



MOBILE EDUCATION

Lessons from 35 Education Experts on
Improving Learning with Mobile Technology



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CEO

FOREWORD

Education is at a tipping point. From the rising cost of a college education and the financial pressures upon local districts and state agencies to fund K-12 schools and programs, to the questions of how to employ mobile technologies and leverage social platforms to support the growing trend toward mobile, collaborative learning models, educators face an almost overwhelming set of challenges.

While there are no easy answers to these and other issues, Citrix believes strongly that online learning technologies can help enhance and extend the teaching and learning process and provide greater, more wide-spread access to education to students. We are committed to developing and delivering learning solutions that will meet the evolving needs of teachers and students in this changing landscape. We hope that our sponsorship of this ebook and other projects will help you, the reader, gain a better understanding of the opportunities that online learning technologies provide, increase your mastery of these solutions, and enable you to put them to productive use. We look forward to working with you as we explore new and effective ways to help teachers teach and learners learn.



CAILIN PITCHER

Product Line Director, Collaboration, Citrix

MOVE OVER TEACHERS: THE STUDENTS ARE IN CONTROL

WE ASKED 35 TOP EDUCATION EXPERTS THE SAME SIMPLE QUESTION:

“What are the most effective uses of technology in online and mobile education?”

What emerged from their responses was a surprise. Taken individually, the essays provide a rich variety of perspectives demonstrating the use of mobile and online technology in and out of the classroom. Each essay provides insights on how educators can get the most out of the content, tools, and networks available to them. However, if you take a step back and view the essays in the eBook as a whole, an important and surprising theme emerges. Simply put, the experts are telling us that the entire educational system is at a tipping point. Within a few years, professors, teachers, and campuses won't be at the center of learning. Instead, rapid advances in mobile and online tools, social networks, and content are putting *students* in that position.

What exactly does this shift from instructor-centric to student-centric learning mean? Basically, everything we know about education changes. As technology continues to fuel this shift, educators will need to embrace their new role as coaches, and learners will have to step up and take responsibility for driving their learning. But learners won't be alone: On their journey, they'll be accompanied by people who know far more and far less. They'll be teachers and students, they'll receive and provide feedback, they'll get help and give help, and they'll learn that learning is all about a dynamic collection of global and interpersonal relationships.



MOVE OVER TEACHERS: THE STUDENTS ARE IN CONTROL

THE KEY DIFFERENCES BETWEEN INSTRUCTOR-CENTERED LEARNING AND STUDENT-CENTERED LEARNING ARE SUMMARIZED IN THE FOLLOWING TABLE:

	INSTRUCTOR-CENTERED LEARNING	STUDENT-CENTERED LEARNING
Where does learning live?	In a classroom or campus.	With mobile and online educational tools, it can live anywhere.
When does learning take place?	Mostly at fixed times and on fixed days.	Can be at any time, provided the learner is self-motivated, engaged, inspired, and connected. Updates can come in the form of text messages or alerts.
Can learners use their devices?	No. Leave them at home or turn them off in class.	Yes, and keep them on in class. Use them to learn, share, collaborate, and create.
What's the role of content?	Classroom lectures and textbooks provide the basis for learning. Unless you have your notes and textbook with you at all times, you have limited access to content.	Content comes in different forms and is accessible at any time and in any place on mobile and online devices. Content also offers mobile performance support and can be interdisciplinary.



MOVE OVER TEACHERS: THE STUDENTS ARE IN CONTROL

	INSTRUCTOR-CENTERED LEARNING	STUDENT-CENTERED LEARNING
How is the material presented?	The instructor sets the pace and method from the front of the classroom.	Learners explore and create personalized learning experiences to match their interests, needs, and ability to learn.
What's the role of the instructor?	The instructor is the manager and controller of the learning process. He or she uses learning management systems to structure learning and provides most of the feedback to students.	To be a coach and to show students how to create their own personal learning environment that's flexible and adaptable. For example, instructors must show learners how to: <ul style="list-style-type: none">• Tap into communities for ideas and feedback• Create materials to showcase learning• Receive feedback from other learners• Make good decisions• Solve real problems• Use collaboration tools• Access mobile reference content



MOVE OVER TEACHERS: THE STUDENTS ARE IN CONTROL

What's the role of the learner?

INSTRUCTOR-CENTERED LEARNING

The learner must meet the learning objectives that the instructor has set.

STUDENT-CENTERED LEARNING

Learners must:

- Express and showcase their knowledge using content-creation tools
- Collaborate to solve real problems
- Provide feedback to other learners
- Use their learning to make decisions
- Meet the objectives by creating their own personalized and self-paced learning path

What's the role of feedback?

Teachers provide grades and comments, but much of the feedback is a one-way street.

Feedback fuels the learning process. In addition to an instructor's feedback, learners receive feedback from fellow learners, social networks, and people across cultural lines. Intelligent learning environments can actually adapt based on feedback. In addition, learners can challenge instructors, because they always have access to information while the material is taught.



MOVE OVER TEACHERS: THE STUDENTS ARE IN CONTROL

What's the advantage of each kind of learning?

INSTRUCTOR-CENTERED LEARNING

Instructors, parents and students alike are familiar with it, and change is hard.

STUDENT-CENTERED LEARNING

The playing field is leveled. Learners can create their own paths and learn at their own pace.

To be a coach and to show students how to create their own personal learning environment that's flexible and adaptable.

LEARNING TRANSFORMATION



BRYAN ALEXANDER

How Mobile and Online Technology Transform Learning



LEE KOLBERT

Real Problem, Real Solution, Real World: Technology in the Classroom



DANIEL CHRISTIAN

Second Screen: The Emerging Next Generation Smart Classroom



GARY WOODILL

Moving to Inquiry-based Pedagogy



SIDNEYEVE MATRIX

Enabling Agile Learning in Real Time Through Mobile Technology



RICH KIKER

Preparing Students for College and Career Through eLearning

A background image showing a group of students sitting on the grass, looking at a laptop. A young woman is pointing at the screen while a young man looks on. The text 'LEARNING TRANSFORMATION' is overlaid in large white letters.

LEARNING TRANSFORMATION

HOW MOBILE AND ONLINE TECHNOLOGY TRANSFORM LEARNING

BRYAN ALEXANDER

Senior Fellow

Bryan Alexander is a futurist, researcher, writer, speaker, consultant, and teacher working in the field of how technology transforms education. Areas he focuses on include social media, digital storytelling, mobile devices, gaming, pedagogy, scholarly communication, forecasting, and the future of academia. In the past, Bryan has worked in a used bookstore, been an English professor, and helped build a national nonprofit organization. Currently, he is the senior fellow for the National Institute for Technology in Liberal Education.

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Mobile and online technology has enormous potential to transform learning. Access to the Internet through mobile devices summons the world of information to any location, which can empower users in the moment. On-demand learning turns the world itself into a potential classroom, library, lab, or studio. There's an insurgent quality to this ubiquitous access, as mobile devices equip an audience against a presenter, citizens against authority figures, students with instructors. That same access allows social connections between any two (or more) locations and people, with boons for collaboration and cross-cultural communication. The lived-in space of human civilization is being radically transformed as we grow a digital layer across it, like a laminate.

"On-demand learning turns the world itself into a potential classroom, library, lab, or studio."

Mobile devices also support media collection, manipulation, and sharing—in other words, new possibilities for storytelling. Story always migrates to new media, and the world of smart phones, tablets, wearable computing, and portable game players is no exception. Fields like journalism and the sciences are already changing as citizens contribute their on-the-fly work to those professions. Students benefit from this movement by creating new stories, which require them to reflect on and remix curricular materials, find their voice, and learn effective communication.

KEY LESSONS

- 1 **MOBILE DEVICES EQUIP USERS WITH INFORMATION THEY CAN USE TO QUESTION EDUCATORS, AUTHORITY FIGURES, AND SPEAKERS.**
- 2 **MOBILE TECHNOLOGY ALLOWS SOCIAL CONNECTIONS BETWEEN LOCATIONS AND PEOPLE.**
- 3 **MOBILE DEVICES SUPPORT MEDIA COLLECTION, MANIPULATION, AND SHARING.**

REAL PROBLEM, REAL SOLUTION, REAL WORLD: TECHNOLOGY IN THE CLASSROOM

LEE KOLBERT

Educational Technology
Manager

Lee Kolbert has been an educator for almost 29 years. She is enthusiastic about using technology for personal and professional growth and stresses the importance of integrating technology into the classroom for real-world learning. An avid user of social media, Lee has her own blog at leekolbert.com and also blogs at Huffington Post. You can often find Lee on Twitter or Facebook, and she enjoys helping schools establish their own presence on social media.

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The most effective uses of technology in education are those where learning activities are based on real-world problems and would not be possible without technology. Using technology for its own sake is wasteful; using technology as an innovative way to explore new ideas and create learning outcomes is effective.

Here's a good example: Students in class A identify that some other students throughout the school are not joining the school's popular book clubs. So, class A students use Poll Anywhere to create an online poll to find out why other students are not engaged in reading. They discover that the books in the library don't seem interesting to these students. So the students in class A work together to choose a few of the books they've already read and using their mobile phones and tablets create video book trailers. They videotape themselves giving just enough information to get the viewer excited about the book. They then create a quick-response (QR) code for each book trailer and attach the QR codes to the shelves near the books in the library. Students can then browse the books and use their mobile phones to scan the QR codes and watch a brief video (trailer) to learn more about the book. Real problem, real solution, real world!

"Using technology for its own sake is wasteful; using technology as an innovative way to explore new ideas and create learning outcomes is effective."

KEY LESSONS

- 1 **USING TECHNOLOGY AS AN INNOVATIVE WAY TO EXPLORE NEW IDEAS AND CREATE LEARNING OUTCOMES IS EFFECTIVE.**
- 2 **USING TECHNOLOGY TO CREATE A REAL-WORLD SOLUTION TO A REAL-WORLD PROBLEM GETS STUDENTS ENGAGED.**

SECOND SCREEN: THE EMERGING NEXT GENERATION SMART CLASSROOM

DANIEL CHRISTIAN

Senior Instructional Designer

Daniel Christian has been a senior instructional designer and multimedia specialist at Calvin College since 2011 and before that a technical and academic specialist at Davenport University Online. Christian has been a Web developer with Wells Fargo and a consultant for Kraft Foods. He is passionate about lowering the costs of and developing new business models in higher education and making education more accessible. He blogs about K-12 education and corporate training/development at his Learning Ecosystems blog.

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Calvin College is at the end of Smart Classroom 1.0 and is moving into developing Smart Classrooms 2.0, also called the Next-generation Smart Classroom. Mobile devices are playing an increasingly important role in this ever-changing learning environment, allowing the creation and contribution of content—seamlessly and quickly—from students and professors. This instant sharing of information will enable the flow of the classroom to continue uninterrupted. If the pedagogy supports it, this environment has the potential to engage people, keep them focused, and offer them more opportunities to participate.

No learning can happen unless a piece of information “gets through the gate” (i.e., someone’s attention or working memories). Nothing can get into our longer-term memories—and thus offer us a return on investment from the time we put into learning something—unless it first gets into our working memories. So, if we can’t get someone’s attention, we have no chance of getting information into that person’s long-term memory. Mobile devices can be helpful in this regard, because they offer opportunities for people to locate and contribute content to the discussion at hand.

I am currently tracking something that I call “learning from the living (class) room,” a trend enabled by the convergence of telephone, television, and computer. This trend is also starting to show signs of involving artificial intelligence, learning analytics, social networking and learning, educational gaming, videoconferencing, the use of the second screen, and more.

“If we can’t get someone’s attention, we have no chance of getting information into that person’s long-term memory.”



SECOND SCREEN: THE EMERGING NEXT GENERATION SMART CLASSROOM

DANIEL CHRISTIAN

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Second screen refers the use of (mobile) tablets in conjunction with stationary, large, Internet-connected displays. Second screen-based applications will unleash an enormous amount of creativity, and such applications will enable transmedia-based storytelling and selling as well as new methods of communicating messages over time via a variety of engaging media. *More choice. More control. Participation. Interactivity. Mobility:* These are words that accompany such unfolding trends.

Many of us have heard of the massive open online courses (MOOCs) that are affecting higher education, the corporate world, and in some cases even K-12 education to a significant degree. Although I think MOOCs are a half-baked idea at this point, if technologies like those involved with IBM Watson are baked into the product or offering, the result will be a potent learning environment, one that will provide streams of up-to-date content.



KEY LESSONS

- 1 **THE INSTANT SHARING OF INFORMATION WILL ENABLE THE FLOW OF THE CLASSROOM TO CONTINUE UNINTERRUPTED.**
- 2 **NO LEARNING CAN HAPPEN UNLESS A PIECE OF INFORMATION CAPTURES SOMEONE'S ATTENTION OR ENTERS THEIR WORKING MEMORIES.**
- 3 **SECOND SCREEN-BASED APPLICATIONS WILL UNLEASH AN ENORMOUS AMOUNT OF CREATIVITY.**

MOVING TO INQUIRY-BASED PEDAGOGY

GARY WOODILL

CEO

Gary Woodill is CEO of i5 Research and a senior analyst for Float Mobile Learning. Gary holds an Ed.D. degree from the University of Toronto and has developed learning software, educational CD-ROMs, online courses, educational videos, and blog posts and publications on learning with technology. He is the co-author of Training and Collaboration with Virtual Worlds and the author of The Mobile Learning Edge. Gary has written more than 50 reports on learning technologies and is a speaker at education and training conferences.

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Mobile devices and cloud-based information sources using heterogeneous systems are coming together to provide true ubiquitous learning. We are moving into a multiscreen world where learners will seamlessly move from mobile phones or tablets to laptop computers to smart televisions and to dashboard screens in vehicles, followed each step of the way by personal software agents that provide continuity across all devices.

The most effective use of these new technologies is to provide answers to any questions “at the point of need.” In other words, we learn best by acquiring information that is relevant to us in the moment, based on our current context and the people with whom we are interacting. Because so much information is available and changing quickly, it will be important to forget much of what we acquire to prepare our minds for new information.

To best leverage mobile technologies in education, we need to switch to an inquiry-based pedagogy that builds on both children’s and adults’ natural curiosity, their desire to solve problems, and their love of play. That is why the most powerful approach to learning is often game-based, because it uses our competitive drive, enjoyment of collaborating with others, and the high that comes from working toward and reaching a goal to motivate learning.

“We learn best by acquiring information that is relevant to us in the moment, based on our current context and the people with whom we are interacting.”

KEY LESSONS

- 1 **THE MOST EFFECTIVE USE OF MOBILE TECHNOLOGIES IS TO PROVIDE ANSWERS WHEN USERS NEED THEM.**
- 2 **WE LEARN BEST BY ACQUIRING RELEVANT INFORMATION WHEN WE NEED IT.**
- 3 **WE MAY HAVE TO FORGET MUCH OF WHAT WE HAVE ACQUIRED TO PREPARE OUR MINDS FOR NEW INFORMATION.**

ENABLING AGILE LEARNING IN REAL TIME THROUGH MOBILE TECHNOLOGY

SIDNEYEVE MATRIX

Queen's National Scholar
of Media


Sidneyeve Matrix teaches and researches digital trends in culture, communication, and commerce at Queen's University, Canada.



With our phones always within arm's reach, designing mobile learning opportunities only makes sense. The higher education classroom is an organic bring-your-own-device environment. Whether studying online or on campus, students naturally bring their personal tablets, laptops, and phones along. When we leverage those digital fluencies, whether using handhelds for live polling, lecture-tweeting, fact-checking, content sharing, or streaming instructional content, we enable personalized, agile learning experiences in real time. In my courses, where more than 1,000 students collaborate to learn about digital marketing, the most impactful teaching tools are always the social platforms, where peer-to-peer discussion unfolds. Given the opportunity to participate via social and mobile technologies, my students regularly far exceed expectations for contributing, likely because of the convenience factor. Mobile-optimized learning objects and social-by-design services such as YouTube, Twitter, and Facebook (as well as native apps) give busy Gen Y students the opportunity to connect and be productive on the go.

"When we leverage those digital fluencies . . . we enable personalized, agile learning experiences in real time."

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KEY LESSONS


- 1 **THE HIGHER EDUCATION CLASSROOM IS AN ORGANIC BRING-YOUR-OWN-DEVICE ENVIRONMENT.**
- 2 **MOBILE-OPTIMIZED LEARNING OBJECTS AND SERVICES SUCH AS YOUTUBE GIVE GEN Y STUDENTS THE OPPORTUNITY TO CONNECT AND BE PRODUCTIVE ON THE GO.**


PREPARING STUDENTS FOR COLLEGE AND CAREER THROUGH ELEARNING

RICH KIKER

Director of Online Learning

Rich Kiker is the highest-rated Google Apps for EDU Trainer in the world and has specialized in online and blended learning since 2006. Rich is the director of Online Learning for Pennsylvania's Palisades School District and the author of several massive open online classes at Google, whose education teams he has supported with professional development for educators worldwide. His consulting work at Kiker Learning includes creating, incubating, and delivering eLearning solutions, social media, and instructional technology development to educators worldwide.

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Today, eLearning is the primary conduit to digital literacy for learners. If we are truly building education systems that prepare students for college and career, then our design has to be driven by a desire to raise capacity for the entire learning community, nurture a flexible set of competencies, and instill a growth mindset. Our K–12 online learning program at Palisades was started with this paradigm as its goal. As a result, the program has developed several key features to reach this achievement:

- Cyber centers staffed by support teachers provide a creative environment for students.
- Local teachers in our program maintain the community school feel while meeting the goal of raising global capacity from within.
- Blended learning as part of all secondary classrooms allows time for inquiry and discovery to be valued and effectively deployed.

As we continue to innovate, the cyber academy will include deeper online professional development, hybrid eLearning models, early graduation options, student-driven course design, and much more. We are driving this change to make K–12 relevant and refreshed for our children. This is why Palisades School District has positioned eLearning at the core of its culture.

“If we are truly building education systems that prepare students for college and career, then our design has to be driven by a desire to raise capacity for the entire learning community, nurture a flexible set of competencies, and instill a growth mindset.”

KEY LESSONS

- 1 **ELEARNING IS THE PRIMARY CONDUIT TO DIGITAL LITERACY FOR LEARNERS.**
- 2 **BLENDED LEARNING AS PART OF ALL SECONDARY CLASSROOMS ALLOWS TIME FOR INQUIRY AND DISCOVERY TO BE VALUED AND EFFECTIVELY DEPLOYED.**

STUDENT-CENTERED LEARNING



RAY SCHROEDER

Online Learning is at the Heart of 21st Century Education



LISA DAWLEY

Making Learning Feel Voluntary



LYNDA WEINMAN

Personalizing Education Through Online Learning



WENDY DREXLER

Empowering Students to Take Control of Learning



SHELLY SANCHEZ TERRELL

Student-Centered Learning Motivates and Sparks Curiosity

A young man with dark hair and sunglasses is sitting on the grass, leaning against a large tree trunk. He is wearing a white t-shirt and khaki pants, and is looking down at a tablet device in his hands. The background is a soft-focus green lawn and trees.

**STUDENT
CENTERED
LEARNING**

ONLINE LEARNING IS AT THE HEART OF 21ST CENTURY EDUCATION

RAY SCHROEDER

Associate Vice Chancellor
of Online Learning

Ray Schroeder is associate vice chancellor for Online Learning at the University of Illinois at Springfield and director of the Center for Online Leadership and Strategy at the University Continuing and Professional Education Association. Ray has numerous national presentations and publications in online and technology-enhanced learning and publishes the "Online Learning Update and Educational Technology" blogs. He has been a Sloan Consortium Distinguished Scholar in Online Learning and received the A. Frank Mayadas Leadership Award. He is a Sloan Consortium Fellow.

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Online learning is at the heart of education in the 21st century. No longer do we require that students come to the factories that are university campuses. No longer do we require that students come to class at the ringing of a bell. No longer do we require students to participate in the highly inefficient lecturing process, where information is transmitted imperfectly, verbally to students taking even less perfect notes.

Online learning brings the essence of learning to the student rather than requiring the student to come to the campus. Learning is parsed out in interactive modules, allowing students to use current technologies to engage the instructor, their fellow classmates, and the content. The collective knowledge of the network is shared with the student.

This change from campus- and instructor-centric models to student-centric models of learning means that opportunities are made available to students who never had access to learning before.

I recall teaching a single-parent working student, living in rural Arkansas, who through online learning was able to complete her bachelor's of art degree, which resulted in a promotion that advanced her career and brightened the future opportunities for her and her child.

Online learning makes a real difference in lives and in society.

"Online learning brings the essence of learning to the student rather than requiring the student to come to the campus."

KEY LESSONS

- 1 **ONLINE LEARNING BRINGS THE ESSENCE OF LEARNING TO THE STUDENT RATHER THAN REQUIRING THE STUDENT TO COME TO THE CAMPUS.**
- 2 **STUDENTS USE CURRENT TECHNOLOGIES TO ENGAGE THE INSTRUCTOR, THEIR FELLOW CLASSMATES, AND THE CONTENT.**
- 3 **STUDENT-CENTRIC ONLINE LEARNING CREATES REAL OPPORTUNITIES**

MAKING LEARNING FEEL VOLUNTARY

LISA DAWLEY, PH.D. CEO & Founder

Dr. Lisa Dawley is CEO and founder of GoGo Labs, a learning technology company in Boise, Idaho. With more than 20 years of experience in educational technology research, practice, policy, and entrepreneurship, Dawley provides leadership in the design of innovative learning technologies, online spaces, and experiences. A former professor and chair of the Department of Educational Technology at Boise State University, she co-created the multiple-industry award-winning 3D GameLab quest-based learning platform.

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In my work building online learning communities, courses, and content, I've learned that the most important piece of my work is connecting with each student on an individual level and inspiring him or her to be engaged in ways the student never thought possible. Making learning feel voluntary is critical toward this end. Educators can achieve this feeling in their students by offering asynchronous learning options that students can complete in their own time and at their own pace (we use quest-based learning in 3D GameLab) combined with optional synchronous events in spaces like Twitter, Minecraft, or web conferencing that can be recorded for later viewing.

We recently offered an online game design camp, Teen GameLab, to 30 teens around the United States. During a three-week period, more than 333 quests were completed and players wrote 144 discussion forum posts and had many hundreds of hours of game building, gameplay, and video production, many meeting daily in Minecraft as students collaborated to build an entire city. This was a summer camp, not for credit, and we still had students logging in a month after camp was over. Eight of the students created YouTube channels on which to post their game reviews and game tutorials, and we still follow each other's work. That's engagement!

"The most important piece of my work is connecting with each student on an individual level and inspiring him or her to be engaged in ways the student never thought possible."

KEY LESSONS

- 1 **CONNECT AND INSPIRE ON AN INDIVIDUAL LEVEL.**
- 2 **MAKE LEARNING FEEL VOLUNTARY.**
- 3 **ALLOW STUDENTS TO WORK AT THEIR OWN PACE IN THEIR OWN TIME.**

PERSONALIZING EDUCATION THROUGH ONLINE LEARNING

LYNDA WEINMAN

Co-founder

Lynda Weinman is cofounder and executive chair of lynda.com, one of the most successful companies in online education today. Through a comprehensive library of instructional videos taught by industry experts, lynda.com teaches technology, design, and business skills to millions of individual, corporate, academic, and government subscribers.

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Whether delivered via computer, tablet, or mobile phone, online education is often pitted against in-person education as an either/or proposition. I maintain that they can—and should—coexist as complementary forces to make the most effective use of both.

Why do I think this? One of the benefits of online learning is that it can be more personalized than learning in a classroom in which every participant is receiving the same information at the same time (i.e., a lecture or presentation). Online, even when given identical resources, each person can have a different learning experience tailored to his or her learning style and level of knowledge at his or her skill level. More advanced learners can skip what they already know and proceed quickly through materials, while novices or slower learners might prefer to take their time, start from the beginning, and review materials repeatedly that aren't clear to them. This level of personalization is not possible in in-person group learning environments.

Access to learning resources online also helps to level the playing field. I had a woman tell me that the reason she loved online learning was because of its anonymity. She believed that it allowed her to take her time and not worry about how “stupid” she might appear to others, which subsequently boosted her confidence. I had a teacher write to me to say a student with cerebral palsy had thanked him for providing access to an online video library resource. She told him she couldn't keep up in class because of her physical disabilities, and access to the library allowed her the time to learn at her own speed. When in-person learning was the only option, these types of learners are often disenfranchised, and mobile and online learning help to solve this problem.

KEY LESSONS

- 1 **ONLINE LEARNING CAN BE PERSONALIZED TO THE PARTICIPANT.**
- 2 **ONLINE LEARNERS CAN HAVE A LEARNING EXPERIENCE TAILORED TO HIS OR HER LEARNING STYLE AND KNOWLEDGE LEVEL.**
- 3 **ACCESS TO LEARNING RESOURCES ONLINE HELPS TO LEVEL THE PLAYING FIELD.**

“Online, even when given identical resources, each person can have a different learning experience tailored to his or her learning style and level of knowledge at his or her skill level.”

EMPOWERING STUDENTS TO TAKE CONTROL OF LEARNING

WENDY DREXLER

Director, Online Development

Wendy Drexler is the director of Online Development in Continuing Education at Brown University. She has been a champion for effective integration of technology in K-12 and higher education. Before earning her doctorate in Educational Technology, Wendy managed eLearning design teams at IBM and AT&T. She remains an active member of the National Association of Independent Schools 21st Century Task Force. Her research interests include student construction of personal learning environments and balancing teacher control and student autonomy.

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The most effective mobile and online technologies in education will be those that empower students to take control of the learning process and interact with others in ways that support knowledge creation rather than content consumption. Students will construct personal learning environments that transcend learning management systems and make use of multiple technologies that connect them to teachers, experts, fellow students, and a variety of tools for artifact creation.

A simple example of this model took place in a design-based research case study with 7th graders using various Web 2.0 tools to study poisonous and venomous creatures. The study found that students applied several processes to meet the learning objectives of the project, including digital responsibility, digital literacy, effective organization and synthesis of content, socialization, and creation. Bottom line: The strongest focus should be on technologies that support and end up in the hands of the learner.

"The strongest focus should be on technologies that support and end up in the hands of the learner."

KEY LESSONS

- 1 **TECHNOLOGY IN EDUCATION MUST EMPOWER STUDENTS TO TAKE CONTROL OF LEARNING.**
- 2 **STUDENTS MUST CONSTRUCT PERSONAL LEARNING ENVIRONMENTS THAT TRANSCEND LEARNING MANAGEMENT SYSTEMS.**

STUDENT-CENTERED LEARNING MOTIVATES AND SPARKS CURIOSITY

SHELLY SANCHEZ TERRELL

Director of Learning

Shelly Sanchez Terrell is an education thought-provoker, teacher, author, and speaker. She is the host of American TESOL's Free Friday Webinars and co-founded Edchat, ELTChat, and The Reform Symposium E-Conference. Her presence in educator social media has been recognized by The New York Times and Microsoft's Heroes for Education. She has traveled to more than 15 countries to train teachers and consult with organizations such as UNESCO Bangkok and the European Union aPLaNet Project. Her latest book is The 30 Goals Challenge for Educators.

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In schools with little or no technology, mobile activities are a way to engage students. As a teacher and trainer, I travel to various countries to help schools implement technology. I primarily use the devices students bring in for the lessons. In March 2013, I worked with various rural schools in Slovenia and Croatia. We decided to let learners use their own devices, which ranged from mobile phones to smart phones. This was the first time learners had used their devices to learn English. In 45 minutes, the students worked in groups to invent an app to solve a problem, then created a 30 second commercial demonstrating their apps. The students loved presenting their commercials, were able to move while learning, learned to work in teams, and had the ability to be creative. They brainstormed and had fun. With a basic mobile phone, students can record audio, take pictures, write notes, and capture video. All these features can be used to create stories, podcasts, video casts, commercials, and more. Learners carry the learning with them and discover that learning is all around them. Most importantly, they leave the class feeling motivated to learn the next day. We need schools to support this type of student-centered learning, which motivates and sparks curiosity.

"Most importantly, students leave the class feeling motivated to learn the next day."

KEY LESSONS

- 1 **MOBILE ACTIVITIES ARE A WAY TO ENGAGE STUDENTS.**
- 2 **LEARNERS CARRY THE MOBILE LEARNING WITH THEM.**
- 3 **STUDENTS WHO USE MOBILE TECHNOLOGY IN THE CLASSROOM LEAVE FEELING MOTIVATED TO LEARN.**

CREATING TO LEARN



ADAM BELLOW

Showcase Learning: The Value of Sharing and Collaborating



JULIE LINDSAY

The Flat Classroom: Creating, Collaborating and Learning



TONY VINCENT

Explaining It to Grandma: Turning What You Learn into Something to Teach



BENJAMIN BONNET

Expressing Knowledge with Mobile Technology

CREATING TO LEARN


SHOWCASE LEARNING: THE VALUE OF SHARING AND COLLABORATING

ADAM BELLOW

Founder/CEO

Adam Bellow is founder and CEO of eduClipper and eduTecher, which provide Web resources for teachers, students, and parents. Most recently, Adam was senior director of Educational Technologies and AP Student Services for the College Board. Named Outstanding Young Educator of the Year by the International Society for Technology in Education (ISTE) in 2011, Adam speaks at conferences about reforming education with technology and Web-based tools. He was the closing keynote presenter at ISTE in 2013.

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The most powerful and effective use of Web tools and mobile technologies is in connecting, creating, and sharing information. Using Web tools or mobile apps, students and teachers alike can make wonderful representations of their learning and showcase their understanding in a way that was not possible before. More valuable still is the concept that people from all over the world can use these tools to connect with one another and help contribute to the learning process. Teachers and students can collaborate on social platforms, forming a community of learners and showcasing the work that they are creating together. These tools are only as powerful as the ideas of those using them in new and innovative ways. Typing an essay on a tablet is not innovative or any more educationally sound than writing it with a pencil and paper, but using real-time collaborative tools and creating multimedia projects as a team to share the end product with educators and peers around the world for meaningful qualitative feedback is a powerful use of these technologies.

“People from all over the world can use these tools to connect with one another and help contribute to the learning process.”

I remember creating video projects with my students when I taught high school English: They were great, but there was no way for us to share the videos socially (YouTube and other such sites had not yet been created). The world of technology opens these opportunities, and great work can now be shared in an instant with a growing number of connected educators. Technology is only as valuable as the ideas its users generate and share.

KEY LESSONS

- 1 **WEB TOOLS PROMOTE AND ALLOW USERS TO CONNECT, CREATE, AND SHARE INFORMATION.**
- 2 **WEB AND MOBILE TECHNOLOGIES ALLOW USERS FROM ALL OVER THE WORLD TO CONNECT AND CONTRIBUTE TO THE LEARNING PROCESS.**
- 3 **THIS COLLABORATION CAN RESULT IN MEANINGFUL, INSTANT FEEDBACK.**

THE FLAT CLASSROOM: CREATING, COLLABORATING AND LEARNING

JULIE LINDSAY

Director

Julie Lindsay has led the way in global education and technology-infused collaborations across six countries. As an IT director in international schools, she implemented 1:1 learning and worked with K–12 teachers on pedagogical applications for mobile and ubiquitous computing. Based in Australia, this Apple Distinguished Educator is a consultant, presenter, and workshop leader. Julie is hard at work completing her Ed.D. with the University of Southern Queensland, with a focus on facilitating positive social change through effective pedagogy for collaboration.

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Mobile and online technologies facilitate collaboration, both in real time and asynchronously. Being mobile allows for the collection and easy storage and sharing of multimedia, including images and videos. In conjunction with social or educational networks, students and teachers alike can easily connect and share their ideas and resources. Even more exciting is the opportunity that emerging technology provides for global collaboration and the ability of learners to co-create products from a distance.

When we run a Flat Classroom Conference—for example, the Flat Classroom Conference held in Yokohama, Japan, in 2013—all participants (students and teachers) have a mobile device. They work in teams and use a backchannel, a wiki, Google apps, and other tools to connect and communicate. They also connect with virtual team members who can be anywhere in the world, and together they create an action plan and put together multimedia to pitch and refine ideas. The power of mobile and online technologies is the impact they have on enhanced learning opportunities globally. Web 2.0 tools provide instant access to authoring environments, and mobile devices allow for multimodal flexibility.

“The power of mobile and online technologies is the impact they have on enhanced learning opportunities globally.”

KEY LESSONS

- 1 **MOBILE TECHNOLOGY ALLOWS FOR THE COLLECTION AND EASY STORAGE AND SHARING OF MULTIMEDIA.**
- 2 **MOBILE AND ONLINE TECHNOLOGIES FACILITATE COLLABORATION, BOTH IN REAL TIME AND ASYNCHRONOUSLY.**

EXPLAINING IT TO GRANDMA: TURNING WHAT YOU LEARN INTO SOMETHING TO TEACH

TONY VINCENT

Learning and Technology
Consultant

Tony Vincent is a former fifth-grade teacher who used online and mobile tools with his students daily. Today, Tony works as an independent consultant, speaking at conferences and leading workshops at schools.

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Although great websites and apps deliver content, I think the best use of technology in education is to make something with what you're learning. This might include producing a video, writing a blog post, recording a puppet show, creating a collage, narrating a slideshow, designing a comic book, or somehow making your own media and study aids.

Albert Einstein said, "You do not really understand something unless you can explain it to your grandmother." Technology gives us many avenues for explaining our learning. It also can give us an audience, whether that audience is a grandmother, a friend, or a stranger. What's more, technology often allows for the audience to provide feedback to the learner.

Yes, there are loads of drill and skill apps, digital books, and electronic response systems that can be useful in classrooms. What's more exciting to me are apps that empower students to be creative and expressive.

It's powerful to process what you're learning and turn it into something to teach others. As a fifth-grade teacher, I had groups of students focus on different topics. Each group was responsible for teaching the rest of the class what they learned. I believe in giving students choices in how they convey information, so there was always a variety of learning artifacts.

My students enjoyed learning by teaching others. They loved using technology. As learners, it just makes sense to use technology to help ourselves and others understand what we're learning.

"The best use of technology in education is to make something with what you're learning."

KEY LESSONS

- 1 **THE BEST USE OF TECHNOLOGY IN EDUCATION IS TO MAKE SOMETHING WITH WHAT YOU'RE LEARNING.**
- 2 **TECHNOLOGIES PROVIDE AVENUES FOR EXPLAINING OUR LEARNING.**
- 3 **PROCESS WHAT YOU'RE LEARNING, AND TURN IT INTO SOMETHING TO TEACH OTHERS.**

EXPRESSING KNOWLEDGE WITH MOBILE TECHNOLOGY

BENJAMIN BONNET

Instructional Developer

Ben Bonnet is a web and mobile developer for eLearning and has been a promoter of the virtues and benefits of mobile learning since 2006. Ben has presented at several conferences on mobile user-generated content, including mLearnCon (2011, 2012, and 2013), George Mason University's eLearning Symposium. Ben also taught EDIT 575 at George Mason University from 2010 to 2012.



We think about mobile devices as an extension of our reach in many ways. We think about how we can use those devices to get information and to pull data when we need it. That data could be anything from a sports score or recipe to business analytics pulled to support a decision maker before a meeting. Pulling data and consuming information are great and I do it all the time, but what about our need to express and share our knowledge?

"The real power of mobile learning is in sharing and expressing knowledge."

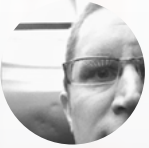
We struggle to share our hard-earned knowledge. At the same time, we carry around these wonderful little production studios, capable of video capture, audio recording, and text entry. We use our devices to consume knowledge, but we can express our knowledge with them, as well. A colleague of mine wanted to explain a concept to a group of coworkers. I recorded him with my mobile phone as he diagrammed and talked through the concept in about a minute. I sent the video to the coworkers, and they learned the concept quickly. In my mind, the real power of mobile learning is in sharing and expressing knowledge, and my goal as a mobile learning developer is to unleash that power.

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KEY LESSONS

- 1 **MOBILE DEVICES ARE AN EXTENSION OF OUR REACH.**
- 2 **MOBILE TECHNOLOGY ALLOWS US TO DO MORE THAN SIMPLY PULL INFORMATION: IT ALSO HELPS US EXPRESS AND SHARE OUR KNOWLEDGE.**

TOTAL ENGAGEMENT



DAVID HOPKINS

Plugged In and Turned On: Encouraging Students to Use Facebook, Twitter and Texts to Learn



JACKIE GERSTEIN

Mobile Devices Increase Engagement



STEPHANIE SANDIFER

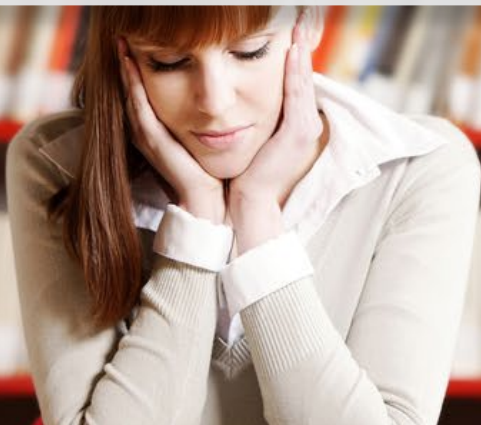
No Books, No Classrooms: Organic Learning In Houston, Texas



WILLYN WEBB

Connecting With Students Through Texting

TOTAL ENGAGEMENT



PLUGGED IN AND TURNED ON: ENCOURAGING STUDENTS TO USE FACEBOOK, TWITTER AND TEXTS TO LEARN

DAVID HOPKINS

Learning Technologist

David Hopkins uses his 10 years of experience in Internet technologies and online communities in his current role as a learning technologist. Since 2007, David has engaged with eLearning and distance learning students at Kentucky universities and with the administrative and academic teams that develop and deliver online programs. David keeps up with pedagogic principles and techniques through his work at the University of Leicester and his research, reading, and writing on his enhanced learning technology blog.

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Look around you: Everyone is connected—on the bus, the train, in front of the TV, with friends, at sport matches, in your classroom. If children are spending more and more time connected online, then it stands to reason that some of this time will be in class. In your class?

What are you doing about it?

Don't complain that students are on Facebook when they should be reading your book. Don't moan that your students would rather spend time tweeting photos of their breakfast than about your assignment. Don't despair that group work ends up with everyone playing Angry Birds and comparing scores. Engage these students; give them a reason to use their smart phones or tablets. Use the power of the connection; use the "always-on" mentality. Use their network of connected friends to find out about your class subject. Use their need to tweet or send messages to each other to bring resources or people from outside the classroom in. Give them a reason to use the technology, give them a reason to engage with each other—and you—and the results will be amazing.

"Use the power of the connection; use the "always-on" mentality."

Professor Stephen Heppell says that "every turned-off device is a turned-off child." Don't be that teacher.

KEY LESSONS

- 1 **ENGAGE STUDENTS AND THEIR ALWAYS-ON MENTALITY.**
- 2 **GIVE STUDENTS A REASON TO USE THEIR DEVICES FOR CLASSROOM WORK.**
- 3 **ENCOURAGE STUDENTS TO USE TECHNOLOGY TO ENGAGE WITH ONE ANOTHER.**

MOBILE DEVICES INCREASE ENGAGEMENT

JACKIE GERSTEIN, ED.D.

Online Faculty -
Educational Technology

Dr. Jackie Gerstein's byline is, "I don't do teaching for a living. I live teaching as my doing . . . and technology has amplified my passion for doing so." Gerstein has been teaching for decades and currently offers master's-level online courses in educational technology for Boise State and others. Her background includes a strong focus on experiential and adventure learning. She believes that one responsibility of 21st century education is to share resources, ideas, and instructional strategies with other educators..

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Mobile and online technologies are ubiquitous extensions of most people's (of all ages) playing, working, learning, doing, and being. As such, I integrate technologies in all of my teaching venues, from elementary level to graduate level. I have students text to one another to interview and share ideas, take photos and videos of concepts being covered in class, and use quick-response codes to access and discuss information.

One class I taught was Interpersonal Communications to a group of undergraduates, ages 17 to mid-40s, at a vocational college. As such, the students were not academically minded or oriented. I asked them to use their own mobile devices throughout the course during every class. Through my own observations, I found that the use of mobile devices increased engagement, focus, and learning. An end-of-course anonymous survey confirmed my observations. The following comments are representative of the comments at large:

- I personally enjoyed the activities quite a lot. They helped me learn the concepts effectively while also being enjoyable to participate in.
- The use of cell phones was something that we use everyday, so it related back to us.
- I appreciate that there were so many hands-on activities to do and that we got to learn in a different style other than lecture or reading.
- It was nice to use [the mobile devices] and not have to hide them, and it connected the class.
- It made us open up to one another, because we had to connect at a more social level.

See more such responses [here](#).

KEY LESSONS

- 1 **THE USE OF MOBILE DEVICES INCREASED ENGAGEMENT, FOCUS, AND LEARNING.**
- 2 **MOBILE TECHNOLOGY CONNECTS STUDENTS IN A CLASS AND CAN OFFER A LEARNING STYLE OTHER THAN LECTURE.**
- 3 **MOBILE TECHNOLOGY LINKS LEARNING TO STUDENTS EVERYDAY LIVES.**

"The use of mobile devices increased engagement, focus, and learning."

NO BOOKS, NO CLASSROOMS: ORGANIC LEARNING IN HOUSTON, TEXAS

STEPHANIE SANDIFER

Educator & Consultant

Stephanie Sandifer is an educator with nearly 20 years of experience educating children and adults at all levels. She currently serves on the Advisory Board for A+ Unlimited Potential, a new, innovative middle school located within the Houston Museum District; teaches online at the college and high school levels; and serves on the Advisory Board for the SXSWedu Conference. Stephanie is also the author of *Wikis for School Leaders* and *Wikified Schools*.

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In March 2012, I was asked to help research and design the plans for a new mobile middle school in Houston, Texas. For 18 months, I worked on the design of a school that would use mobile technology to enable a new model for learning that eliminates many of the constraints of the traditional school structure. In August 2013, I watched with great interest as the new school launched with a dynamic team of educators and a cohort of enthusiastic learners.

On a typical day at the A+ Unlimited Potential (A+UP) Middle School, located in the Houston Museum District, the learners are roaming around museum galleries, Google Chromebook tablets in hand, exploring artifacts, artwork, and exhibits in one of several world-class museums that include the Museum of Fine Arts, the Museum of Natural Science, the Houston Zoo, and the Health Museum. Learning occurs in interdisciplinary units using a combination of real-world artifacts and online resources such as Open Educational Resources, simulations and tutorials, and online communication and collaboration with peers. Students use online tools to create content that demonstrates their new learning. The Learning Coaches (teachers) guide the learners through the learning experiences and provide small-group and one-on-one support throughout the day as needed. There are no textbooks. There is no bell schedule. A “classroom” is located in the Health Museum that serves as a home base, but the “campus” of the school is the entire Houston Museum District, which also includes Hermann Park, where students can engage in outdoor activities and exercise daily.

A+UP offers a unique view of the potential for mobile technologies to support a learning model that leverages the rich resources of the local community. The use of emerging technology, personalization strategies, and online resources at A+UP enables learning within a real-world context, where educators and learners are free from the constraints of the traditional classroom, traditional school structure, and traditional (and often outdated) textbooks.

KEY LESSONS

- 1 **LEARNING SHOULD OCCUR IN INTERDISCIPLINARY UNITS USING A COMBINATION OF REAL-WORLD ARTIFACTS AND ONLINE RESOURCES.**
- 2 **PHYSICAL ACTIVITY AND EXERCISE ARE INTERWOVEN WITH LEARNING.**
- 3 **USE MOBILE TECHNOLOGIES TO SUPPORT A LEARNING MODEL THAT LEVERAGES THE RICH RESOURCES OF THE LOCAL COMMUNITY.**

“For 18 months, I worked on the design of a school that would use mobile technology to enable a new model for learning that eliminates many of the constraints of the traditional school structure.”

CONNECTING WITH STUDENTS THROUGH TEXTING

WILLYN WEBB

Administrator/teacher

Willyn Webb is a teacher, administrator, and licensed professional counselor in Colorado. She has five published books, teaches online classes for educators using mobile technology, is a mother of three girls, and has developed an innovative alternative high school.

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Mobile phones are a terrific tool to support student engagement and achievement in reading and writing. In fact, “Children who are heavy users of mobile phone text abbreviations . . . are unlikely to be problem spellers and readers, a study funded by the British Academy has found. The research, carried out on a sample of 8–12-year-olds over an academic year, revealed that levels of “textism” use could even be used to predict reading ability and phonological awareness in each pupil by the end of the year” (Plester & Wood, 2009). Also, “a new study from California State University researchers has found that texting can improve teens’ writing in informal essays and many other writing assignments” (Miners, 2009).

Group Texting

Through the ease and time-saving means of group texting, educators can connect with groups of students for many literacy activities, such as vocabulary development, questions about assigned readings, polls, or summaries. Tools like [Celly](#) provide a code for students to text in and become part of a group: No personal numbers are shared. All texts sent and received are documented on the website, which adds structure and documentation to communicating with students. As an English teacher, these are my favorite uses of Celly!

To encourage homework reading, I send out a critical thinking question to the students in the evening, then read their responses the next day (by phone or on the computer) and record grades.

I like to put students in Celly-specific cooperative learning groups and have them interact and discuss questions through an open group chat. I get to be a part of every group, and every student has a voice.

“Through the ease and time-saving means of group texting, educators can connect with groups of students for many literacy activities.”



CONNECTING WITH STUDENTS THROUGH TEXTING

WILLYN WEBB

Administrator/teacher

Willyn Webb is a teacher, administrator, and licensed professional counselor in Colorado. She has five published books, teaches online classes for educators using mobile technology, is a mother of three girls, and has developed an innovative alternative high school.

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Sometimes, I group text a cue or a question before school to morning classes and at lunch to afternoon classes. Doing so can really help students come to class aware of the lesson content and ready.

Putting research-based teaching practices to use with time-saving group texting makes for better teaching. All of these activities can be used, regardless of whether mobile phones are used in class or even at school.

Group texting is a great use of mobile technology, even in schools where mobile phones are still banned.

* Miners, Z. (2009). Could texting be good for students? [Web log post] U.S. News. Retrieved from www.usnews.com/blogs/on-education/2009/10/29

* Plester, B., & Wood, C. (2009). Exploring relationships between traditional and new media literacies: British preteen texters at school. Retrieved from <http://www.britac.ac.uk/news/news.cfm/newsid/14>



KEY LESSONS

- 1 **MOBILE PHONES ARE A TERRIFIC TOOL TO SUPPORT STUDENT ENGAGEMENT AND ACHIEVEMENT IN READING AND WRITING.**
- 2 **TOOLS LIKE CELLY PROVIDE A CODE FOR STUDENTS TO TEXT IN AND BECOME PART OF A GROUP.**
- 3 **PUTTING RESEARCH-BASED TEACHING PRACTICES TO USE WITH TIME-SAVING GROUP TEXTING MAKES FOR BETTER TEACHING.**

CONTENT: ANY WAY YOU WANT IT



ALLISON ROSSETT, PH.D.

Translating Lessons into Decisions Through Mobile Technology



CRAIG WEISS

Mobile Time Travel: Use Augmented Reality and Kinect to Place Learners in any Situation or Time



PEDRO A. TAMAYO

Content is the King of Mobile Learning



PATTI SHANK

Informal Learning and Performance Support



CLARK QUINN

Modern Magic: Embed Learning into Practice

CONTENT: ANY WAY YOU WANT IT

TRANSLATING LESSONS INTO DECISIONS THROUGH MOBILE TECHNOLOGY

ALLISON ROSSETT, PH.D.

Professor Emerita
Educational Technology

Dr. Allison Rossett is a long-time professor of Educational Technology at San Diego State University and an ISPI Member for Life. A recipient of the Thomas Gilbert Award, Allison is co-author of Job Aids and Performance Support: Moving from Knowledge in the Classroom to Knowledge Everywhere and First Things Fast. She has conducted research and published on needs analysis, learner engagement, on-demand learning and support, and persistence.

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Mobile in education? Well, my favorite use is probably not what you would expect. What excites me is the way mobile allows us to augment and go beyond education through mobile performance support. Yes, mobile performance support.

Sure, you can take a class on nutrition and get smarter about it. But then you have to make good decisions in the supermarket. Fooducate is an example of an app that helps turn nutrition lessons into decisions. Another example is provided by apps that use location to leverage moments in Balboa Park in San Diego or at the Louvre Museum in Paris. Then there's wine. I've taken classes in person and online. But it's the apps that help me transfer those lessons into the right wine for the meal or moment.

"It's just not possible to be knowledgeable about everything. Mobile performance support helps us act as if we were"

It's just not possible to be knowledgeable about everything. Mobile performance support helps us act as if we were.

KEY LESSONS

- 1 **USERS HAVE TO BE ABLE TO TURN LESSONS INTO DECISIONS.**
- 2 **MOBILE PERFORMANCE SUPPORTS HELPS US BE MORE KNOWLEDGEABLE ABOUT EVERYTHING.**

MOBILE TIME TRAVEL: USE AUGMENTED REALITY AND KINECT TO PLACE LEARNERS IN ANY SITUATION OR TIME

CRAIG WEISS

CEO

Craig Weiss is an eLearning blogger, analyst, and speaker and the founder and CEO of E-Learning 24/7, which provides learning management system consulting services to eLearning buyers and advisory/analyst services to eLearning vendors. Recently, he was named the fourth most influential person in the world for eLearning. Craig writes the E-Learning 24/7 blog and has written for numerous publications, including Training and Development in Australia and ASTD's Learning Circuits, and speaks at events and conferences around the world.

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How can we maximize comprehension, build on retention, enable synthesis, and make learning fun again? Add Kinect technology and augmented reality (AR) with a mobile device.

Using Kinect and AR on their mobile device, students can see or be placed into any event or situation—past, present, or even future. Say you are a student in Berlin, Germany, learning about the Berlin Wall. If you go to where it was today, you will see nothing, so you have no idea what the wall looks like beyond seeing it on a video or reading it in a digital textbook.

Now, using the mobile device's camera, before your eyes the Berlin Wall reappears as it was through the end of the 1980s—all thanks to AR.

“Using Kinect and Augmented Reality on their mobile device, students can see or be placed into any event or situation—past, present, or even future.”

If you want to go one step further and have students solve a problem or truly engage in some situation, add Kinect. (To see a kinesthetic learning experience in action, view [Kinect Math](#).) Kinect and AR can be used with any subject matter or grade level, which is why the use of this technology in mobile will work, because the few schools that have added it are seeing the results.

Students are succeeding.

KEY LESSONS

- 1 **USING KINECT AND AR ON THEIR MOBILE DEVICE, STUDENTS CAN SEE OR BE PLACED INTO ANY EVENT OR SITUATION.**
- 2 **USING A MOBILE DEVICE'S CAMERA AND AR, INFORMATION, EVENTS, AND STRUCTURES CAN REAPPEAR AS THEY WERE IN THE PAST.**
- 3 **KINECT AND AR CAN BE USED WITH ANY SUBJECT MATTER OR GRADE LEVEL.**


CONTENT IS THE KING OF MOBILE LEARNING

PEDRO A. TAMAYO

Lecturer in Economics

Pedro Tamayo is a lecturer in Economics at UNED (a Spanish distance university). He likes teaching online, employing new technologies, gadgets, mobile learning, instructional design, typography, and making learning fun.

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Everyday, when I use public transportation to go to work, it amazes me what I see: Most travelers are focused on their smartphone, eBook readers, or tablet. They are consuming content on a truly mobile device (not on laptops)—content that may be on their devices or from the cloud. When I get to my office at the university, I still see paper books, computers, printers, copiers, hard disks . . . and that's when I realize that what is happening outside the university, on public transportation and in cafés, is what we should be preparing ourselves for: the intersection of content, mobile, and the cloud. Content is the king of mobile learning, regardless of whether that content comes to us through apps, eBooks, videos, or social networks. Today, we face the biggest and most exciting opportunities to enrich teaching and learning, available to all and for all. We will not have to wait decades to verify this fact: Just ride the subway or the bus, go to the cafés, or give a tablet to a child in your family. You'll see it.

“Content is the king of mobile learning, regardless of whether that content comes to us through apps, eBooks, videos, or social networks.”

KEY LESSONS

- 1 **PEOPLE ARE CONSUMING CONTENT ON TRULY MOBILE DEVICES, NOT LAPTOPS.**
- 2 **WE MUST PREPARE OURSELVES FOR THE INTERSECTION OF CONTENT, MOBILE, AND THE CLOUD.**

INFORMAL LEARNING AND PERFORMANCE SUPPORT

PATTI SHANK, PH.D.

President

Dr. Patti Shank is the president of Learning Peaks, an internationally recognized instructional design consulting firm, and the research director of the eLearning Guild. Listed in Who's Who in Instructional Technology, Patti is the co-author of Making Sense of Online Learning and editor of The Online Learning Idea Book. She was an award-winning contributing editor for Online Learning Magazine, and her articles are found in eLearning Guild publications, Adobe Resource Center, and Magna Publication's Online Classroom.

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 learningpeaks.com



My favorite, effective uses of mobile and online learning technologies today tend to be performance support (helping people get work done in the moment) and informal learning (learning that may not be considered to be learning), because mobile and ubiquitous online access have made such things possible. These uses have really changed our lives for the better.

For example, I recently worked with Imogen Casebourne on a [mobile research report](#), and one of the case studies in the report was about how the Red Cross has developed mobile applications for people who need step-by-step emergency help, such as what to do if you have a burn or a broken bone. Amazing that we can carry this information around in our smartphones!

I've certainly experienced the power of informal and social learning through social applications such as Twitter. I'm regularly asking people I've met on Twitter for help and vice versa. For example, when I was writing the Salary Report for The eLearning Guild, I asked a Twitter friend in the United Kingdom to help me think through UK salaries. I also talk to other Twitter friends regularly about writing and design, and we use web conferencing to help each other with our projects. We learn from and with each other every day.

"We learn from and with each other every day."

KEY LESSONS

- 1 **MOBILE LEARNING ENABLES EFFECTIVE PERFORMANCE SUPPORT AND INFORMATION LEARNING.**
- 2 **SOCIAL MEDIA CAN HELP PEOPLE COLLABORATE ON PROJECTS AND LEARN FROM ONE ANOTHER.**

MODERN MAGIC: EMBED LEARNING INTO PRACTICE

CLARK QUINN, PH.D.

Executive Director

Dr. Clark Quinn integrates creativity, cognitive science, and technology to develop learning and performance strategies for business, education, and government. He has led the design of award-winning online content, educational computer games, and websites as well as adaptive, mobile, and performance support systems. Dr. Quinn has served as an executive in online and eLearning initiatives and has an international reputation as a speaker and scholar, with three books and numerous articles and chapters to his credit.

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I like to ask, 'What would you do if you had magic?' Arthur C. Clarke famously said, "any truly advanced technology is indistinguishable from magic," and we're there. Our technology is no longer the barrier. The limits are now between our ears, and we can and should do two things: Enable effective learning experiences that deeply embed practice, and support individuals wherever and whenever they are. Two situations illustrate this concept, both of which are with the Association of Children's Welfare Agencies in Australia: Kids who are released without having learned to live independently, and kids who travel from care situation to care situation. In the former case, we built an online game that allows kids to explore how to survive independently in safe practice. In the other, we prototyped a digital version of an existing LifeStory book that kids could use to engage interactions and record their experiences in a nonjudgmental way to share with new care providers. The principle is to use technology to augment the goals we're trying to achieve and bring in new capabilities that weren't previously possible.

"We can and should do two things: Enable effective learning experiences that deeply embed practice, and support individuals wherever and whenever they are."

KEY LESSONS

- 1 **ENABLE EFFECTIVE LEARNING EXPERIENCES THAT DEEPLY EMBED PRACTICE.**
- 2 **SUPPORT INDIVIDUALS WHEREVER AND WHENEVER THEY ARE.**
- 3 **USE TECHNOLOGY TO AUGMENT GOALS AND BRING IN NEW CAPABILITIES THAT WEREN'T PREVIOUSLY POSSIBLE.**

TAPPING COMMUNITIES FOR FEEDBACK, CREATION, AND LEARNING



ALEC COUROS

Blowing Students' Minds: Unleashing the Power of a Community



GRÁINNE CONOLE

Joining the Community: Transform Learning Through Mobile and Online Technology



IMOGEN CASEBOURNE

Feedback, Convenience and Support: It's All About the Learner



JANET CLAREY

The People Factor: The Two-Way Street of Learning



MALINKA IVANOVA

Learning from the Learners: Using Intelligent Technologies Intelligently



TAPPING COMMUNITIES FOR FEEDBACK, CREATION, AND LEARNING

BLOWING STUDENTS' MINDS: UNLEASHING THE POWER OF A COMMUNITY

ALEC COUROS

Professor of Educational Technology & Media

Dr. Alec Couros is a professor of Educational Technology and Media at the Faculty of Education, University of Regina. He has given hundreds of workshops and presentations, nationally and internationally, on topics such as openness in education, networked learning, social media in education, digital citizenship, and critical media literacy. His graduate and undergraduate courses help current and future educators understand how to use and take advantage of the educational potential the tools of connectivity offer.

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I remember a time in my classroom when a student came up to me and declared, "I have no idea what to blog about." All of my students develop their own blogs, and although I try my best to facilitate content that is rich with writing ideas, students sometimes need a little push to boost their confidence. So, rather than provide my own list of writing prompts, I decided to try something a bit different. I opened a Google Document, titled it "Writing Prompts for Teacher Candidates," shared the document publicly, and crowd-sourced the document on Twitter. Within seconds, the document lit up with collaborators. The once-blank document came alive with writers from around the globe, who shared their best ideas to prompt student writing. The list soon became quite long, and authors soon developed categories and moved sentences across the document. In this wonderful, creative chaos, there was a beautiful sense of order. My students watched this happen as I sat back in glee and said, "So, do you have something to write about now?" My student, inspired by what she just witnessed replied, "Yes! So many ideas! But I think I'll start by sharing how you just blew my mind."

"In this wonderful, creative chaos, there was a beautiful sense of order."

KEY LESSONS

- 1 **DON'T TELL STUDENTS HOW TO SUCCEED WITH TECHNOLOGY. SHOW THEM.**
- 2 **TAP COMMUNITIES TO INSTANTLY BREAK THROUGH LEARNING BARRIERS.**

JOINING THE COMMUNITY: TRANSFORMING LEARNING THROUGH MOBILE AND ONLINE TECHNOLOGY

GRÁINNE CONOLE

Professor of Learning Innovation

Gráinne Conole is professor of Learning Innovation at the University of Leicester. Her research interests include the use, integration, and evaluation of information and communication technologies and eLearning and the impact of technologies on organizational change. Recipient of an HEA National Teaching Fellowship in 2012, Gráinne has published and presented more than 1,000 conference proceedings, workshops, and articles and recently published *Designing for Learning in an Open World*. She regularly blogs at www.e4innovation.com.

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Mobile and online technologies have transformed my practice as a learner, teacher, and researcher in many ways. First, social media means that I am now part of a global, distributed network of peers, able to communicate and share on a wide range of topics. I can pose a question on Twitter and get answers in minutes, I can support Ph.D. students with their research questions, and I can share research findings and discuss the findings of others. Second, my blog has transformed the way I research-the way I think and the way I write. I truly value the comments that colleagues make and the feeling of being a connected community of peers. Finally, with new tablet devices like the Apple iPad Mini, I can connect and browse anywhere, anytime, through a rich set of interactive and communicative apps.

"The way I think and the way I write, I truly value the comments that colleagues make and the feeling of being a connected community of peers."

KEY LESSONS



- 1 **SOCIAL MEDIA MEANS THAT USERS ARE NOW PART OF A GLOBAL, DISTRIBUTED NETWORK OF PEERS.**
- 2 **BLOGS CAN TRANSFORM THE WAY EDUCATORS CONDUCT RESEARCH.**

FEEDBACK, CONVENIENCE AND SUPPORT: IT'S ALL ABOUT THE LEARNER

IMOGEN CASEBOURNE

Director of Learning

Imogen Casebourne started designing mobile learning in 2005, creating successful PDA courses and educational mobile games. More recently, she led the Epic team that received gold at the E-Learning Awards (the United Kingdom's most prestigious eLearning industry awards) for Best Use of Mobile Learning. In 2012, she published a report on mobile learning for the National Health Service and in 2013 undertook mobile case study research for the eLearning Guild. She oversees Epic's thought leadership program and speaks at conferences.

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Online technologies are powerful when they offer tailored feedback so learners can immediately see how they are doing. They can also provide realistic simulations of difficult or dangerous environments, offering a safe place to experiment and learn from mistakes.

Mobile technologies offer more convenient access to existing online learning as well as new possibilities. Because they are invariably with us, mobile technologies are perfect for fitting in small but frequent bursts of practice to help master a new skill or task in "found time" that might otherwise go to waste. Imagine playing a quick round of a learning game while waiting for an appointment or a flight.

Mobile technologies are also great for offering just-in-time performance support to people who are out and about. This support could be related to what someone is about to do (prompted via a calendar on his or her device) or to the user's current location (triggered by GPS or a learner scanning a quick-response code).

"Always remember to ask learners what they want. Technology is there to help people, not for its own sake."

Always remember to ask learners what they want: Technology is there to help people, not for its own sake. When I asked National Health Service learners what they most wanted from mobile technology, the answer turned out to be access to reference books from mobile devices.

KEY LESSONS

- 1 **THE UBIQUITY OF MOBILE TECHNOLOGY MAKES IT GOOD FOR PRACTICE OR LEARNING DURING DOWN TIME.**
- 2 **THE SAME UBIQUITY MAKES MOBILE TECHNOLOGY PERFECT FOR PERFORMANCE SUPPORT.**

THE PEOPLE FACTOR: THE TWO-WAY STREET OF LEARNING

JANET CLAREY

Managing Director

Janet Clarey's background is in corporate learning and development, where she worked on various learning technology platform implementations, technical training, curriculum development, and instructional design. As managing director of The eLearning Guild Academy, Janet strives to help fellow learning professionals make sense of the changing learning environment. She is responsible for development of Guild Academy, providing a comprehensive curriculum of courses and certificate programs for training and learning technologies professionals around the world.

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The most effective uses of mobile and online technologies for corporate education are those that support people's actual behaviors in their daily work. That statement may sound obvious, but when faced with a failed initiative, when trying to answer the question, "Why isn't anyone using this?" I find the answer is often ineffectiveness at being able to deeply understand the day-to-day behaviors of real people. People can't just be told "how" to do their work. I have found that the most effective uses of mobile and online technologies have been implemented by people who recognize this limitation and instead enable work rather than seek to define and control it.

What does "enabling work" look like? From my view, it is embedded in my workflow regardless of where I am—the questions I both ask and answer in the online communities I contribute to daily, the videos I watch and rate, and the articles I read and comment on. It's not effective just because I can access it anytime and anywhere; it's effective because it's a two-way street. I may be learning "how" to do my work, but it is through my own active engagement with others. That's the missing link between effective and ineffective use of mobile and online technologies for learning: the failure to recognize that people are involved.

"The most effective uses of mobile and online technologies for corporate education are those that support people's actual behaviors in their daily work."

KEY LESSONS

- 1 **USE MOBILE AND ONLINE TECHNOLOGIES TO ENABLE WORK RATHER THAN SEEK TO DEFINE AND CONTROL IT.**
- 2 **EMBEDDING TECHNOLOGY INTO YOUR WORKFLOW ENABLES WORK.**
- 3 **YOU LEARN HOW TO WORK THROUGH YOUR ACTIVE ENGAGEMENT WITH OTHERS.**

LEARNING FROM THE LEARNERS: USING INTELLIGENT TECHNOLOGIES INTELLIGENTLY

MALINKA IVANOVA

Associate Professor

Malinka Ivanova is an associate professor at the Technical University of Sofia, College of Energy and Electronics. She is attracted to digital technologies and tries to exploit them in educational settings, providing students with new opportunities for knowledge understanding and discovery.



One of the most important ingredients leading to realization of effective online and mobile teaching and learning is related to the power of contemporary and emerging technologies—technologies that support not only our current learning ecosystems but also facilitate transition of smart educational environments to intelligent educational campuses. Our present learners are looking for next-generation solutions that satisfy their increased cognitive needs, emotional charge, and curiosity. The look beyond is focused on extraction of the advantages of informal, active, collaborative, social learning environments; proposing flexible and individual learning paths; and reaching positive outcomes.

Technologies work in “stealth” mode to assist the achievement of high efficiency and productivity in learning, providing in-time, location-independent, and on-demand mobile and online services. Technologies go further by providing opportunities for the development of tools for motivation adjustment, that affect recognition, and that predict future learning necessity. Intelligent educational environments continually learn from learners to deliver the exact media format and the right applications and services.

Use intelligent technologies intelligently, and you will attain enormous success!

“Our present learners are looking for next-generation solutions that satisfy their increased cognitive needs, emotional charge, and curiosity.”



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KEY LESSONS

- 1 **LEARNERS ARE LOOKING FOR NEXT-GENERATION SOLUTIONS THAT SATISFY THEIR INCREASED COGNITIVE NEEDS, EMOTIONAL CHARGE, AND CURIOSITY.**
- 2 **TECHNOLOGIES WORK IN “STEALTH” MODE TO ASSIST THE ACHIEVEMENT OF HIGH EFFICIENCY AND PRODUCTIVITY IN LEARNING.**
- 3 **INTELLIGENT EDUCATIONAL ENVIRONMENTS CONTINUALLY LEARN FROM LEARNERS.**

MUST HAVE TOOLS



JOHN FAIG

Productivity Boosters



JOHN ROBINSON

Three Things Educators Must Do



KYLE PACE

Using Online Tools for Engaging Reviews, Remediation and Enrichment



NICHOLAS PROVENZANO

Making Learning Easier: Mobile Learning with Evernote



LISA NIELSEN

Three Great Ways Teachers Can Harness the Power of Mobile Devices



JOYCE SEITZINGER

Turning Off the Fire Hose: Using Curation Tools to Focus Learning

MUST HAVE TOOLS


PRODUCTIVITY BOOSTERS

JOHN FAIG

Technology Coordinator

John Faig is an innovative educator who strives to become a better teacher everyday. He is a voracious reader, using his personal learning community to stay current with education and technology research. His project-based classroom is informed by research and includes choice, autonomy, and challenge. He has a bachelor's of science degree in Computer Science from Northeastern University and a master's degree in Educational Technology from Columbia. He is currently pursuing a master's in Computer Science from Johns Hopkins.

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A lot of innovation is occurring in education to make use of the growing availability of mobile devices, such as laptops, tablets, and smartphones. I view the products in three categories, based on who receives the productivity boost: students, teachers, or both. For teachers, tools exist to improve classroom management, gather more formative assessment data. For students, there is a plethora of homework organizers and a note-taking tools for every student. With the help of easier tools, making a short video takes no more time than writing a paragraph. The most powerful tools help create a more collaborative learning environment. There are shared documents, discussions, and rich instructional tools. On the horizon is a new generation of interactive books and more interactive learning management systems.

"The most powerful tools help create a more collaborative learning environment."



KEY LESSONS

- 1 **TEACHERS CAN USE TOOLS SUCH AS CLASSDOJO TO IMPROVE CLASSROOM MANAGEMENT.**
- 2 **STUDENTS CAN USE MOBILE TECHNOLOGY HOMEWORK ORGANIZERS AND NOTE-TAKING TOOLS.**
- 3 **STUDENTS AND TEACHERS ALIKE CAN BENEFIT FROM SHARED DOCUMENTS, DISCUSSIONS, AND INSTRUCTIONAL TOOLS.**

THREE THINGS EDUCATORS MUST DO

JOHN ROBINSON Principal

John Robinson is a 24 year veteran teacher, administrator, technology enthusiast, and blogger. He regularly writes about technology use, school reform, and classroom practice. John has a bachelor's degree in English, a master's in Instructional Technology, an MSA in School Administration, and an Ed.S. degree in Educational Administration. He is currently working on his doctorate at Appalachian State University.

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To capitalize and maximize learning on mobile and online technologies, educators must take advantage of three technological capabilities.

First, they must get students to use such technology to network. Students can use these networks in two ways: to collaborate and to engage in personal learning. To collaborate, students use apps like Twitter or web conferencing to collaborate locally and globally. Two years ago, our foreign language students met regularly with a school in Columbia to collaborate on a school supply donation project using web conferencing. Students in both places practiced foreign language skills and increased their cultural awareness. Students can also create personal learning networks that focus on their own interests.

Second, educators must encourage students to use technology anytime and as needed. When this happens, student learning extends beyond the schedule of the school day. A student using the application Evernote collects research, and then has access to that information any time using multiple devices and the Web.

Finally, teachers must get students to use these technologies across devices. Because of mobile and online technologies, students use tools like Diigo, Evernote, and Twitter on a phone, tablet, eReader, desktop, and the Web. Ultimately, students take their classroom wherever they go.

No doubt, mobile and online technologies make collaboration and connecting easier. These technologies have rapidly deleted the classroom walls and expanded student learning into the world outside of school.

KEY LESSONS

- 1 **STUDENTS MUST USE MOBILE AND ONLINE TECHNOLOGY TO NETWORK.**
- 2 **WITH MOBILE AND ONLINE TECHNOLOGIES, STUDENT LEARNING EXTENDS BEYOND THE SCHOOL DAY.**

“Educators must encourage students to use technology anytime and as needed.”


USING ONLINE TOOLS FOR ENGAGING REVIEWS, REMEDIATION AND ENRICHMENT

KYLE PACE

Instructional Technology Specialist

Kyle Pace has been a K–12 district instructional technology specialist for the past 10 years. He is also a Google Certified Teacher, a 2013 ASCD Emerging Leader, and a 2013 'Leader to Learn From' from Education Week magazine. Kyle provides instructional technology professional development and consulting for schools and districts across the country on Google Apps for Education and Social Media.

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Mobile and online technologies in education give educators, schools, and districts the ability to provide multimedia content in a variety of ways to students and other educational stakeholders. For example, teachers can use tools like Remind 101 to provide just-in-time communication to students about their coursework and other school events. Giving teachers access to resources like YouTube, web conferencing, and screen-capture software allows them to provide review, remediation, and enrichment in more engaging ways that can happen beyond the regular school-day hours. Educators should be integrating these strategies into their instruction regularly.

“Giving teachers access to resources like YouTube, web conferencing, and screen-capture software allows them to provide review, remediation, and enrichment in more engaging ways that can happen beyond the regular school-day hours.”

KEY LESSONS

- 1 **MOBILE TECHNOLOGY ALLOWS EDUCATORS THE ABILITY TO PROVIDE MULTIMEDIA CONTENT.**
- 2 **SOCIAL MEDIA AND SCREEN-CAPTURE SOFTWARE TO INTERACT WITH STUDENTS IN MORE ENGAGING WAYS.**

MAKING LEARNING EASIER: MOBILE LEARNING WITH EVERNOTE

NICHOLAS PROVENZANO

Chief Nerd

Nicholas Provenzano is a high school English teacher from Michigan. He is also the writer of two books on the use of Evernote in the classroom and shares his thoughts on education on his website, TheNerdyTeacher.com. In 2013, Nicholas received his state technology organization's Teacher of the Year award and was named International Society for Technology in Education's Teacher of the Year. He is happily married and has an awesome nerdy son.

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One of the most effective uses of mobile technologies in education has been my integration of cloud-based note taking via Evernote in my everyday life as an educator. Evernote has allowed me to move to a paperless environment for my classroom. My students are no longer busy looking for handout after handout: They can use Evernote on their own devices to access class assignments, stories, and any other information shared in Evernote.

My students have embraced notes in the cloud in my class and have influenced other students and teachers to start using it, as well. My students are no longer bound to a hardcopy of their notes or textbook. They can have all of their notes and ideas with them wherever they go. My high school students are often on the go, so the ability to access their notes at different times and places is a bonus for them.

Evernote has allowed me to create an environment in which students can learn anytime, anywhere. As a teacher, you want to make learning easier for your students. The Evernote mobile platform has allowed me to do that.

"My students are no longer bound to a hardcopy of their notes or textbook. They can have all of their notes and ideas with them wherever they go."

KEY LESSONS

- 1 **A CLOUD-BASED NOTE-TAKING SYSTEM HELPS CREATE A PAPERLESS CLASSROOM ENVIRONMENT.**
- 2 **WITH EVERNOTE, CAN HAVE ALL OF THEIR NOTES AND IDEAS WITH THEM WHEREVER THEY GO.**

THREE GREAT WAYS TEACHERS CAN HARNESS THE POWER OF MOBILE DEVICES

LISA NIELSEN

Writer / Speaker / Public School Educator

Lisa Nielsen, author of *Teaching Generation Text*, is a seasoned public school educator and administrator. As director of Digital Literacy and Citizenship, Nielsen encourages educators and administrators to support innovative and relevant learning that will engage students and prepare them for academic, career, and social success. Best known for her award-winning blog, "The Innovative Educator," Lisa's writing is featured in places such as *The New York Times*, *T.H.E. Journal*, *Tech & Learning*, *Leading & Learning*, *MindShift*, and the *Huffington Post*.

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With or without us, students are using cell phones for learning. A [2012 study](#) on students' use of mobile technology conducted by Tru (a global leader in tween and teen research) revealed that despite the perception by some parents and teachers that mobile phones are distracting to kids, our children deserve more credit: One in three is using his or her device to complete homework and learn better.

Following are some ways innovative educators are harnessing the power of these devices to connect with students, families, and the world.

Connect Students with [Remind 101](#)

Remind 101 provides a safe, one-way, mass text messaging system created specifically for use in education. It keeps your phone number and the phone numbers of your subscribers completely private, stores all of your sent messages, and is free to use. Just sign up and create a list for others to join via a simple text or email. Because of the convenience of sending messages directly to phones, Remind 101 is a perfect tool for announcements and reminders such as school holidays, school events, photo days, fundraising events, testing days, and more.

Nikki Schubert is using Remind 101 for her high school social studies classes in Remsen, Iowa. She is able to send out reminders to students about changes in lessons, due dates, and homework assignments. She is also using it to send out information about cool websites and things on television that are related to class. With five preps, it's an excellent way for her to keep students informed and to help keep them up to date on classroom activities. It really works well for students who are absent and need to know what's coming up. She is also using it with student council members in basically the same way as well as with her play cast. Her hope is to expand it to parents next year and include them in the transfer of information and the communication process.

Connect Families with [Twitter Fast Follow](#)

Did you know that anyone (in the United States) can receive tweets on their phone even if they haven't signed up for Twitter? Twitter Fast Follow allows anyone to follow tweets right from any phone with texting capabilities. For a school community, this can provide a simple way for people to get information they care about in real time, providing a terrific way to build and strengthen the home-school connection.



THREE GREAT WAYS TEACHERS CAN HARNESS THE POWER OF MOBILE DEVICES

LISA NIELSEN

Writer / Speaker / Public School Educator

Lisa Nielsen, author of *Teaching Generation Text*, is a seasoned public school educator and administrator. As director of Digital Literacy and Citizenship, Nielsen encourages educators and administrators to support innovative and relevant learning that will engage students and prepare them for academic, career, and social success. Best known for her award-winning blog, "The Innovative Educator," Lisa's writing is featured in places such as *The New York Times*, *T.H.E. Journal*, *Tech & Learning*, *Leading & Learning*, *MindShift*, and the *Huffington Post*.

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[Watch this video](#) see how Locke Elementary School in Chicago uses Twitter to stay in touch with parents, students, and school leaders via text messages.

Connect to the World with [ipadio](#)

In the busy school day of a teacher, many feel their schedules don't allow for the complexities of the equipment and setup necessary for podcasting. But it needn't be that way. Services like ipadio provide users with the ability to easily create and capture an audio broadcast from any phone that can be published and shared.

In Paul Bogush's 8th-grade social studies class, world leaders are not unknown stuffy old people in a book. Paul's "Lunchtime Leaders" interview leaders from around the world on their opinions about what students should do to be prepared for the future. They are called the Lunchtime Leaders, because they actually interview all of the leaders during their lunch period, which means that they have to start and finish within 20 minutes. A service like ipadio allows them to simply use any phone with three-way calling to connect their interviewee with ipadio. When the call is done, the interview is immediately published and available as a phonecast.

Mobile phones provide a powerful platform for teaching, learning, and connecting with the school community. The examples shared here give you some practical ideas for getting started with incorporating the technology students own and love into practice. This is important not only as a part of the 21st-century educator's toolbox but also as a vehicle to provide more opportunities for students to use real-world tools.



KEY LESSONS

- 1 **TOOLS LIKE REMIND 101 LET EDUCATORS SEND OUT REMINDERS TO STUDENTS ABOUT CHANGES IN LESSONS, DUE DATES, AND HOMEWORK ASSIGNMENTS.**
- 2 **TWITTER FAST FOLLOW PROVIDES A SIMPLE WAY FOR PEOPLE TO GET INFORMATION THEY CARE ABOUT IN REAL TIME.**
- 3 **MOBILE PHONES PROVIDE A POWERFUL PLATFORM FOR TEACHING, LEARNING, AND CONNECTING WITH THE SCHOOL COMMUNITY.**

"One in three students is using his or her device to complete homework and learn better."


NEW ESSAY TITLE: TURNING OFF THE FIRE HOSE: USING CURATION TOOLS TO

JOYCE SEITZINGER

Lecturer in Blended Learning

Joyce Seitzinger is an experienced education technologist working to develop networked practices and communities in the academic world. Her special interests are social curation, learning design, and networked learning, and she is the developer of the **Moodle Tool Guide for Teachers**. Joyce has presented her work in workshops, seminars, and lectures in New Zealand, Australia, the United Kingdom, Hong Kong, Oman and more. She is currently a lecturer in Blended Learning at Deakin University.

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You know that moment when you tell your colleagues about the article you read online, but you can't remember where? Yes, that moment. We've all experienced it. Today, we graze on information. Some studies say we access our smart devices more than 150 times a day. In this information-abundant world, it is paramount that we focus our information strategies, find the resources we need, and store them for future retrieval and use. And more importantly, we must be able to share those resources with our co-learners and co-workers. Curation tools like Flipboard, Scoop.it, Pinterest, Pearltrees, and Storify let us do exactly that.

Curation tools are powerful for learners, because they can choose topics to curate, focusing their attention and letting them ignore the rest of the Internet fire hose. But they are even more powerful for a networked community of learners interested in similar or related topics, because the information can spread freely through the network. An information artifact (a tweet, a picture, a video) can be conveniently shared with a single tap or click of a browser button. Yet, curation by learners in institutional or company course sites is ineffective, requiring log-ins, copying and pasting URLs, and permissions to share. Expect to see the rise of curation tools in education.

"Curation tools are powerful for learners, because they can choose topics to curate, focusing their attention and letting them ignore the rest of the Internet fire hose."

KEY LESSONS

- 1 WE ACCESS OUR SMART DEVICES MORE THAN 150 TIMES A DAY.
- 2 WE MUST BE ABLE TO FOCUS OUR INFORMATION STRATEGIES.
- 3 CURATION TOOLS ALLOW LEARNERS TO CHOOSE TOPICS, FOCUSING THEIR ATTENTION AND IGNORING UNIMPORTANT INFORMATION.

FINAL REMARKS

Dear Reader,

Thank you for reading this book. Did any of the essays spark your imagination? Have you been inspired to try something new? If so, then we've succeeded.

First, I want to thank the good folks at Citrix for making this book possible. Their generous support for this project is just one small example of their ongoing commitment to transforming education. I also want to thank each of our education experts for taking the time to share their thoughts and insights. Most importantly, I want to thank you, the educator. You're at the center of this revolution. Without your dedication to your profession, to your students, and your colleagues, none of this progress would have been possible. Your hard work and willingness to try new things is precisely why the future of education is so bright.

All the best,

DAVID ROGELBERG

Editor

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