
Introduction: Our Changing World

Technology and Global Society

Guiding Questions

1. Are today's students different? Are they attention deficient? What do they want?
2. How can we motivate and engage today's students?
3. Is there a better way to help today's students learn? How can we get there?

In the 21st century, so many of our old assumptions and strongly held ideas have been turned around—and so many more upheavals are on the way—that it is clearly a different place in which our kids are growing up. Two-thirds of the people on the planet have a cell phone. A new virtual (i.e., online) world has emerged out of the ether and become the focus of many of our kids' attention. Engineers are putting a trillion transistors on a single computer chip. Scientists are manipulating individual atoms to make nano-scale machines that we can't even see. The world's volume of information will soon be doubling every few hours. No longer do TV game shows put you in an isolation booth to prove no one is helping you; they encourage you to phone a friend or poll the audience.

It is inevitable, in such an environment, that change would finally come to our young peoples' education as well, and it has. But there is a huge paradox for educators: the place where the biggest educational changes have come is not our schools; it is everywhere else *but* our schools. The same young people who we see bored and resistant in our schools are often hard at work learning *afterschool* (a term I use to encompass informal learning through peers, the Internet, YouTube, television, games, cell phones, and lots of other emerging opportunities, as

well as through organized programs such as FIRST Robotics). It is in the afterschool world, rather than in schools, that many of our kids are teaching themselves and each other all kinds of important and truly useful things about their real present and future. A host of powerful tools are available to them for this purpose, and those tools—and our kids through using them—are growing more and more powerful each day. After school, no one tells kids what to learn or do. They follow their interests and passions, often becoming quite expert in the process.

ATTENTION?

Despite what you may hear, or even observe, today's students don't have short attention spans or the inability to concentrate that they are often accused of having. Many of the same students who don't concentrate in school will sit for hours, for example, totally focused on movies or video games. So, it is not our students' attention capabilities that have changed, but rather their tolerance and needs. Today's young people must continuously choose among a plethora of very expensively produced demands on their attention—music, movies, commercials, TV, Internet, and more. They have learned to focus only on what interests them and on things that treat them as individuals rather than as part of a group or class (as we so often do in school). In an increasingly populated and crowded world, choice, differentiation, personalization, and individualization have become, for today's young people, not only a reality, but a necessity.

More and more young people are now deeply and permanently technologically enhanced, connected to their peers and the world in ways no generation has ever been before. Streams of information come at them 24/7. More and more of what they want and need is available in their pocket on demand. "If I lose my cell phone, I lose half my brain," comments one student.

Do such kids need school? More and more of them (almost a third nationally and half in the cities) think not, and drop out. But we adults, especially educators, know that this is a huge mistake—there is so much today's young people can and should learn from us. The problem is, though (again in the words of a student), "There's so much difference between how students think and how teachers think." Increasingly, we're failing to deliver what students need in the ways that they need it. What today's kids *do* have a short attention span for are our old ways of learning.

WHAT TODAY'S STUDENTS WANT

So what do these students want from school? Based on interviews of almost a thousand of today's students from all economic, social, intellectual, and age strata, all over the world, I have found that what they say is remarkably consistent:

- They do not want to be lectured to.
- They want to be respected, to be trusted, and to have their opinions valued and count.
- They want to follow their own interests and passions.
- They want to create, using the tools of their time.

- They want to work with their peers on group work and projects (and prevent slackers from getting a free ride).
- They want to make decisions and share control.
- They want to connect with their peers to express and share their opinions, in class and around the world.
- They want to cooperate and compete with each other.
- They want an education that is not just relevant, but *real*.

It is possible, of course, to view this list as a narcissistic or unrealistic set of expectations on the part of students. But to do so would be a big mistake. Or one might find this set of expectations incompatible with teaching the required curriculum or with getting better results on standardized tests. But that would be a wrong conclusion as well.

Today's students want to learn differently than in the past. They want ways of learning that are meaningful to them, ways that make them see—immediately—that the time they are spending on their formal education is valuable, and ways that make good use of the technology they know is their birthright.

Our students see a new world coming—their world—a world in which what they think should be important actually is. The world they are headed for is different and important to them, and they already know more about some aspects of it than we do. But the world they came from is also important to them, and we know more about that than they do. We need to teach kids to respect the past but to live in the future.

And that is why we need to partner. The key change and challenge for all 21st century teachers is to become comfortable not with the details of new technology, but rather with a different and better kind of pedagogy: partnering.

PARTNERING AND 21ST CENTURY TECHNOLOGY

All teachers today know that digital technology is becoming an important part of students' education. But just how to use it in school is not yet completely clear, and most educators are at some stage of figuring out (or worrying about) how to use technology meaningfully for teaching. And these teachers are right to be concerned, since depending on how it is used, technology can either help or hinder the educational process.

Concerned teachers are continually requesting more training and additional professional development about using technology. But again, there is a paradox, because to be the most successful at using technology in their classrooms, teachers do not need to learn to use it themselves (although they can if they want to). What teachers do need to know is just how technology can and should be used by students to enhance their own learning.

In a partnering pedagogy, using technology is the students' job. The teachers' job is to coach and guide the use of technology for effective learning. To do this, teachers need to focus on, and become even more expert at, things that are already part of their job, including asking good questions, providing context, ensuring rigor, and evaluating the quality of students' work.

REAL, NOT JUST RELEVANT

An important result of the introduction of technology into our children's education is a much shorter span today between learning and meaningful action. Today's students know that when they learn something after school, they can immediately apply it to something real. When they learn to play a game, they can collaborate and compete with others around the globe. When they learn to download, text, and tweet, they can immediately participate in profound social revolutions, such as changing the music business and influencing government policies. As they learn to post their creations and ideas online, they become aware that even as young people they can truly influence and change the world. This gives new urgency and meaning to the "Why should I learn this?" question that our students eternally ask, and demands that we have a better answer than "Someday you'll need it." Today's students expect the same thing from their formal education as from the rest of their lives—that it be not just relevant, but *real*.

MOTIVATION THROUGH PASSION

Teachers have always known that engagement and motivation are what causes students to put in the effort necessary to learn well. And that effort is not trivial. Both scholars, such as Howard Gardner (in *Five Minds for the Future*), and popular writers, such as Malcolm Gladwell (in *Outliers*), point to a large body of research showing that it takes roughly 10,000 hours (some say 10 years) to become really expert at something, anything at all. Today's teachers, of course, often can't get their students to do one hour of homework. One reason is that, in the 21st century, the road to engagement has changed.

Education's approach to motivating students has traditionally been the stick, that is, discipline. The stick has long been used both literally and figuratively (as demerits, detention, and downgrades). In some circles, discipline is even making a comeback as a remedy for our often-failing system.

But educational experts and teachers who really know kids are increasingly pointing to a better approach to student motivation, one that works much more effectively in both the short and long term. That better way is to motivate each student to learn through his or her passion. Passion drives people to learn (and perform) far beyond their, and our, expectations. And whatever is learned through the motivation of passion is rarely if ever forgotten.

As we shall see, in addition to opening students' minds to new ideas, today's teachers need to be sure to seek out and understand the passion that each student already has for some particular thing, subject, or idea (or will have if he or she hasn't found it already). Those passions are, or can be, the key to students' learning almost anything. If a teacher truly encourages each student to discover his or her passion and understands deeply what each student's passion is, that teacher can provide a learning path for each student that is maximally beneficial and can enable each student to achieve and go as far as he or she is capable.

And that, as far as I can tell, is our goal as educators.

TEACHING FOR THE FUTURE

Today's students will not live in a world where things change relatively slowly (as many of us did) but rather one in which things change extremely rapidly—daily and exponentially. So today's teachers need to be sure that, no matter what subject they are teaching, they are teaching it with that future in mind. While there is much about that future that we don't know, we know enough to understand that today's English students must be posting, publishing, and communicating with the world in the multiple media of today and tomorrow; that today's science students must study what is happening on the cutting edge—not just of the disciplines, but of their interstices, which is where all the really interesting work is going on; that today's math students must truly understand orders of magnitude, estimation of unknown quantities, and the math behind all the polling and statistics that are thrown around in our political lives; and that today's social studies students must be learning to deal with, and effect change in, an increasingly crowded, chaotic, and dangerous world.

We know we must respect and learn from the past. But if the future isn't getting equal time in our education, we are selling our students terribly short.

SO HOW DO WE DEAL WITH THIS?

If you are an experienced teacher, you almost certainly have students filling up your classes who are, in many ways, different from those in the past. You probably feel a need, or some pressure, (and may have even started) to do something different for them. You likely also feel pressure to raise the students' test scores and make or exceed adequate yearly progress. Yet many of the teaching techniques you once used successfully do not seem to be working with today's students. You have probably wondered about, and perhaps already begun, making changes to the ways you previously taught.

If you are new to the profession, a teacher just starting out, you may have arrived on your first day with lots of fresh ideas about how to teach and reach students who are still fairly close to your age. But you may have experienced pressure from administrators to do things the old, traditional way in order to keep test scores up and to not rock the boat.

If you are a new teacher switching in from another profession, as many are these days, you may not know much about teaching at all, except how you yourself were taught and what you've picked up from a brief training program. As a result, you may have a very traditional idea of what teaching is. But you may be looking for more effective ways to teach this new generation—particularly after you meet the kids.

And if you are an education student, thinking about or preparing for teaching while still in school, you may be wondering what you will do, either because you are excited about the possibilities for doing things in new ways, or because some of the old ideas you are hearing about teaching conflict with your past or current experiences as a 21st century student.

Whatever your background, you are not alone. There are a great many teachers today who feel the need to teach differently and are looking for specific guidance in making that shift.

A NEW APPROACH

How This Book Will Work for You

This is a book for teachers and school leaders in which the primary focus is on pedagogy: a pedagogy of partnering that addresses the needs of 21st century learners. Of course, the book incorporates 21st century technology, and the key role technology plays in the partnering pedagogy as well. Because many teachers are concerned about what it takes to use up-to-date technology in their teaching, this book offers specific information about the technology and ways to allay the fears about technology that many teachers have. The book offers ways to deal with whatever level of technology is, or isn't, available in your school and classroom, and discusses when and how teachers should and shouldn't be using technology themselves. Finally, the book emphasizes how maximizing the use of technology *by students* will benefit students most.

Additionally, the book addresses the important question often asked by educators about how to preserve what is important from the past—and in education generally—while embracing the tools of the future. I make the helpful distinction between “verbs” and “nouns,” where verbs are the skills students should know (such as understanding and communicating), which change little or not at all, and nouns are the tools we use to learn, practice, and use these skills (such as PowerPoint, e-mail, Wikipedia, YouTube, etc.), which change with increasing rapidity. I encourage teachers to think of verbs as the part that is fundamental and nouns as something that will continue to evolve continually in our lifetimes.

The pedagogical changes discussed in this book are already well under way around the world. Thousands of teachers, both new and experienced, are already using the partnering pedagogy in one form or another. This is your opportunity to join this positive worldwide wave—a movement that will benefit both you and your students. This book will show you the path to making the changes required to get from being a lecturer who tightly controls students' learning through discipline and testing to being a coach, partner, and guide to students who, driven by their own passion, are teaching themselves and learning on their own with your help.

Because an overwhelming majority of teachers love and want to help the kids they teach, most have the courage required to feel the real fear associated with making these changes, and yet make them anyway. All change takes courage, courage to begin and, perhaps more important, courage to continue even when things don't always go as expected. Wherever that courage comes from—whether from teachers' desire to help their kids, from teachers' own self-respect and desire to do the best possible job, or, preferably, from both—it is crucial to succeeding.

THE ROAD TO A PEDAGOGY OF PARTNERING

This book provides a roadmap for educators who would like to begin (or continue) partnering with their students, to prepare their students for living and working in the 21st century.

The approach I advocate actually goes by many names. I prefer (for reasons I will explain in the course of the book) *partnering*. But the name you use is less important than the steps you take.

In this book you will find strategies, steps, ideas, and examples for how to make the transition to partnering. There are suggestions on how to think about teaching differently. There are examples and suggestions for finding other examples that may be better for you. There are instructions on how to partner, both with colleagues and with students, to create and share good examples of your own. Because not everyone is a beginner at this, there are ways to assess where you currently are along the road to the new pedagogy. And there is help in going further.

I very much hope this book proves useful to you. I hope it sparks in you a new round of energy and creative force with which to approach your demanding but potentially wonderful job.

I welcome your feedback on your successes at marcprensky@gmail.com.

ORGANIZATION

The book is structured to take you logically from a deeper understanding of the problem (Why are so many of today's kids not engaged?) to a solution that works (partnering) to the daily implementation of that solution in your classroom.

Chapter 1 begins by offering a new, more positive way to look at 21st century students and then describes the partnering pedagogy, including the new roles of the teacher, the students, and all the other players. Chapter 2 introduces more detail on how to move to and implement the partnering pedagogy, including setting up your classroom differently, leaving the stage, choosing the best type of partnering for you and your students, understanding the verb/noun distinction, and connecting partnering to the current curriculum. Chapters 3–6 are devoted to key partnering issues. Chapter 3 is about using students' own passions to motivate them to learn. Chapter 4 is about making students' learning real, not just relevant. Chapter 5 discusses translating content into guiding questions and emphasizing verbs, or skills. Chapter 6 focuses on how to use technology in partnering. Chapter 7 is an annotated list of more than 130 of the technologies available for students to use today. Chapter 8 emphasizes student creation. Chapter 9 discusses continuous improvement, particularly through sharing. Chapter 10 takes up the issue of assessment in partnering. In the Conclusion I look ahead to ways in which we can improve digital natives' education even further.

In addition to these discussions, throughout the book there are special features designed to help you and serve as references. These include the following:

- Many practical suggestions, labeled “partnering tips” and set off in boxes
- A number of strategies and choices for making partnering more successful in your particular environment
- Numerous comments from the almost 1,000 students whom I have interviewed
- A chart of more than 50 learning verbs

8 Teaching Digital Natives

- An annotated list of more than 130 nouns (tools) that your students can use while partnering, along with the verbs for which they are appropriate (Note that Chapter 7 is set off with shaded edges to make it easier to find it as a reference.)

I hope you will take advantage of, enjoy using, and return to these tools and features.

Finally, to make it easier to use this book as a study guide, I have followed my own advice with regard to guiding questions, and have placed a set of these questions at the head of each chapter. They are intended to provide context and to help you reflect as you read. I hope they prove useful.