Seven Ways to Boost 1:1 Program Success

This white paper examines the **positive impact 1:1 computing is having** on learning outcomes and **highlights seven ways to ensure your 1:1 strategy is successful** and sustainable.

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When it comes to evangelizing 1:1 learning, **the best advice is this: Communicate early and often** with everyone who has an interest in bettering students' learning outcomes.

More and more teachers and experts are turning to 1:1 computing to better empower and prepare their students for success now and beyond graduation. This technology-centered strategy to learning allows deep personalization, allowing teachers to leverage each student's strengths and build skills on an individual basis. However, 1:1 depends on each student having access to technology — not just to create "educational parity" but also to fuel the desire to learn.

Today, millions of students and teachers worldwide are participating in 1:1 programs designed to improve student outcomes through new ways of learning, collaborating, and creating. As both instruction and assessment become more and more technology-driven, 1:1 is a perfect fit for new digital classrooms and districts. These programs are designed to:

- Improve educational outcomes
- Empower new efficiencies in learning design and delivery for students, teachers, and administrators

1:1 computing holds particular appeal for educators in the US, where student populations reflect diversity in culture, language, and access to technology. In addition to this diversity, the need for graduates with critical-thinking skills, shrinking educational budgets, and the proliferation of national and statewide digital assessment standards adds to the pressure to re-imagine the way students learn.

1:1 computing is the easiest way to ensure each student has a personalized educational experience that leverages his or her strengths and delivers extra help as needed. Because technology enables progress monitoring in real time, teachers can intervene long before a failing grade occurs, as well as give more advanced students new tasks and opportunities.

Whether you're launching a comprehensive 1:1 initiative or a narrowly defined pilot program, it's clear that advanced planning is pivotal. Leading administrators and teachers who are pioneering 1:1 point to seven success factors critical to improving learning outcomes, as discussed below.

1:1 DEFINED

1:1 computing traditionally refers to each student being assigned a device for their exclusive use, and this may or may not include taking the device home. In contrast to traditional lab and laptop cart programs, 1:1 ensures students have consistent access to technology, opening up new opportunities for digitally driven teaching strategies.

1. Policy

Policy development begins with building consensus and setting clear expectations. Smart educators intentionally set out to build policies that govern each major aspect of your 1:1 program.

Building policy in advance gives you an opportunity to solicit ideas before finalizing program elements. In addition, concentrating on individual policies first allows you to construct a 1:1 framework that remains invaluable as you refine and expand the program.

Focus first on the potential of 1:1 computing to **improve learning outcomes.**

Funding and sustainability

Rather than focusing only on immediate revenue sources, look for sustainable financial support as well. While initial funding is critical, it's even more important to identify sources of sustainable funding to keep the effort going. By relying on discretionary or variable funding, you might find your program out of resources just as you are finding momentum.

Communications

To build support for your plans, set out a plan of strategically timed communications with decision makers from instruction, administration, and IT. Focus first on the potential of 1:1 computing to improve learning outcomes — a goal shared by all key stakeholders, including boards of education, teachers, and staff, as well as external stakeholders, including parents and students. Schools seeking financial or "in kind" support from the local business community should also share the 1:1 plan with influential civic and business leaders.

Site readiness

Once your campaign for 1:1 learning is gaining momentum with your key supporters, it's time to focus attention on the individual schools slated to participate. Each site will need to be evaluated regarding its readiness from a technology standpoint, including end-point devices, network connectivity, and other necessary infrastructure.

Instructional readiness

Once you've evaluated a school's site suitability, it's time to focus on instructional readiness. You'll need to determine what digital course content is available and how much must be converted from paper. After you've identified the gaps, you'll need to create a process for choosing or building the content repository that will drive students' digital learning.

Professional development is equally essential, for students, teachers, and administrators. Teachers' technology skills need to begin with baseline computer use and expand to address how to drive consistently successful digital learning.

Metrics and reporting

It's key to establish educational goals in advance of rolling out technology. Educators must measure against these desired learning outcomes to demonstrate the effectiveness of 1:1 and to identify opportunities for improvement. They must also align their plans with evolving digital assessment standards and priorities, ensuring that their program is ready to meet both technology and curriculum standards.

The new focus on student data demands careful assessment, reporting, and security. This information is being used in powerful new ways, giving educators and policymakers relevant and accurate data to drive careful analysis and decision making at the student, school, district, state, and national levels. Technology can also ease how this information is used, with intuitive online dashboards and policy-driven data security to keep sensitive records safe.

Security and privacy

A comprehensive approach to students' computer usage, security, and privacy issues ensures that students and their information stay safe online and protects the integrity of digital learning and assessment.

For example:

- **Will devices stay at school or travel off-campus with students?**
- **Who will responsible for lost or damaged laptops — students, parents, or teachers?**
- **How will you handle replacement of missing laptops?**
- **Will you be able to erase laptop contents remotely in the case of theft or loss?**
- **Will you make "loaner" laptops available?**
- **How will content filtering software be set to enable educational searches, while protecting students from exposure to sites with unacceptable content?**
- **How will data and content be securely accessed by students, teachers and administrators?**

Teachers involved in 1:1 programs often cite their own lack of training as the most significant barrier to successfully using technology in the classroom.

2. Professional development

The far-reaching potential of 1:1 to transform students' educational experience requires that everyone involved knows how to leverage technology towards better outcomes and stronger collaboration. This knowledge hinges on the availability of training designed to meet the needs of each educational stakeholder and participant.

Teachers involved in 1:1 programs often cite their own lack of training as the most significant barrier to successfully using technology in the classroom. Expect this frustration to multiply if you distribute laptops to students before teachers know how to use the devices themselves and how to use them to teach.

While baseline training concentrates on building computer literacy, successful 1:1 computing also requires a full range of technology integration capabilities. For example, teachers who comfortably move from application to application and from the Internet to content creation and distribution software and back again will gain the most from a 1:1 environment. Ultimately, their lesson plans and course materials will include the full range of digital content, including rich multimedia.

SAMPLE RECOMMENDED USAGE POLICIES

Prescriptive policies addressing each of these concerns offer an optimal way to keep the various schools "on the same page" when it comes to 1:1 learning. While it's recommended that each school system or district create its own unique checklist, the following baseline policies offer a place to start:

- Set out acceptable usage guidelines
- Recommend care for laptops
- Block access to violent games and/or specific websites
- Require originally installed software to remain on the laptop
- Prohibit installation of additional software
- Create a reliable, easy-to-use laptop-tracking system
- Consider random inspections to check condition and software
- Collect insurance fees from students
- Decide if students can take laptops home for the summer
- Secure written permission from parents before distributing laptops

Teachers involved in 1:1 programs often cite their own **lack of training as the most significant barrier** to successfully using technology in the classroom.

3. Curriculum

Once launched, 1:1 computing opens up an exciting new world of potential learning opportunities in and out of the classroom. You can tailor your curriculum and electronic courseware to meet digital learning and assessment mandates. For example, while past testing may have only identified particular areas of academic concern, you can use 1:1 as an opportunity to strengthen and focus resources spent on those gaps.

You may decide to emphasize certain learning areas to prepare your students for success in specialized competencies or career skills. From English language learners to vocational prep, being dynamic and responsive has never been easier. This phase of 1:1 preparation provides schools with an opportunity to enlist educational experts, civic leaders, and industry in a collaborative process designed to equip students with marketable, in-demand skill sets today and tomorrow.

Teachers have their own technology-focused curriculum concerns. Whether you build from scratch or choose a hosted application, your solution must be easy for teachers to use and simple for IT to manage, secure, and expand.

4. Content

Traditionally, new content and ideas had to wait as long as seven to ten years to appear in a textbook's next revision. With the rapid evolution in today's digital age, a decade can feel like centuries. That's because digital content can be updated quickly and easily, via the Internet, compressing the cycle time between revisions from years to days. Today's e-books and digital content cost less than traditionally printed volumes and add virtually no weight to students' already bulging backpacks. The Internet delivers a wealth of fresh content to teachers and students every day, much of it available free of charge.

In addition, teachers can access a host of educational resources on a subscription basis. These grade-specific resources include information, tools, and materials appropriate to subjects such as English, history, science, mathematics, and Spanish. Each level-specific subject area also features interactive components, such as games, that incorporate and expand students' critical-thinking skills.

Measured outcomes, tailored to the subject matter and grade level, complete each resource. These rich media experiences can transform even the most passive student into an actively engaged learner.

5. Devices

As you think through your school's approach to 1:1 computing, you'll need to evaluate lots of technology to find the devices most appropriate to your learning goals and IT infrastructure. The challenge is to carefully balance competing priorities around student expectation, teacher need, IT readiness, state device standards, and budget.

Laptops and tablets can both enable K-12 students and drive 1:1 computing, but meeting assessment standards and other technical requirements is critical. These mobile devices bring lightweight design, long battery life, and exceptional connectivity to students and teachers alike. It will be important to ensure all devices are built to high standards of reliability and durability, which will help your IT survive the daily challenges and hazards of 1:1 service.

Regardless of the device combinations you employ in 1:1 learning, each should be customized for your needs. This includes a reliable up-to-date OS, a full set of productivity-enhancing applications, engaging digital media tools, collaborative software, and Intel processors to keep it moving with speed and reliability.

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6. Assessment

1:1 computing can give teachers and administrators a direct line into what students are doing day to day and how they are performing against standards. This data becomes an “early warning system” or leading indicator for teachers, identifying the students who require additional attention and even specifying the sections that are proving troublesome.

In addition, the individualized approach to learning enables teachers to fine-tune their course materials as needed based on class comprehension and retention. Having student-specific data online further empowers educators to share results with parents easily and at any time during the learning period.

Finally, individualized performance data can be “rolled up” to show trends across classes, departments, schools, districts, and even states. This same data also proves invaluable as school systems and districts quantify their results for state regulators and local boards of education. In order for this potential to be quickly realized, professional development must help teachers and administrators learn to leverage new tools and data sets.

7. Classroom management

While it may seem that students are the ones benefitting the most from 1:1, this approach to individualized learning helps teachers as well. Teachers that are hesitant about 1:1 computing often point to losing control over the classroom as a reason to be reluctant in their support of 1:1.

In actuality, the reverse is true. 1:1 learning actually gives teachers more control over their classes. For instance, technology enables teachers to control each student’s laptop, assuring that everyone sees the same information and images at the same time. Technology also gives teachers new capabilities to interact with student devices, helping eliminate classroom disruption and distraction.

Conclusion: the power of a plan

New ideas about digital learning and assessment are transforming education, and 1:1 computing gives students the best opportunity for success in this new digital-intensive learning environment. Smart, effective 1:1 computing gives both teachers and students access to a wealth of rich media and digital content designed to inspire achievement in new ways.

However, making 1:1 computing successful requires more than just adding technology to the classroom. Focusing on the seven key challenges discussed here will help schools and districts create a blueprint that carefully captures their challenges and priorities while providing a clear plan and next steps. Once these difficult decisions are made, your 1:1 success begins.

To learn more about designing 1:1 programs, visit www.lenovo.com/education or email eduteam@lenovo.com.