



A Review of Education Technology in Digital Age: Classroom Learning for Future and Beyond

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Abstract

The focus of all of this intense interchange was the shape and future of learning institutions. Our charge was to accept the challenge of an Information Age and acknowledge, at the conceptual as well as at the methodological level, the responsibilities of learning at an epistemic moment when learning itself is the most dramatic medium of that change. This is an idealistic claim about the primacy of learning that the single most important characteristic of the Future of classroom learning in a Digital Age is its capacity to allow for a worldwide community and its endlessly myriad subsets to exchange ideas, to learn from one another in a way not previously available. We contend that the future of learning institutions demands a deep, epistemological appreciation of the profundity of what the Internet offers humanity as a model of a learning institution.

Keywords: Internet, digital world, classroom, technology

“I am often told that I rush ahead to promote things that will only be possible 30 or 40 years from now. But that is not the case, because I commend that which is current and urgent, which already exists in more advanced countries, while my detractors are unaware of such things because unknowingly they are 30 or 50 years behind the times”. Bernardo A. Houssay (Nobel Prize for Medicine, 1947)

Introduction

Current Scenario of Our Education System

During the last decade, as the Internet and multimedia technology became widespread, enthusiasm for the use of computers in schools also became more evident across the United States. Attendance at educational technology conferences rose sharply; hundreds of businesses started up to offer hardware, software and related services to education; and thousands of teachers took courses to help them utilize newer technology in their classrooms. Outside the school system enthusiasm grew as well despite the publication in newspapers and magazines of several articles critical of the growing reliance on computers in schools (Ronald, Anderson and Ronnkvist, 1998).

Will classrooms still exist in 20 years from now? Do we have traditional classrooms in a physical sense anymore? What is the classroom anyway? For most of us, a classroom consists of four walls, ‘closed’ doors, chairs, tables, perhaps a blackboard, and sometimes a desk - simple but efficient pieces of furniture. A quick glance at the history of pedagogical practices reveals that the classroom has scarcely evolved over a period of many years. Is the traditional classroom intrinsically outdated or has it rather survived the test of time because it is already self-reconfigurable and has been adapted in many different contexts of use? Do we even need a classroom anymore? Do we need a teacher in the classroom? What do we teach and what do we want pupils to learn? What kinds of knowledge and skills will be required in the future? These are some of the questions that we should bear in mind when thinking about the classroom of the future (Siegl, Zottmann, Kaplan and Fischer 2010).

Each solution is stated in such a way that it gives the essential field of relationships needed to solve the problem but in general and abstract way, so that you can solve the problem for yourself, in your own way (Alexander, Ishikawa and Silverstein 1977). Nowadays, it is a global trend that young brains are being attracted more towards technological education. There is no doubt that science and technology are complementary in nature and have to grow hand in

hand. Besides, the growth of knowledge, research in fundamental science always adds an inevitable input to the advancement of technology.

We find that having a home computer is associated with higher test scores in mathematics and reading, even after controlling for family income and for cultural and social capital. However, children from high socioeconomic status (SES) homes achieve larger educational gains from home computers than do lower SES children. Boys' performance advantage is larger than girls' (Attewell and Battle (1999). Quick and highly paid job opportunities have always been an added advantage for the technology graduates. Further, they are not encouraged to have crazy ideas. The current system of teaching and evaluation does not provide any opportunity for this purpose. Starting from the primary to the higher education, the present emphasis is on maximization of the quantity of information instead of leaving room for imagination or recreation of minds. We forget that the creative mind always has no problem in acquiring information on its own.

New Type of Teacher and Student

Teachers taking part in remote education must fulfill various essential pre-requisites. They will have to be fully familiar with all distance education technology. Teachers should be trained in the use of new technologies. This training will be continuous given the constantly changing demands of distance education and the new opportunities offered by the rapid renewal of technologies. Their homes and workplaces should be well equipped. Quality education requires teachers' homes to be supplied with standard computer and communications equipment. This equipment must be updated periodically. New digital habits must be acquired. The process of transition from a predominantly analog classroom academic world to a digital and virtual world is slow. Teachers should eliminate printed information wherever possible, replacing paper by bits.

Digital Presence and Digital Futures

Digital technologies increasingly enable and encourage social networking and interactive, collaborative engagements, including those implicating and impacting learning. And yet traditional learning institutions, whether K-12 or institutions of higher learning, continue to privilege individualized performance in assessments and reward structures. Born and matured out of a century and a half of institutional shaping, maturing, and hardening, these assessment and reward structures have become fixed in place. But they now serve also to weigh down and impede new learning possibilities. Digital technologies have dramatically encouraged self-learning. Web interfaces have made for less hierarchical and more horizontal modes of access. The Web has also facilitated the proliferation of information, from the inane and banal to the esoteric and profound, from the patently false, misleading.

New Digital Culture

In practice this road towards greater unity in human society requires a change in culture, beginning with a profound change in daily working habits. This in turn supposes special training which is not easy but is worth the effort as the advantages are obvious. In the first place there is a leveling of leisure and study time. The stress of change will be reduced. Initially, hybrid situations will exist, such as the coexistence of printed and digital texts, as when an architect displays a design on paper that has been generated by computer, and which could be consulted directly on the screen. With time it is possible to acquire the habit of communicating without paper. Even fax paper turns out to be obsolete in the face of the modem/fax that enables

messages to be sent and received directly from computers. Once the network between students and professors has been established, progress is made at a different pace.

Technology in Today's Classrooms

Do you remember lugging your books to and from school every day? How about stuffing them in your locker while trying to keep track of your calculator, pens, and pencils? For future students and even some current ones, these common school quandaries may never be a problem again. Computers and advancing technology are changing the way classrooms work and providing students new ways to learn.

The formidable expansion of the digital environment in our planet is one of the most urgent challenges of this century. This new environment supports most human activities around the world today. Among the multiple social changes empowered by the digital environment we must emphasize the transformation of the education of the new generations, the so-called “digital natives.” The access to this digital environment is now becoming a hope for millions of students and teachers, a way to overcome ignorance and poverty. It is a human right, and a value in itself. At the same time the digital environment is becoming the common ground for the mind, brain and education sciences. We think that the future of education will depend on the increasing integration of these sciences. And education is the hope of humanity. The teacher is facing new pedagogical challenges in a globalized world. We should however acknowledge the fact that while we have significant information about the learning brain we lack a similar knowledge of the teaching brain. Our expectation is to bridge this neuro-cognitive gap in the next years (Battro 1997).

Today, the blackboard has become a whiteboard; chalk has become a magic marker; the slates that students used have been replaced by notebooks; and classes have sometimes gotten smaller. Little else has changed. True, some schools are providing their students with laptops, and teachers are increasingly using technology and encouraging collaboration. But the methods are essentially the same—with the teacher dictating learning (Wadhwa, 2015).

Technologies that has Changed the Digital Classroom

In the past, the suggestion of getting a college degree without ever cracking a book meant paying a degree mill. It meant the degree was in name only, reflecting neither learning nor effort. Then distance learning meant correspondence courses, perhaps combined with some coordinated telecasts. Technology has already changed all that, and the future will change it even further and they are-

eTexts

Now, online college students can obtain legitimate college degrees without cracking a book— but that doesn't mean they don't have to read. Even with hard copy texts available, most students download their textbooks in password protected Portable Document Format (PDF). Not only is this a “green” alternative, but you avoid the weight of having to carry around textbooks. Students can copy the PDF to mobile devices, and carry all of their texts on one iPad or Galaxy Tab. They choose to print whole books, only parts, or just use the digital document. A drawback to depending on protected PDFs is that they only open with active internet connections — but once opened students can use them until closed.

Virtual Libraries

Most online school programs — even those which still use correspondence course designs have robust virtual libraries – something that never existed 15 years ago. Many colleges and universities contract with EBSCO Publishing to maximize available peer reviewed journals. Even traditional students use in college libraries. Distance learners access the same journals as campus students — from anywhere in the world. Students quickly build up their own virtual libraries of thousands of journal articles, just as mobile as any e-text. Renaming these files as closely as possible to the required bibliographic format, and cataloguing them, keeps them organized, accessible, and easy to cite in papers.

Online School Portals

Until here resources for modern distance learning seem only different in form from correspondence courses. That changes with portals. These virtual campuses come complete with individual rooms for each class. They are so significant an innovation that they could change the future of on campus studies. Anticipating how ubiquitous technology should become, some schools already require even on campus students to take at least one class online. This innovation means students need not all be present at once. More, many schools are now integrating social media into their portals – so students can correspond about classes and socially connect for pleasure.

Webcams & Teleconferencing

With the advance of higher bandwidth, real time webcasts have become a reality for online courses. Some schools still set most of their distance learning around attending formal classes, and allow this method as a supplement. Other colleges choose to use up such heavy bandwidth only for specific lessons, allowing students and teachers to get to know each other better. Lectures that do not change need not have all the students watch at once, so schools now make them available to download as needed. Downloading is quickly replacing mailed audio and video recordings as a preferred media delivery method. Webcams and teleconferencing have added a new element of interactivity to the virtual classroom that cannot be matched.

Mobile Apps & Augmented Reality

Mobile apps may present the biggest challenges for colleges with growing online programs. Augmented Reality (AR) apps interest schools. This cutting-edge technology is so young that its full potential still requires exploration. AR allows students to point mobile device cams at objects around them. The screen image offers information about what they see. Schools might use them for mobile testing, for example asking questions about objects on museum visits or historic tours. They could allow astronomy students to point a device at the night sky for the screen to identify stars, or outline constellations. Common availability of such apps may still be out of reach (Pricenetwork, 2012).

Effects of Technology on Classrooms and Students

Dunwill (2016) states technology is becoming a bigger and bigger part of the world today. Technology has evolved and become more central to teaching and learning. Integrating technology into the curriculum is a priority in schools. When teachers first began to use computers in a classroom setting, schools evaluate whether the use of educational technology had a significant and consistent impact on student achievement. When people hear the word

“technology”, computers are the first thing people think. However, there are many different types of technology other than computers that can be used to improve student learning.

Change in Student and Teacher Roles

When students are using technology as a tool or a support for communicating with others, they are in an active role rather than the passive role of recipient of information transmitted by a teacher, textbook, or broadcast. The student is actively making choices about how to generate, obtain, manipulate, or display information. Technology use allows many more students to be actively thinking about information, making choices, and executing skills than is typical in teacher-led lessons. Moreover, when technology is used as a tool to support students in performing authentic tasks, the students are in the position of defining their goals, making design decisions, and evaluating their progress. The teacher's role changes as well. The teacher is no longer the center of attention as the dispenser of information, but rather plays the role of facilitator, setting project goals and providing guidelines and resources, moving from student to student or group to group, providing suggestions and support for student activity.

Increased Motivation and Self Esteem

The most common – and in fact, nearly universal – teacher-reported effect on students was an increase in motivation. Teachers and students are sometimes surprised at the level of technology-based accomplishment displayed by students who have shown much less initiative or facility with more conventional academic tasks. Teachers talked about motivation from a number of different perspectives. Some mentioned motivation with respect to working in a specific subject area, for example, a greater willingness to write or to work on computational skills. Others spoke in terms of more general motivational effects--student satisfaction with the immediate feedback provided by the computer and the sense of accomplishment and power gained in working with technology.

Technical Skills

Students, even at the elementary school level, are able to acquire an impressive level of skill with a broad range of computer software. Although the specific software tools in use will likely change before these students enter the world of work, the students acquire a basic understanding of how various classes of computer tools behave and a confidence about being able to learn to use new tools that will support their learning of new software applications.

Accomplishment of More Complex Tasks

Teachers for the observed classes and activities at the case study sites were nearly unanimous also in reporting that students were able to handle more complex assignments and do more with higher-order skills because of the supports and capabilities provided by technology.

More Collaboration with Peers

Another effect of technology cited by a great majority of teachers is an increased inclination on the part of students to work cooperatively and to provide peer tutoring. While many of the classrooms we observed assigned technology-based projects to small groups of students, as discussed above, there was also considerable tutoring going on around the use of technology itself. Collaboration is fostered for obvious reasons when students are assigned to work in pairs or small groups for work at a limited number of computers. But even when each student has a computer, teachers note an increased frequency of students helping each other.

Increased Use of Outside Resources

Teachers from 10 out of 17 classrooms observed at length cited increased use of outside resources as a benefit of using technology. This effect was most obvious in classrooms that had incorporated telecommunications activities but other classes used technologies such as satellite broadcasts, telefacsimiles, and the telephone to help bring in outside resources.

Improved Design Skills/Attention to Audience

Experiences in developing the kinds of rich, multimedia products that can be produced with technology, particularly when the design is done collaboratively so that students experience their peers' reactions to their presentations, appear to support a greater awareness of audience needs and perspectives. Multiple media give students choices about how best to convey a given idea.

Changes That Will Shape The Classroom of The Future: Making Education Fully Technological

It's hard to read the tea leaves of education technology. You never really know what the classroom of the upcoming year will look like in terms of technology. Will iPads be all the rage? Will videoconferencing replace face-to-face office hours? Would a Smartphone app be the new way to turn in homework? Who knows?. It's difficult to discuss the classroom of the future, as if it is something that it exists in some faraway time. The truth is, education is changing right now. Technology and expanded knowledge of the learning process have already resulted in a metamorphosis of the classroom and of teaching methods. There will be even more changes in the future

The layout of the classroom will change immensely.

Forget about neat rows of chairs and desks from which students focus intently on the teacher delivering a lecture and demonstrating concepts on the whiteboard. That's already falling out of favor today. Seating arrangements in the future will be flexible so that they are appropriate for the task that students are working on, and there will also be more focus on the comfort of the students. Here are just a few things that will become more commonplace in the classroom of the future:

- Standing desks for students who have difficulty maintaining focus while sitting.
- Accommodation for students who need more movement.
- Private workstations will be available for individual tasks while collaborative workspaces will be available for group projects.
- Interactive projectors and other technology will replace interactive whiteboards.
- Students will be given more autonomy on how and where to sit.
- Moving walls will make spaces more adaptable.

Virtual and augmented reality will change the educational landscape.

Imagine this: A student opens a book to what appears to be a page with a picture of the earth on it. Then, the student puts on a pair of special glasses and a three dimensional images pops out at them. Now, instead of seeing a simple, flat image, they can see various landforms; look at a cross section of the planet to see all of the various layers going down to the earth's core. Picture a student walking through an art gallery and scanning a code next to a picture using a special app on their cell phone and then being able to watch a video of the artist speaking about

their own work. This is all possible today because of a technology known as augmented reality. Apps and other educational devices act upon trigger images to create an augmented learning experience.

Flexible assignments will accommodate multiple learning styles.

Today, in the majority of classrooms, students all complete the same assignments. For example, if the assignment is to use MS word to write a research paper on tools developed during the Bronze Age, which is the assignment each student must complete. The only time when exceptions are made is usually when the student has special needs and accommodations are required. Unfortunately, these one size fits all assignments don't take into consideration learning styles. With flexible assignments, the teacher will be more interested in proof of competency than in receiving 25 assignments all completed using the same methods

MOOCs and other online learning options will impact secondary education.

You have to stay in school. You have to get good grades. You have get your diploma. If you don't do these things, you cannot get into college. If you don't get into college, you won't be able to get the degree that leads you to the career that you love. All of these seem like very logical statement, and chances are most people reading this were raised being told these very things by their parents and their teachers. There's just one problem. The diploma simply isn't as necessary or as valuable as it used to be, and neither is the college degree. In the future, students will feel less inclined to spend 4 years in high school learning the basics, plus another 4 years in college, especially when the first two years is simply covering the basics yet again. Today, a thirteen year old with an email address and access to the internet can sign up at Khan Academy and complete courses of study in a variety of academic disciplines, all for free. They can sign up for free classes designed and taught by professors at prestigious universities that are created and distributed using MOOC. In the time that it takes to finish high school, a student who is particularly motivated could have mastered multiple technologies; learned as much about history, business, mathematics, science, economy, etc. as a college graduate, and earned industry recognized certifications.

Ten Global Trends in ICT and Education

Hawkins (2010) says with a discussion of 10 Global Trends in ICT and Education for 2010 and beyond (joining the crowded space of lists in this New Year). The list is an aggregation of projections from leading forecasters such as the Horizon Report, personal observations and a good dose of guesswork

The Top 10 Global Trends in ICT and Education are:

Mobile Learning. New advances in hardware and software are making mobile "smart phones" indispensable tools. Just as cell phones have leapfrogged fixed line technology in the telecommunications industry, it is likely that mobile devices with internet access and computing capabilities will soon overtake personal computers as the information appliance of choice in the classroom.

Cloud computing. Applications are increasingly moving off of the standalone desk top computer and increasingly onto server farms accessible through the Internet. The implications of this trend for education systems are huge; they will make cheaper information appliances available which do not require the processing power or size of the

PC. The challenge will be providing the ubiquitous connectivity to access information sitting in the “cloud”.

One-to-One computing. The trend in classrooms around the world is to provide an information appliance to every learner and create learning environments that assume universal access to the technology. Whether the hardware involved is one laptop per child (OLPC), or – increasingly -- a net computer, smart phone, or the re-emergence of the tablet, classrooms should prepare for the universal availability of personal learning devices.

Ubiquitous learning. With the emergence of increasingly robust connectivity infrastructure and cheaper computers, school systems around the world are developing the ability to provide learning opportunities to students “anytime, anywhere”. This trend requires a rethinking of the traditional 40 minute lesson. In addition to hardware and Internet access, it requires the availability of virtual mentors or teachers, and/or opportunities for peer to peer and self-paced, deeper learning.

Gaming. A recent survey by the Pew Internet and American Life Project per the Horizon Report found that massively multiplayer and other online game experience is extremely common among young people and that games offer an opportunity for increased social interaction and civic engagement among youth. The phenomenal success of games with a focus on active participation, built in incentives and interaction suggests that current educational methods are not falling short and that educational games could more effectively attract the interest and attention of learners.

Personalized learning. Education systems are increasingly investigating the use of technology to better understand a student’s knowledge base from prior learning and to tailor teaching to both address learning gaps as well as learning styles. This focus transforms a classroom from one that teaches to the middle to one that adjusts content and pedagogy based on individual student needs – both strong and weak.

Redefinition of learning spaces. The ordered classroom of 30 desks in rows of 5 may quickly become a relic of the industrial age as schools around the world are re-thinking the most appropriate learning environments to foster collaborative, cross-disciplinary, students centered learning. Concepts such as greater use of light, colors, circular tables, individual spaces for students and teachers, and smaller open learning spaces for project-based learning are increasingly emphasized.

Teacher-generated open content. OECD school systems are increasingly empowering teachers and networks of teachers to both identify and create the learning resources that they find most effective in the classroom. Many online texts allow teachers to edit, add to, or otherwise customize material for their own purposes, so that their students receive a tailored copy that exactly suits the style and pace of the course. These resources in many cases complement the official textbook and may, in the years to come, supplant the textbook as the primary learning source for students. Such activities often challenge traditional notions of intellectual property and copyright.

Smart portfolio assessment. The collection, management, sorting, and retrieving of data related to learning will help teachers to better understand learning gaps and customize content and pedagogical approaches. Also, assessment is increasingly moving toward frequent formative assessments which lend itself to real-time data and less on high-

pressure exams as the mark of excellence. Tools are increasingly available to students to gather their work together in a kind of online portfolio; whenever they add a tweet, blog post, or photo to any online service, it will appear in their personal portfolio which can be both peer and teacher assessed.

Teacher managers/mentors. The role of the teacher in the classroom is being transformed from that of the font of knowledge to an instructional manager helping to guide students through individualized learning pathways, identifying relevant learning resources, creating collaborative learning opportunities, and providing insight and support both during formal class time and outside of the designated 40 minute instruction period. This shift is easier said than done and ultimately the success or failure of technology projects in the classroom hinge on the human factor and the willingness of a teacher to step into uncharted territory.

These trends are expected to continue and to challenge many of the delivery models fundamental to formal education as it is practiced in most countries.

Exploring Benefits

Dede (2000) quotes rapid changes in technology over the last 75 years have created enormous opportunities for education. While some technologies such as the computer were adopted early on, a reluctance to embrace change coupled with a lack of funding has resulted in a continuing dependence on chalkboards and other anachronistic technologies. The extent to which schools adopt new technologies, not surprisingly, often depends on how well they're funded. Technology-based innovations offer special challenges and opportunities in this scaling up process. I believe that systemic reform is not possible without utilizing the full power of high performance computing and communications to enhance the reshaping of schools. Yet the cost of technology, its rapid evolution, and the special knowledge and skills required of its users pose substantial barriers to effective utilization. One way to frame these issues is to pose six questions those school boards, taxpayers, educators, business groups, politicians, and parents are asking about implementing large-scale, technology-based educational innovations. After each question, I'll respond to the issues it raises. Collectively, these answers outline a strategy for scaling-up, leveraging the power of technology while minimizing its intrinsic challenges

Preparing For the Workforce

One of the most positive results of schools embracing new technologies is found when low-income students gain skills they otherwise wouldn't. The ability to type, use email and execute basic computer functions like Word and Excel are imperative in today's workforce. When students who have no access to computers at home learn these skills specifically because of technology in the classroom, they have a far greater chance of moving from have-nots to haves in the future. Having technological competence gives them a better chance of success in the workforce and gives them a greater ability and confidence to pursue online education university options.

No Student Left Behind

When classrooms adopt iPads or other tablets in lower grades amongst younger students, the possibility that those students will be left behind in terms of the greater society decreases dramatically. Studies have consistently shown that new technology introduction to younger children provides better results than when introduced at a later age. Even if low-income students

have no access to computers at home, the integration of new technology into all aspects of school life ensures that they have greater opportunities going forward.

Quality of Writing

There is another, lesser known, but reasonable argument against adopting computers across all academic disciplines. Pen and paper often tend to be more conducive to good writing than computer keyboarding. Longhand writing is more likely to result in well-reasoned, nuanced and intricate prose. This may arise from the fact that typing lends itself more easily to abrupt and punchy prose. The staccato quality of typing can work its way into writing. Stylistic arguments aside; a potentially far more worrisome implication for the long term is the increasing technology gap among schools.

Social Class

When the only technology requirements for completing a primary education involved paper, pencils, a slide rule and eventually calculators, the impact technology had in widening the divide between haves and have-nots was minimal. But the technology gap which exists in schools today also functions as a solidifier of social class. If low-income students are unlucky enough to attend schools which can't fund technology purchases, the chance that they'll find a way out of a low income life becomes less likely.

The Danger of Making Technology So Critical

The ability to use technologies such as laptops and tablet computers allows students to acquire the same sets of core competencies they'll need in the workforce. Not acquiring these skill sets is more than an inconvenience. The ability to access information and basic computer literacy can function as a potential stepping-stone out of poverty for many students. If a student graduates high school without at least a rudimentary and working knowledge of new technologies, their future starts looking a lot less bright. Since many school/colleges which can't afford to incorporate technology into the classroom are largely found in less affluent areas, the likelihood of upward social mobility decreases significantly and social classes begin to look a lot more like social castes. The technology gap runs the risk of further cementing social class.

Technology's Impact on the Future

Twenty years ago, someone without computer skills could still expect to find a decent job which, though not providing a huge income, could still support a family. But now, jobs that used to be considered basic blue collar jobs require technological know-how. A car mechanic used to need mechanical aptitude and a good set of wrenches and they were in business. Working in customer service used to require basic telephone skills. But increasingly, even menial entry level jobs require much more computer literacy than what some disadvantaged students are getting in schools.

Technology as a replacement for pen and paper is neutral

It has some minor advantages and disadvantages but is essentially just replacing one tool with another. By this I mean using an office suite to do work instead of an exercise book. It is becoming increasingly popular as computer equipment is becoming more and more accessible (especially with the net book phenomenon, for example in NSW in Australia public schools have embraced net books to great effect). Two disadvantages are the increased possibility for distractions and also the increased possibility for copying others work. Both of these can be overcome with correct management of students and design of class workflow however.

Advantages are that it is easier to make changes to work and so exploring different ideas and experimenting becomes easier.

Conclusion

Chalk, blackboards and textbooks are still essential components for educating students today, but there is no question that in order to engage young people who are growing up with technology in a cyber-world, we must incorporate a greater level of technology into our schools. By introducing students to these resources and teaching them effective and appropriate use as digital education does not discriminate, but schools cannot create a digital habit if teachers do not manage to incorporate information technology and communications into their daily lives. As the world grows “smaller” through connectivity, some local cultures are struggling for momentum to remain vital. Through the media and growing international trade, a strong global corporate culture is overlaying its symbols and values on top of local cultures, creating a dissonance. At the same time, there is an incipient “intercultural” that is emerging – via global nomads, multilingual and polycultural scholars, and people engaged in international virtual communities of practice. Interactions among diverse cultures are creating a new mix of ideas, symbols, and values that are blending organically toward the emerging intercultural (Clegg, 2001).

Having arrived at this point we will attempt to summarize the central concepts of digital education and reach a few conclusions. However, many people are unaware of this elementary fact and persist in their old habits. To make these changes, teachers and school leaders should participate in extensive professional development on how to best harness the power of technology to increase student achievement and ensure students are ready for college and the high-tech global job market.

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