

Software Implementation Checklist for Educators

Purpose: The purpose of this Implementation Checklist is to provide guidance to educational institutions that need to plan for and carry out the large-scale implementation of purchased software applications. Years of experience have shown that effective implementation practices can be the determining factor in obtaining successful results from software applications, both instructional and administrative. The actions an institution takes prior to the delivery of the software and during its initial use can help ensure this success. The Checklist suggests these actions and provides a summary description of each.

Background: The Checklist is based in part on the work of the SIIA Education Division's Promising Practices in Technology Implementation and Integration Working Group as well as a review of existing resources on best practices. The SIIA Working Group gathered information on effective implementation practices through a survey of both educational software vendors and the institutions that purchase their products.

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Suggestions? Please contact the SIIA Education Division if you have suggestions or comments on this document. Email education@siiia.net

About SIIA: The Software & Information Industry Association is the principal trade association for the software and digital content industry. SIIA provides global services in government relations, business development, corporate education and intellectual property protection to the leading companies that are setting the pace for the digital age.

About SIIA's Education Division: SIIA's Education Division serves and represents over 150 member companies that provide software, digital content and other technologies that address educational needs. The Division shapes and supports the industry by providing leadership, advocacy, business development opportunities and critical market information. SIIA provides a neutral business forum for its members to understand business models, technological advancements, market trends, and best practices. With the leadership of the Division Board and collaborative efforts with educators and other stakeholders, the Division undertakes initiatives to enhance the use of educational technology and the success of SIIA members.

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Introduction

From assessment to curriculum and from instruction to administration, technology is playing an increasingly integral role in the nation's educational institutions. Educators and students are looking to leverage innovative strategies and interventions to meet teaching and learning needs, and this use and demand in technology is growing in light of various practical considerations and demonstrated impact.

Much of technology's impact on teaching, learning and management of the school enterprise relates to the technology design itself, but equally important is how the technology is implemented. In its 2000 *Research Report on the Effectiveness of Technology in Schools*, SIIA found that "Technology can improve teaching and learning, but just having technology doesn't automatically translate to better instructional outcomes. Whether a given school experiences the potential benefits of technology depends on the software it chooses, what students actually do with the software and computer hardware, how educators structure and support technology-based learning and whether there is sufficient access to the technology." These findings are as true today as they were when that report was published. And the same holds true for administrative and enterprise management software applications.

These factors are important to both software providers and educators as they work together to maximize product effectiveness and improve education and student achievement. Proper planning, teacher training, school leadership, technical support, configured hardware, network infrastructure and Internet access, pedagogy and instructional use, intensity of software use and other conditions and practices are all inseparable from results. Recognition of these and other important factors is necessary to ensure a successful implementation.

The Ten Essentials

The following basic concepts underlie all effective software implementation:

1. You must have objectives before you plan.
2. You must plan before you implement.
3. You must involve all stakeholders in the planning process to some degree, and obtain their buy-in for performing their assigned responsibilities.
4. Your plan must include an evaluation component and criteria for determining success.
5. You must assign an effective leader, with appropriate decision-making authority, to manage the implementation.
6. The physical environment and equipment for the implementation must match the requirements for which the software was designed.
7. The staff involved in the implementation must receive adequate training in all aspects of the software's use.
8. The end users of the software must have the prerequisite knowledge and skills specified for the product's use.
9. The entire implementation must be monitored and the resulting issues resolved.
10. Each stage of implementation must be informed by the evaluation results from the previous stage.

Software Definition

For purposes of this Checklist, software is defined broadly to include a wide variety of applications that:

- meet instructional, curriculum/content, assessment, classroom management, and enterprise level administrative tasks;
- are used in the classroom, school office, and potentially accessed offsite such as from home (student or educator) or from a mobile device;
- are installed on a computer or other device, installed on a school local network or wide area network, or hosted by a third party and accessed online via a web browser;
- include a wide variety of digital content ranging from an electronic version of a printed material (e.g., e-book or pdf file) to multi-media, interactive and adaptive courseware.

Software Implementation Cycle

The process of creating and executing an effective software implementation plan includes a series of steps that is similar for both instructional and administrative applications. The table below shows these steps. While these steps are shown in chronological order, in reality, software planning and implementation is a more dynamic process. Multiple steps and stages are often occurring simultaneously, while other steps may require ongoing or repeated attention as the situation evolves. Finally, each stage of an implementation repeats this cycle.

Because significant software implementations require an extensive effort and take time to produce maximum results, it is often advisable to begin with a **pilot program**, which could be viewed as a stage of implementation with its own, albeit more limited, cycle as outlined on the next page. A pilot typically involves fewer objectives, fewer staff and end users, a shorter implementation period, and lesser cost. It allows the customer to preview the logistics challenges involved and experience the degree of success that can be expected from the software.

Software Implementation Cycle

Step	Instructional Software Implementation	Administrative Software Implementation
1	Determine instructional objectives and stakeholder buy-in <ul style="list-style-type: none"> What should users of the software accomplish? How will learning be improved? Are all stakeholders supportive of the software and prepared to devote their time to its successful implementation? 	Determine process objectives and stakeholder buy-in <ul style="list-style-type: none"> What should users of the software accomplish? How will business processes be improved? Are all stakeholders supportive of the software and prepared to devote their time to its successful implementation?
2	Curriculum integration planning <ul style="list-style-type: none"> Match software use to learning standards; Fit software use into instructional steps: how much use, by whom, and when? Connect software use to other resources 	Process integration planning <ul style="list-style-type: none"> Fit software use into administrative process steps; Data input needed for the software; Reporting from software use; Connect software use to other resources
3	Logistics planning <ul style="list-style-type: none"> Identify tasks and make assignments; Prepare timeline and budget for technology readiness, software purchase/installation, professional development, monitoring, and program evaluation; Anticipate the need for multiple use cycles to work through issues and fine tune practices 	Logistics planning <ul style="list-style-type: none"> Identify tasks and make assignments; Prepare timeline and budget related to technology readiness, software purchase/installation, professional development, monitoring, and program evaluation; Anticipate the need for multiple use cycles to work through issues and fine tune practices
4	Delivery & installation of software <ul style="list-style-type: none"> Prepare the technical environment; Track the installation; Carry out acceptance testing against planned criteria 	Delivery & installation of software <ul style="list-style-type: none"> Prepare the technical environment; Track the installation; Carry out acceptance testing against planned criteria
5	Professional development <ul style="list-style-type: none"> Software operation training; Integrating software use into instruction 	Training on software use and process modification <ul style="list-style-type: none"> Software operation training; Integrating software use into new processes
6	Implementation monitoring & software support <ul style="list-style-type: none"> Monitor plan progress and adjust implementation if necessary to increase effectiveness; Collect evaluation information via various methods; 	Implementation monitoring & software support <ul style="list-style-type: none"> Monitor plan progress and adjust implementation if necessary to increase effectiveness; Collect evaluation information via various methods;
7	Program evaluation & repeat cycle Use collected information and planned metrics to answer questions and evaluate success against planned criteria	Program evaluation & repeat cycle Use collected information and planned metrics to answer questions and evaluate success against planned criteria

Software Implementation Checklist for Educators

✓	1. OBJECTIVES and BUY-IN
	Develop a clear statement of your institution's vision, purpose, and goals for using the software.
	Verify that the software vendor has produced a clear statement of the purpose and goals for the software, and that it is a close match to your own.
	Evaluate the software to determine whether it matches with your vision, purpose and goals, including review of the research behind the software as well as the research of its effective impact in learning or work settings similar to those in which you will use it.
	Develop metrics for each goal against which success can be evaluated.
	Obtain a commitment from the staff supporting, using, and benefiting from the software that it meets needs important to them and that they are prepared to make the effort required to implement it properly.

✓	2. INTEGRATION PLANNING
	For instructional applications, match the use of the software to your curriculum and the learning standards it supports.
	Fit the use of the software into the processes its supports, either instructional sequences/practices or administrative procedures.
	Determine the connection between the use of the software and the use of other resources, including other software applications and print materials.

✓	3. LOGISTICS PLANNING
	Appoint a Coordinator from your organization who will have the overall responsibility and authority to carry out and monitor the implementation of the software. Designate specific staff responsibilities for professional development, installation, and support of the software. This should include representation from, and coordination between, both the IT support staff as well as the instructional/administrative staff using the software.
	Insist that the vendor also designate a point-person you can contact regularly to answer questions and resolve problems.
	Develop a logistics plan that specifies each step to be taken and its participants, timeline, and budget related to technology readiness, software purchase and installation, professional development, program monitoring and reporting, and program evaluation.

√	3. LOGISTICS PLANNING, CONTINUED
	Arrange with the vendor for off-site technical problem solving support that can be contacted during the appropriate hours.
	For instructional applications, insure that students can be scheduled to receive the contact time with the software prescribed by the vendor.
	Plan to ensure that the scheduling of the implementation fits well with the institution's calendar and won't be compromised by lack of access due to testing, vacation, or other periods of special activity. Recognize that mid-year implementations may be necessary and appropriate, but could require more time for successful integration into existing processes.
	Verify that the personnel involved in the implementation have the appropriate technology background to successfully learn the operation of the software. If not, develop and institute a training plan to provide those basic technology skills and knowledge.
	Develop an evaluation plan that specifies the following: <ul style="list-style-type: none"> • criteria for successful outcomes from the use of the software • questions to be answered to determine if the criteria have been met • information and metrics needed to answer those questions • methods to be used to gather that information, such as software use data, user performance data, and stakeholder interviews or surveys.
	Commit to a multiple-year implementation so that the inevitable start-up issues in the first year can be remedied, with improved results. Adjust evaluation plan to account for this staged approach with expectations for success growing over time.
	Budget for multiple-year support, including the following: <ul style="list-style-type: none"> • follow-up training from the vendor (especially for new staff who arrive after the initial training) • internal technical support • vendor off-site technical support • adequate hardware, network, and (if appropriate) Internet bandwidth availability • expansion of software licenses to include new users.

√	4. PROFESSIONAL DEVELOPMENT
	Provide a thorough orientation for the staff who will implement the product, including the institution's objectives and expectations, and background from the vendor's representative.
	<p>Carry out an effective staff training program that includes the following:</p> <p><i>For instructional applications –</i></p> <ul style="list-style-type: none"> • background on the software's instructional design • thorough instruction in the operation of the software • how and how long to effectively engage students with the software • how to integrate the software with other classroom activities. <p><i>For administrative applications –</i></p> <ul style="list-style-type: none"> • background on the software's functional features • thorough instruction in the operation of the software • how to integrate the software with other administrative procedures.
	Provide technical training for internal staff supporting the software's operation.

√	5. INSTALLATION
	Conduct a pre-installation check of the hardware, system software, network readiness, and Internet access of all sites where the software will be used.
	Schedule the installation of the software on servers and/or work stations such that disruption to normal technology use is minimized.
	Verify that all planned installation activity carried out by both the vendor and local staff is completed.
	Carry out roll-out activities to alert all staff to the implementation plan and to insure that the initial use of the software goes smoothly.

	6. IMPLEMENTATION & USE
	<p>Note: This step has no direct checklist items, but is instead intended to signify the point in time when the cycle shifts from planning and preparation to actual scaled use.</p>

√	7. MONITORING AND SUPPORT
	Ensure that the Coordinator tracks the progress of the implementation plan, regularly reports on its status, and resolves problems as they arise, involving other decision-makers as appropriate.
	For instructional applications, ensure that the software is being used as prescribed, with adequate on-task time for students, and that information generated by the software on student performance is being included in analysis of student progress.
	For administrative applications, ensure that the data generated by the software is being included in the analysis of operational metrics.
	Provide ongoing professional development as needed, including training and support both specific to the application as well as that more general to the integration of technology into core educational processes and practices. This support could include a forum (virtual and/or in-person meeting time) for school staff to share questions and information and collaborate on effective software use.
	Collect information as designated in the evaluation plan.
√	8. EVALUATION
	Analyze the information collected during the implementation and apply the analysis to answering the planned evaluation questions. Check implementation results against the program's criteria for success.
	Use the evaluation results to plan improvements in the next implementation cycle.