

*"If we teach today's students
as we taught yesterday's,
we rob them of tomorrow."*

John Dewey

Three Technology Trends that are Changing Education (and the World)

Here's the challenge: A number of men and women have been chosen to move to a remote and previously unexplored island. Your job is to prepare these candidates for their trip, giving them the tools they will need to spend the rest of their lives in this obscure location. However, you have virtually no information about the destination. You don't know the landscape, climate or resources the candidates will find when they arrive. You also don't know how they will live their lives, employ their time, communicate, or if they will find happiness and purpose in their new home. You have limited time to prepare them. One more thing—they are all children, facing all the trials and tribulations that children and adolescents must endure. Get started!

With few variations, the previous scenario describes the daily challenge faced by teachers, principals and parents. Educators are asked to create a program that will prepare children for a future that no one can predict. Social and technological changes have created a world that is less predictable and changing faster than at any other moment in our history. What jobs will become available when today's 5-year-old enters the workforce? What tools will she or he use? What will work look like? As blind archers, educators shoot for a target they cannot see, hoping their aim is right.

Predictions vs. Trends

Predicting the future has always been an iffy business. If such predictions were easy, we would all have flying cars, jet packs and handheld communications devices (well, we got some things right). However, the future travels in directions that the present cannot anticipate. Close examination of the tools and techniques that exist today and which are likely to become even more important tomorrow makes trend analysis a more effective way of designing for this unknown future. Predicting 10 years from now that students will still be using iPads or Chromebooks would be foolish. We know from our own experience that another device will surely come along in this time. The trend of integrating digital tools in the classroom is undeniable. Though there are many trends in the digital world, let's look at three areas that should be central to decision-making in education today.

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Trend #1: Mobility

The story of digital devices is a timeline of bulkiness and rarity moving toward portability and ubiquity. From the earliest room-sized machines to desktops, from laptops to tablets, from phones to watches to who knows what's next, there is an unmissable trend of putting digital devices and capabilities in the hands of all people at all times. If this is the world in which students will live, it is essential that they learn in a technology-rich environment. While this may take many forms, it does speak to the end of the traditional computer lab which is by its nature remote and less accessible. Students need access to digital tools when the learning requires it, not when the schedule allows it.

Not only does mobility change the look of education, but the content as well. Traditional education for much of the past century focused on rote learning and memorization. This was important because resources were not usually with us—one couldn't take the encyclopedia from a backpack and look up the capital of Idaho, so it had to be memorized. In today's digital age that stores information for us, the data that the average person needs to keep in memory is significantly less; or at least how we access it differs significantly. Therefore the focus of modern education moves from memorizing facts to finding and using them effectively.

Trend #2: Paperless

Paper has been the primary means of communication throughout our history, so much so that we seldom consider its many limitations. Paper can convey only two modes of communication: words and pictures. The information on a piece of paper cannot easily link to any other piece of paper unless they are bound together. The material on a piece of paper can be duplicated, but the same page cannot be viewed by several people at the same time. Finally, paper is a renewable, but limited resource that requires the use of other resources to make and distribute.

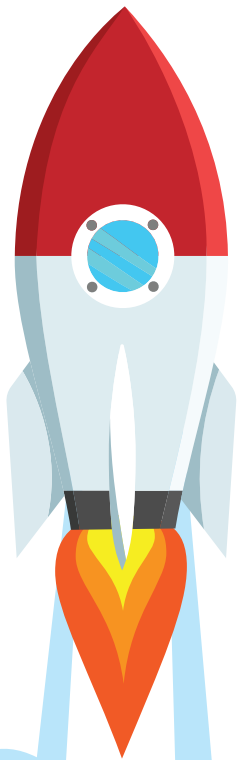
Paper is not disappearing from our culture and from schools overnight, but through time there has been a gradual shift toward digital production and distribution.

Digital products can contain not only words and pictures but also sound and video. Digital products can be easily linked to other products and customized to meet the needs of the user. A digital document can be viewed and edited by unlimited people simultaneously. Though digital creation and distribution also uses resources, it also creates less waste. While schools must continue to develop creativity and manual dexterity with traditional paper models, programs must also be designed to accommodate and use digital tools.

One area where this will show itself most clearly is in the decline and eventual end of traditional textbooks. While there is argument as to the current effectiveness of digital texts for all students, and many of us hold an emotional bond with our paper books, economic realities are eventually going to override these concerns. Most publishers are currently pursuing a "two-track" system producing both paper textbooks, as well as digital. However, this is an extremely expensive process, particularly since the development of a quality digital textbook requires significantly more work than simple digitizing of paper pages. Eventually, publishers will focus their efforts on the digital track since it reduces other costs. Paper textbooks will still exist, but they will be more costly and will not have the tools or the updates that digital texts provide.

Trend #3: Shifting Role of the Teacher

There is a cliché phrase that the modern teacher is no longer a "sage on the stage" but a "guide on the side." Another metaphor for this model of instruction is to think of the teacher as a curator of knowledge. If we think of a curator in a museum, she or he is an expert in the field whose skill is to create learning experiences that will bring the public to a greater understanding of the subject. Sometimes the curator might lead people directly, other times they may be on their own; however, the knowledgeable hand of the curator is always there. Likewise, students in a contemporary classroom may be working with a teacher, working with other classmates, or working independently, but the teacher creates the total experience that leads to mastery of standards. ►►



The vision of the "all-knowing teacher" in the front of the classroom imparting rote knowledge and testing students' memory is now an image synonymous with the past. If school is becoming less about memorizing facts, then the role of the teacher as the fount of knowledge is also less important. Digital learning programs can present information and assess student knowledge in many subjects with greater individualization and customization than a teacher in a large classroom ever can. The teacher has a vital role in this new environment, and it is evolving. Whichever way facts are distributed, students will always need direction on finding, evaluating and using that knowledge. Developing critical thinking skills and fostering an independent and collaborative work process is now the priority. The teacher is no longer valued solely as a fact dispenser but as a leader and director of student learning activities. Likewise, students are no longer seen as empty vessels to be filled, but as full active participants in their own learning.

As the educational profession faces the daunting task of preparing students for an unknown future, setting directions for tomorrow based on the trends observed today can provide a small degree of certainty in a changing environment. We cannot prepare our brave explorers for all of the challenges they will face, but we can give them tools that will serve them well.

In anticipating the new realities of education, keeping current with technology trends is paramount when developing a strategic plan. Using trend analysis is just one example of how Catholic School Management's approach can take an organization to the next level. ☀

Greg Dhuyvetter is the lead consultant at CSM, driving the organization's trend analysis strategy by offering a variety of audit, assessment and planning services to assist Catholic schools to analyze trends, overlay these with long-range projections and ultimately attain their desired outcomes with success.



Greg Dhuyvetter brings a wealth of experience to Catholic School Management and we are delighted that he has joined Christian Brothers Services. His expertise and commitment to Catholic education is evident, and he adds great depth and scope to the services we offer our elementary and secondary schools.

Dhuyvetter will be speaking at the NCEA Catholic Leadership Summit and New Leaders' Academy this fall, and keynoting the 2019 STREAM Conference for NCEA.

His upcoming CBS webinar, *Subject to Change: The Life and Times of a Catholic School Administrator* is set for October 25, 1:00 p.m. CST. Tune in!