Leadership and Planning 2

EDUCATIONAL LEADERSHIP IN THE 21ST CENTURY

School leaders are experiencing a very challenging and exciting time. Clearly, the ever-present dramatic political, social, environmental, and economic changes occurring globally are requiring educational leaders at all levels to become conscious of guiding and directing institutional and academic change relevant to the needs of this modern reality (Goslin, 2012). This change can be both academically threatening and liberating for school administrators, technology coordinators, and curriculum leaders as they consider new approaches and avenues for delivering education to the young people of this country. At this critical juncture, the quality of educational leadership is becoming one of the essential elements required for the organization and realization of successful technology initiatives in schools. Conversely, average leadership will merely maintain the status quo. At its worst, mediocre direction from school leaders and coordinators will likely nullify the positive contributions that technology can make to education, frustrate teachers and their students, and cost taxpayers a good deal in ill-directed expenditures.

Defining Leadership Values

School leaders are helping to define the future of schools. More to the point, they are making a significant contribution to the teaching and learning process. According to Lytle (2012), successful leaders define their values and vision to raise expectations if they are to set direction and build trust; reshape the conditions for teachers and learning; restructure parts of the organization and redesign leadership roles and responsibilities; enrich the curriculum; enhance teacher quality; enhance the quality of teaching and learning; build collaboration internally; and build strong relationships outside the school community. This lengthy list reveals that school leadership is both dynamic and complex, and as a result, is constantly evolving. With the advent of new educational technologies, coupled with innovative teaching practices, perceptive

school leaders are becoming more adept at guiding schools through this dynamic learning environment. Individual school administrators who have the foresight required to create and sustain leading-edge technology programs are certainly worthy of the encouragement and recognition extended by their communities and peers. Through time, energy, and commitment, these visionary leaders are investing in a renewed vision of schooling that can have broader implications for the larger educational community. These are the school leaders who are developing and maintaining technology programs and plans of exceptional quality. At the beginning point in developing exceptional technology programs, school leaders and technology coordinators should attempt to answer four basic questions:

1. What equipment or applications are required to make the improvements we wish to see in the student-centered learning environments of our schools?

2. Why do we want to commit a great deal of time and money to this initiative for specific technological changes, and are our motives focused on improving student learning?

3. Who is the best person to lead the technological initiative we are considering?

4. Who will be best suited to assess and maintain the quality of technology programs after the initial stages of implementation are completed?

Without a doubt, quality leadership involves a unique human ability. This means a successful leader must be able to anticipate change and adapt administrative roles and responsibilities to meet the needs of teachers and students. As part of this process, school leaders must be able to work within a structured organizational framework. This also means knowing how to effectively integrate innovative educational technologies. With this being said, today's management and instructional skills currently require individuals who are flexible and can handle a good deal of change. This flexibility and this adaptability are extremely useful because they allow school leaders to shift from a purely managerial focus to an instructional teacher-learner leadership approach. Additionally, a ranking of the top characteristics of ethical educational leaders are shown in Box 2.1.

BOX 2.1. TOP CHARACTERISTICS OF ETHICAL EDUCATIONAL LEADERS IN ORDER OF IMPORTANCE

1. Honest

2. Positive

3. Caring/Considerate

4. Fair

5. Professional/Knowledgeable

6. Trustworthy/Reliable

7. Consistent

8. Respectful

9. Open-minded

10. Kind/Friendly

11. Listener

12. High expectations/Standards

13. Accessible/Available

Source: National Council of Professors of Educational Administration (n.d.).

Leadership and Integrity

Perhaps the most critical aspect of quality leadership involves integrity and ethics. Today's school leaders and technology coordinators must act with integrity, fairness, and ethics. When we lose our integrity, we lose our effectiveness. As an administrator, one needs to act consistently and treat all people equitably. Thus, leaders need to show stakeholders in a school and community that they genuinely respect and care about them. Stakeholders need to know that a leader exhibits outstanding character, values honor, and is driven by an unending passion to reach a vision of excellence. Covey (2006), in his book *The Speed of Trust,* ties this concept to the roots of a tree. He stated that even though the roots of a tree are underground and not visible most of the time, they are vital to the nourishment, strength, stability, and growth of the entire tree. Likewise, educational leaders, who do not have strong roots, and thus are withering on the inside, will soon be exposed on the outside. Covey continued defining integrity by saying that, for most people, integrity means honesty. Though some do not consciously realize it, honesty includes not only telling the truth, but also leaving the right impression. It is possible to tell the truth, but leave the wrong impression.

Most school administrators and technology coordinators would describe themselves as being honest. However, many staff members do not believe their administrators and directors are honest or communicate honestly. So, how does one go about increasing his or her integrity? The answer may be in school leaders and technology coordinators taking time to reflect on what degree of integrity they presently possess (see Exhibit 2.1). This is the first step of being truthful. Inherently, most of us know the difference between right and wrong, and we need to evaluate our inner thoughts on *how honest are we with our fellow man.*

Results from the Research from the Schools of Integrity project by Mirk (2009) identified openness, honesty, relationship building, and constant rigorous reflection as key elements in schools that successfully balance academic rigor with ethical development. The Institute for Global Ethics (2006) translated those findings and interviewed six secondary school leaders who were

Exhibit 2.1 Self-Reflective Integrity Assessment

Self-reflective integrity assessment. Place a check (✓) mark by those items that you always do, do most of the time, or just sometimes.	Always	Most of the time	Sometimes
• I indisputably try to be honest in all my interactions with others.			
• I typically "walk my talk."			
• I am clear on my values.			
• I feel comfortable in standing up for my values.			
• I am open to the possibility of learning new truths that may cause me to rethink issues or even redefine my values.			

Source: Covey (2006).

recommended on their solid reputations of integrity to learn how ethics and values contribute to leadership effectiveness. Those leaders offered five key recommendations listed below:

- *Lead from your core values.* Deeply held values become an operating platform that works in two directions: compelling constant internal alignment and driving outward actions. In an age of increasing transparency, both functions are essential.
- *Have the courage to connect.* As a leader of a school community, it can take a measure of courage to stick to ideals and share vulnerabilities. A commitment to fairness directs a leader to suspend preconceived ideas or assumptions as they go into potentially tough meetings. By overriding preconceptions about a given situation, an ethical leader can develop the courage and humility to share and connect with others. Effective leaders resist the temptation to impose their beliefs. Instead they opt for a slower and perhaps less convenient route that seeks common ground and mutual respect and, ultimately, leads to meaningful connections. The focus on positive, authentic relationships sets the tone for what the leader wants their school culture to become.
- *Do your homework.* In developing relationships, the ethical leader needs to understand how others think and understand the background of where others are coming from. Thus, the leader has an understanding and respect for the person as well as the issue at hand. Remembering details and giving specific feedback helps others know

they are being respected. The point of not talking jargon but being able to communicate in ways that anyone can understand with clarity is a huge leadership responsibility.

- *Model your outcomes.* School leaders can establish trust through their willingness to be open and transparent with faculty and staff. Being open and forthright is a key ingredient in modeling what you expect your faculty to do with students. As a school leader, exemplifying experimentation and then acting upon feedback is a risk but a huge modeling technique. It will open channels for discussion and reflection and create a culture of improvement.
- *Lean on others for support.* Bringing faculty and staff into conversations about their school shows that you respect them as professionals and you recognize the institution as a community of practice. This leadership approach helps to build values-driven relationships within a school community. When appropriate, asking the question, "What would you do?" opens the door to talk about different points of view regarding decisions that need to be made at the school.
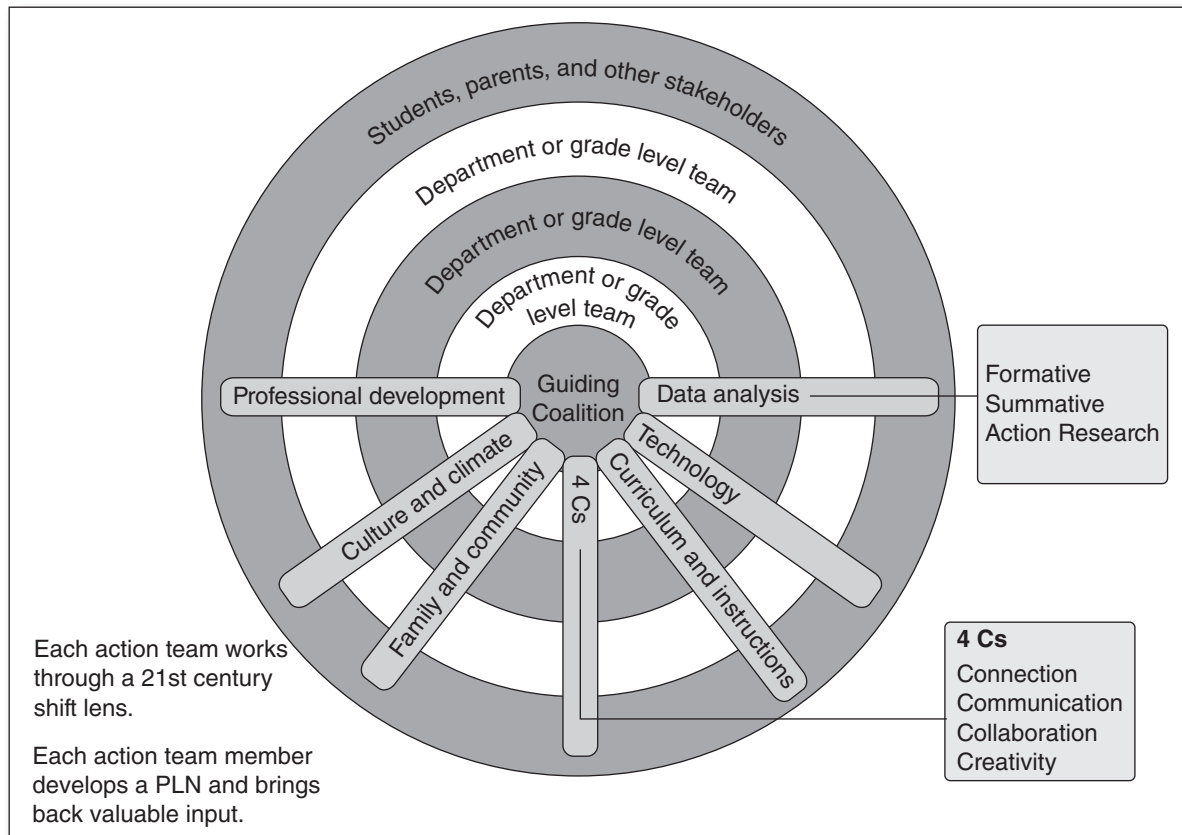
Distributive Leadership

Sharing leadership is a major part of technology planning and implementation. Keeping with this perspective, a fundamental aspect of distributive leadership is involving teacher leaders. According to Kennedy, Deuel, Nelson, and Slavit (2011), the three major attributes of distributed leadership that support teacher collaboration and professional learning communities are

1. leader's recognition and use of internal intellectual and experiential resources,

2. differentiated top-down and lateral decision-making processes, and

3. culture building through dialogue and collaborative inquiry.

Each of the attributes listed promotes the concept of school administrators sharing expertise and creating a collective responsibility for integrating technology. These efforts are directed toward enhancing student learning as well as teaching leaders the value of inviting teachers into leadership. Such discussions can also build a platform for shared decision making if opportunities are appropriate when considering new technology initiatives. Likewise, significant problems are more likely to be solved when people come together and collaborate (Hoerr, 2012). Readers can refer to the distributive leadership conceptual model presented in Figure 2.1. This model is a visual representation of the core elements that stakeholders and school administrators should consider in creating a culture of shared leadership.

Involving other teacher leaders has real benefits—and in the end, when trying to change school culture, it certainly does make sense to broaden leadership responsibilities and deepen understanding. Whenever the job is too large to be effectively done by one person, there are individuals who can

Figure 2.1 Distributive Leadership Model

Students, parents, and other stakeholders

Department or grade level team

Department or grade level team

Department or grade level team

Guiding Coalition

Professional development

Data analysis

Culture and climate

Family and community

4 Cs

Technology

Curriculum and instructions

Formative
Summative
Action Research

4 Cs
Connection
Communication
Collaboration
Creativity

Each action team works through a 21st century shift lens.

Each action team member develops a PLN and brings back valuable input.

Source: "Thinking Hard While Running on Empty" (n.d.).

support in the process of change. Instead of one individual trying to provide adequate leadership, using a team approach to technology planning can be the answer. The corollary to this line of thinking is that if we trust teachers to work with students and make decisions about their academic welfare, school leaders need to be willing to involve teachers in discussions that are technology and leadership related.

Engaging Stakeholders in Technology Planning

Involving stakeholders in school reform and technology planning has far-reaching implications. Moreover, with technology planning being a multifaceted enterprise, it takes the involvement of various stakeholders to make it all work. For school leaders, this means a school technology advisory committee should include interested teachers, a financial expert, a person knowledgeable about project implementation, another individual with knowledge of professional development strategies, a technology specialist, as well as a person who is proficient in public relations.

Fortunately, there are many schools that have discerning and mindful leaders who instinctively invite these community members into the process. That said, one of the most important steps toward improving public education is deepening

an understanding of a school's most important stakeholders, their teachers, parents, and students (Hemmen, 2012). They are the stakeholders at the heart of the institution and it is vital their viewpoints are heard and included.

School and Community Leadership

Successful educational leaders who make initial changes in planning and technology implementation are usually those same individuals who realize the importance of community involvement. As noted in Chapter 5, public engagement is no longer a theoretical phrase to be used exclusively in discussions between academics. The development of technology initiatives that are broad based and supportive requires foresight on the part of school and teacher leaders. A good deal of this foresight involves the willingness and moxie to cultivate and capitalize on the potential knowledge, energy, and support of parents and community members.

Public disengagement from schools has been a problem in the past, but this can change with sound research practices, information sharing about technology, and quality leadership. If we are to succeed as a global society, educational leaders must involve parents and community members in the development of school technology plans. Understanding how to support educational change via technology advancements, evaluating instructional strategies, and initiating new programs is perhaps one of the critical steps in the leadership process. Likewise, it is important for school leaders to translate their knowledge and abilities into community support for school reform. When considering the great extent to which properly functioning schools can positively influence student lives, there should be little doubt that communities should be major supporters and encouragers of their children's schooling. With a focus on quality leadership and a focus on increasing student achievement, public schools can effectively accommodate the demands for curricular and technological change that are unmistakably evident on the educational horizon.

Navigating Future Change

The 21st century challenge in education will be to assess curricular and technology credibility in a systematic and sustained way (Abilock, 2012). Subsequently, the art of planning and building successful technology programs will continue to involve a number of important factors. The following important target areas provide a brief overview of individual elements needed for a successful technology outline. In most cases, these target areas provide concise categories as a guideline for school leaders and technology coordinators. For more detailed information, readers are referred to specific chapters.

Support Student Needs

In any technology initiative, the needs of students must be placed above any other factor being considered. The present interest in mobile technology and mobile learning, or *m-learning,* often derives support from viewpoints that take into account the importance of student needs. Unfortunately, many

well-meaning school leaders, coordinators, and committee members make decisions about technology applications that really do not acknowledge the needs of the students who will use it. Educationally questionable reasons for making major decisions about technology include international competitiveness, skilled-labor force, and getting good jobs. As important as these reasons are, no other motivation can be allowed to supplant students' needs as the central focus for schools and their technology programs. For more in-depth information on students' needs, see Chapter 4.

Combine Teaching and Learning

Teaching and learning are two distinctly complex and yet complementary entities. Therefore, they must be considered simultaneously when deciding how the technology will be brought into the classroom or the school. For a more complete discussion of teaching and learning with technology, see Chapter 4. To begin with, educational administrators can consider the following list as it relates to the effects technology has on teaching and learning:

- Consider carefully how new technology applications will affect teaching and learning. Make sure to have a purpose that reflects teaching and learning when bringing technologies into the school and into classrooms.
- Determine how new technology will coexist with other technologies used throughout the school district.
- Explore and manage bandwidth issues.
- Evaluate applications and purchases as well as coordinate them to student needs.
- Consider features like durability, maintenance, access, and speed.
- Evaluate projected purchases to determine which programs and applications will best complement, support, and expand classroom teaching and learning.
- Evaluate planned purchases for user friendliness. Use is important because ease of use reduces the learning curve and helps ensure that the program will be used.
- Determine the simplest approach that will effectively integrate technology into the teaching and learning environment. Making technology transparent allows stakeholders to support the process more readily.
- Establish dialogues with teachers to evaluate classroom space as it relates to new technology.
- Determine the amount of use teachers will make of the new technology.

Provide Leadership With Planning

Quality leadership must be evident at all stages of development. Planning can help participants understand the structure of the project and what is required of each committee and person. Planning can also help address the *who, what, when, where, why,* and *how* aspects of the project. The suggestions listed

below provide a brief overview of several important factors to consider when a technology project is being planned:

- Keep students' and teachers' needs as the vanguard during the various stages of the technology planning process.
- Consider how students and staff members will be affected by the technology changes and develop appropriate support structures like professional development, changes in classroom layout, and inclusion into curricula.
- Invest in technology for the long haul and not just for a quick fix.
- Review school programs to determine how course subjects may be adjusted to make use of technologies in the classroom.
- Locate research that both supports and counters the major assumptions on which the technology project is based. Make sure everyone knows both sides of the issue.
- Consider the possibility of having to modify school practices or upgrade regulations.
- Look at the likelihood of having to adjust the school's philosophy and mission statements to align with the technology initiative you are creating.
- If necessary, create or borrow surveys to probe stakeholder viewpoints.
- Envision what the completed project will look like and what it will do for teaching and learning. This mental picture can help provide focus for the entire enterprise.

Provide Professional Development

One of the most important aspects of any technology initiative is professional development. It is critical that consideration be given to teacher learning well in advance. For a detailed description of professional development and its importance to technology implementation, see Chapter 3. Suggestions include the following:

- Formulate detailed plans for professional development and implementation. Plans for training and inservice should be developed well in advance of the actual implementation of technology.
- Decide who will lead professional development programs and evaluate each stage of implementation.
- Determine appropriate professional development activities for special services and support staff.
- Identify who will lead and evaluate professional development for auxiliary staff members.
- Identify in-house technical consultants who will help teachers deal quickly with problems that might arise.
- If possible, seek out a product/technology representative who has already done what you are trying to do.
- Develop a working schedule for the professional development program.

Understand Financial Management

Most determinations about finance are generally dealt with at middle- and upper-management positions. While many of these deliberations are held in

small groups, their impact will be critical to the success of committees that will guide the technology project. For more information about financial management, see Chapter 7. Several points are listed below to provide a general overview of the financial-management process:

- Determine what financial resources are available for in-house projects and equipment.
- Itemize equipment resources owned by the school or district. The goal is to look to reduce unnecessary duplication in new purchases.
- Determine financial resources available 3 to 5 years in advance.
- Consider canvassing civic organizations for financial, material, or equipment support.
- Determine if the proposed equipment or applications will be purchased locally, statewide, or nationally. Decide who will be responsible for handling recommended purchases.
- Review all costs to make sure the technology project is affordable at all phases.

Analyze the Infrastructure

This should be one of first steps in planning and implementation of technology. When discussing infrastructure, one is generally referring to basic facilities as well as technological capabilities needed in a school. These facilities and installations can impact proposed technology implementations. For a more complete review of infrastructure, see Chapter 8. The following points provide a brief outline of things to consider when reviewing infrastructure:

- Decide how existing infrastructure and capabilities can be integrated into the project.
- Visit other schools to evaluate successful programs for structural adaptations that could be simulated and, in particular, look for unique ideas to solve local problems.
- Ensure infrastructure will accommodate any instructional configuration required by teachers or staff.
- Analyze what space, remodeling, and/or expertise is required for implementation.
- Arrange for professionals to handle infrastructural changes or needs.

Garner Community Support

In current educational contexts, when planning technology, community support is paramount to success. This is because parents and community members want to be informed especially when costly reforms are undertaken. To find out more about community awareness, planning, and support, see Chapter 6. Several factors are listed below to provide general information to guide your deliberations:

- Evaluate community willingness to fund technology initiatives.
- Determine the level of congruence between the school's technology initiatives and commitment on the part of board members and/or trustees.

- Consider how you will be able to show community members how teachers will integrate technology into their curriculum.
- Address parents' and community members' concerns as to how technology will enhance student learning and achievement.
- Show parents and members of the community the benefits of new technology applications.
- Develop guidelines for presenting information to the public. Be sure all news releases are verified with the superintendent as well as public relations director (if applicable) before they go public.

Complete an Evaluation

A crucial component of any technology implementation is program evaluation. To learn more about this process, see Chapter 9. The list that follows contains a selection of ideas that are pertinent to evaluation of the technology initiative:

- Decide who will evaluate the overall project and how the evaluations will be done.
- Set a specific timeline for the completion of key events within the evaluation process.
- Outline how changes or revisions will be handled.
- Review various evaluation methods and choose the most appropriate methods available for sharing information with the community.

After reviewing the above factors and tailoring feedback to reflect school or district realities, school leaders will be prepared to develop more specific plans for the initiative or project renewal.

TECHNOLOGY FOR SCHOOL LEADERS

To specifically define project parameters, school leaders need to follow International Society for Technology in Education standards (ISTE, 2011) as well as Technology Standards for School Administrators (TSSA, 2001). The driving force behind these standards is the assumption that technology reform requires large-scale systemic change. Moreover, these standards can assist school leaders in identifying and specifying future school technology projects. Refer to the following TSSA standards to conceptualize the leadership role in the technology plan.

Standards

I. **Leadership and Vision.** Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

Educational Leaders:

A. Facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.

B. Maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, long-range, and systemic technology plan to achieve the vision.

C. Foster and nurture a culture of responsible risk taking and advocate policies promoting continuous innovation with technology.

D. Use data in making leadership decisions.

E. Advocate for research-based effective practices in use of technology.

F. Advocate on the state and national levels for policies, programs, and funding opportunities that support implementation of the district technology plan.

II. **Teaching and Learning.** Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize teaching and learning.

Educational Leaders:

A. Identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.

B. Facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning.

C. Provide for learner-centered environments that use technology to meet the individual and diverse needs of learners.

D. Facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.

E. Provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

III. **Productivity and Professional Practice.** Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.

Educational Leaders:

A. Model the routine, intentional, and effective use of technology.

B. Employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community.

C. Create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.

D. Engage in sustained, job-related professional learning using technology resources.

E. Maintain awareness of emerging technologies and their potential uses in education.

F. Use technology to advance organizational improvement.

IV. **Support, Management, and Operations.** Educational leaders ensure the integration of technology to support productive systems for learning and administration.

Educational Leaders:

A. Develop, implement, and monitor policies and guidelines to ensure compatibility of technologies.

B. Implement and use integrated technology-based management and operations systems.

C. Allocate financial and human resources to ensure complete and sustained implementation of the technology plan.

D. Integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources.

E. Implement procedures to drive continuous improvement of technology systems and to support technology replacement cycles.

V. **Evaluation.** Educational leaders use technology to plan and implement comprehensive systems of effective evaluation.

Educational Leaders:

A. Use multiple methods to evaluate appropriate uses of technology resources for learning, communication, and productivity.

B. Use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning.

C. Assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions.

D. Use technology to evaluate and manage administrative and operational systems.

VI. **Social, Legal, and Ethical Issues.** Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision making related to these issues.

Educational Leaders:

A. Ensure equity of access to technology resources that enable and empower all learners and educators.

B. Identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology.

C. Promote and enforce privacy, security, and online safety related to the use of technology.

D. Promote and enforce environmentally safe and healthy practices in the use of technology.

E. Participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources.

TECHNOLOGY LEADERSHIP ROLES

To formulate a technology mission statement, school administrators should keep the following specific technology leadership tasks in mind. The school superintendent, principal, and district technology coordinator will take on technology leadership roles that provide ways and objectives to solidify overriding goals of technology for a school district.

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

Leadership and Vision

1. Ensure that the vision for use of technology is congruent with the overall district vision.

2. Engage representatives from all stakeholder groups in the development, implementation, and ongoing assessment of a district technology plan consistent with the district improvement plan.

3. Advocate to the school community, the media, and the community at large for effective technology use in schools for improved student learning and efficiency of operations.

Teaching and Learning

4. Provide equitable access for students and staff to technologies that facilitate productivity and enhance learning.

5. Communicate expectations consistently for the use of technology to increase student achievement.

6. Ensure that budget priorities reflect a focus on technology and its relationships to enhanced learning and teaching.

7. Establish a culture that encourages responsible risk taking with technology while requiring accountability for results.

8. Maintain an emphasis on technology fluency among staff across the district and provide staff development opportunities to support high expectations.

9. Use current information tools and systems for communication, management of schedules and resources, performance assessment, and professional learning.

Support, Management, and Operations

10. Provide adequate staffing and other resources to support technology infrastructure and integration across the district.

11. Ensure, through collaboration with district and campus leadership, alignment of technology efforts with the overall district improvement efforts in instructional management and district operations.

Evaluation

12. Engage administrators in using districtwide and disaggregated data to identify improvement targets at the campus and program levels.

13. Establish evaluation procedures for administrators that assess demonstrated growth toward achieving technology standards for school administrators.

Social, Legal, and Ethical Issues

14. Ensure that every student in the district engages in technology-rich learning experiences.

15. Recommend policies and procedures that protect the security and integrity of the district infrastructure and the data resident on it.

16. Develop policies and procedures that protect the rights and confidentiality of students and staff.

Principal

Principals who effectively lead integration of technology typically perform the following tasks:

Leadership and Vision

1. Participate in an inclusive district process through which stakeholders formulate a shared vision that clearly defines expectations for technology use.

2. Develop a collaborative, technology-rich school improvement plan, grounded in research and aligned with the district strategic plan.

3. Promote highly effective practices in technology integration among faculty and other staff members.

Teaching and Learning

4. Assist teachers in using technology to access, analyze, and interpret student performance data, and in using results to appropriately design, assess, and modify student instruction.

5. Collaboratively design, implement, support, and participate in professional development for all instructional staff that institutionalizes effective integration of technology for improved student learning.

Productivity and Professional Practice

6. Use current technology-based management systems to access and maintain personnel and student records.

7. Use a variety of media and formats, including telecommunications and the school website, to communicate, interact, and collaborate with peers, experts, and other education stakeholders.

Support, Management, and Operations

8. Provide campuswide staff development for sharing work and resources across commonly used formats and platforms.

9. Allocate campus discretionary funds and other resources to advance implementation of the technology plan.

10. Advocate for adequate, timely, and high-quality technology support services.

Evaluation

11. Promote and model the use of technology to access, analyze, and interpret campus data to focus efforts for improving student learning and productivity.

12. Implement evaluation procedures for teachers that assess individual growth toward established technology standards and guide professional development planning.

13. Include effectiveness of technology use in the teaching and learning process as one criterion in assessing performance of instructional staff.

Social, Legal, and Ethical Issues

14. Secure and allocate technology resources to enable teachers to better meet the needs of all learners on campus.

15. Adhere to and enforce among staff and students the district's acceptable-use policy and other policies and procedures related to security, copyright, and technology use.

16. Participate in the development of facility plans that support and focus on health and environmentally safe practices related to the use of technology.

District Technology Coordinator

District technology coordinators who effectively lead integration of technology typically perform the following tasks:

Leadership and Vision

1. Ensure that program technology initiatives are aligned with the district technology vision.

2. Represent program interests in the development and systematic review of a comprehensive district technology plan.

3. Advocate for program use of promising practices with technology to achieve program goals.

Teaching and Learning

4. Participate in developing and providing electronic resources that support improved learning for program participants.

5. Provide rich and effective staff development opportunities and ongoing support that promote use of technology to enhance program initiatives and activities.

6. Ensure that program curricula and services embrace changes brought about by the proliferation of technology within society.

Productivity and Professional Practice

7. Use technology and connectivity to share promising strategies, interesting case studies, and student and faculty learning opportunities that support program improvement.

8. Model, for program staff, effective uses of technology for professional productivity, such as in presentations, record keeping, data analysis, research, and communications.

9. Use online collaboration to build and participate in collaborative learning communities with directors of similar programs in other districts.

Support, Management, and Operations

10. Implement technology initiatives that provide instructional and technical support as defined in the district technology plan.

11. Determine financial needs of the program, develop budgets, and set timelines to realize program technology targets.

Evaluation

12. Continuously monitor and analyze performance data to guide the design and improvement of program initiatives and activities.

13. Employ multiple measures and flexible assessment strategies to determine staff technology proficiency within the program and to guide staff development efforts.

Social, Legal, and Ethical Issues

14. Involve program participants, clients, and staff members in dealing with issues related to equity of access and equity of technology-rich opportunities.

15. Educate program personnel about technology-related health, safety, legal, and ethical issues, and hold them accountable for decisions and behaviors.

16. Inform district and campus leadership of program-specific issues related to privacy, confidentiality, and reporting of information that might impact technology system and policy requirements.

Formulating Goal and Mission Statements

A project goal and mission statement can be very helpful as a guide to participants in any major project. The key is to note that a goal is an overarching theme. It is crucial that the goal and mission of any individual school remain consistent and in line with the overall goal of the district. Thus, a goal and mission statement (see Box 2.2) including students, learning, and teaching is one that is most likely to direct the project toward successful implementation for students, teachers, and schools. For example, technology-oriented goal and/or mission statements should include

- Statements about student learning
- School and district priorities
- General objective and expectations associated with the shift in technological focus

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BOX 2.2. KALAMAZOO PUBLIC SCHOOLS TECHNOLOGY PLAN, MICHIGAN

Technology Mission Statement

The technology mission of Kalamazoo Public Schools is to ensure that all students access, process, create and communicate using diverse technology as an integral part of learning.

Technology Vision

The technology vision of the Kalamazoo Public Schools is to ensure that all students, supported by staff and community, will demonstrate a high degree of technological literacy in pursuit of life–long learning.

Technology Belief Statements

1. All students must have the knowledge and competencies necessary to function in an increasingly technological age.

2. Educational technology, when used appropriately, improves performance, increases achievement and expands the knowledge of both the student and the teacher.

3. The financial commitment of the school district to technology must be continual and ongoing.

4. Technology should be equally accessible for all members of the school community.

5. All students must be provided the opportunities to access, process, create and communicate using various technologies.

6. Technology used in the learning process is project based.

7. Technology instruction must include an understanding of the responsible use of all forms of technology including the social, ethical and legal aspects.

8. Technology integration is an essential component in the school improvement process.

9. The District Technology Benchmarks must be aligned with the State Educational Technology Standards and Expectations and integrated into the district curriculum.

Source: Kalamazoo Public Schools (2012).

Establishing and Maintaining Commitment

Resilience and support is often what school leaders need the most (Allison, 2012). Obtaining and maintaining commitment from administrators, teachers, parents, and school board members is paramount to the success of each phase of the process. Establishing strong support from each of these groups requires the development of several strategies. Following are a number of approaches for building and maintaining commitment from various groups.

School Administrators

- Encourage school administrators to attend state and national technology conferences or workshops. Conferences and workshops can bring administrators up-to-date on technological developments and provide useful information to meet district and school needs.
- Allow school administrators to visit schools that have successfully integrated technology into their classrooms. A picture is worth 1,000 words, so get out there and see what is being done.
- Require school administrators to develop management plans for the technology in district schools. School administrators must know that their job is not over when the technology is in place. Their influence and insights will be needed in other areas.

School Board Members

School board members have the ultimate responsibility and authority for almost all decisions and activities that take place in the school district. Therefore, support from trustees or school board members is critical for the successful implementation of any technology initiative. Some ways to obtain (or

maintain) board support and keep board members abreast of new developments in technology are in the following list:

- Encourage board members to attend technology presentations at state and national conferences and workshops.
- Continually upgrade board members' knowledge by making the latest research available to them.
- Keep the school board informed about district technology needs and initiatives.
- Keep board members up to date on the status of technology problems.
- Remember that school board support is important during the entire project but particularly during the planning stages.

The guidelines mentioned above are important because *to compete, public and private school board members across the country need to spend more time and energy focusing on an array of critical issues in their districts.*

Teachers

Teaching is a complex profession. Initiating advances in educational technology into school learning environments can add to the complexities that teachers must already deal with on a daily basis. Inherent in properly functioning classrooms is an energy that is fully understood only through experience. It is within the hustle and bustle of classroom activities that technology initiatives will ultimately succeed or fail. Successful coordinators will understand this reality and provide a good deal of attention to teachers. The following ideas can help teachers adapt to technological changes:

- Encourage interschool visits for teachers to see what classroom technology use looks like and how it is integrated into the curriculum and regular classroom work.
- Distribute up-to-date literature and research findings about technology use in schools. This will build confidence in the staff when they know that their administrator is informed regarding the research base on this issue.
- Provide in-house workshops for classroom educators. Let teachers know where the expertise is and, more importantly, that it will be shared.
- Consider contacting teachers at specific grade levels to implement pilot projects with the new technological approach. Allow teachers to share with others the advantages they are experiencing and to discuss difficulties encountered.
- Build a user-friendly environment for teachers. Provide prompt access to expert guidance when they have questions or problems. Remember, if teachers become stuck, they rarely have time or energy to deal with technical shortcomings because students come first!
- As part of the budgeting agenda, administrators should set aside funding to send teachers to technology workshops or conferences. This is where

they can learn from those who are already using learning technologies in their classrooms.

- Remember that teacher input and support for the technology projects are critical for real success.

Parents

Parents comprise a primary group of educational stakeholders whose voice needs to be heard. When working with parents, readers can consider the following approaches:

- Involve parents in the planning process because it can be very beneficial to a project. Make sure they know what is expected of them from the start.
- Arrange for formal and informal meetings between school personnel and parents. These meetings can be used to set positive expectations for the intended technology project.
- Provide the latest information to parents and be willing to discuss information with them.
- When practical, invite parents to attend professional development opportunities.
- Develop working relationships between home and school to provide an avenue for parental viewpoints and contributions. Parent support can help a project immensely.

Project Calendar

School leaders, technology coordinators, curriculum leaders, and committee members must work closely together to construct a practical calendar for the project. The calendar of events in the Project Outline marks important reference points for the technology advisory committee to reach in order to keep the project on schedule. Realistic target dates are a key ingredient, and committee members should be included as this is the only way to really ensure a workable schedule of events. In this respect, it is important to remember that committee members are usually chosen because they know how to get tasks done, and they are also the ones who usually have the best idea of how long it will take to get these tasks done.

Developing a Schedule

A technology implementation schedule differs from the calendar in that it is more specific in nature. The calendar sets general benchmarks to notify participants where they are in the process. The schedule, on the other hand, identifies specific tasks assigned to committee members needed to meet the benchmarks outlined in the calendar. Before scheduling begins, all participants must understand their roles in the project. Administrators and coordinators should hold meetings to discuss project guidelines and group responsibilities with the technology advisory committee members. Once a schedule is developed, a second

meeting should be convened to discuss the project in more detail. Representation at this meeting should include

- Teacher leaders
- Local technology specialists and company representatives
- Community leaders
- District maintenance advisor
- Members of groups interested in or affected by the project

Keep minutes of meetings to direct the efforts of committee members. During preliminary meetings, list the names of individuals or organizations willing to assist with any aspect of the project. Create an implementation document outlining the duty of each group or individual on the technology advisory committee. This document is important because it ties everyone together and ensures successful scheduling of the project. Building enthusiasm for any technology initiative is crucial. Without this implementation document, the best designed plans have the potential to fail (Overbay, Mollette, & Vasu, 2011). Moreover, precious time, significant sums of district money, and needless duplication of labor can be saved because channels of communication will remain open and responsibilities clearly outlined.

PROJECT OUTLINE

The Project Outline noted below provides structure and direction for the leadership and committee activities required to make a technology project successful. When using the Project Outline, it is important to note that a needs assessment, professional development, and technology evaluation will continue well beyond the initial 2-year period. Assessing and updating current infrastructure is therefore imperative at this juncture of the planning process. Likewise, lengthening the time span for professional development should be consistent with research showing teachers often require up to 5 years to become proficient in planning and implementing educational technology.

PROJECT OUTLINE

Phase One: Initial Planning and Commitment

Note: This phase deals with organizing people and creating the plans necessary in moving the technology initiative forward.

Step One: Gaining Support for the Project

Administrative	Faculty and Staff	School Board
Commitment	Commitment	Commitment
Yes ❑ No ❑	Yes ❑ No ❑	Yes ❑ No ❑

If "No," indicate reasons.

Parental Commitment   Community Member(s)

Yes ❑ No ❑   Yes ❑ No ❑

If "No," indicate reasons.

Additional insights and concerns regarding support:

Step Two: Formulating Core Committees

Note: The number of members on any of the suggested committees will depend on the amount of human resources available.

Technology Advisory Committee

Chairperson:

Administrative Members   Faculty Members
Parent Members   Community Members

Steering Committee

Chairperson:

Note: These members will come from the technology advisory committee.

Members:

Subcommittees:

Note: The following list suggests subcommittees that could be established to help with this technology initiative. Some of these can be separate committees, or they can be combined as needed.

Curriculum Committee

Chairperson:

Note: These members will be responsible for developing a working base of information that will assist teachers in implementing the technology in the curriculum.

Members:

Professional Development Committee

Chairperson:

Note: This committee will be responsible for ensuring that all staff members receive appropriate professional training regarding the technology initiative.

Members:

Budgeting Committee

Chairperson:

Note: This committee will be responsible for dealing with all financial issues associated with the technology project, from garnering financial support to pricing out needed equipment.

Members:

Infrastructure Support Committee

Chairperson:

Note: This committee will be responsible for deciding how the technology can best be integrated into the existing school facility. Of primary importance here is assessing as well as updating current infrastructure.

Members:

Evaluation and Assessment Committee

Chairperson:

Note: This committee will decide on and formulate the approaches needed in evaluating and assessing all stages of the project.

Members:

Public Relations Committee

Chairperson:

Note: This committee will guide and direct how information will be released to the external community.

Members:

Step Three: Determining Leadership Roles

Note: In this area of the project outline, you want to determine the degree of leadership, input, and involvement you want core members to play.

Superintendent

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Local School Administrators

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Tehnology Instructors

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Teacher Leaders

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Parents

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Community Members

Leadership:	High ❑	Medium ❑	Low ❑
Input:	High ❑	Medium ❑	Low ❑
Involvement:	High ❑	Medium ❑	Low ❑

Step Four: Setting

Whenever addressing these components of your technology project, it is essential to have a clear understanding of your current technology plan. It is suggested that before you begin to work on the following components in the Project Outline, you review Chapter 8 for help in determining the maturity level of your technology plan.

1. Write several possible vision statements: This is to provide general direction for the committees and to align the project with district philosophy statements. Remember that vision statements should align with the school's purpose of educating students and improving learning and be

consistent with the school improvement process. Make sure you are thinking about the future you want, not your current situation. Note: After you have come up with a potential list, rank them from most favored to least favored and defend this ranking. Next, rank from most difficult to least difficult to implement and defend this ranking. Are the two rankings the same or different?

Concepts to consider in your vision statement:

a. What do you want your learners to look and be like in the years to come?

b. How will curriculum and technology synchronize to impact student learning?

c. What is your future concept of instructional delivery?

d. What will your classrooms under the new vision look like?

e. What impact do you see technology having on your school in the coming years?

f. How will the local and larger community be involved in your technology vision?

2. Write several possible mission statements. Remember that the mission statement is an expression of how the vision will be fulfilled. You can go through the same ranking process you did for your vision statement. Concepts to consider in your mission statement are the following:

a. What is your definition of learning?

b. How is learning different when technology is added?

c. How can you make your vision come to reality?

d. What is required to make technology have positive impacts on instruction?

e. How do you see technology impacting student achievement outcomes?

f. What is unique about the learners and their needs at your school?

State specific goals:

Now that you have potential vision and mission statements, you will want to support this with relevant goals. In this sense, you want your goals to be specific statements about how you are going to connect technology to learning. Goals are the technology and learning points you are trying to reach. You want your goals to be realistic, achievable, and adaptable.

Goals List:

1.

2.

3.

4.

5.

6.

7. Other:

State specific objectives:

You now need to write some specific objectives for each goal. Objectives are ways that you can measure the accomplishments of your intended goals. You want your objectives to be clear, concise, measurable, adaptable, and observable.

Objectives List

Goal 1

Objectives:

1.

2.

3.

4. Other:

Goal 2

Objectives:

1.

2.

3.

4. Other:

Goal 3

Objectives:

1.

2.

3.

4. Other:

Goal 4: Other . . .

3. Committee recommendations:

This will provide direction for the committees as they work toward a solid technology plan.

Recommendations List:

Step Five: Establish Communication Networks

Note: Make sure that you provide a list of all committees and their members to everyone involved in the project. In doing so, stress the importance of using proper channels when discussing project issues or concerns. As part of this, project-related communications should go through committee chairs to disseminate to committee members.

Step Six: Needs Assessment

Note: In this particular category, you want to ask yourself if you have general needs in each of these three areas. The key is that you want to start to consider what already exists in the school and what can be used and what is needed to begin to align your existing technology program with the new technology initiative outlined in this book.

General Assessment

A. Hardware Needs   B. Software Needs   C. Financial Assessment

Yes ❑ No ❑   Yes ❑ No ❑   Yes ❑ No ❑

A. Hardware Inventory		
Equipment	**Current Amount**	**Needed Amount**
Faculty desktops		
Faculty mobile devices		
Student desktops		
Student portable devices		
Smart boards		
Available printers		
Wireless routers/Networking system		
Other		

Current Technology Hardware Specifications

❑ **PC**   ❑ **APPLE**   ❑ **Mobile Device**

Processor type: _____

Memory: _____

USB/HDMI ports: _____

Bluetooth: _____

Wireless capability: _____

Operating system: _____

Warranty: _____

Other relevant data:

B. Current In-School Software and Application Programs

1.
2.
3.
4.
5. Other:

C. Technology Financial Assessment

Sources of Funding	Current Amount	Potential Amount
In-school funding	$	$
District funding	$	$
Contributions	$	$
Grants	$	$
Donations	$	$
State initiatives	$	$
Federal initiatives	$	$
Fundraising	$	$
Totals	$	$

Step Seven: Course of Action

1. List specific purposes for the technology change.

2. Project evaluation: Determine how technology will be evaluated for use.

3. Preliminary supplier evaluation

Company: _____

Expertise:	Excellent ❑	Good ❑	Poor ❑
Price:	Excellent ❑	Good ❑	Poor ❑
Service quality:	Excellent ❑	Good ❑	Poor ❑

After-sale service: Excellent ❏   Good ❏   Poor ❏

Warranty: Excellent ❏   Good ❏   Poor ❏

- Repeat this process until an appropriate company can be found.
- Preview software and application support services.

Findings:

4. Assess general costs for predicted hardware needs.	PC	Apple	Cost per Unit
Faculty desktop			$
Faculty mobile device			$
Student desktop			$
Student mobile device			$
Smart board			$
Wireless routers/Networking system			$
Other			$

5. Estimated Hardware Costs				
Users	Total Cost Per Unit	×	Amount Needed	= Total Predicted Cost
Faculty desktop				
Faculty mobile device				
Student desktop				
Student mobile device				
Smart board				
Wireless routers/ Networking system				
Other				
			Total Cost	

Note: You may not have to purchase all new equipment or devices for a project. Make sure everything is compatible.

Option:

Some schools and school districts are opting to lease equipment and systems instead of purchasing them outright. Leasing agreements allow schools to acquire equipment without using capital funds, establish flexible financing, and keep systems current. Most leasing agreements are based on 48-month terms. It is something that could be discussed and considered based on district needs, finances, and resources.

6. Evaluate existing network capabilities. Unless you have a qualified technical expert, it would be best if this was evaluated through school district personnel or contracted privately.

List specific needs:

7. Establish professional development program and prepare budget. Include such factors as

Professional development:	$
Conferences:	$
Research resources:	$
Leave time:	$
Travel allowances:	$
Other:	$
Projected totals:	$

General comments:

8. Review all proposed maintenance agreements, contracts, costs, warrantees, legal documents, and so on. Make sure to get the various committees and school officials to double-check and list any concerns.

Notes:

PROJECT OUTLINE

Phase Two: Action Planning and Implementation

Step One: Committee Action

Assign specific tasks to committees. Consider factors such as

- Committee description
- Who will participate
- Timelines for work projects

Committees should now be actively working on their areas of focus and should be providing clear direction to how the equipment and devices will be brought into the classrooms.

Step Two: Financial Review

1. Verify funding sources accessed by appropriate committees. You should now be starting to work with actual figures and not projected numbers.

2. Confirm hardware, software, and application costs.

3. Confirm infrastructure and networking costs.

4. Confirm staff development costs.

5. Finalize financial plans with appropriate district and school authorities.

Step Three: Public Relations Program

1. Committee chairperson or administrator should now be able to inform the larger community and public of the technology project.

2. Assign school and technology spokesperson.

3. Ensure that parents and the public are appropriately informed of the stages and progress of the technology initiative. This can occur through school website, online and phone message systems, newsletters, articles in the local paper, radio, and television.

Step Four: Calendar of Events

1. Finalize dates for completion of purchases.

2. Set dates for introduction of new devices into classrooms.

3. Set tentative dates for professional development.

4. Set program evaluation dates.

5. Set dates for public relations information and events.

Calendar of Events Checklist

District approval	Date:	Done ❏
School board approval	Date:	Done ❏
Financial agreements and contracts signed	Date:	Done ❏
Equipment purchase	Date:	Done ❏
Support materials purchase	Date:	Done ❏
Infrastructure and networking project	Date:	Done ❏
Professional development meetings	Date:	Done ❏
	Date:	Done ❏
	Date:	Done ❏
	Date:	Done ❏
	Date:	Done ❏
Evaluation program schedule	Date:	Done ❏
	Date:	Done ❏
	Date:	Done ❏
	Date:	Done ❏
Public relations announcements and events	Date:	Done ❏
	Date:	Done ❏

Step Five: Hardware, Software and Application Implementation Checklist

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1. Sign contracts to purchase hardware, software, applications, and network accessories. Done ❏

2. Sign contracts to purchase support materials such as tables, chairs, headsets, extension cords, power strips, etc. Done ❏

3. Prepare schools and appropriate personnel to facilitate delivery and setup. Done ❏

4. Check all products for damage. Done ❏

5. Return damaged materials for replacement. Done ❏

6. Place equipment in classrooms according to agreed-on plans. Done ❏

7. Consult teachers to see if changes are needed regarding placement of equipment and devices in their rooms.   Done ❑

8. Load all software and check for problems.   Done ❑

9. Run all factory-installed programs and check for problems.   Done ❑

10. Check network to make sure that connections work as needed.   Done ❑

11. Make sure support materials are available and equitably distributed (manuals, tutorial programs, textbooks, etc.).   Done ❑

12. Run final integrity checks on networks, equipment, software, and applications before clearing the system for classroom use.   Done ❑

13. Sign contract for service and maintenance of system.   Done ❑

14. Develop schedule for regular cleaning and preventive maintenance.   Done ❑

PROJECT OUTLINE

Phase Three: Professional Development and Assessment

Note: Professional development is critical for the overall success of this technology initiative. It requires foresight and patience by administrators and teachers, because introducing new equipment, mobile devices, and applications into classrooms can require a good deal of time for everyone to adjust. As such, all staff members will need differing levels of technical support, encouragement, and space so that they can find the best ways to link technology with curriculum as well as to their personal teaching style. It is important that professional development programs are developed according to teacher needs. Often, a home-grown program will work best. Also be aware that phase three will begin as phase two is being finalized.

Instructions for the Professional Development Committee

1. Establish a professional development program that is common sense in focus and will provide essential help to all staff members.

2. Consider various forms of professional development activities: online on-demand programs, conferences, inservice days, staff meetings, individual tutoring, and so on.

3. Identify and hire experts to run key professional development exercises, if needed.

4. Purchase needed materials for professional development meetings and activities.

5. Prepare a budget of expected professional development costs.

6. Set dates for professional development activities and meetings.

7. Set guidelines for evaluation and assessment of professional development activities.

8. Establish a communication network and links so that information and concerns can be shared. This information can be used for future professional development activities.

Instructions for the Evaluation and Assessment Committee

1. Develop and implement an assessment or evaluation format—online and/or hardcopy.

2. Review summative and formative evaluation information and data to determine strengths and weaknesses and areas requiring alterations.

3. Make necessary alterations and continue evaluating the project.

Keep in perspective that precious time, significant sums of district money, and needless duplication of labor can be saved when channels of communication are open and responsibilities clearly outlined.

The project model will help school leaders develop the core elements necessary to implement this technology initiative. It is intended to help individuals focus on the specific needs of their school and to provide the framework necessary to construct a technology plan based on local contexts. Administrators can use the outline as a model, keeping the plans that are relevant and making changes to suit local needs and conditions when prudent to do so.

Yearly Plans

When the overall three-phased process is finalized in a more specific form and placed on a timeline, it will help school administrators address the technology needs for a school or district.

Calendar Outline

YEARLY PLANS

When this overall, three-phased process is put in more specific form and placed on a timeline, it might look something like the following model:

YEAR ONE: Phase One—Planning Phase

September	• Determine initial commitment to project.
	• Form technology advisory committee.
	• Form project steering committee.
October	• Develop project philosophy and mission statement.
	• Create calendars for specific committee work.
	• Develop project benchmarks and indicators.
November	• Finalize goals and targets for project.
	• Carry out needs assessment.
December	• Review relevant literature.

January	• Analyze needs assessment data.
	• Disseminate information from literature review.
	• Consider possible options available to coordinators. (Look at such elements as hardware, software, application programs, implementation strategies, financing, professional development strategies, and student needs.)
February	• Determine course of action based on available options and needs assessment data.
	• List needed materials and resources.
	• Confirm and formalize school board commitment.

YEAR ONE CONTINUED: Phase Two—Implementation and Professional Development

	• Establish leadership roles for implementation phase.
	• Fix calendar for implementation phase.
	• Plan public relations program.
March	• Meet with committees to discuss implementation strategies.
	• Purchase hardware, software, applications, and other materials.
April	• Initiate professional development programs.
	• Continue public relations program.
May	• Network and/or wireless installation finalized.
June–August	• Complete installation and troubleshooting of system.
	• Finalize teacher inservice before classes begin.
September	• Continue with professional development activities.
	• Integrate new technology in instructional program.
	• Administrative monitoring of equipment and programs begins.
October and	• Public relations program continues.
November	• Ongoing help to teachers provided in various forms.
December	• Continue administrative monitoring of equipment and programs.

YEAR TWO: Phase Three—Evaluation

January	• Begin formal project evaluation, which should include
	• Reports from administrative monitoring from September to December
	• Continuing administrative monitoring
	• Feedback from teachers
	• Feedback from students
	• Feedback from in-house technology experts
February	• Continue monitoring and gathering information.
March–May	• Complete formal evaluations.
	• Make revisions according to information gathered during evaluation phase.

Note: Planning, implementation, and evaluation schedules are based on a 2-year calendar. Requirements for each month are noted above to simplify and structure the project. As illustrated above, planning and implementation should be completed in year one, with program implementation and evaluation continuing throughout the 2nd year. The professional development phase begins after the planning stage is completed and continues indefinitely.

This project outline will help school leaders develop the core elements necessary to implement a technology initiative. It is intended to assist individuals focus on the specific needs of a school or district as well as to provide the framework necessary to construct this technology plan based on local contexts. School leaders and coordinators can use the outline as a model, keeping the plans that are relevant and making changes to suit local needs and conditions when prudent to do so.

FUTURE CHALLENGES

If schools are to thrive in the future, technology initiatives and implementation plans must be familiar to everyone—and adaptable enough to reflect situational change. With strong leadership and a vision of what is needed, as well as a solid technology plan in place, school leaders will be better able to build relevancy and create the connections needed to secure student learning. Moreover, if leaders learn to expect the unexpected, lead with wisdom, and stay current with the latest advances in educational technology—our schools will succeed long into the future.

REFLECTIVE ACTIVITIES

1. Describe your personal philosophy regarding leadership in technology.

2. Indicate why technology planning is important to your school as well as your school district.

3. Analyze the relationship your school has with the community.

4. Identify a school and a school district's technology goal and mission statement as well as objectives. Explain how they meet student needs.

5. List which elements of steps one through seven in the Project Outline are in place at your school or school district.

6. In relation to step three in the Project Outline involving leadership roles, identify and list teacher perceptions regarding technology use in your school. Identify levels of technological expertise.