



Online Assessment Planning Tool TECHNOLOGY INFRASTRUCTURE WORKSHEET

This worksheet is one of a set of resources addressing eight key elements of online assessment readiness. The worksheets are designed to assist districts and schools in planning actions steps that will move them from their current stage of readiness to their next targeted level of preparation and practice.

- Planning and Leadership
- Communications
- Assessment Practices
- Instructional Practices
- Professional Development
- Technology Infrastructure
- Systems Integration
- Logistics

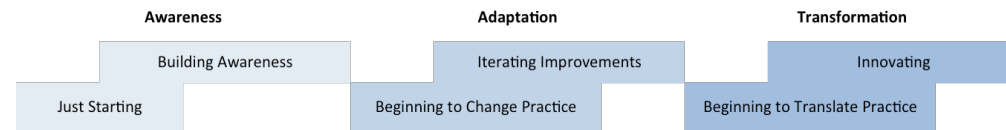
Systems Integration		Assessment		Adaptation		Transformation		
		Just Starting	Building Awareness	Beginning to Change Practice	Starting Improvements	Beginning to Translate Practice	Improving	
Focus Areas		Strategies for moving from Awareness toward Adaptation		Strategies for moving from Adaptation toward Transformation		Action Plan		
Check						What	Who	When
PEOPLE	Cross-Functional Systems Perspective (Bring a bigger picture to inform administrative processes)	Engage a cross-functional team to review the school systems inventory (see below), discuss common issues, and identify ways to improve efficiency and usability.	Maintain data on systems usage and common issues (e.g., conflicts, duplications, confusion, data migration problems), and use the findings to inform integrated planning for technology, data management, and assessment/practice products.					
	Systems Mapping (Identifying details of multiple systems in order to convey complexity and efficiency)	Conduct an annual inventory of technology-based assessment, instruction, and data systems in use, including data inputs and outputs, reporting systems, network utilization, technical requirements, procurement history, and who has access and decision-making authority.	Maintain an ongoing system map for technology-based assessment, instruction, and data systems that is regularly updated to reflect any changes. Include data inputs and outputs, reporting systems, network utilization, technical requirements, procurement history, and who has access and decision-making authority, as well as data formats and transfer paths, interoperability standards in use, and how systems connect to each other. Understand interdependencies, gaps, duplications, and conflicts.					
TECHNOLOGY	Cross-System Solutions (Identifying integration and access solutions)	Identify solutions for common systems integration issues, including services and processes, for better cross-platform management of login credentials, student rosters, student data, shared instructional content, and other information. Utilize restricted program and content access through district hubs.	Implement a range of solutions to streamline login, consolidate content access, and enable data exchange between multiple systems, with the goal of enabling a seamless user experience when switching between assessment, reporting, and instructional platforms and improving analytics across digital tools.					
	Interoperability (Building systems for more effective integration and cross-platform data exchange)	Understand what interoperability standards are available for different kinds of instructional and assessment content and data, such as CEDS, IMS Global (QTI, AEP, LTI, OneFoster, Canvas), Ed-Fi, and others. Understand the implications of these standards to different systems within the school.	Establish the technical information that potential vendors must produce during the procurement process and what technical requirements their solutions must meet. Base this list on instruction and assessment needs, technology levels, and other functions. Insist that vendors utilize open standards (rather than vendor proprietary formats) for data exchange and systems interoperability such as CEDS, IMS Global (QTI, AEP, LTI, OneFoster, Canvas, Ed-Fi), and others.					
PROCESS & PROCEDURE	Coordinated Requirements for Procurement (Establishing a set of technical and functional requirements for future procurements that address interdependent and conflicting needs of the different platforms that have to serve instructional, assessment, and administrative purposes)	Understand how potential products will handle data inputs and outputs, what is self-contained and what is reusable, what formats are being used, what content and which data formats are proprietary, and how the products might work in concert with the products and systems already in use in the district and the schools.	Establish the interoperability standards that potential products and vendors must support and implement moving forward so that the district builds content and data systems that can more easily exchange information across platforms.					
	Enterprise Maintenance (Seeking efficiencies in coordinated maintenance programs for multiple technical systems)	Protect expensive digital investments with quality maintenance and support programs.	Where possible, coordinate maintenance and support contracts to include multiple platforms as a means to promote more effective systems uptime (COP).					

How to Use Online Assessment Planning Tool Worksheets

Each worksheet features Focus Areas with recommended strategies for moving a district and its schools along the spectrum toward greater degrees of online assessment readiness. Using the results from the Online Assessment Planning Survey, a district's planning team can identify their current stage along the spectrum for each element and where they would like to be in the future. The planning team can identify and prioritize critical areas on which to focus efforts by placing a check in the columns on the left side of the worksheet. The area on the right side of the worksheet should be used to identify action steps that will help achieve both short and longer-term goals. Each worksheet groups strategies into practical categories, including People (professional development, planning, engagement), Technology (systems, devices, infrastructure, software), and Process (policies, protocols, workflows, scheduling) to assist schools and districts in integrating assessment strategies with broader planning efforts.

This PDF is designed to be printed onto 11" x 17" paper.

Additional Online Assessment Planning Resources are available at <http://www.elearninstitute.org/assessment>.



Technology Infrastructure

Focus Areas		Strategies for moving from Awareness toward Adaptation	Strategies for moving from Adaptation toward Transformation	Action Plan		
Check				What	Who	When
PEOPLE	Internal Tech Support (School-based technology infrastructure expertise)	Ensure that one or more people in the school are designated for providing internal tech support who have appropriate training/experience to support online assessment.	Have one or more full-time tech support staff on site, who have appropriate training and experience to support online assessment. Consider possible appropriate roles for students to provide low level classroom tech support.			
	External Tech Support (Identified technology infrastructure assistance outside the school)	Plan ahead for which scenarios will require off-site tech support, and be prepared with the phone numbers and emails of district assessment office, district information technology office, and vendor help desks.	Consider enlisting contracted support from professional IT support service providers if inadequate technology assistance is a frequent challenge for your school, particularly for high-stakes summative assessment administration.			
	Technology Infrastructure Sharing and Collaboration (Collaborating on emerging and promising practices)	Create periodic opportunities to share and collaborate with other schools on strategies for designing and maintaining technology to support online assessment and instruction.	Enable school tech support staff to stay current on district, state, and national trends and practices. Create regular opportunities to share and collaborate with other schools on strategies for designing and maintaining technology to support online assessment and instruction.			
TECHNOLOGY	Test-Taking Devices (Planning for adequate device capacity for testing and instruction)	Use the Capacity Calculator provided by eLearn Institute, testing vendors, or other sources to determine the minimum number of devices needed by the school to accommodate formative and summative online assessments, accounting for availability when devices are also used for instruction. Include contingency plans for spare devices in case of device failure during testing.	To the degree possible, allow students to test with the same devices and peripherals (keyboard, mouse, trackpad, web browser) that they use during daily instruction.			
	Internet Bandwidth and Wireless Connectivity (Evaluating Internet capacity from the district to the school and within the school network)	Work with District IT to determine a minimum viable bandwidth level to the school from the district network. Understand wireless access point configuration in the school and work with District IT to make adjustments to improve wifi performance.	Calculate desired minimum total bandwidth and wireless network connectivity speeds. Work with District IT to determine the level available to the school from the district network and to adjust configurations in wireless access points. Add school infrastructure as needed to achieve target connectivity.			
	Network Utilization (Defining the level of Internet demand within the school and patterns of peak usage)	Understand all current uses of the network in the school including classroom instruction, library research, school office functions, security systems, landline phones, mobile phones, copiers, printers and other networked devices. Calculate usage versus availability.	Create and maintain a network map that accounts for all uses of the network in the school, including school-installed and district-installed systems, and identifies patterns of peak usage throughout a typical school day, week, and year. Utilize network monitoring software to enable dashboard views of network activity and calculate usage versus availability.			
	Accessibility and Assistive Technology (Ensuring that all students have access to technology to support teaching, learning, and assessment)	Determine the minimum accommodations, modifications, and assistive devices that may be necessary to deliver eAssessments to students with special needs in accordance with their 504 Plans, and students with language accommodations in accordance with ELL Plans or other defined supports.	Ensure adequate access to accessibility tools and features, and assistive input devices for eAssessment to allow students to test with the accommodations that they use for instruction, when allowable under testing policies for specific assessments.			
POLICIES & PROCEDURES	Minimum Technology Requirements (Planning for technology capacity to meet the minimum guidelines as defined by the district and test vendors)	Evaluate the school's device inventories and network capacity against the minimum technical requirements for current formative and summative online assessment products. Develop a plan for how to address gaps, if present.	Set school technology requirements to meet or exceed current product recommendations based on future anticipated capacity. Reference guidelines for capacity planning from organizations such as the State Educational Technology Directors' Association (SETDA) and the Consortium for School Networking (CoSN).			
	Technology Refresh (Establishing planned technology repair and replacement strategies)	Create a plan for repairing, replacing, and adding devices, including guidance for new device selection and procurement. Research options and recommendations for funding new technology.	Engage a cross-functional team, including students, in defining functional and technical requirements for new devices. Incorporate technical lifecycle, logistics of storage and maintenance, training time, and total cost of ownership into selection criteria.			
	Device Management (Determining how student test-taking devices will be managed for software updates and access configurations)	Understand the device management options for school selected computers. Will each computer be updated individually, or can sets of computers be centrally updated through enterprise management systems?	Ensure that adequate technical staff are available for device updates and enterprise management configurations, especially in preparation for state summative assessments.			
	Student-Owned Devices (Defining allowable use for student-owned devices on campus)	Identify learning-centered strategies and model policies to guide the use of student-owned devices on campus for learning. Remember to include student-owned devices in network utilization calculations.	Develop policies to guide the use of student-owned devices on campus for assessment. Remember to include student-owned devices in network utilization calculations.			