

## BUILDING BLOCKS OF A DIGITAL CLASSROOM

Just like a traditional classroom, the digital classroom has critical spaces where students access course materials and engage with each other. For example, students must have a consistent location where they can access information, such as a class agenda and homework. In the classroom, important information is written on a board for students to view and record. Similarly, the blended classroom must also have an online location where students can find important information. Teachers can post information to a website, class blog, homepage of an LMS (Learning Management System), or send text message reminders. Table 5.1 breaks down some of the critical spaces students need in both the traditional face-to-face classroom and online for a blended learning model to work effectively.



As teachers move from a traditional classroom to a blended learning model, they must be mindful of selecting technology tools that allow the flow of information, communication, collaboration, and creation to begin in one learning medium—in class or online—and extend seamlessly into the other. It is only when various learning mediums are woven together that the blended learning model is most effective.

Although much of the discussion about the technology integration is focused on the types of devices and costs to the schools, it is important to remember that the device is simply the vehicle we use to connect students to information and resources in order to cultivate specific skills they need to be successful in life.



## LINKS TO LEADERSHIP: SUPPORTING AN ITERATIVE PRACTICE

As teachers are empowered to use various tools in their classrooms, it is important for school leaders to embrace “fail-forward” moments. Too often, school leaders become fearful of mistakes that students can make online using collaborative tools rather than embracing those teachable moments for students and teachers. Instead of shutting down the use of a tool after an incident of inappropriate interaction or misuse, school leaders should engage teachers and students in solutions that allow for the more responsible use of the tool. Through this practice, school leaders continue to build a positive, growth-oriented blended learning culture.

**TABLE 5.1** Critical Spaces for Learning

CRITICAL LEARNING SPACES	TRADITIONAL CLASSROOM	DIGITAL CLASSROOM
Information	On the board	Website Blog Homepage of an LMS Text message reminders Calendar
Discussion	Whole group and small group real-time conversations	Asynchronous discussions e.g., Schoology Video conferencing (e.g., Google Hangouts or Skype) Communication Apps (e.g., VoiceThread or Voxer) Sharing Apps (e.g., Twitter, Today’s Meet, or Padlet)
Collaboration	Small group work at desks	Google Apps Microsoft Office 364
Creation	Limited to tools and supplies in the classroom: <ul style="list-style-type: none"> <li>● Pens</li> <li>● Paper</li> <li>● Glue</li> <li>● Rulers</li> </ul>	Limitless online applications, Chrome extensions, and web tools to create: <ul style="list-style-type: none"> <li>● Presentations</li> <li>● Videos</li> <li>● Artwork</li> <li>● Storybooks</li> <li>● Infographics</li> <li>● Websites</li> </ul>

### Productivity and Collaboration Environments

In October 2006, Google launched Google Apps for Education (GAPE), a free cloud-based productivity suite with tools comparable to the Microsoft

Office suite. This offering is enticing for schools from a financial perspective as the migration to GAFE results in significant savings in both licensing and server maintenance expenses. GAFE also gives teachers and students a chance to collaborate in the same shared documents, which can be accessed by multiple users with internet access. Google for Education has grown to over twenty-five million users worldwide and has become an industry standard for collaborative cloud applications.

Teachers in blended learning classrooms can use Google for Education tools to blend work done in class with work done online as pictured in Table 5.2.

GAFE is no longer the only open-source productivity solution that schools can implement on a district or schoolwide basis. In 2012, Microsoft released Office 365 Education which offers a free version to schools of its Office 365 for Business. Similar to GAFE, Office 365 is cloud-based and offers comparable productivity tools. Unlike GAFE, Office 365 is a freemium model which offers more services for enterprise, fee-based integration. (Freemium is a pricing strategy by which a product or service—typically a digital offering or application, such as software, media, games, or web services—provided free of charge, but money or a premium is charged for proprietary features, functionality, or virtual goods.)

As more learning applications and devices have hit the market, the integration of systems has become more essential so that all the systems communicate

**TABLE 5.2** Google for Education: Applications and Uses in a Blended Classroom

TOOLS	BLENDED LEARNING APPLICATION
Classroom	<ul style="list-style-type: none"> <li>• Assign work, collect, and grade digital work</li> <li>• Post class announcements and engage students in discussion</li> <li>• Manage Google Drive activity for each class</li> </ul>
Drive	<ul style="list-style-type: none"> <li>• Organize files in shared folders</li> <li>• Build student portfolios</li> <li>• Collaborate on curriculum and faculty resource collections</li> </ul>
Documents “Google Docs”	<ul style="list-style-type: none"> <li>• Collaborate on written assignments and projects</li> <li>• Provide teacher feedback and editing through comments and “suggesting” mode with Documents</li> <li>• Design collaborative multimedia presentations using Slides</li> <li>• Explore data, charts, and information management through Sheets</li> <li>• Survey students and document progress easier with Forms</li> </ul>
Email	<ul style="list-style-type: none"> <li>• Communicate with students</li> <li>• Facilitate peer communication</li> <li>• Teach digital citizenship and communication standards</li> </ul>
Calendar	<ul style="list-style-type: none"> <li>• Help students manage their schedules</li> <li>• Post homework assignments or class events to shared Calendar</li> </ul>
Blogger	<ul style="list-style-type: none"> <li>• Engage students in class or individual blogging</li> <li>• Connect with other classes to form learning communities</li> </ul>

properly with one another. Many learning applications are now integrated with GAFE or Office 365 so that students can create their accounts and log in via a “single sign-on,” meaning they sign-on with their GAFE or Office 365 credentials. Further, each environment has additional tools, including many learning applications, which can be added to a user’s dashboard. Because of this integration and supplemental application marketplaces, it is important for school and district leaders to carefully consider the selection of the productivity environment early on in the *Blended Learning Roadmap*; not doing so can lead to complications down the road. For example, a school selecting Chromebooks as a device would find a higher level of integration with a GAFE environment than a Microsoft one.

## Learning Management Systems

Unlike a productivity environment where teachers and students actually do their work, the learning management system (LMS) is a space where work and ideas are shared. An LMS

is a software application or web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. (Rouse, 2016, p. 1)

An LMS has the advantage of offering a wide range of features and functionality in a single place with a single sign-on.

Many schools adopt an LMS early in their transition to a blended learning model as a strategy to get all of the teachers on one campus or in a single district on the same page in terms of technology. For schools and districts, the selection and implementation of an LMS is an easy place to start because it provides teachers a place to house, organize, and disseminate information related to their courses. The LMS is found in Phase 2: Transitions in the *Blended Learning Roadmap* to give an opportunity for a small group of teachers to pilot before a full-scale rollout.

Teachers can use an LMS to create individual courses, post assignments, engage students in asynchronous discussions, administer tests and quizzes, and track student progress.

This convenience is incredibly attractive given that most schools and districts transitioning to a blended learning model are wrestling with the logistical challenges of getting a large number of teachers and an even greater number of students online successfully. Consistency and ease of use are often paramount concerns for leaders who want to make integrating tech as painless as possible—especially for members of the school community who have resisted the move to integrated online learning into the traditional classroom.

The cost of an LMS is a primary factor in the selection process, so district leaders must identify a clear budget before exploring the LMS market. Once a budget has been established, leaders should identify the features and functionality that are important to teachers. Ideally, teachers should have an opportunity to “test drive” more than one LMS to see which ones are most user-friendly and provide the functionality that is most important to them. Since several LMS platforms operate with a freemium business model, schools can proceed through the pre-pilot and pilot phases using mainly individual teacher accounts, keeping in mind the extra features that come with an enterprise fee-based integration.



## LINKS TO LEADERSHIP: ACCESS TO TECHNOLOGY



Leaders must make decisions about large scale purchases, like the purchase of a learning management system (LMS). Here are some questions to consider.

- What is the school or district budget for purchasing technology hardware versus applications?
- What are the benefits of investing in a single LMS for all teachers as opposed to allowing teachers to select and independently use a free LMS? What added features, support, and/or functionality of the LMS come with a school or district purchase?
- Who will take the lead in researching LMS options? Will this person compile a “short list” of LMS options for the school or district to consider?

Decisions and purchases should be part of the larger conversation among stakeholders about the tools needed to shift to a blended learning model. Teachers are more likely to use a learning management system if they’ve participated in the conversation about **why** purchasing an LMS will help them to more effectively shift to a blended learning model, and which features are necessary to engage students in work related to their curriculum.

- How will you engage teachers in a conversation about the features and functionality they want in an LMS?
- Will there be time set aside for teachers to explore LMS options?
- What method will you use to survey your staff to compile data about their preferences?

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## LINKS TO LEADERSHIP: PROFESSIONAL DEVELOPMENT

Once an LMS is selected, teachers need to be trained how to use it. Because each LMS has many different and distinct features, at first it can be challenging for a teacher to navigate. Professional development can be handled in a few different ways.

- Schools and districts paying for an LMS may receive training from the LMS company—depending on the contract. This training may be online via on-demand webinars or in-person. If they are on-demand webinars, leaders should build time into the schedule for teachers to watch the webinars and explore the tools together. The best strategy for this type of training is to group teachers with colleagues who teach their same subject and/or grade level and focus on one feature of the LMS at a time. A series of short trainings that encourage teachers to play with a single feature and then return to their classroom to try that feature with students is more effective than a lengthy training that attempts to cover every aspect of the LMS in one sitting.
- If the LMS company sends a trainer to deliver professional development, it's important to complement that with “playtime” sessions where teachers are encouraged to experiment with different features while surrounded by colleagues with whom they can have conversations and troubleshoot.

Schoology, an LMS or course management system, published a resource titled “7 Best Practices for Getting Faculty Buy-in for a New LMS” (2016) that identifies the following tips for getting teachers to adopt and consistently use an LMS:

1. Communicate with teachers before, during, after, and often
2. Provide iterative training, not a single training event
3. Use your LMS to deliver professional development to model the value of your LMS for learning
4. Focus on ease of use
5. Support your early adopters
6. Embed your LMS in your institutional culture
7. Emphasize how the LMS will improve student learning

These best practices help make the adoption and use of an LMS more successful.

Although the learning management systems attempt to offer one-stop shopping in terms of technology needs, it's important that teachers also explore stand-alone apps and tools.

Just as there isn't one tool in life that solves every problem, though the Swiss Army Knife valiantly attempted this feat, there is no one piece of technology or software that solves every problem. The reality is that certain tools work well for particular tasks. It's important for teachers and students to understand this if we are to move students from technology literacy to technology fluency.

Certain tools work well for particular tasks.  
#BLinAction

## Building Technology Toolboxes to Promote Technology Fluency

Technology literate students know what to do with technology and how to use it competently to accomplish a task. Fluency requires more experience and expertise. Students who are technology fluent know *when* to use a tool, and *why* the tool they are using is the best tool for a specific job. Beyond simply using technology competently, fluency requires that students demonstrate a high degree of skill or proficiency when selecting and employing technology.

It is easier to move students from literacy to fluency if they are exposed to many different types of technology tools during their time in school. If students are encouraged to use a range of tools to complete a variety of tasks, they begin to appreciate that different tools do different jobs well. Then when they approach a novel situation, they are more likely to select the best piece of technology for that specific situation or task from a range of tools. Because apps and tools change, it's also crucial that students develop flexibility when it comes to using technology. If students are only exposed to a single LMS or technology tool, they will struggle to solve problems if that particular tool is no longer available.

If a school or district decides to purchase and use a learning management system, teachers should still be encouraged to build their own technology toolbox composed of a collection of apps and online resources. Although some teachers balk at the need to create various accounts and remember multiple log-ins and passwords, often applications and online web tools can be integrated into an LMS for convenience or accessed using the single sign-on process.

## Deciding on the Right Device

In U.S. Secretary of Education Arne Duncan's "Future Ready Schools: Building Technology Infrastructure for Learning" (2014), he accurately states that