

Evaluating Your College's Readiness for Technology Adoption

The Importance of Self-Assessment

For colleges seeking to improve student outcomes, new technologies often appear to hold the promise of transformative change. Across the country, colleges are using technological tools to enhance reform efforts related to how they teach, how they provide supports to students, and how they guide students through programs of study.

In order for technologies to gain the kind of foothold that could lead to substantial improvements, however, colleges must ensure two things. First, the technologies must be used to restructure the student experience, not merely to improve administrative efficiency. Second, end-users must adopt these tools in their daily practice; merely getting a product up and running will not lead to transformative change.

Implementing and supporting a new technology is difficult and expensive, both in terms of financial cost and staff time. Therefore, better understanding the likelihood of successful adoption *before* embarking on a reform can help your college invest wisely in new technologies. Performing a self-assessment of your college's technological and cultural characteristics can help you evaluate whether a given technological reform is likely to be adopted, and it can help you identify issues that may need to be addressed to facilitate successful reform.

This self-assessment tool is based on the Community College Research Center's Readiness for Technology Adoption (RTA) framework. CCRC researchers developed this forward-looking framework through an extensive review of the literature and preliminary validation research conducted at six colleges engaged in technology-based reforms (see Karp & Fletcher, 2014).

The Readiness for Technology Adoption Framework

Unlike previously proposed frameworks for institutional change, the RTA framework focuses on gauging whether a technology can be readily *adopted*, not just implemented. Implementation is the process of deploying a new technology and making it available to end-users. Adoption, in contrast, is the process by which end-users incorporate a new technology into their daily work processes.

The RTA framework consists of four broad areas of readiness that are necessary for technology adoption, each of which contains several components. Assessing your college's readiness in these four areas can provide a nuanced picture of your overall readiness for technology adoption, and it can bring to light specific issues that you should address in preparing for reform.

Understanding the likelihood of successful adoption before embarking on a reform can help your college invest wisely in new technologies.

Our previous research and validation fieldwork suggest that successful adoption requires more than technological and project management capacity. Therefore, the RTA framework focuses on the cultural context of a college as well as its infrastructure and management.

READINESS FOR TECHNOLOGY ADOPTION FRAMEWORK		
	Technology	Culture
Institution Level	<p>Technological Readiness</p> <ul style="list-style-type: none"> IT system maturity IT system stability Compatibility of new and existing IT Current patterns of IT use Past experience with IT implementation 	<p>Organizational Readiness</p> <ul style="list-style-type: none"> Clarity of mission Communication Decision-making process Openness to change
Project Level	<p>Project Readiness</p> <ul style="list-style-type: none"> Administrative and technical resources Training Ongoing support Incentives 	<p>Motivational Readiness</p> <ul style="list-style-type: none"> Need for reform Vision of benefits Perception of functioning

How to Use This Self-Assessment Tool

This self-assessment is designed to encourage conversations among individuals within your institution. It aims to help you identify additional steps your college may need to take before beginning a technology-related reform. This tool does not provide a definitive assessment of readiness; rather, it presents a set of research-based indicators that are related to the likelihood of successful reform.

The self-assessment is organized into four areas of readiness: technological readiness, project readiness, organizational readiness, and motivational readiness. For each area, we provide a rubric listing the components of readiness and describing the features of institutions that are *minimally ready* and those that are *poised for action*. Colleges that exhibit some readiness characteristics but not others can be considered *moderately prepared*.

Looking at your readiness scores across the components will provide a sense of your college’s readiness in each area overall. If most of your component scores in an area are high, your college is probably poised for action in that area. If they are low, you are minimally prepared and may want to consider strategies to improve your college’s functioning in that area prior to embarking on a reform.

We recommend that you complete the self-assessment in small, cross-functional and cross-hierarchical groups and discuss where you would place your college on each rubric. The inclusion of stakeholders from across the organization is essential. The RTA framework assumes that colleges are made up of what sociologists call “microcultures,” subgroups of individuals who share underlying attitudes and values. Different microcultures have different propensities to adopt new technologies. If various microcultures are not represented in your self-assessment process, you will probably not get an honest and accurate view of your readiness.

Most likely, your college will be ready in some areas but not others. A low readiness score in a particular area does not necessarily mean that you need to postpone your reform efforts. Instead, you should use what you have learned from your self-assessment to target areas that would benefit from additional planning, either prior to or as part of your technology-based reform effort.

Including stakeholders from across the organization in the self-assessment process is essential.

Self-Assessment Tool

Technological Readiness

Does your college have the information technology (IT) infrastructure needed to effectively deploy a new technology? Is the technology you intend to embed in your reform effort feasible to implement, from a system perspective? While technological readiness alone is not sufficient for successful adoption by end-users, getting a new technology to a point where it can be reliably used by college personnel is a critical first step.

We have identified five components of technological readiness: IT system maturity, IT system stability, compatibility of new and existing IT, current patterns of IT use, and past experience with IT implementation.

IT System Maturity

To make a new technology reliably available for use, your college must have the hardware, software, networks, and human resources necessary to support the technology.

IT System Stability

The frequency with which your college introduces new technologies should not be too rapid. If it is, end-users are unlikely to commit to learning new systems for fear they will not be permanent.

Compatibility of New and Existing IT

IT systems need to be able to seamlessly share information. If they do not, end-users may have to recreate documents or re-input data after the introduction of the new system, or continue to log into the old system to perform certain tasks. This creates frustration and minimizes the likelihood that end-users will adopt the new technology.

Current Patterns of IT Use

Colleges in which individuals rely primarily on non-IT tools will find it more challenging to encourage adoption than colleges in which end-users already use IT tools in their daily work processes.

Past Experience With IT Implementation

Institutions with experience implementing technological tools similar to the proposed innovation may experience a smoother implementation and adoption process. Experience breeds skill and capacity, laying the groundwork for future innovation. In general, the larger the leap in IT infrastructure or demands placed on end-users, the less successful a new technology is likely to be.

Getting a technology to a point where it can be reliably used by college personnel is a critical first step toward adoption.

TECHNOLOGICAL READINESS SELF-ASSESSMENT

COMPONENT	POISED FOR ACTION	MINIMALLY READY	SELF-ASSESSMENT
IT system maturity	<ul style="list-style-type: none"> • Our college has a robust IT staff and can handle the increased demand that will result from the reform. • College IT staff focus on systems and data as well as end-user training and support. • Our college’s servers and networks have the capacity to support increased data load and usage. • Our college has (or has resources to procure) all the necessary software and hardware for the new technology, including hardware for end-users if necessary. 	<ul style="list-style-type: none"> • Our college’s IT department is chronically understaffed. • College IT staff focus on performing a small number of functions (e.g., systems support only). • Our college’s servers and network capacity are unsuited to the needs of the product being deployed. • Our college does not have (or lacks the resources to procure) all the necessary software and hardware for the new technology. 	
IT system stability	<ul style="list-style-type: none"> • Our college has not introduced any major systems changes recently. • End-users are confident in their ability to use current systems and could engage in learning something new. 	<ul style="list-style-type: none"> • We have recently implemented a major systems change, or many smaller changes. • End-users are still learning our current systems 	
Compatibility of new and existing IT	<ul style="list-style-type: none"> • Our current IT systems are compatible with the new systems, in terms of user interface and data interoperability. • Our IT personnel and procurement personnel prioritize the compatibility of technologies when selecting new products. 	<ul style="list-style-type: none"> • Our current and new systems are not compatible, and work-arounds are not obvious or easily identified. • Decisions concerning IT procurement do not include staff who can verify that a new product will integrate with current data systems prior to its purchase. 	
Current patterns of IT use	<ul style="list-style-type: none"> • Our college currently offers a wide array of services online or electronically. Students are able to apply for admission, take placement exams, register for courses, and apply for financial aid via a commercial or homegrown software platform. • When given an option of paper- or electronic-based services, students and staff typically opt for the electronic version. 	<ul style="list-style-type: none"> • Most of our college’s service functions are offered only in paper format. Students must apply for admission, take placement exams, register for courses, and apply for financial aid using paper forms. • When given an option of paper- or electronic-based services, students and staff tend to choose the paper version. 	
Past experience with IT implementation	<ul style="list-style-type: none"> • Our previous IT implementation experiences were successful, as evidenced by our clear implementation plans, timely rollouts, and the adoption of new technologies by end-users. • We have a clear understanding of what went wrong during previous technology implementations and have a detailed plan for addressing similar challenges going forward. 	<ul style="list-style-type: none"> • Our previous IT implementation experiences were poorly executed, as evidenced by our failure to roll out the technology or our high levels of end-user frustration. • We do not have a clear understanding of what went wrong during previous technology implementations or cannot identify ways to overcome similar challenges in the future. 	

OUR ASSESSMENT OF OUR OVERALL TECHNOLOGICAL READINESS:**OUR ACTION PLAN:**

DIRECTIONS: For each of the components above, discuss whether your college is poised for action, moderately prepared, or minimally ready. Write your scores in the self-assessment column, and use these scores to determine your overall technological readiness and develop your action plan.

Project Readiness

Can your college get this project up and running on time and on budget? Is your project management capacity sufficient for implementing and managing a new technology? What resources can you devote to the initiative? In addition to having sufficient technological resources in general, your college must have the logistical and structural resources to ensure that the project can be completed, from planning to implementation.

We have identified four components of project readiness: administrative and technical resources, training, ongoing support, and incentives.

Administrative and Technical Resources

In addition to having the funds to purchase new technology and equipment, adoption-ready colleges budget for dedicated staff time for project planning and rollout, administrative support, and time for end-users to receive training and practice the new technology. Doing so includes not only having the funds for staff but also finding the time for staff to perform the work required to implement the reform.

Training

Adoption-ready colleges have a plan in place to ensure that end-users learn how to use new technologies. The format of these trainings is less important than the fact that adoption-ready colleges think about how best to expose end-users to the product and provide time for end-users to learn to use the new technology.

Ongoing Support

Although training helps end-users develop an initial understanding of how a technology might be used in their work, the needs of staff evolve with their use of a new technology. Adoption-ready

In addition to technological resources, your college must have the logistical and structural resources to ensure that the project can be completed.

institutions think about the ways that a new technology will require individuals to do their jobs differently, and they provide end-users with time, training, and support as they relearn some of their job functions. They also ensure that there is staff capacity to provide this type of support.

Incentives

Incentives indicate to end-users that the adoption of the new technology is important and that their investment of time and effort in learning the technology will be worthwhile. Incentives can vary but might include easier work processes, use of the technology integrated into performance reviews, or recognition for improved performance.

PROJECT READINESS SELF-ASSESSMENT			
COMPONENT	POISED FOR ACTION	MINIMALLY READY	SELF-ASSESSMENT
Administrative and technical resources	<ul style="list-style-type: none"> We have clearly defined departmental responsibilities for implementing the project, including project leads, departmental division of labor, and timelines. The departments responsible for implementation have the staff capacity—in terms of skill and time—to execute their responsibilities. We are able to articulate challenges we may encounter during the implementation process and have a plan for addressing those challenges. We have clear adoption and usage goals for the project. We have an executive sponsor for the project who will be actively involved throughout the implementation process. 	<ul style="list-style-type: none"> It is not clear who will execute this project, or how. It is not clear how our proposed division of labor or work plan will lead to successful implementation. While we may have a sense that the implementation process will be challenging, we are not sure how or what to do about it. We have not identified goals for the project, or our goals focus on outcomes rather than adoption and end-user behavior. While a college executive has signed off on the project, this person will not play an active role in the implementation process. 	
Training	<ul style="list-style-type: none"> We have identified an approach for providing training to end-users (train-the-trainer, vendor-provided, etc.). We have defined who will provide training and have ensured that those individuals have dedicated work time to develop materials. We have a specific timeline for training that provides end-users with ample time to learn about the system prior to its scheduled launch. 	<ul style="list-style-type: none"> We have not yet identified a particular approach for providing training to end-users; training plans will be figured out later. We have not yet determined who will be responsible for providing training. Our timeline for implementing the new technology does not include time for training prior to launch. 	

<p>Ongoing support</p>	<ul style="list-style-type: none"> • We have identified ways that end-users' daily practices will change as a result of the reform and have plans to help them relearn aspects of their jobs. • We have identified the staff members who will be responsible for providing ongoing support and have given them time to plan ongoing support activities. • Ongoing support activities will be embedded into staff roles, and staff will have ample time to provide ongoing support to end-users. • Staff have developed, or have a timeline for developing, ongoing support activities that go beyond technical troubleshooting and address end-user work processes. 	<ul style="list-style-type: none"> • We have not considered how end-users' daily practices will change as a result of the reform. • We have no plans for providing ongoing support to end-users. • We plan to provide ongoing support focused on technical issues rather than end-user work processes. 	
<p>Incentives</p>	<ul style="list-style-type: none"> • We have identified a set of specific incentives that are meaningful on our campus. • Staff are incentivized for participating in the initial rollout and for incorporating the new technology into their daily work routines. • We have budgeted for incentives. 	<ul style="list-style-type: none"> • Incentives are not part of our project plan. 	

OUR ASSESSMENT OF OUR OVERALL PROJECT READINESS:

OUR ACTION PLAN:

DIRECTIONS: For each of the components above, discuss whether your college is poised for action, moderately prepared, or minimally ready. Write your scores in the self-assessment column, and use these scores to determine your overall project readiness and develop your action plan.

Organizational Readiness

Do people across your college have a clear sense of mission and strong working relationships? How does your college make decisions, and how do its faculty and staff react to change? Adoption-ready colleges attend not only to the technological requirements of a reform but also to the underlying cultural characteristics of the organization that influence its ability to support the hard work of reform.

In examining your organizational readiness, it is essential that you include individuals from different parts of the college in the conversation, since different microcultures within your college may have

Adoption-ready colleges attend to the cultural characteristics that influence their ability to support the hard work of reform.

different perceptions of practices and norms. Including individuals from only one level of leadership, or only one organizational role, will not give you a nuanced perspective of your college’s functioning.

We have identified four components of organizational readiness: clarity of mission, communication, decision-making process, and openness to change.

Clarity of Mission

Technology adoption is influenced by the extent to which an institution has clear values and measurable goals that guide its activities. Your college will be more likely to achieve buy-in for a reform if your mission is shared and understood by individuals throughout the college.

Communication

Colleges that openly communicate their plans to staff throughout the organization are able to manage the reform process more successfully. It is important to examine how communication occurs horizontally and vertically, as well as how communication is perceived by those receiving the information and those providing it.

Decision-Making Process

Adoption-ready colleges include end-users in the decision-making process from the beginning in order to encourage buy-in and solicit their input on issues related to project design and potential challenges. There is a trade-off, however, between inclusiveness and the length of time required to make decisions. Adoption-ready colleges are strategic in creating structures that encourage input while maintaining the momentum of their reform efforts.

Openness to Change

The willingness of *all* staff—not just reform leaders or early adopters—to change current practices and include new technologies in their work will influence the overall level of institutional adoption. Colleges in which many individuals are tradition-bound, skeptical of new technology, or set in their ways will have a more difficult time adopting technology-based reforms. In these colleges, it is important that reform leaders identify strategies to overcome end-users’ discomfort with change.

ORGANIZATIONAL READINESS SELF-ASSESSMENT

COMPONENT	POISED FOR ACTION	MINIMALLY READY	SELF-ASSESSMENT
Clarity of mission	<ul style="list-style-type: none"> • Our college’s mission is concrete enough to guide our decision-making, and it provides an image of the types of outcomes we want to see at our college. • Individuals throughout our college are able to articulate our mission in the same way. • Individuals throughout our college buy into our mission and use it to guide their professional practice. 	<ul style="list-style-type: none"> • Our college’s mission is not clear enough to drive our decision-making. • The mission, or how to achieve it, is interpreted differently by different individuals within our college. • Most individuals at our college do not use our mission to guide their professional practice. 	

<p>Communication</p>	<ul style="list-style-type: none"> • We have established regular mechanisms for communicating with individuals throughout the college. • Departments regularly communicate with one another about their practices, plans, and challenges. • Individuals throughout the college feel informed, respected, and trusted. • Cross-departmental or cross-sector communication occurs among all levels of staff, not just senior-level administrators. 	<ul style="list-style-type: none"> • Mechanisms for communicating with individuals throughout the college are not consistently used. • Communication tends to occur within departments or sectors, with little cross-departmental or cross-sector communication. • Some individuals within the college are excluded from communication channels. • Communication typically occurs within one level of the college (e.g., within the president's cabinet) but not others. 	
<p>Decision-making process</p>	<ul style="list-style-type: none"> • When implementing new projects, our college involves a wide range of individuals in the planning and implementation processes. • Planning committees include individuals from multiple parts of the college and from multiple levels of personnel. • We have clear lines of decision-making authority in order to maintain the forward motion of our project. 	<ul style="list-style-type: none"> • Most projects at our college are driven and led by a small number of individuals. • Individuals from multiple parts of the college and multiple levels of personnel are not generally well represented in planning committees. • Our college often has a large group involved in planning, but no clear lines of decision-making authority. 	
<p>Openness to change</p>	<ul style="list-style-type: none"> • Most individuals at our college seek new ways of doing their work in order to improve student outcomes. • In general, individuals at our college feel that technology is useful in their work. • Our college is tradition-bound, but our reform leaders have developed a plan to encourage individuals to learn about the benefits of the intended change. 	<ul style="list-style-type: none"> • Our college is strongly tradition-bound, and change happens slowly. • Most people at our college are skeptical of educational technology. • The majority of individuals at our college are set in their ways and reluctant to learn new things. • Our reform leaders have no clear plan to help individuals learn about the benefits of the intended change. 	

OUR ASSESSMENT OF OUR OVERALL ORGANIZATIONAL READINESS:

OUR ACTION PLAN:

DIRECTIONS: For each of the components above, discuss whether your college is poised for action, moderately prepared, or minimally ready. Write your scores in the self-assessment column, and use these scores to determine your overall organizational readiness and develop your action plan.

Motivational Readiness

Does your college have a need for this reform, and a vision of how it will benefit end-users? To what extent are individuals at your college motivated to engage in the technology-based reform you have chosen? Your college's motivational readiness depends on the alignment between your proposed project and your organization's needs and practices. Adoption-ready institutions have a clear understanding of why they are engaging in a specific reform, what types of changes end-users can expect, and how the reform will bring the college into better alignment with its broader goals and values.

Like organizational readiness, motivational readiness reflects the attitudes of microcultures within your college. In adoption-ready colleges, the need for the reform and its benefits for end-users are clear to individuals in various stakeholder groups across the institution. If only one stakeholder group is motivated to adopt the reform, widespread institutional adoption is unlikely to occur.

We have identified three components of motivational readiness: need for reform, vision of benefits, and perception of functioning.

Need for Reform

Adoption-ready colleges have a clear sense of the need they are trying to address through reform. Whether this need is teaching-related, service-related, or capacity-related, individuals across the college must understand which need is being addressed, define it the same way, and know why this need is important.

Vision of Benefits

In adoption-ready colleges, stakeholders are able to envision how the new technology will benefit their work, the college's goals, and the student experience. Perceived potential benefits can include job relevance, increased levels of student engagement, enhancement of learning, and expansion or improvement of services.

Perception of Functioning

In adoption-ready colleges, end-users perceive that the new technology will function as intended and that the college will be able to implement and support the technology successfully. Even with a clear vision of benefits, if stakeholders do not believe that the college can engage with the product such that its benefits will be realized, they will not adopt it.

Adoption-ready institutions have a clear understanding of why they are engaging in a specific reform.

MOTIVATIONAL READINESS SELF-ASSESSMENT

COMPONENT	POISED FOR ACTION	MINIMALLY READY	SELF-ASSESSMENT
Need for reform	<ul style="list-style-type: none"> • There is a clear rationale for our reform that advances the college's mission and goals. • Stakeholders throughout the college understand the rationale for the reform in the same way and can explain how the reform will meet the identified needs of the college. 	<ul style="list-style-type: none"> • The rationale for the project is not related to the college's mission or strategic plan, and it is unclear how the reform will meet the identified needs of the college. • Stakeholders provide different rationales for the reform. 	
Vision of benefits	<ul style="list-style-type: none"> • Stakeholders can give a clear description of what the reform will look like in action. • Stakeholders can articulate how they will use the reform to reach their goals and how the reform will help meet institutional goals. • The vision of the reform and its benefits is aligned across stakeholders. 	<ul style="list-style-type: none"> • Stakeholders are unable to give a clear description of what the reform will look like in action. • It is not clear to stakeholders how the reform will help them reach their goals or help meet institutional goals. • Stakeholders have competing visions of what the reform will look like in action. 	
Perception of functioning	<ul style="list-style-type: none"> • Stakeholders are confident in the efficacy of the reform. • Stakeholders believe that the college will be able to implement the reform. • Individuals throughout the college believe in the power and possibility of the reform. 	<ul style="list-style-type: none"> • Stakeholders express concerns that the college will be unable to support the reform. • Stakeholders do not believe that the reform will lead to the type of change that is necessary for institutional improvement. • Only some institutional subgroups feel confident that the reform and the college will be successful. 	

OUR ASSESSMENT OF OUR OVERALL MOTIVATIONAL READINESS:

OUR ACTION PLAN:

DIRECTIONS: For each of the components above, discuss whether your college is poised for action, moderately prepared, or minimally ready. Write your scores in the self-assessment column, and use these scores to determine your overall motivational readiness and develop your action plan.

Sources

Karp, M. M., & Fletcher, J. (2014). *Adopting new technologies for student success: A readiness framework*. New York, NY: Columbia University, Teachers College, Community College Research Center.

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