IT Planning Guide: Building the Case for Mobile Technology Adoption in Elementary Schools
Enabling anytime, anywhere learning, mobile technologies have produced impressive gains in educational outcomes in grades K-6. Drawing on the insights of experts, this planning guide is designed to help IT leaders build a business case and justify IT investments in new mobility programs.

IT leaders responsible for the successful adoption and management of mobile technology in elementary school environments know the importance of building a solid business case. You need to persuade your key decision-makers and influencers—administrators, superintendents or principals, and often parents—that investing in mobile technology will prepare students and improve learning outcomes better than existing methods.

By developing and presenting a powerful case, IT directors can get commitment to the project that can sustain its success into the future.

CLARIFYING VALUE, DRIVING CONSENSUS

The process of developing the business case enables all parties to collaborate, clarify needs and value, and reach consensus. It’s about more than obtaining initial approval. It’s about ensuring that all parties critical to the sustained success of the program are fully onboard from the beginning.

The business case is particularly critical in terms of engaging your organization’s senior leadership, whether at a school or district level. “My perspective is that when you do not build a business case and then review it with senior management to have it approved, you run a higher risk of being out of sync with the [organization]

than when there is a strong level of communication within the senior management team,” says Mike Sisco, a senior consultant with Cutter Consortium, an organization that has closely studied the impact of business cases on IT success.

While IT leaders may not relish the challenge of conducting analysis and assembling documentation, it’s clear that a solid business case can deliver dividends in both the short and long term. IT leaders who can manage the business case—both document and process—in a disciplined fashion are far more likely to achieve their objectives when it comes to mobile adoption.

So let’s examine the four essential steps toward producing a successful business case for mobility technologies:

1. Identify opportunities and challenges
2. Conduct cost/benefit analysis
3. Recommend technology solutions
4. Present information to stakeholders

1. IDENTIFY OPPORTUNITIES AND CHALLENGES

Business cases must begin by thoroughly articulating the limits, costs and consequences of the status quo. Why is it necessary to change? Unless this question is fully and effectively answered, the project is likely to stall. You may not have adequate support (or approved funding) to carry it forward.
Most K-6 educators contend that 1-to-1 computing programs, and more particularly, mobile technologies used in support of those programs, result in students receiving an education that fosters 21st century skills such as digital literacy, creativity and collaboration. Without modern mobility technologies, schools and students risk falling behind.

By analyzing and articulating the problem to be solved, IT leaders also prepare themselves to solve it. They learn the full extent of the challenge and begin recognizing its root causes. Stakeholders—most especially, administrators and teachers—have an opportunity to provide their perspective on the current situation and perhaps even identify problems that were not known. Further, this discussion helps all parties understand the greater consequences of not taking action. Stakeholders need to be committed to change for the project to be successful.

From the perspective of mobility in K-6 education, you’ll want to consider such issues as:

• What impact is this mobility program likely have on student performance or engagement?
• What have other schools or districts experienced with mobile technologies?
• What are some “lessons learned?”
• How will security concerns be addressed?
• What are the funding options?
• Where can you start small with a pilot?
• What impact will the proposed solution have on the decision’s stakeholders?

2. CONDUCT COST/BENEFIT ANALYSIS

Once you’ve outlined the issues and obtained input from stakeholders, it’s time to move on to find answers to these questions. Skilled decision makers will be most interested in this section of your business case. They’ll need to see that projected benefits clearly outweigh projected costs if they are to give a project the green light.

So what are the likely costs that must be considered?

Ken Brown, vice president of innovation and technology at Sterling College, identifies five major categories that typically account for most of K-12 technology project budgets and provides some estimates on typical funding ratios. Among them:

• **Hardware.** This typically is the largest category of the budget. Investments must be made in laptops, notebooks and tablets as well as servers and charging stations. While the size of hardware budgets will vary significantly based on project scope, experts recommend a limit on hardware spending to 50 percent of the total budget.

Keep in mind that in elementary schools, IT directors must ensure they have mobile devices that can take the wear and tear that younger students are likely to place on them. Ruggedized notebooks have proven especially popular in this setting. It’s also common in this environment to rely heavily on technology carts that can bring the devices—be they laptops, notebooks or tablets—into the classrooms.

Some schools are moving toward “bring your own device” programs, whereby students bring their own laptop or tablet. Proponents argue that these multi-device programs are the wave of the future, as students use the technology they already know and love and school funds are invested in infrastructure and content. However, they may not be appropriate for younger students.
• **Software.** This category includes end-user applications as well as server-level products such as security, networking and backup software. Software typically represents about 15 percent of the budget, Brown says.

One of the biggest trends in mobile learning is the increased interest in online learning assets such as digital textbooks and web-based assessment tools, according to the Consortium for School Learning (CoSN). For instance, the state of Florida is calling for all textbooks to be digital by 2015.

• **Infrastructure.** Technology infrastructure includes the cost of wireless broadband (and, to some extent, wired) infrastructure. It will include network components such as switches, hubs, routers, etc. While the age, condition and architecture of a particular building can have a significant impact on this category, Brown recommends allowing at least $1 per square foot for technology infrastructure costs.

• **Maintenance and Support Services.** Hardware and software will inevitably require repairs, upgrades and other services to ensure it performs effectively. As a rule of thumb, Brown suggests setting aside $2 for every $10 spent on hardware, which is 10 percent of the overall budget, for this category of expense.

• **Professional Development.** Projects often fail when professional development is overlooked. Users must understand the application and relevance of mobile technology if they are to fully take advantage of it. Therefore, training must be given clear attention in the overall technology budget. Generally speaking, Brown says it makes sense to budget $5 on professional development for every $10 spent on hardware or 25 percent of the overall budget.

While the costs of any mobile technology project are certainly clear and present, the benefits may prove less tangible and more elusive. To present them, it can help to cite the experiences of other schools engaged in similar projects. But, again, the benefits are likely to be most relevant if they are fully aligned with the objectives of your final decision makers.

Though definitive stats can be hard to find, many studies have been published on mobile projects. For example, Chicago Public Schools conducted a tablet pilot in 2010-2011 focusing on grades 3-8. Teachers overwhelmingly reported increases in the quality of instructional strategies and methods, quality and frequency of teacher feedback, and student engagement. Students completed homework more often, spent more time on task, and gained motivation and confidence, according to teachers.

Another key benefit that schools are realizing is ubiquitous access to technology. In fact, schools may not even need to purchase all mobile devices in order to achieve such goals. They may merely need to seed their schools with the devices or provide devices to those who can’t otherwise afford them. Research suggests that families may do the rest in many cases. According to a survey by Project Tomorrow, 62 percent of parents report that if their child’s school allowed devices to be used for educational purposes, they would likely purchase a mobile device for their child.

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**Return on Mobility Investments**

What types of benefits are school (and district) technology leaders using to justify investments in mobile technology adoption? Here are just a few:

- Higher performance in relation to academic measures
- Greater student engagement
- Anywhere, anytime access to learning tools
- Deeper connections between school and home
- Greater digital equity
- Higher teacher satisfaction and productivity
- Greater student preparation for 21st century skill requirements
- Reduced operational costs, including lower IT support costs and less power consumption from energy-efficient computers.
BUILDING A CASE FOR MOBILITY IN K-6: SUCCESS STORIES

Here are a few examples of how schools have justified and projected the impact of their mobile technology endeavors:

**Supporting Writing and Math Instruction: Jamestown Elementary**

Jamestown Elementary School in Arlington, Virginia, first embraced notebook devices in 2004 to support writing instruction. More recently, the school has begun providing device “tool kits” for every grade level. The tool kits support an array of wireless devices including tablets, notebooks and digital audio players. The school built its case for continued investment based on its ability to take on a growing number of activities such as math and writing.

While the school originally began by applying mobile technology to writing instruction, IT leaders built the case for continued investment based on encompassing new subject areas. Rolling out the program incrementally proved much easier than trying to introduce it upfront across the curriculum, explains Camilla Gagliolo, the school’s instructional technology director. “Using the devices provides an immediate and transparent way to do research, practice math facts, take notes and create presentations, as well as access the ever growing number of available learning apps.”

**Reading and Writing Skills Development: Henderson Inclusion Elementary**

Another elementary that made a successful case is Dr. William W. Henderson Inclusion Elementary School, a Boston public school that serves 230 students. One-third of students have mild- to severe-disabilities, so the demands on the school are quite high. To attract grants and partnerships that fund mobile technology programs, the school’s IT leaders needed to demonstrate an effective return on investment.

So far, the school has targeted reading comprehension as well as other state measures of progress and performance. “We’re seeing data showing that the amount of time students spend on reading has increased, and technology is a big part of that,” says Tricia Lampron, the school’s principal. “Students also produce more writing output in the same amount of time, and their work better represents their cognitive abilities.” Meanwhile, Spring 2009 results on the Massachusetts Comprehensive Assessment System (MCAS) show that the school made Adequate Yearly Progress on Language Arts, which it was unable to accomplish the prior year. Finally, teachers unanimously “agreed” or “strongly agreed” in a recent survey that using the mobile computers improved the quality of instruction in class and improved student achievement in class.

However you decide to calculate and assess these benefits, it’s important to map them to the concerns of stakeholders. Business case developers will also want to ensure their claims are conservative and credible. To the extent possible, it makes sense to try to validate assumptions and projected benefits with stakeholders in the course of assembling the case.

**3. RECOMMEND A SOLUTION**

Before recommending a particular solution, the business case should lay out various alternatives for mobile learning based on the options listed above. This list of possible solutions will ensure the organization doesn’t get bogged down in a series of “what if” discussions. It shows that viable options have been explored and considered. Indeed, the final recommendation will be stronger and more authoritative if it’s clear that key alternatives have been fully assessed.

Ultimately, the recommended solution should inspire and persuade stakeholders that a given direction is in the organization’s best interest. While a more thorough accounting of benefits in relation to costs will be presented in the next section of the business case, this section is really designed to provide clarity around the recommended course.
In addition, the business case must articulate how the solution will be implemented and how it will deliver value. Stakeholders are unlikely to be comfortable with the solution unless they are confident that it can be implemented effectively within a projected budget.

Finally, it’s necessary to answer the question why the mobile technology project must be implemented now as opposed to later. To address this question, the costs and consequences of delay must be explored.

4. PRESENT THE BUSINESS CASE

The presentation of the business case takes two forms: printed document and face-to-face.

With regard to the document, it’s important that it begin with a compelling executive summary. This is something that typically should be written when the rest of the research is complete. The executive summary should lay out the most critical points—factors that are essential to the case.

With regard to the in-person presentation, best practice is to keep the meeting under an hour while allowing for an additional 30-60 minutes for discussion. It shouldn’t take longer to present the case because the key stakeholders, as participants in the initial research and through validation of its findings, should already be familiar with its key contents.

In other words, the presentation should be basically a formality—a fait accompli. Key stakeholders should already be committed to the endeavor before the case is presented in person. The meeting should serve the purpose of reiterating the logic behind the project and establishing final consensus and commitment.

CONCLUSION

Successful business cases identify key challenges, recommend relevant solutions and justify solutions with careful cost/benefit analysis. IT leaders responsible for ensuring the adoption of new mobile technology programs in elementary school environments must follow these practices. But they must also think of the business case as a process, not just a document. In so doing, they can ensure stakeholder buy-in occurs when the case is being assembled. Having built support for the case, presenting it becomes a mere formality on the road to adoption.

SOURCES


