Chapter 2

TEACHING AND LEARNING WITH TECHNOLOGY

Essential Questions

1. **What are the instructional delivery modes a technology coordinator may be called on to support?**
2. **What should the technology coordinator know about designing instruction to support effective teaching and learning with technology?**
4. **How can the technology coordinator promote digital citizenship and safe uses of technology?**
5. **What are some key theories and frameworks that a technology coordinator should be familiar with that can be helpful in guiding decisions, plans, and professional development related to teaching and learning with technology?**

Technology coordinators are key players in fostering, supporting, and sustaining the use of technology for teaching and learning. All purchases of technology in schools are ultimately in support of teaching and learning, from internet access to school network infrastructure, to the hardware and software in the hands of teachers and students. The technology coordinator is often called upon to advocate for technology in support of teaching and learning in budget discussions, to provide professional development in support of meaningful uses of technology for teaching and learning, and to provide support for the technologies and systems that are necessary to enable the use of technology for teaching and learning. In this chapter we answer five essential questions for technology coordinators regarding their work in supporting teaching and learning. These questions are based on five essential issues related to teaching and learning, as depicted in Figure 2.1.

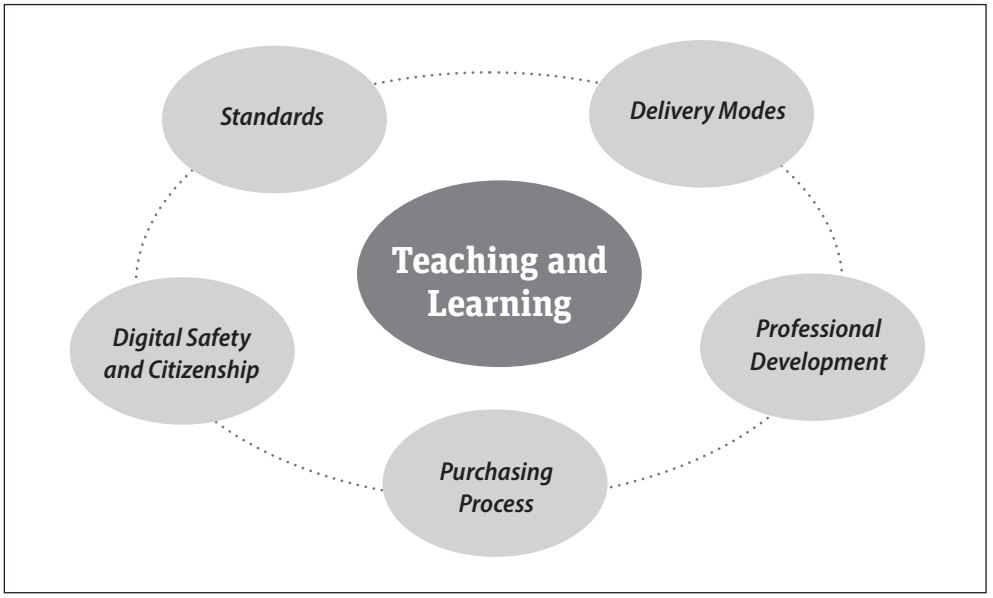

Figure 2.1. Essential issues related to teaching and learning.

ISTE Standards

When it comes to teaching and learning with technology, it is important to know what is expected of K–12 students and the standards for their learning about and with technology. The International Society for Technology in Education (ISTE) has created a set

of standards to answer these questions. As a technology coordinator, making sure that teachers are aware of these standards and are incorporating them in their planning, teaching, and evaluation processes is very important.

The student section of the ISTE Standards is designed to empower student voice and ensure that learning is a student-driven process. The seven overarching standards for students are:

1. Empowered Learner
2. Digital Citizen
3. Knowledge Constructor
4. Innovative Designer
5. Computational Thinker
6. Creative Communicator
7. Global Collaborator

The full set of ISTE Standards and their performance indicators can be accessed at iste.org/standards. The ISTE website also offers explanatory videos, guidance on adopting the standards, downloadable posters, and more.

One strategy for addressing these standards with teachers is to showcase the work of teachers who are implementing one or more of these standards well. Another is to weave them into professional development activities. A third might be to have students explain what they did on video to play back to teachers during professional development time.

The various ISTE Standards are very useful for technology coordinators to know and leverage. Later in this chapter we address how the ISTE Standards for educators are useful for professional development planning and assessment, just as the student standards are when working with students.

Delivery Modes

The most common method of instructional delivery mode in K–12 education takes place in the traditional classroom, where teacher-directed, face-to-face instruction is the norm. This is especially true in K–3 classrooms, where the students may not have

significant technological literacy or skills like keyboarding. However, a spectrum of instructional delivery modes is emerging, as some states, for example Florida and Virginia, now require high school students to take at least one class online to graduate, and many states offer fully online instruction in publicly funded online schools ranging from upper elementary grades to high school. Additionally, public charter schools offering online learning for upper elementary to high school students seem to be growing in popularity. In the spring of 2020, during the COVID pandemic, the U.S. Census Bureau's Pulse Survey found that nearly 93% of people in households with school-age children reported their children engaged in some form of "distance learning" from home. Due to the pandemic, many more children now have experience with online learning than ever before.

Tech Leader Profile

Travis True, Curriculum Technology Specialist

Travis True is a curriculum technology specialist for the Topeka Public Schools. His is an urban district serving a diverse population of about 14,000 students across 31 schools in the Kansas capital city; over 70% of these students qualify for free or reduced lunches. Travis joined the Topeka schools in 2004 and became a curriculum technology specialist in 2012. While more than thirty people work in the technology department for the Topeka Public Schools, Travis is one of three curriculum technology specialists who are all assigned to the Teaching and Learning Department. Originally trained as an educator and with twelve years of classroom experience, Travis holds master's degrees in Instructional Design and in Educational Administration, along with being a Google Certified trainer. His main job responsibilities include technology support and integration training, and he is responsible for researching new hardware, software, and technology trends in education. One of the main challenges Travis faces every day is providing accurate information and answers to teachers while not being officially part of the technology department. He is proud of the fact that his district provides more technology resources to teachers and students than other districts in the area. Travis would encourage other technology leaders to "be flexible and open to change, as this field changes rapidly. You must know your stuff so you can successfully train people and explain how the technology will improve student achievement." He believes that change is a constant and that if you are not willing to adapt, your job will only become more difficult. You can follow his work here: @travistrue.

A middle ground on the spectrum between fully face-to-face and fully online modes of teaching and learning has been emerging over the last few years with the increasing popularity of hybrid learning initiatives. Building on the success of one laptop or tablet

per student initiatives, these hybrid programs make use of student laptops and tablets to supplement and enhance the face-to-face learning process. In addition to traditional classroom activities to engage students and allow them to work with other students, teachers are also able to integrate these devices into their instruction, giving students ready access to the internet and to a variety of applications, ranging from traditional productivity tools such as word processors, spreadsheets, and presentation tools to multimedia creation tools and web-based applications.

Toolbox Tip

Using a Gameboard for New Teacher Orientation

New teacher orientation for the Francis Howell School District (FHSD) in O'Fallon, Missouri, is a week-long boot camp of all things curriculum, instruction, and technology for teachers new to the district. Like most organizations, they use a variety of online applications ranging from instructional resources to online benefits managers. The annual challenge is making sure all new teachers are correctly added as application users, and providing a quick overview of each application. For years, April Burton, FHSD instructional technology content leader, assigned reading of a five-page packet containing this information. She recently developed a more attractive and efficient way to provide an overview of essential online resources. New teachers now receive a copy of the tech applications gameboard (shown in Figure 2.2) with their district laptop, prior to orientation. Using a shortened URL or QR code Burton includes on the gameboard, they can click through the hyperlinks to access information about each program.

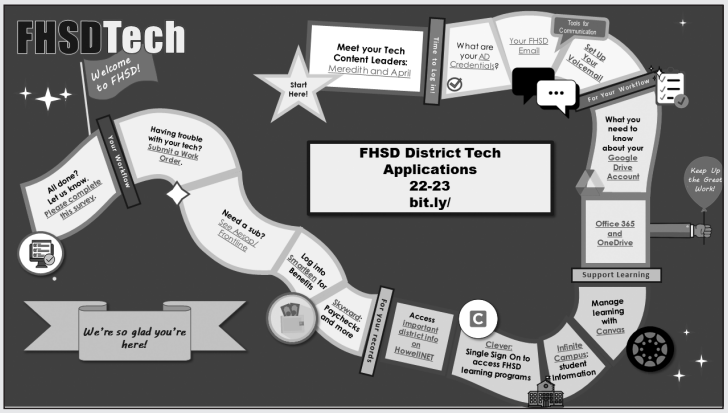

Figure 2.2. FHSD District technology application gameboard. Reproduced with permission.

The scope of delivery modes is growing even more diverse as an increasing number of schools are implementing the use of learning management systems (LMSs). Some have chosen to adopt free, open-source solutions like Moodle, which have limited budgetary impact, but other school districts are providing full-blown commercial LMSs to their teachers. In doing so, these organizations hope to leverage the school-provided technology already in the classrooms for instruction and for learning assignments using their LMS. Innovative teachers in schools without an official LMS have increasingly been using free tools such as Google Classroom, Edmodo, and Schoology. This trend has led to the creation of a range of delivery methods and has contributed to the growing popularity of the flipped classroom model of instruction, a blended delivery method. In the flipped classroom model, teachers offload some activity normally conducted in the classroom for students to do at home, aided by internet resources or an LMS. For example, the teacher may ask students to watch selected TeacherTube or YouTube videos, engage in an online discussion (helping to ensure that all students participate, not just those who usually speak up in class), or create and upload their own materials from home as homework. Classroom time then emphasizes activities, projects, and opportunities to check for understanding and correct any misunderstandings. Of course, the flipped classroom is less feasible in situations where students do not have necessary access to technology resources and dependable internet access at home.

The spectrum of instructional delivery modes is clear, with fully face-to-face instruction on one end of the continuum, a variety of blended instructional methods in the middle, and fully online instructional modes on the other end. The technology coordinator must be aware of issues involved in supporting all areas of the continuum. This support should include teacher professional development as well as support for teaching using this entire range of modes. One very useful model of the types of blended learning is offered by Heather Staker of the Innosight Institute (2011). Staker's six models of blended learning are briefly described in Table 2.1.

Table 2.1. Models of Blended Learning

MODEL 1 **Face-to-Face Driver**	The programs that fit in the face-to-face-driver category all retain face-to-face teachers to deliver most of their curricula. The physical teacher deploys online learning on a case-by-case basis to supplement or remediate, often in the back of the classroom or in a technology lab.
MODEL 2 **Rotation**	The defining feature in the rotation model is that, within a given course, students rotate on a fixed schedule between learning online in a one-to-one, self-paced environment, and sitting in a classroom with a traditional, face-to-face teacher. It is the model most in between the traditional face-to-face classroom and online learning, because it involves a split between the two and, in some cases, between remote and onsite. The face-to-face teacher usually oversees the online work.

MODEL 3 **Flex**	Programs fitting into the flex model feature an online platform that delivers most of the curricula. Teachers provide on-site support on a flexible and adaptive as-needed basis through in-person tutoring sessions and small group sessions. Many dropout-recovery and credit-recovery blended programs fit into this model.
MODEL 4 **Online Lab**	The online-lab model encompasses programs that rely on an online platform to deliver the entire course, but in a brick-and-mortar lab environment. Usually these programs provide online teachers. Paraprofessionals supervise, but offer little content expertise. Often students that participate in an online-lab program also take traditional courses and have typical block schedules.
MODEL 5 **Self-Blend**	The nearly ubiquitous version of blended learning among American high school students is the self-blend model, which encompasses any time students choose to take one or more courses online to supplement their traditional school's catalog. The online learning is always remote, which distinguishes it from the online-lab model, but the traditional learning is in a brick-and-mortar school. All supplemental online schools that offer *a la carte* courses to individual students facilitate self-blending.
MODEL 6 **Online Driver**	The online-driver model involves an online platform and teacher that deliver all curricula. Students work remotely for the most part. Face-to-face check-ins are sometimes optional and other times required. Some of these programs offer brick-and mortar components as well, such as extracurricular activities.

Purchasing Process

Long before any software or hardware is selected, make sure you are knowledgeable about your district purchasing regulations and procedures, because each school district has unique policies to guide purchasing without school board approval, approval of contracts, when formal price quotations are required and how many must be obtained, request for proposal procedures, details on the awarding of contracts; payment policies, and timelines for purchasing.

For larger purchases, the technology coordinator is usually responsible for the specifications of the goods to be purchased, and perhaps for preparing and submitting a resolution to the school board for permission to bid. Before preparing the specifications, it is usual to convene a hardware/software/service evaluation committee to identify needed features, help prepare the specifications documentation, and ensure that the identified needs are met. It is also common for the technology coordinator to prepare purchasing specifications for someone in the district's purchasing office, who will then prepare a request for proposals (RFP). The RFP will be reviewed by the district's legal department before the purchasing office publishes the RFP and vendors can submit bids. Typically, before the bids are due, the purchasing office holds a pre-bid conference

to answer any questions that potential bidders may have. Following the submission of bids by vendors, the technology coordinator and someone in purchasing will select a provider for the hardware, software, or service being purchased. Ideally, hardware and software will be made available for evaluation before the final decision is made.

For smaller purchases, those under the district's threshold dollar amount for the bidding process, the technology coordinator typically has to get a certain number of bids for what is needed. If only one provider of a product or service exists, each district will likely have special procedures to follow as well. Regardless of the process, the input of a hardware/software/services evaluation committee is indispensable. Before the purchase is made, ensure that the evaluation committee has had a fair chance to try each vendor's product. This process is important because the technology coordinator will likely have to explain why the hardware, software, or service was selected and why it is the best value for purchase.

A technology coordinator representing an entire district may often get the best possible value on tools for digital teaching and learning if they can join together with several other school districts and form a purchasing consortium. If several school districts are going to purchase a common piece of software, chances are a consortium of those districts will be able to negotiate a much better price than could one district alone.

Digital Citizenship

Given the ubiquity of technology, the responsibility to teach students how to use technology safely and be good digital citizens often falls to schools. ISTE has taken a leading role in developing resources for that purpose. Most of ISTE's standards documents address digital citizenship in significant ways. For students, standard 2 is about digital citizenship; for educators, standard 2 concerns the citizen; for education leaders, standard 1 addresses being an equity and citizenship advocate, and for coaches, standard 7 involves being a digital citizen advocate. One of the roles of the technology coordinator is to make sure teachers and other educational professionals in schools are familiar with and are implementing the ISTE Standards. The most current student standard addressing digital citizenship reads, "Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical" (International Society for Technology in Education, 2016).

In a keynote address at the ISTELive 2019 conference in Philadelphia, CEO Richard Culatta described digital citizenship instruction as "Far too often, digital citizenship is

taught in a negative way—here's the list of all the stuff you should not do online. And while I appreciate the intent behind anti-cyberbullying campaigns, we don't teach other things as "anti-" in schools. I mean, we don't have anti-illiteracy campaigns—we teach kids to love to read. Digital Citizenship shouldn't be a list of don'ts, but a list of do's." During this address, Culatta announced that ISTE was joining several partner organizations to create the DigCit Coalition where the members would be working together to redefine digital citizenship. In his ISTELive address, Culatta identified five competencies for digital citizenship: inclusive, informed, engaged, balance, and alert.

An overview of digital citizenship compiled from Culatta's ISTELive presentation, along with additional definitions of the five digital citizenship competencies along with related examples is presented in Table 2.2.

Table 2.2. Digital citizenship competencies and examples

DIGITAL CITIZENSHIP COMPETENCIES	A GOOD CITIZEN . . .	A GOOD DIGITAL CITIZEN . . .
1. INCLUSIVE **Definition:** Is open to hearing and respectfully recognizing multiple viewpoints, and engages with others online with respect and empathy	Advocates for equal human rights for all	Engages others online in a respectful way and shows empathy to others
2. INFORMED **Definition:** Evaluates the accuracy, perspective, and validity of digital media and social posts	Actively pursues an education and develops habits for lifelong learning	Evaluates digital information accurately to insure validity and perspective
3. ENGAGED **Definition:** Uses technology and digital channels for civic engagement, to solve problems and be a force for good in both physical and virtual communities	Is actively involved with the community, interacts with others, and shows a sense of community responsibility	Uses digital resources in positive ways for civic engagement and problem solving
4. BALANCED **Definition:** Makes informed decisions about how to prioritize time and activities online and off	Participates in a way that makes the most of the time involved	Uses time wisely for both online and offline activities
5. ALERT **Definition:** Is aware of online actions and knows how to be safe and create safe spaces for others online	Pays attention to what is happening in the community to maintain safety and security	Ensures that online actions will maintain safety and security for self and others

Sources: Infographic: I'm a Digital Citizen, International Society for Technology in Education (2022) and The 5 competencies of digital citizenship, International Society for Technology in Education (2021).

ISTE offers a variety of publications addressing digital citizenship. The most recent offering, *Deepening Digital Citizenship: A Guide to Systemwide Policy and Practice* (Rogers-Whitehead & Monterosa 2023), provides models, case studies, and a variety of additional information for those seeking resources.

Theories and Frameworks

The technology coordinator must be aware of various theories and frameworks that can help to guide decisions in the areas of learning, motivation, instructional design, assessment of implementation of technologies for teaching and learning, and assessment of professional development.

Assessment of Implementation

Several common questions posed to technology coordinators are:

- How much of the technology we are buying is actually being used?
- Is it being used broadly across our school or schools?
- Is it being used in meaningful ways?
- Is it making a difference in student achievement or some other measurable student outcome, such as attendance rates?
- How well did the latest faculty development program work?

To answer these sorts of questions, technology coordinators are commonly expected to assess the implementation of these sorts of initiatives. Depending on the people and other resources available, assessment can be a time-consuming and detailed endeavor. For a technology coordinator without a staff, assessment can be a significant burden. It is important to consider that good assessment of what is going on in your school or district need not be entirely the task of the technology coordinator. Almost any college or university with a department, school, or college of education will typically have at least one faculty member interested in this area. Such help may even be available for free, although permission to publish anonymous results may be requested in return for assistance. It is best to ask for assistance early, so that all steps of the process will benefit from the expertise of the evaluation specialist.

We recommend the following six steps in program planning, including assessment:

1. **Assess Needs:** What do the students, teachers, staff, or community need as part of the hardware, software, teaching methodology, or professional development program to be implemented? Employing an advisory group is a great idea. Set priorities.
2. **Plan:** Use a logic model (see below). Include evaluation in your plan. Make a timeline. Plan for assessment and to collect the data.
3. **Develop the program:** Include people, places, schedule, assessments, and materials. Make stakeholders aware of plan and schedule.
4. **Deliver:** Implement the professional development, use of technology, teaching method. Gather assessment data. If possible, have an external evaluator observe events and collect data.
5. **Evaluate:** Collect remaining data. Analyze and interpret data. Involve the advisory group or other advisors in this stage as well. Compile a written report.
6. **Disseminate results:** Share the written report with all stakeholders.

Toolbox Tip

Technology Integration Assessment Rubric

Harris, Grandgenett, and Hofer (2010) have developed and tested a rubric based on the TPACK (technology, pedagogy, and content knowledge) framework for assessing the quality of technology integration. This "pedagogically inclusive" instrument is designed to reflect key TPACK concepts and, based on their research, has proven to be both reliable and valid in two rounds of testing using these categories of assessment:

- **Curriculum Goals & Technologies:** curriculum-based technology use
- **Instructional Strategies and Technologies:** using technology in teaching/learning
- **Technology Selection(s):** compatibility with curriculum goals and instructional strategies
- **Fit:** content, pedagogy, and technology together

The rubric, which contains a creative commons license, can be accessed by scanning the QR code or by visiting the URL bit.ly/3PGERLv.

Tech Leader Profile

Joan McGettigan, Director of Instructional Technology

Dr. Joan McGettigan has served as the director of instructional technology for Darien Public Schools in Connecticut since 2019. Prior to that, she was director of educational and information technology at North Broward Preparator, an Apple Distinguished School. Originally trained as an elementary classroom teacher, she has master's degrees in Elementary Education and in Educational Technology, as well as a doctorate in Instructional Leadership. Joan is also recognized as an ISTE Certified Educator, an Apple Distinguished Educator, and an Apple Learning Coach. Her responsibilities include overseeing Technology Education and Libraries (a total of fourteen people), conducting professional development, and providing curricular support. She reports directly to the assistant superintendent for curriculum and instruction. Darien schools are in the suburbs outside New York City. The district serves around 4,500 students and is ranked as one of the top 5% of school districts in the state. Joan describes her biggest challenge on any day as how best to serve the multiple diverse needs of teachers and students in her district. Dr. McGettigan thinks the best part of her job is helping others learn new ways to teach in innovative and creative ways using technology. She points out that "all districts need someone to speak up for the teaching and learning side and advocate for the goals the instructional side of the house is trying to achieve. The one-two punch of the pandemic and the advance of artificial intelligence present challenges to learning we are just beginning to understand." For those aspiring to a position like hers, she offers this advice: "listen carefully, be empathetic, advocate for students and teachers, and be willing to shape the path for any needed change." You can follow her work at: @drmcgettigan.

Developing a Logic Model

An effective logic model is often helpful with planning both the implementation and the assessment portions of your implementation. Sometimes called a "theory of change" or a "program theory," logic models typically contain five parts and are often arranged into columns. The first two columns represent planned actions, and the last three represent intended results. Logic models, like the one shown in Table 2.3, are often linear, but they may take on other forms. A logic model is usually expected to be included in a grant proposal, and they are taken seriously by funders. A guide to reading a logic model is shown in Figure 2.3.

Table 2.3. Logic model for mathematics achievement.

INPUTS ➡	ACTIVITIES ➡	OUTPUTS ➡	OUTCOMES ➡	IMPACTS ➡
Hardware, software, & infrastructure.	SMBW is deployed on classroom computers.	Teachers gain an understanding of how SMBW can enhance math learning.	Student scores on basic math operations increase by 20%.	Reduced student math anxiety.
Trainers and PD planned bi-weekly.	Teachers, principals, and coaches receive training on SMBW implementation.		Student scores on word problems increase by 15%.	Increased student math self-efficacy.
Administrative expectation to use SMBW at least 30 minutes each day.	Teachers implement SMBW with fidelity for at least 30 minutes each day.	Teachers can integrate SMBW at least five ways into mathematics instruction with fidelity at least 30 minutes per day.	Student scores on fractions, ratios, and percentage problems increase by 15%.	Increased student engagement in mathematics.
Scheduled weekly teacher team planning and discussion of SMBW implementation.	Teachers meet weekly for a structured SMBW discussion as a team led by a coach.	Teachers' comfort level integrating SMBW in the five ways increases.	Student scores on pre-algebra problems increase by 15%.	Increased student enjoyment of mathematics.
Weekly SMBW coaching per teacher.	Teachers meet individually each week with assigned SMBW coach.	Teacher lessons show increasing sophistication with SMBW integration.	Student scores on mathematics vocabulary increase by 20%.	Reduced student retention rate. Increased average daily attendance.
Assessment Data to Collect				
Deployment schedules. PD schedules. Memo from principals to teachers. Meeting schedules. Baseline math test scores.	SMBW utilization rates from central management software. Records of meetings such as notes, agendas, and teacher reflections. Pre-implementation (baseline) student math anxiety, self-efficacy, engagement, and enjoyment scores.	Teacher reports and coaches' observations of teaching practice. Teacher comfort measurement results. Collected teacher lesson plans.	Student test scores.	Post-implementation student math anxiety, self-efficacy, engagement, and enjoyment scores. Retention rates. Daily attendance rates.

Table 2.3 shows a sample logic model for the implementation of a fictitious software program called "Super Mathematics Brainiac Wizard" (SMBW), designed to increase elementary school mathematics achievement. Across the bottom of the logic model is a section indicating the data to be collected at each stage of the program so the success of the program can be assessed and so impact on student learning can be measured. A guide to reading a logic model is shown in Figure 2.3.

As illustrated in the table, a good plan includes the data that should be collected in all stages of the program, including pre- and post-test data when appropriate. Assessing teaching and learning with technology usually includes implementation of the technology, as well as student outcomes such as learning. Theoretically, implementation of technology in ways that are faithful to the plan and best uses of the technology (implementation fidelity) should result in improvements in learning.

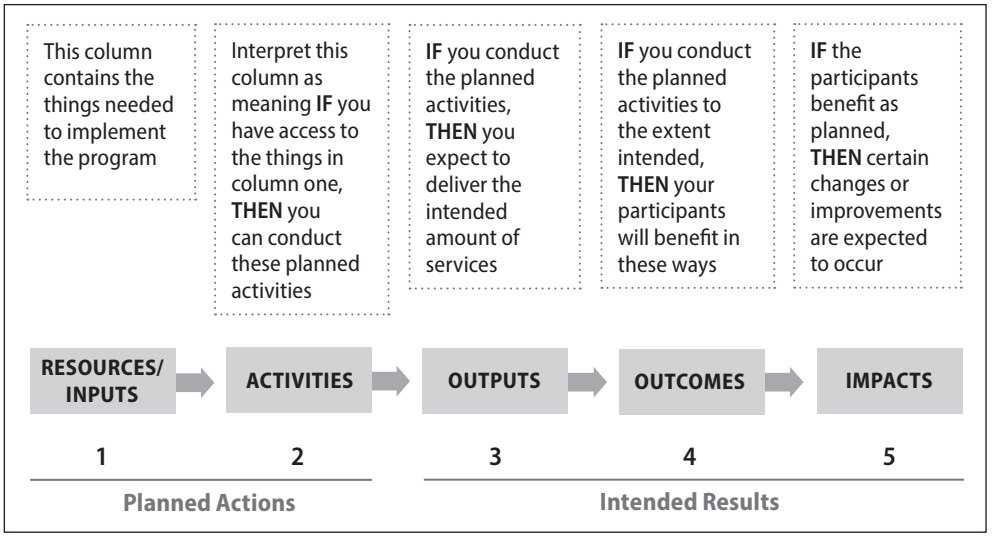

Figure 2.3. Guide to reading a logic model.

Concerns-Based Adoption Model

A well-researched and useful set of tools for assessing innovation adoption, such as a new use of technology for teaching or learning, is the Concerns-Based Adoption Model or C-BAM (Hall & Hord, 2015). This model is easy to implement and contains three diagnostic dimensions: 1. An Innovation Configuration Map to provide both

an exemplar to guide efforts and a measurement of implementation, 2. A Stages of Concern measurement in questionnaire form to enable the attitudes, beliefs, and related concerns about a new program or innovation to be addressed, and 3. A Levels of Use structured interview tool to determine how well individuals and groups are implementing a program. Additionally, the C-BAM model offers suggestions to help improve attitudes and beliefs of individuals and groups in order to move from slow adoption to levels that are conducive to effective implementation.

Professional Development Spotlight

Online Training Opportunities from ISTE

Both teachers and technology leaders can benefit from ongoing professional development opportunities. One source for these opportunities might be the offerings from ISTE U. This program offers a variety of options ranging from self-paced courses, to summer learning academies, to instructor-led courses. These learning opportunities allow individuals or groups to choose from a variety of time commitments and costs. The self-paced courses offer topics such as "Assessing Learning in Online Environments" and "Creating Communities in Online Classrooms" with a time commitment of two hours. The instructor-led courses have set time commitments of approximately eight weeks and focus more in depth on topics such as "Digital Citizenship in Action" or "Understanding Learning Differences." These courses may count for graduate credit. The Summer Learning Academies combine online courses with webinars, virtual coaches, and online learning communities for participants. All of these would be useful professional development experiences for teachers, technology coordinators, tech coaches, or librarians who are looking to enhance their knowledge or skills. Group rates may be available.

ISTE also offers educators the opportunity to be certified with demonstrated mastery of the ISTE Standards for Educators. After participating in forty hours of professional learning focused on pedagogy and educational practice over fourteen weeks, those seeking certification will spend about six months developing a portfolio that demonstrates their mastery of the standards and will earn four units of graduate credit as part of the process. Those who earn certification are recognized for knowledge and technology leadership skills. There is a significant registration cost for those seeking certification.

More information about all ISTE professional development opportunities can be found by following the Professional Development link on the ISTE home page: www.iste.org.

Answers to Essential Questions

1. **What are the instructional delivery modes a technology coordinator may be called on to support?**

   There are many possible modes of delivering instruction, but direct instruction is ubiquitous and should be thoroughly understood. It is also important to be knowledgeable about Staker's six models of blended learning.

2. **What should the technology coordinator know about designing instruction to support effective teaching and learning with technology?**

   There are a variety of strategies that can be used to plan an instructional development project, and it would be useful for the technology coordinator to become familiar and comfortable with several models that might be shared with teachers to improve the teaching and learning process.

3. **How can the technology coordinator promote digital citizenship?**

   The technology coordinator should make use of the ideas of the Digital Citizenship Coalition and partner organizations to help prepare students to stay safe, solve problems, and become a force for good by acting as alert and engaged online citizens.

4. **What are some key theories and frameworks that a technology coordinator needs to be familiar with that can be helpful in guiding decisions, plans, and professional development related to teaching and learning with technology?**

   The technology coordinator must be aware of theories and frameworks useful in guiding thoughts, decisions, and actions about various aspects of learning, instruction, and assessment. There are many useful theories and frameworks out there. We chose to highlight the logic model, which is useful when designing professional development, learning experiences, or programs. When assessing programs, the Concerns-Based Adoption Model is useful and easy to implement.

Resources

Digital Citizenship Coalition (digcitcommit.org) is the website for the organization focused on teaching digital citizenship by preparing students to stay safe, solve problems, and become a force for good.

Ignitecast (ignitecast.com) is a video sharing tool also enabling the creation of interactive video.

iRubric (www.rcampus.com/indexrubric.cfm) allows for the creation of rubrics, evaluating student artifacts, or simply printing out a rubric.

PaperRater (www.paperrater.com) will allow users to upload a paper or copy and paste the text into the tool to check for grammar, spelling, and style issues.

RubiStar (rubistar.4teachers.org) allows for creating and saving rubrics online.

Socrative (socrative.com) is an online quiz tool that works like a student response system. It is very easy to use and works on any device that can connect to the internet.

Storyboard That (storyboardthat.com) will help with writing screen plays, skits, or movies.

UtellStory (www.utellstory) is similar to VoiceThread but has a simpler interface.

VoiceThread (voicethread.com) facilitates the creation of presentations and also functions as a multimedia collaboration and discussion tool.