

Study Guide

POWER UP

**MAKING THE SHIFT TO 1:1
TEACHING AND LEARNING**



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Chapter 1: We Have 1:1; Now What?

Synopsis

The opening chapter of *Power Up: Making the Shift to 1:1 Teaching and Learning* addresses many of the questions you may have about teaching with a computer or tablet for every student. For example: What should you do about distractions on the Internet? How will you learn what you need to teach effectively with technology? In what ways will greater access to computers and tablets change your classroom? What about students who do not have Internet access at home? These are valid and common questions, and this book will offer guidance and answers from other teachers who have stood in your shoes.

The second part of the chapter addresses the things you need to think about first as you make the shift to a 1:1 classroom, including acceptable use policies, management decisions, and tips for the early days of technology exploration. The chapter ends with a recap of the ways a 1:1 classroom changes our work after dismissal, when we assess progress and make plans for the next day.

Guiding Questions

- This chapter lists many common questions for teachers new to 1:1. How have these answers addressed your concerns, and what questions do you still have?
- The chapter encourages you to “commit to one small solution.” What will you try in the first few weeks of 1:1 teaching and learning?
- The chapter also mentions “shooting for the moon,” to envision greater possibilities for teaching and learning when all students have computers or tablets at hand. What are your long-term goals for integrating technology effectively?

Quotes to Ponder

Many teachers feel some “digital anxiety” (Kajder 2003) about teaching with 1:1. Even those who consider themselves very tech savvy know that there is a difference between feeling personally proficient with technology and feeling confident about using educational technology with students. (2)

In a 1:1 classroom your students have the tools to produce high-quality work in your classroom. Let them work. (14-15)

Ideas for Work Groups

The Plug In box in the middle of Chapter 1 suggests visiting a 1:1 classroom. Plan a visit on your own or with colleagues, and try to see several different grade levels and/or subjects.

The Power Up box at the end of the chapter suggests getting familiar with the device(s) students will be using in your classroom. Plan to attend a technical training, borrow a device to use on your own, or search for video tutorials to learn more.

Chapter 2: Communication and Workflow

Synopsis

Chapter 2 opens with a visit to a seventh-grade science class to show how a good learning management system (LMS) helps a 1:1 classroom run smoothly. The rest of the chapter addresses other suggestions for communication, digital citizenship, and workflow. Another example shares how a teacher solved a workflow problem, and then authors Diana Neebe and Jen Roberts suggest some tools that will help with workflow in the classroom. The authors also offer guidance about the logistics of running a digital classroom, from organization to monitoring student work. The chapter ends with a review of the changing roles of teachers and students in 1:1 classrooms.

Guiding Questions

- This chapter opens with a visit to a 1:1 classroom using an LMS to guide and support student learning. How would an LMS be useful to you and your students during class and at home?
- Questions about organization and classroom management are often the most challenging for teachers new to 1:1. What concerns do you still have about workflow in your classroom? Which tools might work best for you and your students?
- The roles of teachers and students often change in a 1:1 classroom. What adjustments do you anticipate? Share one concern, as well as one hope for how the shift might lead to improvements in teaching and learning.

Quotes to Ponder

As educational technology coaches Tanya Avrith (2014) and Kim Meldrum like to say, “You can’t inoculate students with digital citizenship.” In other words, teaching about digital citizenship is not a one-time lesson that should guide students forever. Helping our students successfully navigate a digital world is something we work on in our classrooms every day. (25)

It may be frustrating to hear [when students compare your classroom to others], “Well, Mrs. V. shares documents by using. . .” but before you get frustrated with the comparison, remember that this student is making a suggestion about efficiency that might be worth looking into. (26)

Ideas for Work Groups

It’s crucial to have a central online space where you can manage the work in your classroom. Discuss how your team will address this, and look at options together. If you are mandated to use a particular LMS, spend some time exploring its features as a group and discussing how you could use it with students. Many LMS platforms support teacher collaboration. How can you make the best use of this function?

Try a workflow experiment. Give your students an assignment or assessment online and have them turn in their work digitally. Consider giving a common assignment or assessment. With your team, decide on a process and then debrief after your students have completed the work. What went well, and what could be better? How could you make the workflow process more efficient? Share your solutions.

Chapter 3: Engagement

Synopsis

Chapter 3 explores three core conditions for student engagement—connection, perplexity, and curiosity—and uses a series of classroom vignettes to illustrate these conditions. The second half of the chapter details five tried-and-true strategies for increasing engagement in your 1:1 classroom. The authors share reasons why each of these strategies works to encourage and integrate all student voices, put students in conversation with one another, and transform teacher-centered instruction to personalized learning. Using backchanneling, online discussion boards, polling and data collection, interactive feedback systems, and educational games, you can easily enrich the great teaching you are already doing. The chapter closes with a brief discussion of disengagement and offers suggestions for ways to detect and reduce distractions in the 1:1 classroom.

Guiding Questions

- We always start with the premise that “good teaching is good teaching.” What are some examples of lessons from pre-1:1 that cultivated connection, perplexity, or curiosity to engage students?
- Which of the five strategies for engagement are you most excited to try? Which are you most reluctant to try? How could one or more of your colleagues support you in trying out a new tool? (For example, could you have an extra teacher in the room the first time you do a backchannel?)
- What are your biggest concerns about disengagement and distraction? How have you addressed these challenges in your classroom already? With your colleagues, brainstorm a game plan for handling off-task students in your class.

Quotes to Ponder

A 1:1 classroom creates the opportunity to make all learning experiences active and productive, and to transition from the old paradigm in which one student would participate at a time to a new normal in which everybody does the thinking and everybody contributes to the learning. (37)

The first instinct of many teachers new to 1:1 is to take away the device and hand the student a textbook or paper. We suggest you avoid that tactic. When you take away the device, you implicitly send a message to the distracted student and to the rest of the class that the work he or she was supposed to be doing with the computer or tablet was not meaningful or important. (53–54)

Ideas for Work Groups

Critical reading is a central skill across the curriculum. The Plug In box in the middle of Chapter 3 suggests using a digital text in place of a paper one, or trying a collaborative reading activity. With your colleagues, brainstorm a text (or set of texts) that would benefit from this type of engagement.

The Power Up box at the end of the chapter encourages you to try out one of the five strategies for increasing student engagement: backchanneling, online discussion boards, polling and data collection, interactive feedback systems, and educational games. Pick one of the strategies to try out with your colleagues before taking it live in your classroom. Consider watching an online tutorial or testing a few different programs or tools before deciding on what’s best for your classroom.

Chapter 4: Collaboration

Synopsis

Chapter 4 opens with a visit to a middle school where students bring their own computing devices from home. Although they're using a wide range of devices, they collaborate easily. Teachers can support student collaboration and model the process by effectively working with colleagues through digital means. Sharing digital resources makes the transition to 1:1 easier and improves the variety of materials we can share and use with our students.

Students can collaborate digitally and face-to-face in a variety of ways as well. The chapter discusses collaborative preparation, production, feedback, and presentation; it also provides examples and suggestions of possible tools for each approach. The chapter wraps up with some suggestions for managing digital collaborations (from ground rules to self-evaluation) and information about accessing options for global collaboration.

Guiding Questions

- Do you agree with the authors that collaboration will be an increasingly important skill in work and educational environments? If so, how are you consciously including aspects of collaboration in your classroom activities?
- How—and how often—do you engage in curriculum collaboration with your colleagues? What changes would you like to make? How could digital collaboration tools help you share resources and find time to work together?
- Neebe and Roberts suggest that collaboration can take the form of collaborative preparation, production, feedback, and presentation. Which of those forms are your students using most often? How could you modify activities to include more collaboration in other aspects of instruction?

Quotes to Ponder

When digital collaboration becomes the norm for teachers, it breaks down the walls of our classrooms. Imagine for a moment that the curriculum binders on your shelves are enchanted so that any time a colleague adds a paper resource to his or her binder, the same resource magically appears in your binder as well. You would only have to open the binder on your shelf to see everything your colleagues had been adding to theirs. (63)

Although collaboration has always been a part of the curriculum, it certainly looks different now that every student has access to technology. The tools we place in students' hands enrich their collaborative experience and make the work they do more closely resemble the work they will continue to do once they leave our schools. (65)

Ideas for Work Groups

The Plug In box in the middle of the chapter encourages you to set up a shared online folder with your colleagues. Discuss that possibility and decide on a tool you would like to use to do so. (Watching short tutorial videos about each tool may help you decide.) Create subfolders within your shared folder and name them by unit or something that makes sense for your team.

Modify an activity in your classroom to make it more collaborative. Collaborative preparation can be an easy way to get started. What can students create together that will enable all of them to work on the next part of the project? Brainstorm options as a group, share the process of creating resources, and debrief about how this worked with students.

Chapter 5: Audience

Synopsis

Giving students a wider audience for their work can vastly improve the quality of their productions and often piques their interest in the project. Blogging, e-publishing, connecting with professionals, video conferencing, and submitting work to professional sites are all ways that students can share their work with a larger audience.

The second half of the chapter shares an example of a unit in which students created and published a book about a current world issue. The chapter closes with criteria for making decisions about digital publishing tools, setting expectations for students, ensuring rigor in the assignment, and reflecting on the process.

Guiding Questions

- What experiences have you had with digital tools that can help students reach a wider audience? Discuss your thoughts about how blogging, e-publishing, connecting with professionals, conducting video conferences, or submitting work to professional sites could be incorporated into your classroom activities. How can you introduce these options to your students?
- Helping students reach a larger audience can also raise privacy concerns. What are the norms for student privacy in your community? What steps will you need to take, such as obtaining permission from parents and administrators, before publishing student work for a larger audience?
- Creating projects and publishing student work for a larger audience also will require time and planning. What specific benefits will make it worthwhile to invest time and energy to create such opportunities for your students?

Quotes to Ponder

When we encourage our students to appeal to a real audience for their concerns, the research they conduct becomes more meaningful and potentially transformative. (90)

Part of the excitement in writing for their younger counterparts, they explained, came from the joy of creating a product that looked professional. They were proud. I couldn't help but think of the saying I heard from my colleague Rushton Hurley: "Work for an audience has to be good. Work for my teacher only has to be good enough." Their work was really good. (104)

Ideas for Work Groups

Choose an audience-building tool—such as blogging, video conferencing, or an e-publishing site—and spend some time exploring it. Share your findings with the group and discuss how you could use the tools to help your students reach a larger audience.

Share the process of creating a project in which students reach out to a larger audience. Consider the academic content, as well as the digital tools, you will offer to students. How will the final project be published, and who is the likely audience? What outcomes do you expect from students?

Chapter 6: Differentiation

Synopsis

The students in our classrooms present a wide array of learning preferences and differences. Fortunately, 1:1 learning can help us meet their needs more effectively and efficiently. The first half of Chapter 6 explores the three primary ways to differentiate learning for all students—by content, process, and product. The second half of the chapter investigates tools and techniques for differentiating instruction and assessment for special populations, including English language learners and students with special needs.

Guiding Questions

- Grab your class roster. Choose one of your class periods, and brainstorm all the different types of learners in that class. In what ways do they differ?
- What are the challenges of creating lessons that reach all learners? What would an ideal learning environment look like? What have you already done to differentiate instruction and assessment? Which strategies have worked well? Which have not worked well?
- Sometimes when we differentiate content, process, or product, complaints about “fairness” start to bubble to the surface. What concerns do you anticipate hearing from students, parents, or colleagues? How might you respond? What are your own concerns?

Quotes to Ponder

In the days before 1:1, if a student needed extra instruction or a modified curriculum, it was darn near impossible to supply that support discreetly. . . . But, with technology in our classrooms and in front of our students, our support can become invisible, pervasive, and targeted. When the rest of the class is oblivious to the extra feedback a student receives, such as the guided notes the teacher e-mailed before class, kids retain their dignity. (106)

Students live and breathe in a “culture of customization.” We know this worldview trickles into the classroom, and we think that’s a good thing! Our flexibility in the classroom helps us meet students where they are and stretch them beyond where they could go without us. (117)

Ideas for Work Groups

The Plug In box asks you to practice reenvisioning what it means to communicate mastery. Many teachers have accepted one “right way” to showcase information or prove understanding. It’s time for us to differentiate by product and rethink our standard delivery. Practice outside the classroom to build fluency with this approach. For example, instead of looking up written driving directions to your favorite restaurant, try annotating a Google Map online. Instead of sending a friend the Web link to a great recipe, create a step-by-step clickable photo guide using Tildee.com. Then, start targeting your classroom. Pick a learning standard and remix it.

The Power Up box asks you to take a closer look at your students’ interests and readiness levels by creating an online survey to collect and organize their data. Create a new Google Form (or other survey tool), and get typing! Consider the skills students will need to be successful in an upcoming unit and the areas in which you have the flexibility to offer them choice.

Chapter 7: Feedback and Assessment

Synopsis

Chapter 7 shares research about effective feedback for learners and common challenges teachers face in providing that feedback. The authors detail six strategies that strengthen feedback in the 1:1 classroom, including providing instant feedback, peer feedback, global feedback, frequent feedback, audio feedback, and reflections on feedback. The second half of the chapter focuses on assessing unconventional assignments, such as videos, podcasts, websites, blogs, digital portfolios, and multimedia presentations.

Guiding Questions

- What are some of the biggest grading woes in your subject discipline? In an ideal world, how would you provide exceptional feedback to students? How would they use that feedback to improve their understanding and skills?
- Consider an upcoming assessment (formative or summative) for which you'd like to rethink the feedback process. Which of the six strategies identified in Chapter 7 do you think can best support your students and ease your workload? What steps would you have to take to implement that strategy?
- Take a look at the Common Rubric for Uncommon Work in the second half of the chapter. How might you modify this rubric to better suit your curriculum?

Quotes to Ponder

This generation of students is programmed for digesting rapid, continuous feedback. Just consider their participation in computer and video games; they innately understand what it means to learn through the feedback loop. . . . Our students are ready for a kind of immediate feedback that is rare in most classrooms. (127)

We love that teaching in a 1:1 environment affords us opportunities to give more unconventional assignments. . . . But when the audience changes from teacher to some other entity, and the format moves from a standard essay or test to a creative project, assessing becomes incrementally harder. The set standards we have used time and time again may no longer seem appropriate, and it is really easy to get swept away by the glitz and glamour of digitally enhanced student work. (140)

Ideas for Work Groups

Two of the suggestions in the Plug In box encourage you to use a survey to provide feedback—either as an exit slip or a form for reflection. Why not practice that process now with your colleagues before you take it live in your classroom? Create a brief survey (we like Google Forms), send it out to a couple of colleagues, and practice gathering the data.

In the Power Up box, the two challenges push you toward using unconventional assessments in your 1:1 classroom. Which of your existing projects or assignments could you replace? Supplement? Select one of the rubrics in the second half of the chapter and modify it for your curriculum.

Chapter 8: Creativity and Innovation

Synopsis

Chapter 8 is structured around two key concepts: creativity and innovation. *Creativity* is defined as the iterative process of bringing imagination to reality, whereas *innovation* is defined as creativity with a cause (or creativity that benefits others). The chapter explores a range of classroom practices that foster creativity, including original work, authentic tasks, abstract thinking, workflow flexibility, and handoff. Moreover, through the example of the Apps for Good project, the authors lay out the process of building innovation into the curriculum through design thinking.

Guiding Questions

- In so many ways, teaching is a creative art. Provide an example from your own teaching of how you have used a combination of convergent and divergent thinking to create something for your students—a lesson, project, or class materials. Recall that *convergent thinking* is the process of narrowing down to one “correct” answer, whereas *divergent thinking* is the process of generating many ideas in search of a creative solution.
- Now apply those concepts to your students. Which types of assignments and work in your class require convergent thinking? Divergent thinking? A combination of the two?
- Go back to the second half of the chapter and review the process for design thinking. Which steps could you easily leverage in your classroom? What roadblocks might occur? Brainstorm, alone or with your team, some possible solutions to problems.

Quotes to Ponder

Most educators feel the crunch of state and district mandates, the push to effectively and efficiently implement standards, and the vocational call to avoid stifling students’ natural love of learning. In this environment of accountability, how do we rationalize spending time on something as fluffy as creativity? The first step is to stop thinking of creativity as an add-on or as synonymous with “arts and crafts.” (162)

If imagination is the process of conjuring up ideas that are not present to our senses, and creativity is bringing those ideas to life, then innovation is like creativity for a cause. In other ways, innovation is creativity that benefits others. . . . Innovation takes creativity out of the personal space and thrusts it into the public arena. Innovation is the response to a greater call to action. (170–171)

Ideas for Work Groups

The Plug In box suggests that you make a list of at least ten ways you could add imaginative thinking and creative skill-building to your next unit plan. Make that list now, with the support of your colleagues.

Take the time now to learn a bit more about the design thinking process. Explore dschool.stanford.edu for handouts and resources. Search [design thinking] on YouTube and watch everything from tutorials to TED talks on the subject.

Chapter 9: Rethinking Class Time

Synopsis

Chapter 9 takes a look at the variety of ways that teachers are changing what happens between the start and end bells—flipping, blending, and rethinking class time. Neebe and Roberts examine the opportunities that arise from 1:1 technology to move curriculum from teacher paced, linear, and prescribed to student determined, dynamic, and responsive. Grounded in research on cognition, the chapter walks teachers through the rationale for making the transition to use time more flexibly. The chapter breaks down the progression by investigating ways to prepare students for a new workflow, engage them with dynamic media, hold them accountable at home, and dig deeper into content during class.

Guiding Questions

- Imagine that the school bells are silent and the clocks are frozen. How would you spend your class period if time were not constrained?
- Now, think of a typical class period. How closely aligned is it to your “dream class”? Identify the friction points. What consumes time but doesn’t include the payoff of student engagement and construction of knowledge? Are there any types of lessons you wish you could shift out of class?
- In moving to a flipped or blended approach to learning, one of the most important considerations early on is how you will hold students accountable for lessons they complete at home. Brainstorm a list of five different ways you can accomplish this without taking up valuable class time.

Quotes to Ponder

[We] have said it before, but [we’ll] say it again: good teaching is good teaching. With or without technology, our end game is meaningful student learning, and that means we must start with the end in mind. Beyond the general questions about learning objectives and outcomes that we ask with any unit, [we] wanted to consider how we could leverage technology to expand what we could each achieve in class. We wanted to move up Bloom’s taxonomy, and from coverage to uncoverage. (188)

Diana teaches at a school founded in 1898, and in a brick building that has been standing since that first school year. If Edison walked the halls without students there, he could think nothing had changed in the world of education. Bring in the students and their devices, though, and he would see the beginning of what he had hoped for: an education system that is dynamic, visual, technologically driven, and open to innovation. (199–200)

Ideas for Work Groups

The Plug In box encourages you to avoid reinventing the wheel. The best place to start is by curating content that’s already available on the Internet. If you are working in a course team, start by creating a shared Google Doc to collate curated links. Then, pick a topic and start perusing! Check out YouTube, YouTube EDU, Khan Academy, and TED for starting points. Don’t forget images, audio, interactive websites, and apps in your search.

Ready to test out your screencasting skills? Find a friend with whom you can make a quick practice video. Take a look at the list of tools in Figure 9.7, and consider your needs. Then, search for [the tool you chose + tutorial] online. Even if your video is ten seconds long and only records your screen and voice, you are off to a great start!

Chapter 10: Becoming a Connected Educator

Synopsis

The final chapter of *Power Up* discusses ways for teachers to stay connected and keep learning after making the shift to 1:1 teaching and learning. Virtual communities, such as the professional learning networks on Twitter, can transcend the rigid structures of school buildings, bells, and teaching assignments to create loose links among educators that were not possible before. The authors provide step-by-step support for using social media to expand teachers' professional learning networks, and stress the importance of making the journey together with colleagues.

Guiding Questions

- What reservations (if any) do you have about using social media for professional learning? What are your concerns about using Twitter, Google+, or other platforms?
- If you could pose a question about a classroom challenge to a wider network—beyond your school community—what guidance would you seek?
- Neebe and Roberts pose this question in the chapter: “If the fifty most interesting educators you know were going to be speaking at a conference in your town, wouldn’t you go to hear them and meet them? What if you could follow them all on Twitter or Google+?” Identify some of the most interesting or innovative thinkers in education. What questions would you ask them? It’s time to get started! If you don’t already have a Twitter account, create one. Then, begin building your professional learning network by adding twenty people you know or know of—colleagues, organizations, and authors you read.

Quote to Ponder

In the first chapter of the book, we asked the question you might have asked yourself at some point. That is, We have 1:1; now what? The answer, really, is this: now, anything is possible. We wrote this book because we believe in the power of technology to transform education. From flipping the classroom to connecting students in meaningful collaboration, we know that 1:1 technology equips us to make our learning more personal, our time more purposeful, and our environment more malleable. (216)

Idea for Work Groups

Prepare to participate in a Twitter chat. If you are working in a small group, try having a mini Twitter chat by creating a unique hashtag for your team’s conversation. Pick a person to ask the questions, and label each question Q1, Q2, and so on. Then, start answering. Be sure to include the hashtag in every tweet.