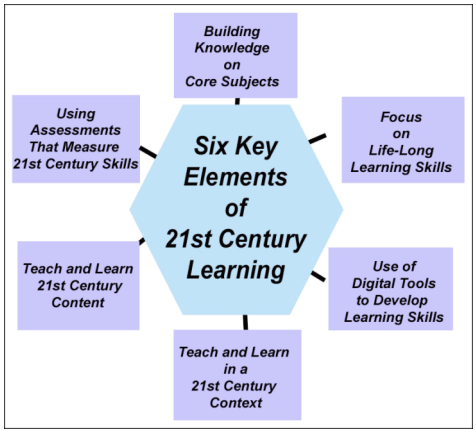
Shanice and her team will use what they have learned about poetic devices, about the qualities of a hero, and about heroes today to write an original poem. Her Writing Community will work collaboratively to "publish" their poem using a multimedia presentation program, digital video tool or podcast. All of the teaching teams collaborate to help students learn the skills for creating these expressions of student knowledge and understanding of content. Online tutorials in Atomic Learning provide just in time "how-to" instructions for learning specific software. Shanice and the other students on her team will create their own music accompaniment using GarageBand, digitize artwork or photographs for illustrating their presentations, or use digital still and video cameras to capture and edit footage to create a movie or podcast. Student teams in all of the classes will share their final presentations by projecting their work using a video projector and posting them to the school website. Students provide peer-to-peer feedback to each other based on a rubric that has jointly been developed by both teacher and students. Shanice is excited about learning and cannot wait to share her project with her family and friends.

The goal of this grant is to have scenarios like the one above occurring in all project classrooms and schools by the end of this grant period. The project design explains how we will do this!

Section 3.1 – Overview and Current Status:

Broward County Public Schools has implemented an aggressive plan to "level the playing field" for all schools by providing wireless student laptops and carts. This massive effort brought wireless carts for students to all schools in Broward County at a ratio of one computer per six students. This leveraging initiative supports the Florida Instructional Technology goal to expand access to innovative digital technologies and learning opportunities. At the same time, the Broward Enterprise Education Portal (BEEP) has been expanding, providing an impressive amount of online curriculum and resources for both teachers and students. Another District initiative is underway to transition school library media centers into ***information technology centers*** to develop information literate students who can access, analyze, use and communicate information. Increasing the ratio of computers to students, providing digital curriculum, and beginning to adapt media centers are district priorities that are part of Broward's Instructional Technology Plan and Information Technology (IT) Blueprint. However, to simply place technology and provide resources or provide professional development without new instructional strategies, principal leadership support and a vision for whole school reform will not effectively change teaching and learning, which is the most challenging part of the equation. *Broward needs to provide the necessary support, professional development and guidance to our teachers to make the most of these tools and to support teachers in creating digital learning environments where students are engaged in education in ways never before possible, a Florida Instructional Technology Goal*. Broward needs to help teachers become digital educators and students to become digital and global knowledge workers.

The district continually provides research-based professional development and support for teachers at each level of growth using the Apple Classroom of Tomorrow (ACOT)research model and the Evolution of Thought and Practice (ETAP) scale as a guide in using technology in teaching and learning. Professional development alone, however, will not create change unless coupled with strategic planning. There is a need to guide administrators and teachers to a shared vision, provide strategies and methods for them to leverage technology to effectively impact student achievement and to actively engage students in their own learning process. There also needs to be a way to showcase student successes and empower students to demonstrate knowledge in authentic exhibitions where the community can see the results. To expedite these next steps, all of Broward's resources and professional development opportunities will need to focus on creating a school-based sustainable model that supports school reform, 21st century literacy skill development and student success in a highly competitive global economy. The research from the Partnership for 21st Century Learning (2003) has greatly influenced Broward's planning and program development for this grant proposal. As the visual on the following page shows, six key elements need to be integrated into the daily delivery of instruction for true 21st century learning to take place. A brief description of each key element follows the visual. The focus of this grant will be to provide the professional development and instructional strategies to teachers, media specialists and administrators in 27 schools so that they can implement project-based learning approaches that support the incorporation of these elements of 21st century learning.



- Building knowledge on core subjects. Core curriculum content is focused beyond basic competency to the understanding of academic content at high levels.

- Focus on life-long learning skills. Defined as information and communication skills, thinking and problem-solving skills and interpersonal and self-directional skills.

- Use of digital tools to develop learning skills. Students use digital tools to access, manage, and evaluate information, construct new knowledge, and communicate.

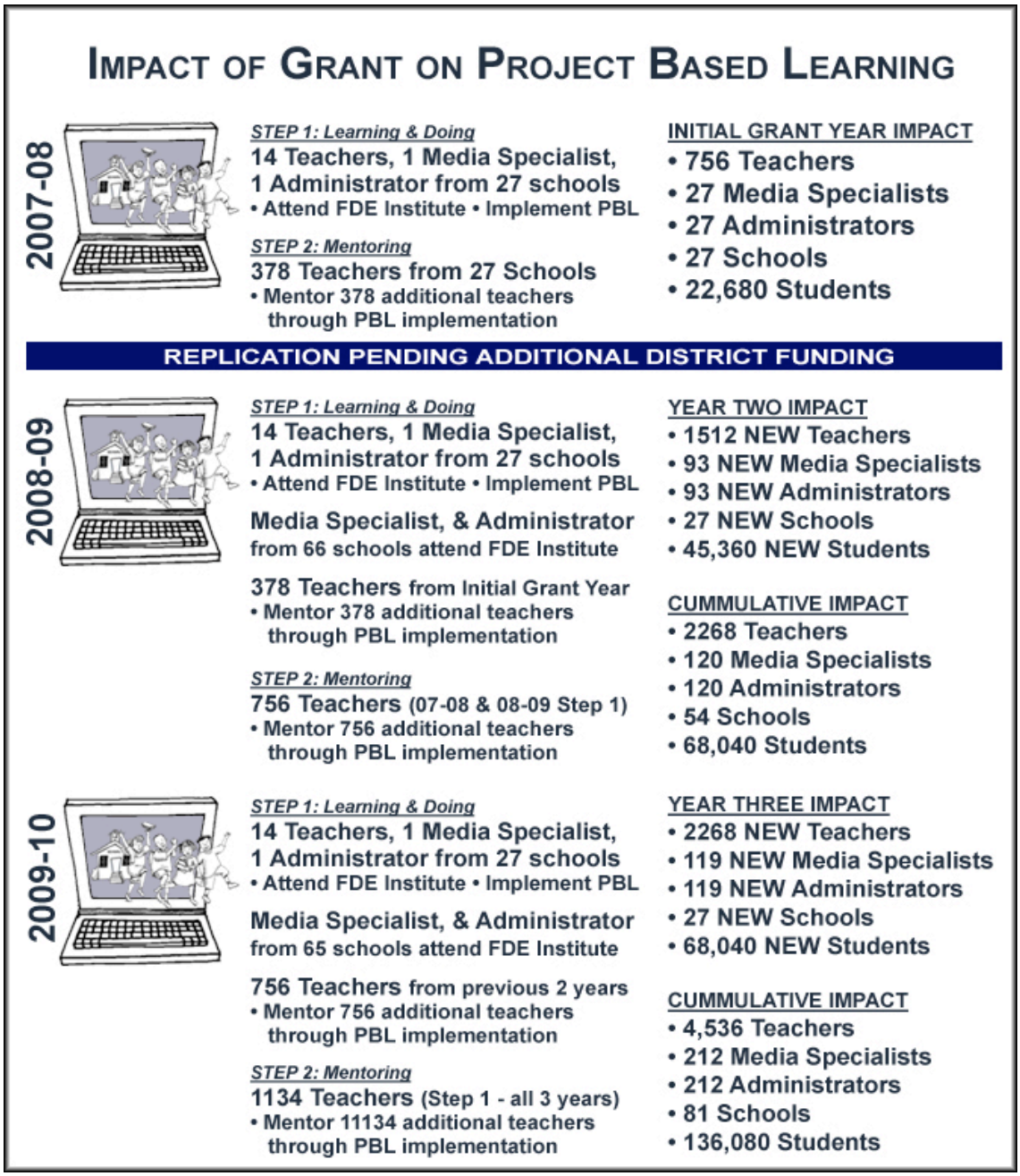
- Teach and learn in a 21st century context. Students learn academic content through real-world examples and experiences both inside and outside of school.

- Teach and learn 21st century content. Defined as global awareness, financial literacy and civic literacy. Much of this content is not captured in existing curricula or taught in depth in schools today.

- Using assessments that measure 21st century skills. Assessments that offer alternative means for students to express their knowledge along with information technologies that record and analyze data on student performance.
  Source: (Partnership for 21st century literacy, 2003).

Broward will be innovatively leveraging the ***Florida Digital Educator*** *Program*, the Florida Inventory of Teacher Technology Skills (ITTS), the Florida Instructional Technology Goals, and existing District-based programs to strategically transform the classrooms and delivery of instruction into new innovative digital learning environments in which technology-infused, curriculum focused strategies incorporating 21st century literacy skills are pervasive. ***The goal is to create models in which the entire school community is actively engaged in 21st century learning processes leading to student preparation for success in both career and post secondary venues. These models will be studied, documented and evaluated with the expectation to replicate the best practices that emerge to all schools in Broward County by 2010.*** To ensure maximum benefits and equitable program distribution, one school from each of the 27 Innovation zones will be part of the implementation. Innovation zones are feeder pattern schools

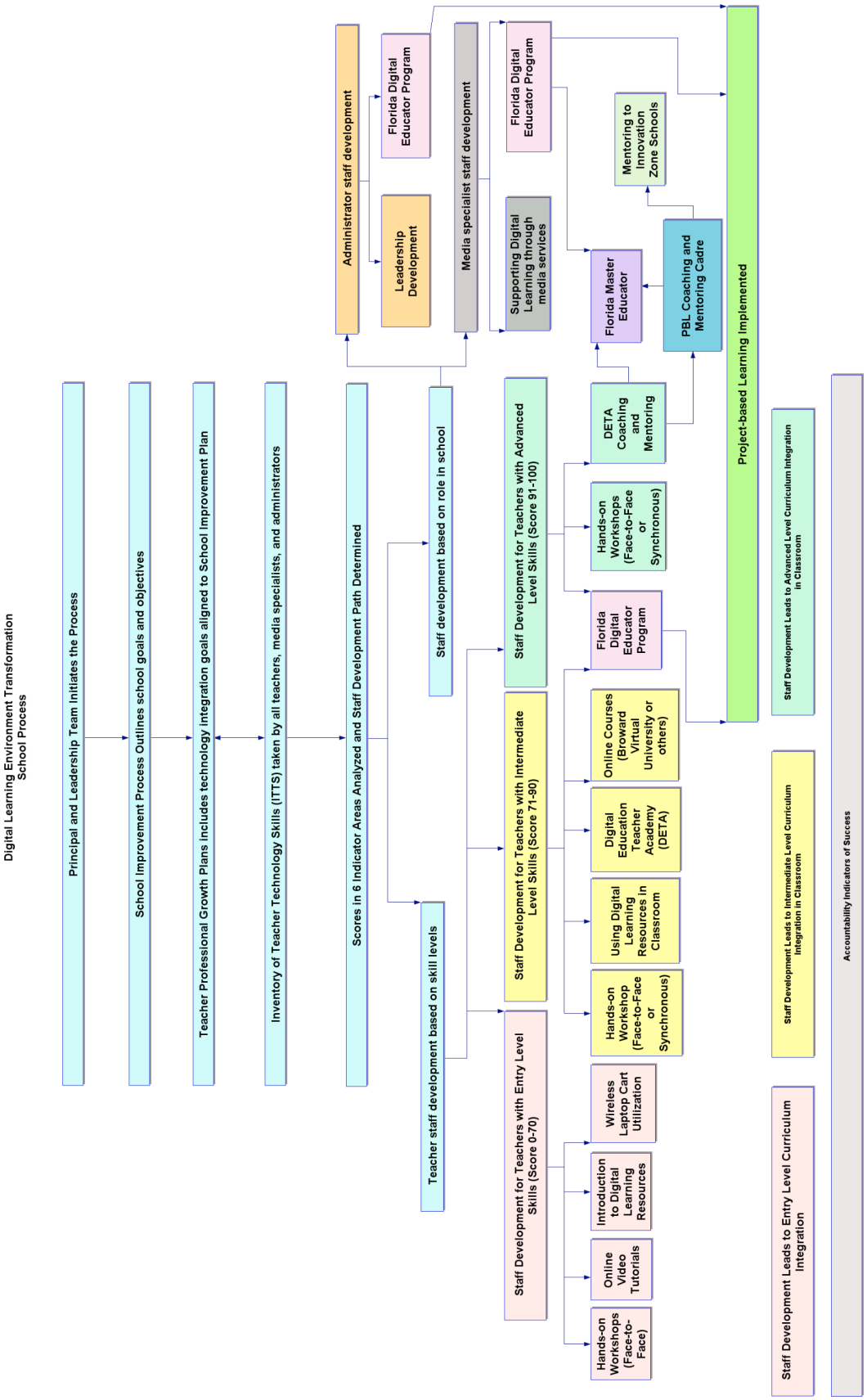
that are connected in a geographic area and that have articulation as a key mission. In the second phase of the grant year, additional schools will be added and additional models created until the entire process is replicated throughout the entire school district. While the grant will support the transformation in the initial 27 schools, Broward's plan calls for replicating the project at a critical mass of schools by 2010 pending additional District funding. The following visual represents the replication process.



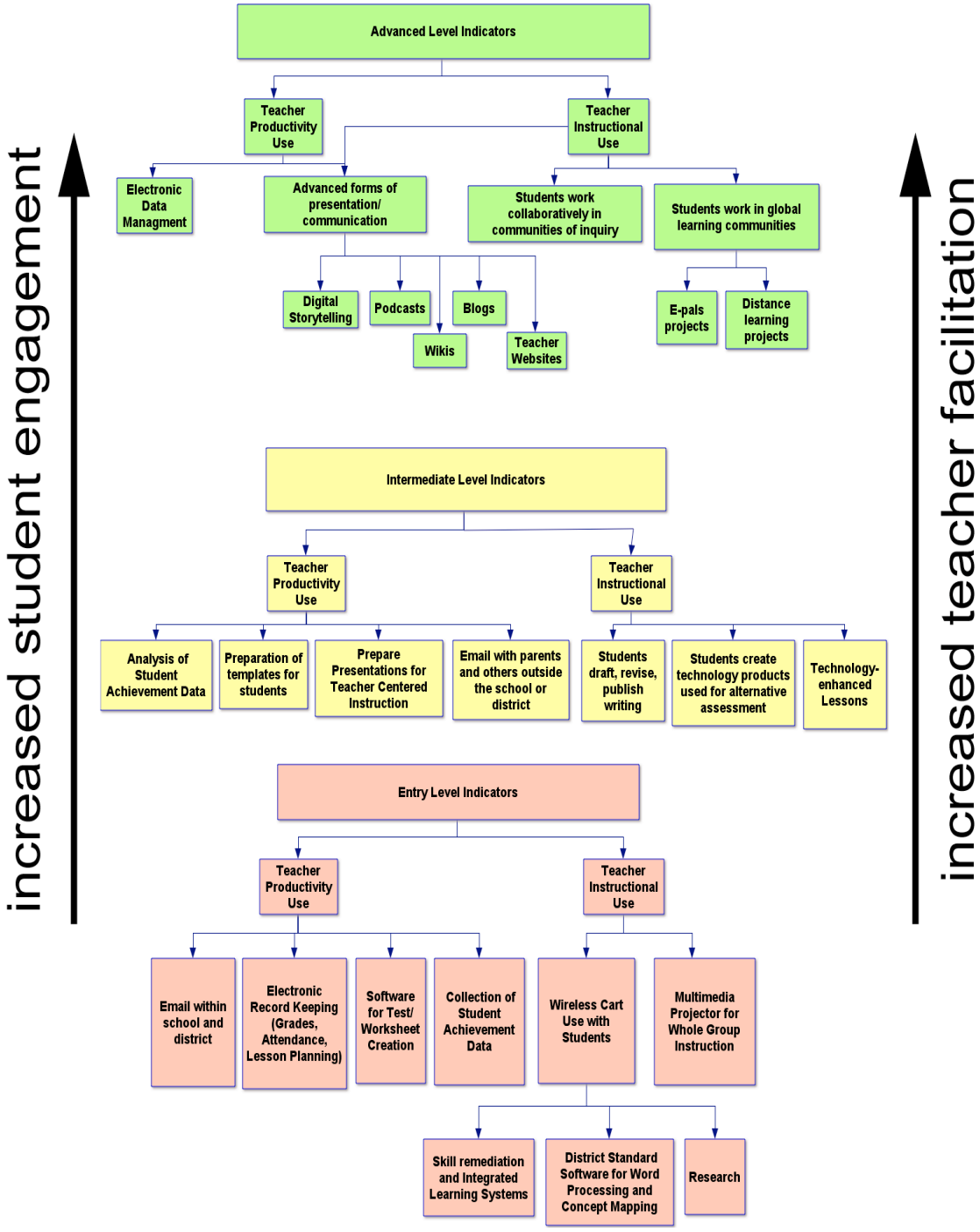
The innovative transformation process in this grant proposal includes:

- Principal, leadership team, school staff commitment to the transformation model.
- Alignment of the school improvement process to the creation of digital learning environments.
- Alignment of professional development to the professional growth plan process for teachers
- Use of the Inventory of Teacher Technology Skills needs assessment tool by all school staff to determine baseline data and to plan appropriate professional development
- Alignment of school professional development plans to provide entry, intermediate and advanced levels of technology integration professional development for all teachers, support staff (including media specialists), and administrators.
- Leveraging the ***Florida Digital Educator*** program to provide comprehensive professional development to meet the unique needs of teachers, the equally unique needs of media specialists to support 21st century learning for students.
- Integration of teacher accountability plan including evidence of indicators of success for each of the professional development levels (entry, intermediate and advanced)
- Administrator use of the classroom walkthrough tools to determine evidence of the indicators of success for each teacher
- Media Specialist collaboration with the classroom teacher to support ***reading comprehension and skill development and Information Literacy skill development.***
- Implementation of project based learning initiatives with teachers at the advanced levels of integration and their students as examples of student centered, teacher facilitated learning incorporating 21st century literacy skills, higher order attainment of knowledge by students, and authentic assessment experiences of student learning.

The following digital learning transformation flowcharts shows the process each school will be undertaking as part of this grant proposal. The process addresses three critical and identified areas of need, professional development, media specialist and principal/administrator support, and implementation of project-based learning as the target goal. Indicators of Success flowchart shows examples of observables that will be evidenced in the classrooms with teachers at entry, intermediate and advanced levels of integration. As a teacher progresses in integration level, evidence of student engagement should increase and evidence of teacher facilitation of the learning process should increase.


Digital Learning Environment Transformation
School Process
Principal and Leadership Team Initiates the Process
School Improvement Process Outlines school goals and objectives
Teacher Professional Growth Plans includes technology integration goals aligned to School Improvement Plan
Inventory of Teacher Technology Skills (iTTS) taken by all teachers, media specialists, and administrators
Scores in 6 Indicator Areas Analyzed and Staff Development Path Determined
Teacher staff development based on skill levels
Staff development based on role in school
Staff Development for Teachers with Entry Level Skills (Score 0-70)
Staff Development for Teachers with Intermediate Level Skills (Score 71-90)
Staff Development for Teachers with Advanced Level Skills (Score 91-100)
Hands-on Workshops (Face-to-Face)
Online Video Tutorials
Introduction to Digital Learning Resources
Wireless Laptop Cart Utilization
Hands-on Workshop (Face-to-Face or Synchronous)
Using Digital Learning Resources in Classroom
Digital Education Teacher Academy (DETA)
Online Courses (Broward Virtual University or others)
Florida Digital Educator Program
Hands-on Workshops (Face-to-Face or Synchronous)
DETA Coaching and Mentoring
Administrator staff development
Leadership Development
Florida Digital Educator Program
Media specialist staff development
Supporting Digital Learning through media services
Florida Digital Educator Program
Florida Master Educator
PBL Coaching and Mentoring Cadre
Mentoring to Innovation Zone Schools
Project-based Learning Implemented
Staff Development Leads to Entry Level Curriculum Integration
Staff Development Leads to Intermediate Level Curriculum Integration in Classroom
Staff Development Leads to Advanced Level Curriculum Integration in Classroom
Accountability Indicators of Success

Indicators of Success



3.2 Professional Development:

The professional development approach consists of concurrently moving entry level teachers to intermediate level, intermediate level teachers to advanced level and advanced level teachers to project based learning (PBL) implementation and then to mentoring and coaching of teachers within both the school and innovation zone community.

Teachers at entry level of integration will participate in professional development that includes the incorporation of wireless carts into classroom instruction, using video projectors and presentations for whole group instruction, having students access computers for research, and becoming familiar with district software such as Inspiration for concept mapping and become familiar with the resources obtained in the Broward Enterprise Education Portal (BEEP). Indicators of success will be available for entry-level teachers as benchmarks to measure progress. Administrators will be able to conduct classroom walkthroughs and use the indicators of success as observables. Pre and post ITTS data, administrator feedback and teacher self-assessments will be analyzed to see if these teachers moved from entry to intermediate level by the end of the grant.

Teachers at the intermediate level will participate in professional development offered through the district-sponsored Digital Education Teacher Academy. This program includes strategies for integrating technology into unit and lesson plans, immersion in the resources available through BEEP, replacing traditional activities with technology based activities and simple projects. In addition, seven teachers from each of the grant schools will attend the ***Florida Digital Educator Program*** in preparation for advanced level integration of project-based learning. Indicators of success will be available for these teachers and administrators will be able to conduct classroom walkthroughs in which these indicators will be observed. Pre and post ITTS data, classroom observation data and administrator and teacher feedback will be analyzed to see if these teachers moved from entry to intermediate level by the end of the grant.

Teachers at the advanced level will implement the project-based learning initiative. The advanced level teachers will all participate in the ***Florida Digital Educator program*** through the Teaching and Learning summer institutes. Then, they will follow the project based learning process (Appendix A) to lead their school into this key instructional direction. Teachers will facilitate the learning and have a firm understanding of each student's learning needs because they will have immediate access to data to assist in planning and delivering learning programs. Project-based learning and interdisciplinary strategies will provide students with a well-rounded understanding of curricular content and provide an atmosphere where discovery, deep thought and reflection, participation, and interaction are encouraged.

The media specialists, teachers, and administrators at advanced integration levels may also apply for selection as a ***Master Digital Educator*** recruited through a formal application process, who will then be a trainer at subsequent *Teaching and Learning Institutes* and regional workshops. A total of 16 members from each school will

participate in a regional summer Teaching and Learning Institute in the Florida Digital Educator Program designed to support student achievement through opportunities to develop 21st century skills. The 16-member team will consist of 14 intermediate and advanced teachers, the media specialist and one school based administrator from each of the 27 selected schools.

Media specialists, teachers and administrators from the proposed schools will continue to have access to Broward's **Digital Educator Teacher Academy (DETA)** which provides ongoing professional development and digital training for all instructional personnel within a partnership with Florida Atlantic University. The DETA program is a series of staff development opportunities designed to provide participants with skills for effectively integrating technology. Participants in DETA use technology to improve student achievement in core curriculum areas; learn strategies for integrating technology that can be incorporated into daily practice; and learn how to use new technologies such as Internet-based curriculum and digital tools. DETA will also be used as a preparatory vehicle for participation in future ***Florida Digital Educator*** opportunities including having DETA teachers apply to be ***Master Digital Educators*** which will serve both local and state needs for trainers.

An essential component of the professional development model will be to implement ongoing, on-site and individualized professional development throughout the grant year as indicated by school needs. This component will coincide with actual student implementation and will include technical skill development delivered directly to students and teachers by mentors. Professional development will consist of collaborative planning, mentoring and coaching, meeting local training needs and online networking through learning communities. The media specialist will actively participate by delivering training, co-teaching and focusing on Information Literacy skill development for students. District departments such as ***Learning Resources and Instructional Materials and the Department of Instructional Technology*** will deliver ongoing training on multimedia tools, media web pages, video production, interpreting and using data, library solutions, and online resources and databases as needed by the project team. All project teams will participate in a Learning Community Blog where experiences, strategies, and project communication *is shared*.

A professional services group will provide 27 additional mentors and coaches directly to schools. These mentors will work with teachers and students in the classroom and provide critical on-site support and assistance in integrating technology into daily classroom instruction. Mentors will also employ online collaborative tools and techniques to create virtual learning communities that will connect all teachers, media specialists and administrators in the 27 schools together to share experiences, best practices and lessons learned.

This professional development model will enable Broward County Public Schools to successfully support teachers, media specialists and administrators as they transition their traditional classrooms into digital learning environments for our students.

Once the advanced level teams have implemented project-based learning, they will mentor a second team at the school, thus within the 18 months of the grant, a total of 28 teachers plus the media specialist and the administrator at each school will be implementing project-based learning. This will impact approximately 22,680 students district-wide who will be actively involved in student centered, student-engaging project based learning opportunities. As the evaluation of the project proceeds, the lessons learned will be incorporated into the Year Two implementation to ensure that continuous improvement is addressed and excellence is achieved.

The ***Inventory of Teacher Technology Skills (ITTS)*** survey will be used for selection and appropriate placement of teachers, media specialists and administrators targeted for inclusion in this project. As Florida educators strive to meet the NCLB goal for full integration of technology in the curriculum, many first face the task of developing the basic technology skills. The ***ITTS*** offers educators the opportunity to identify the basic skills and/or knowledge that need reinforcement through professional development activities. The ***ITTS*** identifies strengths and needs in the following technology areas: Basic Operations, Productivity, Databases, Communication, Research, Planning-Management- and Instruction, and Social-Ethical-Legal and Human Issues. The ITTS will be used to establish a baseline of participants' ability levels, strategically place them into appropriate training venues, and will be retaken in the following school year after participation in the summer Teaching and Learning Institutes to determine the gains in technology skills as a result of the technology training.

The following sections describe the objectives, process, activities and timelines that will be used in the grant implementation.

3.3 Measurable Objectives and Anticipated Outcomes

The goals and objectives presented below are to be attained by the end of the grant period.

Goal 1: *Systematically move teachers through the stages of entry, intermediate and advanced levels of technology integration culminating in project-based learning as an instructional strategy that incorporates 21st century literacy skills, focuses on student engagement and provides multi-disciplinary curriculum content delivery.*

Objective 1.1. Increase the number of students who are actively engaged in learning curriculum content through project-based learning by 75% as measured by pre and post School Observation Measure (SOM) data.

Objective 1.2. Increase the number of students who are actively using digital tools for authentic assessment and presentation of knowledge by 75% as measured by pre and post Survey of Computer Use (SCU) data and as evidenced in student work samples.

Objective 1.3. Increase the competencies of project teachers in NETS as reflected by pre- and post- test results of the Inventory of Teacher Technology Skills by a minimum of 50%.

Objective 1.4. Increase the number of teachers that are infusing 21st century literacy skills and project-based learning into instruction by more than 700 as measured by pre and post School Observation Measure (SOM) data.

Objective 1.5. Increase the number of teachers who are able to mentor and coach other teachers at their schools and within their innovation zones in implementing project-based learning so that a minimum of 14 teachers and one media specialist per zone would be able to serve as mentors as measured by completion of mentoring and coaching professional development.

Anticipated outcomes:

Outcome 1.1. Improve student learning and engagement through the delivery of standards-based curriculum, authentic assessment, data-driven, relevant, and rigorous integration of 21st century literacy skills across the K-12 curriculum.

Outcome 1.2. Form a collaborative network of ***Florida Digital Educators*** locally, and state-wide (incorporating use of wikis, blogs and/or podcasts to document and share best practices) and enable these ***Florida Digital Educators*** to mentor and coach other teachers in their schools/zones. These "internal" support networks will sustain engagement, offer just-in-time and contextual support, and bridge the gap between professional development and implementation.

Outcome 1.3. Establish a replicable, step-by-step, classroom-based process for delivering curriculum through a multi-disciplinary, project-based learning approach that includes team planning, implementation, student assessment, student presentations and student communication.

Goal 2: *Create a comprehensive professional development program with the* ***Florida Digital Educator*** as a cornerstone program that *will position the media specialist as a catalyst and change agent in creating effective Information Technology Centers and consequently learning environments that use technology to enhance teacher delivery of instruction, as well as student achievement.*

Objective 2.1. Increase the competencies of project media specialists in NETS as reflected by pre- and post-test results of the Inventory of Teacher Technology Skills by a minimum of 50%.

Objective 2.2. Infuse information literacy skills into the curriculum through collaborative teaching in which the teacher is responsible for the content and the media specialist is responsible for the research skills in 25% of the project classrooms in 27 schools.

Anticipated outcomes

Outcome 2.1. Media Specialists will be better prepared to support teachers in the transition to digital learning environments by bringing specialized expertise in Information Literacy, Research skills, technology literacy and the integration of technology into the curriculum to the school community.

Outcome 2.2. Media Centers will begin the transformation into Information Technology Centers with media specialists who are able to play a pivotal leadership role in developing information-literate teachers and students who can access, analyze, use, and communicate information through digital tools and systems.

Outcome 2.3. Standardize the use of the ***Research Process Model (RPM)*** to assist all students in using information confidently and independently and in transferring those skills across the curriculum and beyond the school in all project classrooms at 27 schools.

Goal 3: *Assist school administrators in taking the Leadership role needed to actively re-invent the school culture to support digital learning environments with 24/7 learning opportunities and highly achieving 21st century literate students.*

Objective 3.1. Increase the competencies of project administrators in NETS as reflected by pre- and post-test results of the Inventory of Teacher Technology Skills by a minimum of 50%.

Anticipated Outcomes

Outcome 3.1. School Administrators will be better able to create and lead a school culture that shapes and fosters learning environments that are aligned to learning environments that exist in the real world; understand the need to embed technology into the instructional process; provide time and training for teachers to collaborate, support, and share best practices in technology integration; and promote project-based learning as a means to help students develop skills for living in a knowledge-based, highly technological society.

Goal 4: *Communicate and disseminate best practices resulting from the implementation of this grant to key stakeholders and implement a strategy to replicate the process undertaken in this grant throughout Broward County Public Schools.*

Objective 4.1. Capture and increase the number by 100 of replicable curriculum and technology integration best practices and strategies supported through a project-based approach that can be shared throughout the district *(BEEP teacher and student portals)* and through the State and Nation through a project web site.

Objective 4.2. Produce "Podcast"-based online courses for teachers and administrators to provide training on project-based learning using state professional

development protocols including results-driven models as evidenced by availability of described courses by the end of the grant period.

Anticipated outcomes

Outcome 4.1. Examples of project-based learning plans that can be replicated and adapted will be available to teachers in the District.

Outcome 4.2. Podcast-based staff development will be available to assist other teachers in the District.

Outcome 4.3. Best practices and lessons learned will be shared through various online and professional venues including the Florida Education Technology Conference and at selected local, state and national conferences.

3.4 Activities/Process

The following activities and process will be undertaken to achieve the program objectives. One school will be selected per "Innovation Zone" to participate in the program. In Broward County, there are 27 Innovation Zones, which include a high school and the middle school(s), elementary schools, and special centers within the high school's "feeder pattern." These zones, established several years ago, have provided opportunities for collaboration, communication, and shared decision making with other schools. Since the zones are spread across the District, selection of one school per zone will assure a diverse socio-economic composition of this project.

School Selection Process

1. A point system was used to categorize all schools based on the following criteria:
   •Specific questions in the STaR Survey were used to analyze and categorize schools. (10 points)
   •Level of Teacher/School participation in DETA (2 points)
   •Readiness input was given by Area Superintendent and staff (1 point)

2. All schools were placed in entry, intermediate and advanced readiness levels based on final score.

3. The top schools in each of the four Areas with the highest scores (intermediate to advanced level) were given to the Area Superintendents who rank ordered the top three schools per innovation zone.

4. Individual school principals will make the final decision regarding the schools participation in the project. A total of 27 schools will be selected.

Method to Replicate and expand number of schools:

27 schools will be selected to participate in the grant year of this initiative. The projected plan, pending additional District funding, is to move 27 more schools to the project-based learning model during Year Two and the remaining 27 schools in Year Three.

Implementation Process/Activities

The school team that will lead the transformation process will consist of the principal, the media specialist, and 14 teachers who have demonstrated advanced levels of integration as indicated by ITTS results. The ITTS needs assessment tool will determine baseline data on skill levels of instructional personnel and as a pre- and post- test tool to measure individual progress towards technology integration goals. This project will use several innovative strategies to expand participation in the ***Florida Digital Educator*** *program*.

• Teachers who complete the ***Florida Digital Educator*** *program* will implement the project-based learning plans using the Broward standard digital tools. This theory into action approach will provide the experience needed to begin a program of study leading to the ability to **mentor and coach** other teachers both within their schools and their innovation zones. A minimum of two teachers per school will be encouraged to continue the course of study leading to certification as a **Master Florida Digital Educator.** District incentives in the form of tuition reimbursement will be given to those teachers willing to continue this program. An additional incentive will be the ability of these teachers to use course completion for re-certification or advanced degree purposes. As the replication model delineated in this grant is implemented, pending district funding, the cycle of participation in FDEP, classroom integration, mentoring and coaching will enable a learning community network of teachers to provide peer support, sharing of best practices and ability for virtual collaboration among all FDEP teachers.

•The administrator participation in **FDEP** will help to meet the Florida Instructional Leadership Technology Goal, to invest in leadership programs to develop technology savvy leaders at all levels of education. The role of the administrator is to foster a culture in which appropriate technologies support instructional methods that maximize student achievement. The **FDEP** administrators will assist other school administrators in their innovation zone by facilitating the transformation process. Shared experiences and best practices will better insure success as replication proceeds. Each time a new school is added, the new administrator will participate in future **FDEP** workshops, thus a cycle of FDEP participation, implementation, leadership and peer networking will be in place.

• As Broward County moves to reexamine and expand the role of the media specialist, the FDEP will be a key professional development program in the change process. It is the overall goal of the district to provide the opportunity for a majority of media specialists to participate in the FDEP. Media Specialists will also be supported with tuition reimbursement opportunities for continuing to **Master Digital Educator** certification. This grant will be used to develop, implement and refine a strategic results-driven professional development program for media specialists. The vision for the new

role of the media specialist has this central support person collaborating with teachers to create high-level learning experiences, building avid and capable readers, develop information literate students, and using technology to enhance learning.

Leveraging the **FDEP** to enable administrators, teachers, and media specialists to work in collaborative teams focused on student achievement will allow Broward schools to empower educators with the skills necessary to integrate technology to improve students' rates of learning, a Florida Instructional Technology Goal.

Using the data from the ITTS, a staff development plan unique to each site will be developed. Training topics include, but are not limited to, Designing Project-based Activities, Digital Storytelling, Podcasting, Movie-making, Developing Effective Presentations, and training on Broward standard software applications. Training delivery methods will be customized for each site and staff will choose from face-to-face, online courses using Blackboard, or synchronous options including Elluminate webcasting system and video conferencing. As part of the training, the ***Florida Digital Educator*** team will plan a project-based learning unit to be implemented at the site. In addition, that team will receive professional development on the project-based learning. Upon receiving the professional development, this team will be required to implement a project-based learning activity within a multi-disciplinary curriculum framework.

Participation in the ***Florida Digital Educator*** training will occur in the summer of 2007. The Florida Digital Educator program supports integration of technology across the K-12 curricula through collaborative experiences with new technologies and digital tools. Included in the program model is an action research and mentoring aspect to increase data-driven research from the classroom and educator perspective. For this effort beyond their normal calendar, the attending teachers will receive stipends. Participation in ***Florida Digital Educators*** will help to meet the State Technology Goal to empower educators with the skills necessary to integrate technology to improve students' rates of learning. Afterwards, the team, with assistance of the District, will finalize a plan, specific to school, designed to move teachers along the continuum of digital integration. The school plan will feature the seven teachers guiding their students through an interdisciplinary project. The remaining teachers will be receiving professional development that moves them on the path to project based learning. In this project, students will be active participants who will explore various aspects of their topic and share their learning in various ways, including student- produced multimedia presentations, web sites, newspapers, and movies. Every project will include a career component that focuses on the basic principles of career planning such as decision-making, self-evaluation and goal setting. To support the teachers and further guarantee the success of these efforts, outside experts in project-based learning will consult with the school teams at key stages in the process. This project will serve as a "living laboratory" for other staff members who will be able to witness the process of project-based learning while they are receiving training in their areas of need as identified by the ITTS.

To facilitate and support the projects and the digital media staff development each school will be provided with a "technology needs" budget. Determined by school-based needs,

the school team will be able to select from a variety of technologies including: video projectors, interactive whiteboards, digital cameras, iPods, and document cameras to utilize during the implementation.

To reinforce their skills and provide opportunities for collaboration and support, ***Florida Digital Educator***s will be invited to participate in the District's existing DETA Peer Coaching: Creating 21st Century Classrooms program. DETA Coaching is designed to help schools implement a professional development model that can enhance standards-based instruction by assisting teachers in developing, implementing, and coaching one or more collaborating teachers in project-based learning in the classroom with engaging, technology rich, standards-aligned learning experiences for students. Embedded within the program are opportunities for teachers to evolve into teacher-leaders as coaches and mentors, supporting their peers through a project-based approach. Participating teachers will document the process via a reflective, digital portfolio and video exhibit to be submitted via the juried process for inclusion in the BEEP Teacher Portal.

Student Engagement through project-based learning will occur through the incorporation of highly motivating, interdisciplinary themes of study such as the "Energy Effect" which will examine the role of energy resources in present and future life. Students will be actively participating in their learning process and use technology for research, communication, skill development, knowledge acquisition and presentation of knowledge. Student to student interaction is also an essential component of PBL and will be emphasized throughout this grant initiative. Students will be expected to participate in blogs or wikis and collaborate on group projects and activities. ***Reading comprehension and writing skills*** will be of highest priority and related to the critical 21st century skills are central to the learning and students will learn to be team players, take on leadership roles, be critical thinkers, and be active citizens in the community. Most importantly, students will be succeeding at high achievement levels and will be part of an engaged, active learning community that believes that every student *will* learn and succeed. This model of student engagement and involvement is where we want to lead the entire school community by actively moving each teacher, each media specialist, each administrator and finally each students into this collaborative, global and comprehensive learning environment.

At the conclusion of the projects, a celebration of learning will take place that will feature student presentations and discussions of their learning and the learning process with parents, fellow students, school staff, District officials, and community members in attendance. School celebrations will serve to increase awareness of the benefits of project-based learning to the district staff and parents. The student presentations will also provide alternative assessments that will be used to evaluate student progress and achievement. Examples of student presentations will be shared via the BEEP Student Portal and through the project web site.

To help build capacity within each Innovation Zone and throughout the District, staff development specialists from the District's Human Resources Development (HRD) Department, along with Instructional Technology Specialists, will document various

stages of each project with digital images, digital video, and interview of teachers and students. The HRD staff development team will then utilize these resources to create a series of "how-to" Podcasts about project-based learning that will be posted on the Broward Enterprise Education Portal (BEEP). BEEP is composed of curriculum and instructional resources available to students and teachers on a 24/7 basis thus providing opportunities for learning beyond the school day. In addition, Digital Educators will be posting their project plans and samples on BEEP, providing a rich library of technology-infused, project-based plans that other teachers can adapt.

The PBL podcasts and the project summaries and methods will be publicly available through the project web site enabling teachers throughout the State of Florida and the Nation to learn from Broward's experiences.

Appendix A is a flowchart that organizes the Project-based Learning process that will be undertaken by the advanced integration level teachers and their students.

Session 3.5 Hardware Acquisition:

The grant proposal will fund additional equipment that will be placed in the project classrooms to complete the 21st Century tools needed for 21st Century learning. Each school principal and project teacher will select equipment needed up to $10,000 per school. Below is a list of equipment that will be offered to each school.

21st Century Tool Description	Projected Cost
Multimedia Projector	$850/projector
Digital Still Camera	$200/camera
Digital Video Camera	$350/camera
Interactive White Board	$500-$1,100 depending on functionality needed.
iPOD device	$200/iPOD
Classroom Response Systems	$500/set of 32

"Refresh" laptop carts are available in each of the selected schools and will be shared among the instructional staff to create model 21st century learning environments. This will provide a computer to student laptop ratio of 1:6 throughout the schools of wireless technology for students. In addition, each school has access to a wealth of digital curriculum resources through the Broward Education Enterprise Portal (BEEP) that will be a key resource in the implementation of this grant.

3.5 Project Timeline

Phase I (January '07 – June '07) – Planning and Initial Project Professional Development			
Goals/ Objectives/ Outcomes	**Actions**	**Beginning/ End Dates**	**Responsible Party**
Goal 1	Identification of Schools and commitment of principal, leadership team and instructional staff	November 2006 to December 2006	District Staff Area Superintendents Principals
Objective 1.3 Objective 2.1 Objective 3.1 Outcome 1.1 Outcome 2.1 Outcome 3.1	Completion of ITTS by Teachers, Media Specialist, Administrators at school (Baseline Data)	January 15, 2007 to February 1, 2007	School Administrator, Teachers, Media Specialist
Objectives 1.1 through 1.5 Outcomes 1.3	Leadership Team Planning Meetings	February 1, 2007 to April 1, 2007	School Leadership team
Objective 1.4 Objective 2.1 Objective 3.1 Outcome 1.1 Outcome 2.1 Outcome 3.1	Analysis of ITTS data and results, development of individualized training plans	February 1, 2007 to March 30, 2007	HRD staff School leadership team District grant support staff
Objectives 1.1 through 1.5 Outcome 1.3	Analysis & Development of Project Curriculums & Instructional Focus	Completion by: April 1, 2007	School Leadership Team
Objective 1.4 Outcome 1.1 Outcome 1.2 Outcome 1.3	Digital Education Teacher Academy for Teachers (District program)	January-June 2007	District grant support staff, intermediate level teachers
Objective 1.5 Outcome 1.1	Decide on hardware and software to be acquired	February 1, 2007 to March 1, 2007	School Leadership with assistance from District Staff
Objective 1.5 Outcome 1.1	Procure hardware and software	March 1, 2007 to June 30, 2007	District grant support Staff
Objective 4.1 Outcome 4.2	Design and develop project web site	January 1, 2007 to February 15, 2007	District grant support Staff
Objective 4.3 Outcome 4.3	Procure hardware and software requested by HRD for building podcasts	March 1, 2007 to June 30, 2007	District grant support Staff

Goals/ Objectives	Actions	Beginning/ End Dates	Responsible Party
Objective 2.1 Objective 2.2 Objective 2.3 Outcomes 2.1-2.3	Meet with media specialist team members to determine group training needs for supporting this initiative	March 15, 2007 to March 30, 2007	District grant support Staff Media Specialists
Goal 4 All goals All outcomes	Meet with Research staff to determine final evaluation plan and procure outside evaluator	Complete by April 1, 2007	District grant support staff, Research and Evaluation Staff
Goal 4	Set up project management system and data collection routines	January 1, 2007 to March 30, 2007	District grant support staff
Phase II (June '07 – August '07) – Florida Digital Educator Training and Project Preparation for Implementation			
Goal/ Objective	**Actions**	**Beginning/End Dates**	**Responsible Parties**
Goals 1, 2,3 and Related Objectives and Outcomes	Florida Digital Educator Teaching and Learning Summer Institutes	June 1, 2007 to August 1, 2007	Advanced and Intermediate level teachers Key district staff
Objectives 1.1-1.5 Outcomes 1.1-1.3	Finalization of PBL process of School Plan	Completed by August 30, 2007	Advanced level teachers Media Specialist
Objectives 1.1-1.5 Outcomes 1.1-1.3	Distribute equipment and insure that project team knows how to incorporate these digital tools into the PBL	June through August 2007	District Staff Leadership Team Administrator
All Objectives	Continuously update project web site	On-going	District grant support team
Phase III (August'07 – March '08) - Implementation			
Goal/ Objective	**Actions**	**Beginning/End Dates**	**Responsible Party**
Objectives 1.1-1.5, 2.1 Outcomes 1.1-1.3, 2.1	Implementation of professional development on entry and intermediate levels for teachers	August 2007 – March 2008	District Staff Entry and Intermediate teachers School Principal and leadership Team

Goals/ Objectives	Actions	Beginning/ End Dates	Responsible Party
Objectives 1.1-1.5 Objectives 2.1-2.3 Objectives 3.1	Implementation of PBL process. (Using PBL Process flowchart – Appendix A)	September 1, 2007 to December 15, 2007	Advanced team, Students
Objectives 1.1-1.5 Outcomes 1.1-1.3	Student Presentations of learning to Community audience	December 2007	School Project Teams, Students
All objectives All outcomes	Surveys of teachers, students, media specialists and administrators to obtain feedback regarding 1st round of project implementation	January 2008-March 2008	All participants
All objectives All outcomes	Video documentation of classroom process	On-going	HRD staff
Goal 1: Objectives	Begin replication of Phase I with seven additional advanced teachers from each of the project schools with mentoring aspect initiated	January 2008 to May 2008	Advanced and Intermediate level teachers
All Objectives All Outcomes	Data analysis and Evaluation	March 30, 2008 to May 2008	District Research Department Staff; Outside Evaluator
All Objectives All Outcomes	Final Evaluation Report	May 2008	Outside Evaluator
All Objectives All Outcomes	Communication of lessons learned, best practices and evaluation results to School Board, Community at large (local, State and National) through dissemination plan	May through August 2008	District Grant Support Team School Project Teams Administrators
Objectives 1.1 – 1.5 Outcomes 1.1-1.3 Outcome 4.1	Incorporation of project based learning plans into the BEEP Teacher Portal for district-wide teacher access and replication.	May 2008 – August 2008 (Ready for 2008-2009 school year)	District BEEP staff Project Teachers

Goal/ Objective	Actions	Beginning/End Dates	Responsible Party
Objectives 1.1-1.5 Outcome 1.1-1.3 Outcome 4.1	Sharing of student work samples for district-wide access through the BEEP student portal. Simultaneous sharing through project web site of student work.	May 2008-August 2008 (Ready for 2008-2009 school year)	Project Students District Staff
All Objectives All Outcomes	Make available podcast-based course on project-based learning	Completed by May 2008	HRD staff
Phase IV: Replication continues following Proposed Strategy – Pending District Funding (March 2008 – January 2010) **Goal: School transformation to digital learning environment by 2010**			

Section 4.0: Evaluation

The evaluation plan will consist of a case study designed to determine the relative impact on student achievement of the proposed project. The evaluation effort will focus on determining the process of implementing this project and the benefits of this program for students and teachers. The evaluation of both the teaching and learning and technology integration process will be analyzed**.** ***The Broward Department of Research Services will coordinate with the University of South Florida/Florida Center for Instructional Technology and the David C. Anchin Center in evaluating this grant.***

Both *qualitative and quantitative* methodologies will be used to determine effectiveness in meeting grant goals and objectives. The focus of the evaluation will be on the changes in teacher, student, media specialist and administrator behaviors as it relates to the immersion of digital content, tools and resources into daily classroom instruction, the learning processes and strategies that have been effective or ineffective, and the student achievement results after the implementation of the proposed interventions. Major emphasis will be placed on the observation of changes in school culture, instructional strategies and student abilities as it relates to the development of 21st century literacy skills. The following summarizes the evaluation tools and processes that will be used to gather and analyze data related to project goals and objectives.

1. The ***ITTS evaluation tool*** will be used subsequent to the year-long technology integration training and implementation delivered through this grant and participation in the FDEP Teaching and Learning Institutes during the summer of 2007. To determine changes in ability levels from the baseline data collected prior to grant participation, the ITTS will be re-administered at the end of the grant period and pre and post test results will be analyzed to determine teacher, media specialist and administrator progression levels.
2. Broward County Public Schools has ***three Florida Master Digital Educators*** who have successfully completed the ***Formative Evaluation Process for School Improvement (FEPSI) Observer Training***, and have been trained to conduct the ***School Observation Measure (SOM)*** and the ***Survey of Computer Use (SCU)*** created by the ***Center for Research in Educational Policy (CREP)***. Together with ***CREP***, these three individuals will conduct "walk-through" processes to determine impact of technology integration training into specific classrooms and media centers of teachers/media specialists who participate in the technology integration training. Administrators in the grant will be trained by the Broward Master Digital Educators to use the standard forms to evaluate teachers and media specialists at their individual schools. This will insure consistency of data collection and enable more meaningful results.
3. The ***Florida Digital Educator (FDE)*** Program supports integration of technology across the K-12 curricula through collaborative experiences with new technologies and digital tools. Broward County Public Schools is no stranger to the FDE Institutes, having hosted a Teaching and Learning Summer Institute at New River Middle School during the summer of 2006, with over eighty

participants from the tri-county area. The purpose of the ***FDE Institutes*** is to provide educators with the technology experiences and opportunities to participate in project-based learning and collaboration they would expect of their students in today's global economy. Evaluation efforts would look to identify instances where such activities are evidenced. Participants will create lessons or projects demonstrating the integration of digital strategies and resources into core curriculum areas; which then can become a best practice Unit or Lesson in the district's Broward Enterprise Education Portal (B.E.E.P.).

4. Participating media specialists will be ***required to submit a project-based lesson*** at the completion of the FDE institute and their project training that can be implemented into their school's media program.
5. The ***USF/Florida Center for Instructional Technology*** and the ***David C. Anchin Center*** participate in educational research and evaluation, which help shape the course of education reform. Broward County Public Schools' ***Research, Evaluation, Assessment & Boundaries Department*** will work closely with these two educational partners to evaluate the data collected by both qualitative and quantitative measures.

In particular, the evaluation will attempt to answer the following evaluation questions related to the project goals and objectives.

Goal 1: Systematically move teachers through the stages of entry, intermediate and advanced levels of technology integration culminating in project-based learning as an instructional strategy that incorporates 21st century literacy skills, focuses on student engagement and provides multi-disciplinary curriculum content delivery.

Evaluation Questions:

What are the demographic characteristics of the schools participating in these projects?

Data: Student and Teacher data files.
Procedure: The evaluator will summarize the demographic characteristics of the students and teachers in the project schools in tabular format.

How has the proposed project been implemented in the 27 project schools?

Data: The evaluation team will interview appropriate district and school staff and request appropriate documentation including School Observation measure (SOM) tool results, and the Survey of Computer Use (SCU) tool.
Procedure: The evaluator will provide a summary of the implementation of the project including addressing the: infrastructure and network effectiveness, role of school leadership, the role of the media specialists, use of student laptops and digital tools in the instructional process, the professional development model, curriculum and integration strategies, school/district technology support, major issues and resolutions, and successful implementation practices.

Has the project-based learning approach resulted in student attainment of 21st Century Literacy skills and student achievement of curriculum content standards?

Data: The evaluation team will review the student portfolios, and student assessment data to determine student progress and achievement. Student and teacher survey data. .
Procedure: The evaluator will provide a summary of the data analysis of student achievement data. The evaluator will also summarize the interview and survey data to determine student perceptions of their learning process. Evaluator will also attempt to determine whether students were more engaged in learning through the project-based learning approach through classroom observations.

Has the professional development strategy implemented resulted in project teachers being able to infuse the project-based learning approach into the delivery of curriculum content using digital tools? What has been the impact of the project on teacher classroom behavior specifically as it relates to transforming to a digital learning environment?

Data: Teacher survey data, teacher portfolios, teacher unit/lesson plans, classroom observations.
Procedure: Evaluation team will analyze the data listed above and draw conclusions regarding the effectiveness of the project as it relates to teacher professional development and transforming the learning environment.

What are the barriers to transforming to a digital learning environment? How are teachers overcoming these barriers? Are there any limitations that are being encountered? How are pedagogical practices changing in the context of the innovations introduced?

Data: Classroom observation walk-through results. Principal/Assistant Principal Interviews. Pre- and Post- survey data from the ITTS instrument, Teacher Surveys.
Procedure: The evaluator will summarize the results of the classroom observation walk-through results submitted by Principals/Assistant Principals.

To what extent have student's attained National Education Technology Standards (NETS) skills and Sunshine State Standards as evidenced by student portfolios?

Data: Student portfolios of work produced in digital format.
Procedure: Student work will be evaluated based on a rubric that addresses levels of skill attainment towards the NETS Standards for Students. As an additional component, student work will also be assessed based on the attainment of Sunshine State Standards in core subject areas. Student work will also be reviewed for knowledge beyond the SSS and evidence of critical thinking skills and other advanced learning skills will be noted.

Goal 2: *Create a comprehensive professional development program which will position the media specialist as a catalyst and change agent in creating effective Information Technology Centers and consequently learning environments which use technology to enhance teacher productivity and delivery of instruction, as well as student achievement and will clarify their role and responsibilities for the school community.*

Evaluation Questions:

Has the professional development program for media specialists implemented as part of this grant enabled them to become collaborative teaching partners with the classroom teacher?

Data: Media Specialists survey data, media center observations, teacher survey data, student achievement of Information Literacy Skills, pre and post ITTS needs assessment data.
Procedure: The evaluation team will analyze the data sources above to determine any changes in the role of the media specialists in project schools. The Pre- and post- data from the ITTS will be analyzed to determine media specialist skill attainment. Surveys of mentors/coaches will be completed to record observable changes in instructional process that may be noted. The observations of the school leadership will be gathered during the interviews and summarized. Media Specialists will be surveyed and essential questions posed that address barriers and limitations encountered.

Goal 3: *Assist school administrators in taking the Leadership role needed to actively reinvent the school culture to support digital learning environments with 24/7 learning opportunities and highly achieving 21st century literate students.*

Evaluation Questions:

Are school administrators who participated in the project more able to lead and support the digital learning environment?

Data: Administrator survey results, teacher survey results
Procedure: Evaluator will analyze survey data to determine impact on leadership and support for the creation of digital learning environments.

Goal 4: *Communicate and disseminate best practices resulting from the implementation of this grant to key stakeholders and implement a strategy to replicate the process undertaken in this grant throughout Broward County Public Schools.*

Evaluation Questions:

What are the lessons learned and best practices that emerged from this implementation that can be shared on a local, state and national basis?

Data: Work products produced by students and teachers
Procedure: Evaluator will analyze results and attempt to address the evaluation question.

Evaluation Plan:

1. All participating teachers/media specialists/school-based administrators/district-wide administrators take the ITTS to provide a baseline of their technology skills level.
2. All participating teachers/media specialists/school-based administrators/district-wide administrators participate in the 2007 FDE Teaching and Learning Summer Institutes. Throughout the training, and afterwards, each participant maintains a web log (blog) site detailing the activities learned throughout the training and how these newly acquired skills were subsequently used throughout the following school year.
3. In September 2007 through March 2008, ***Master Digital Educators*** trained in the ***School Observation Measure (SOM)*** and the ***Survey of Computer Use (SCU)*** will conduct observations of the classrooms/media centers of all Broward's participants to collect data. Administrators will also be trained and use the observation tools to assess teachers.
4. In March 2008 participants in this project proposal will retake the ITTS to determine gains in technology skills.
5. Formal evaluations of the project will be conducted by the District's ***Research, Evaluation, Assessment & Boundaries Department*** in conjunction with the USF/Center for Instructional Technology.
6. ***Project Management Office (PMO)*** will detail this project proposal using Microsoft Office Project, and maintain it as an IT Blueprint project as an effective approach for using formative evaluation results to guide necessary adjustments to the proposed project. Information stored in PMO will be simultaneously housed on a website detailing how skills obtained through the technology training are being used throughout the district's classrooms, media centers, and work environments.

Formative evaluation results will be monitored quarterly and used by each school team to guide necessary adjustments and mid point corrections to project activities and processes.

Section 5.0: Support for Strategic Imperatives

This grant application supports three Florida Strategic Imperatives from the Florida State Board of Education Strategic Plan and supports the State's *Just Read, Florida* reading initiative through the following:

Reading Initiative Support

Participating students will be required to access, select, analyze, evaluate, and paraphrase information from the Internet that is relevant to their understanding of the curriculum content of the projects undertaken. Reading continuously is an essential skill needed by the student. Students who may be struggling with the reading of the content will receive assistance by school-based reading coaches, differentiated instruction web resources, and

reading intervention strategies as outlined by the *Just Read, Florida initiative*. High School students will keep electronic journals that describe their individual learning processes while involved in project-based learning. Essential questions will be posed at key milestones in the implementation of the project and students will express their thoughts, reactions, feedback and learning on a regular basis. High School students will write an essay to submit to the *Read Together, Florida* contest that will also encourage them to be self-directional in finding potential scholarships for higher education and career goals. The media specialist and the classroom teachers will partner to ensure reading is an essential part of grant implementation.

The described professional development and project-based learning focus aimed at increasing the skills of media specialists, teachers, and administrative staff will ensure that Broward County meets the eligibility criteria prescribed by the *Reading First* federal legislation and Florida's state grant application. Through the participation in *Reading First,* Broward County will continue to implement proven methods of scientifically-based reading instruction in classrooms to prevent reading difficulties in Grades K-3.

Because media specialists will play a key support role in this grant proposal, it incorporates and extends the mission and vision of the Florida Association for Media in Education (FAME) by advocating for every student in Florida to be involved in and have open access to a quality school library media program administered by a highly competent, certified library media specialist. FAME is a collaborative, responsive, dynamic network for Florida library media professionals. FAME continues to address change and include the ever-expanding role of technology in its goals and purposes.

Strategic Imperative 1: Increase the Supply of Highly Effective Teachers.
1.1: Acquire, retain and develop qualified, effective teachers
1.2: Increase the number of high-performing teachers

This grant has a strong professional development component with goals to ensure that project teachers, media specialists, and administrators are highly effective in the area of integrating technology tools into the daily delivery of core curriculum. To this end, 378 teachers, 27 media specialists and 27 administrators plus four district staff in total, will complete the *Florida Digital Educator program* leading to the incorporation of new instructional strategies and digital tools. Project-based or inquiry-based learning using constructivist pedagogical approaches will provide project participants with opportunities to implement a new learning environment, more in line with the needs of today's students. Advanced level teachers will be prepared to mentor, coach and model activities that will provide continuous, on-site and direct classroom interventions. Media Specialists will be better prepared to support classroom teachers. Administrators will be able to identify effective instructional strategies that integrate digital tools and new learning methods. Teacher incentives will include additional classroom technologies such as video projectors, interactive whiteboards, and digital devices for students. Other incentives include stipends for professional development beyond the school day. Best practices of project teachers will be recognized through a variety of web-based and district events and shared through local, state and national venues so other teachers can

benefit from realistic classroom experiences. As participating teachers develop their integration skills, additional opportunities for mentoring of other teachers in their schools emerges. The combination of all of these activities will lead to the creation of 405 more highly qualified and effective teachers and media specialists that are able to meet the challenges of 21st century learning and the needs of the school district.

Strategic Imperative 3: Improve Student Rates of Learning
3.1: Improve student-learning gains

Through project-based learning and interdisciplinary lessons, emphasis will be placed on student progress towards the attainment of the six key elements of 21st century learning. These elements include information and media literacy, communication skills, critical thinking skills, understanding core academic content at higher levels and global awareness. Curriculum content and projects will incorporate reading, mathematics and writing skill development. Student achievement data will be analyzed in each of the grant classrooms and pre- and post- test results will be determined. Evaluation criteria will include determining gains in student learning and attempting to find connections between student achievement results and grant implementation. Assessments will be alternative in nature with students demonstrating knowledge through portfolio artifacts such as multimedia presentations, video stories, podcasts, writing samples, research reports and group projects.

Strategic Imperative 4: Improve the Quality of Instructional Leadership
4.1: Enhance K-12 Instructional Leadership

The proposed grant project recognizes the role of the principal as the Instructional Leader of the school and requires participation in the *Florida Digital Educator program* for the school principal. Administrators will be better prepared to lead the vision and support the creation of 21st century learning environments in their schools. Research studies and district evaluation reports continue to stress the need for principals to lead the transition to digital learning environments. Therefore, it is included in this grant proposal as a key element to change.

Section 6: Dissemination Plan

The following methods and strategies will be used to disseminate and market information about the project to appropriate populations.

1. A **project web site** will be created and maintained by a staff member in the Department of Instructional Technology who is responsible for web site development. The URL for the project site will be available at: http://www.broward.k12.fl.us/it. The web site will link to the *Florida Digital Educator program* and provide access to the workshop training schedule. The web site will link to a web page for each of the project schools and will include information on the teachers, classrooms and project-based learning plans being implemented. The web site for the project will also include a project management

template that will show progress on the action steps, timelines and current status. This project web site will be used to communicate implementation status to State and District personnel who are responsible for monitoring the progress of the grant as well as a communication vehicle among grant participants.

2. In addition, **each project school will maintain their own web site** that will contain the following information:

    a. Project Classrooms, Teachers and Projects (student names and pictures will not be included unless written permission in terms of media release forms are obtained from parents or guardians)
    b. Samples of student work including presentations, digital videos, and podcasts.
    c. Classroom Blogs (user name and passwords required).

    Part of the web site will be available to the community, including parents, and be used to communicate information about the project. The **Broward Enterprise Education Portal (BEEP) Student portal will be linked to the web sites**. In this way, all students in Broward County will have access to the projects and student work being produced. In addition, the district web site and individual school web sites will link to the site.

3. The Community Relations department of Broward County Public Schools will be engaged to produce a **digital video presentation** that will be included on the **district web site** (http://www.browardschools.com). In addition, this web site will link to student **podcasts** that are produced as part of the grant so that they will be available to the community at large.

4. Parents will receive information on this project through school newsletters, Home-School Open House events, and messages sent through the District's **Parent Link** system. This system automatically calls homes with a message and will be used to inform parents of their child's participation in the project.

5. Each school will hold a **presentation day** towards the end of the grant period. This presentation day will include students and teachers showcasing the projects and the knowledge gained from the learning. Students will be engaged in developing their own presentations and can choose from a wide variety of digital media and resources to use in development. School Board Members, Senior Management and other key community leaders will be invited to attend. The presentation days will be **videotaped** by the District's BECON television facility and **broadcast** throughout the school system. In addition, the events will be simultaneously webcast using the District's Elluminate **webcast** system. Finally, a **podcast** will be created to showcase the presentation events. In this way, parents who may not be able to attend the presentation day will have several avenues in which to view the day's events. These communication strategies will also insure that all stakeholders can participate in the event.

6. A **School Board Retreat** will be requested towards the end of the grant to communicate to school board members the status of the grant and the progress made to date. This retreat will focus on the achievements of the students and teachers and recommend next steps to continue the replication to other schools.

7. In conjunction with the Community Relations Department, **newspaper articles** will be solicited from the local press. Newspaper articles will reach the larger community and also provide recognition to the achievements of the project teachers and students.

8. Articles will be written for the **internal Broward County publications**, such as the *411 Newsletter*, the HRD *Focus*, and the Department of Instructional Technology's *Tech Talk*. These publications reach every SBBC employee and will provide an excellent forum to communicate about the project.

9. An article for an educational **professional publication** will be written about the project and its results. This option is dependent upon the article being accepted for publication.

10. Project-based learning plans produced by the teachers as part of this project will be added to the **BEEP Teacher Portal** and aligned in the Instructional Organizer by unit, lesson and Sunshine State Standards. Video segments that describe the procedure to deliver the lesson will be tied to the project-based learning plan. Samples of student work will also be included. Since the Teacher Portal is available to all 16,000 teachers in Broward County, this will be a key and essential component of disseminating the results so that all teachers can benefit from the grant.

11. A **brochure** describing the project, the schools involved, the project goals and web sites where additional information can be found will be produced and disseminated to parents, all school principals, all district department heads and other key stakeholders.

12. Proposals to present at **educational conferences** will be submitted so that the project can be shared with educational professionals on both the State and National level. Proposals will be submitted to the Florida Educational Technology Conference (**FETC)** to communicate within Florida**,** the Consortium for School Networking (**CoSN)** to communicate on a National advocacy level and to the National School Board Association (**NSBA**) to communicate to School Board Members through the United States. These conferences were chosen because the populations served are diverse.

Section 7: Budget:

The proposed budget is aligned to the project design, *meets the budget criteria of 25% or more for professional development, 15% or more for the Florida Digital Educator program and 5% for program evaluation*. It includes resources necessary to transform learning environments to prepare students for careers in a global economy. The requested budget fills in the essential components needed and not available through district resources. The proposed budget does not duplicate existing curriculum tools and teacher tools and supports the grant goals and objectives in the following way:

Objective 1.3. Increase the competencies of project teachers in NETS as reflected by pre- and post- test results of the Inventory of Teacher Technology Skills by a minimum of 50%.

Objective 1.4. Increase the number of teachers that are infusing 21st century literacy skills and project- based learning into instruction by more than 700 as measured by pre and post School Observation Measure (SOM) data..

Objective 2.1. Increase the competencies of project media specialists in NETS as reflected by pre- and post- test results of the Inventory of Teacher Technology Skills by a minimum of 25%.

Objective 3.1. Increase the competencies of project administrators in NETS as reflected by pre- and post- test results of the Inventory of Teacher Technology Skills by a minimum of 50%.

Budget Item: To support this goal and objective, funds are allocated to pay project teachers and media specialists stipends to complete the professional development requirements of this grant that are offered after school hours or on Saturdays.

Budget Item: As part of the implementation process, project team members including the teachers, media specialist and administrator will meet for curriculum and instruction planning. Funds have been allocated to pay for substitute time to allow for comprehensive team planning, an essential part of inter-disciplinary learning coordination.

Budget Item: Funds have been allocated to pay the registration fee for each project teacher, media specialist and administrator to attend the *Florida Digital Educator* summer institutes.

Objective 1.1. Increase the number of students who are actively engaged in learning curriculum content through project based learning by 75% as measured by pre and post School Observation Measure (SOM) data.

Objective 1.2. Increase the number of students who are actively using digital tools for authentic assessment and presentation of knowledge by 75% as measured by pre and post Survey of Computer Use (SCU) data and as evidenced in student work samples.

Objective 1.5. Increase the number of 21st century classroom models in Broward County where teachers are implementing strategies that support effective digital resource integration, project based learning and engaged student learning.

Objective 4.3. Produce a "podcast" based video course for teachers and administrators that provide training on the project based learning using state professional development protocols including results-driven models.

Budget Item: Essential to the implementation is to procure an educational team of professionals to provide the on-site mentoring, coaching, and modeling directly in the classroom. This strategy, key to the project, provides on-going assistance and support to the classroom teacher and media specialist as they are undergoing the change process and incorporating new instructional strategies into everyday classroom practice. The grant will use educational consultants with proven success to provide the mentoring and coaching to project teachers. Funds, therefore, are being allocated for professional development services. 27 mentors and coaches will be part of this procurement.

Budget Item: To support this goal and objective, funds are allocated to provide classroom technologies that may not be available to the project teachers and media specialists but that are necessary to transition to a 21st century learning environment. Teachers will select the appropriate tools needed such as video projectors, digital cameras, interactive whiteboards, document cameras and MP3 players including iPods. $10,000 per school project team has been allocated for this purpose.

Budget Item: To assist the Human Resources Department (HRD) with the creation of the podcasts, video- editing software will be procured. In addition, the HRD team will be provided with a set of iPODS that will be used to provide training to teachers in a format that can be easily transported from the school to the home and available on a 24/7 basis.

Objective 4.2. Disseminate outcomes of this grant initiative through presentations at the Florida Education Technology Conference and at selected local, state and national venues focusing on building 21st century literacy skill attainment and project-based learning approaches.

Budget Item: An outside evaluation of the project is a critical way to determine if project goals have been met and if the strategy implemented has been successful. Funds up to $7,500 have been set aside to hire an outside evaluator to complete this process. The Research and Evaluation Department of the School District will oversee this aspect of the grant.

Project Support

- $15,000 has been allocated to support the purchase of materials and supplies and printing services as needed for marketing and dissemination of information regarding the grant.
- $3,100 for travel expenditures to statewide meetings and professional conferences has also been allocated in the budget.
- For the Human Resources Development department to produce video-based podcasts of high quality for online professional development, video- editing software and tools will be procured.

Non-grant support

Curriculum Software tools are not being requested in this grant because the following district-standard software tools are already available on the student laptops for student use. The objective is to fully utilize the tools for curriculum and instruction. The tools that will be used are:

Inspiration/Kidspiration: Concept Mapping Tool

Apple iLife Suite: Production of multimedia presentations using the MacIntosh computer by students

Movie Maker: Production of multimedia presentations using the Windows platform by students

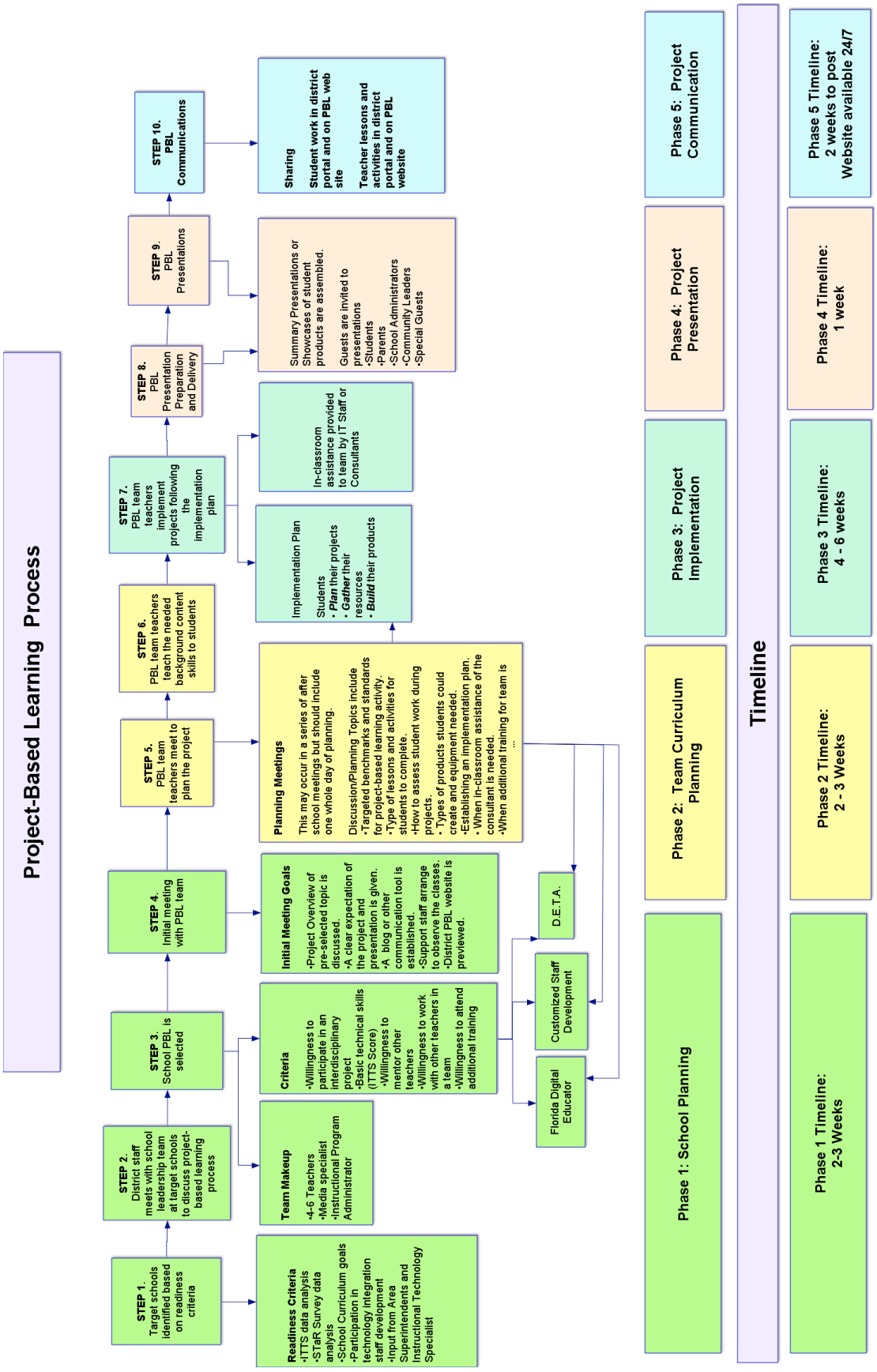
Atomic Learning: Video tutorials that assist with students learning applications.

AppleWorks: Productivity software available for both Macintosh and Windows platform student laptops

Office Suite: Available on Windows platform student laptops

Ten Instructional Technology Specialists from the Department of Instructional Technology will coordinate the activities associated with grant implementation. Because 27 schools would be involved, each instructional technology specialist will assist three to four schools. The cost of this support will be from operating funds of the district. Support staff is necessary to insure that the grant objectives, initiative and data collection proceeds according to the timeline. In addition, this team will handle issues needing resolution.

Appendix A (Project Based Learning Process) follows:


Project-Based Learning Process
STEP 1. Target schools identified based on readiness criteria
STEP 2. District staff meets with school leadership team at target schools to discuss project-based learning process
STEP 3. School PBL is selected
STEP 4. Initial meeting with PBL team
STEP 5. PBL team teachers meet to plan the project
STEP 6. PBL team teachers teach the needed background content skills to students
STEP 7. PBL team teachers implement projects following the implementation plan
STEP 8. PBL Presentation Preparation and Delivery
STEP 9. PBL Presentations
STEP 10. PBL Communications
Readiness Criteria
•ITTS data analysis
•STaR Survey data analysis
•School Curriculum goals
•Participation in technology integration staff development
•Input from Area Superintendents and Instructional Technology Specialist
Team Makeup
•4-6 Teachers
•Media specialist
•Instructional Program Administrator
Criteria
•Willingness to participate in an interdisciplinary project
•Basic technical skills (ITTS Score)
•Willingness to mentor other teachers
•Willingness to work with other teachers in a team
•Willingness to attend additional training
Florida Digital Educator
Customized Staff Development
D.E.T.A.
Initial Meeting Goals
•Project Overview of pre-selected topic is discussed.
•A clear expectation of the project and presentation is given.
•A blog or other communication tool is established.
•Support staff arrange to observe the classes.
•District PBL website is previewed.
Planning Meetings
This may occur in a series of after school meetings but should include one whole day of planning.
Discussion/Planning Topics include
•Targeted benchmarks and standards for project-based learning activity.
•Type of lessons and activities for students to complete.
•How to assess student work during projects.
• Types of products students could create and equipment needed.
•Establishing an implementation plan.
• When in-classroom assistance of the consultant is needed.
•When additional training for team is
...
Implementation Plan
Students
• Plan their projects
• Gather their resources
• Build their products
In-classroom assistance provided to team by IT Staff or Consultants
Summary Presentations or Showcases of student products are assembled.
Guests are invited to presentations
•Students
•Parents
•School Administrators
•Community Leaders
•Special Guests
Sharing
Student work in district portal and on PBL web site
Teacher lessons and activities in district portal and on PBL website
Phase 1: School Planning
Phase 2: Team Curriculum Planning
Phase 3: Project Implementation
Phase 4: Project Presentation
Phase 5: Project Communication
Timeline
Phase 1 Timeline: 2-3 Weeks
Phase 2 Timeline: 2 - 3 Weeks
Phase 3 Timeline: 4 - 6 weeks
Phase 4 Timeline: 1 week
Phase 5 Timeline: 2 weeks to post Website available 24/7