

The Promise of Online Tools in Elementary and Secondary Schools

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Something different is happening in many schools. Online tools are being integrated into many academic areas with significant success. What trends are causing this to happen?

First and foremost, students are showing up with skills that were unheard of several years ago. They know the online environment as a place where they can browse the Web, listen to music, watch videos, and chat with their friends in the next room or even halfway around the world. They've even developed their own unique chat language *gtg*, *pos*, *ttyl* and other short cuts. Parents who do not understand "*pos*" might do well to ask their teenagers about it.

Technology is working its way into classrooms, too. Two of my granddaughters attend middle schools in Maine where every seventh grader receives a laptop. As a result, students are entering Maine high schools well versed not only in recreational uses of technology but especially in its educational uses.

eSchool News reports that Maine's laptop initiative is highly likely to be extended to all high school students within a year. In Texas, a large school district has decided to purchase laptops instead of textbooks for many students. The big question, of course, is, "How skilled will high school teachers be in the use of instructional technologies across the 9 - 12 curriculum?"

Laptops for students should not be seen simply as electronic pencils. That misses the true potential of these initiatives. The best use of laptops is often outside the classroom and reaches well into cyberspace for enhanced learning.

When I was a high school principal several years ago, our school became a charter member of Virtual High School. The

curriculum consisted of honors level and Advanced Placement courses. These courses were clearly intended for college-bound students. While this laudable effort continues, who is primarily concerned with technology integration for *other* students across the elementary and secondary school continuum? In some schools that question remains unanswered while in others the journey has begun.

A major technological movement is under way in elementary and secondary schools - *online technology*. "Online" can refer to two approaches, Web-based and Web-enhanced. Web-based technology at Virtual High School, for example, focuses on asynchronous (anytime, anywhere) approaches. Students can be in different parts of the world and still belong to an online learning community.

This article focuses on Web-enhanced instruction through which regularly scheduled (synchronous) classes are supplemented by anytime-anywhere (asynchronous) online tools. By taking this combined approach, teachers can design instructional processes and assignments that:

1. remove the constraints of time and space associated with daily class schedules,
2. improve the level of individualization for students,
3. provide for more collaborative learning,
4. strengthen the teacher's role as mentor, and
5. improve school-home communication.

Let's take this list apart and consider some concrete examples.

Removing constraints of time and place

Clock watching is a regular activity in many face-to-face classrooms. That is not necessarily an indictment of teachers. Rather, it can be a function of having to come together at a time that is not necessarily conducive to teaching and learning. With online tools we can break the mold of time-constrained and space-limited methodology by designing approaches through which students can learn together even when they are miles and hours apart.

Individualizing

Imagine a classroom in which a student who "doesn't get it" dominates the class with frequent questions while others suffer in silence. We've all been there. Any teacher who wants to help an individual student in a classroom quickly recognizes that when attention is given to that one student, others are sometimes removed from the teacher's immediate and direct sphere of influence. There is almost no way around this in a classroom environment based on same-time-same-place instruction within a fixed schedule.

A key to individualizing instruction with online tools is the ease and availability of *content driven communication*. The teacher is able to meet the needs of individual students in ways that are not possible in the classroom or even during typical after school help sessions. The online format brings the teacher to individual students.

When students are required to reflect when constructing written questions and comments, additional opportunities for critical thinking exist. Students must plan what they want to present. In a regular classroom, students can coast on the coattails of other students who are more vocal. In online learning, *all* students can be held accountable for submissions that reflect comprehension rather than off-the-top-of-the-head comments. In a regular classroom many students refrain from asking a question that they fear might seem minute or silly to the teacher or even to their classmates. Often they preface a question with, "This might

seem like a dumb question, but . . ." Some students will go to the extreme and decide not to ask the questions at all. Online tools, however, provide reticent students an opportunity to discuss a topic one-on-one with the teacher, with other students, or even within a small group to an extent that is seldom possible in a regular classroom setting.

In individual project choices, some students encounter more difficulty than others in researching their topics just by the nature of the challenging topic they chose. Online learning provides limitless opportunities for teachers to help these students obtain the resources they need. They don't have to wait until the next class or try to catch a teacher during after school. They often have an answer within hours or even minutes, thus allowing them less down time as they engage the subject to be learned.

Yet another important part of individualizing is the ability of a teacher to insist on individual student accountability. Because the teacher is able to communicate directly with all online students, students quickly figure out that it is more work to try to slide by in an online course than just do the work the first time.

Student as teacher (collaborative learning)

Insightful teachers recognize that students often express and clarify complex issues in unique ways understood by their classmates. It is not unusual for students in an online group to initiate peer assistance and collaboration with, "Let's all look it up and get back to each other with our findings." This not only reinforces learning, but also provides a forum for scholarly discussion and consideration of others. One experienced teacher states, "Thank goodness for students helping students online. With threaded discussions it is nearly impossible to keep up with the entire class at all times."

Some teachers note that experienced online learners assist first-timers with the online tools, guiding them through what they might not have understood from online tutorials. They often make comments like, "Oh, I did the same thing the first time," thus putting the inexperienced student at ease.

Teacher as mentor

The online environment allows the teacher to become more of a mentor, tutor, confidante, advisor, scholar, and colleague. As in regular classrooms, the diversity of abilities is often vast. The online model provides an opportunity to help stellar students reach higher levels without intimidating other students. It provides opportunities for teachers to identify students who need additional help. The teacher can revisit conversations, clarify whether points were already made, and provide targeted mentoring as needed.

Experienced online teachers believe that encouragement, reinforcement, ongoing communication, lack of time constraints, and feedback afforded through online instruction provide a context within which the relationship between the teacher and the student is indeed one of instructional mentoring. Students sometimes ask all the questions they like, and this often results in queries related and unrelated to the assignments. Some teachers continue to receive communication and updates from students who have taken their courses during previous semesters.

Content engagement: breadth and depth of learning

Without content there is no course. However, unless students engage that content in ways that extend far beyond memorization and repetition, they will soon forget most of it or at best not understand it in ways in which they can apply it. As a teacher I have often relied on the statement, "To know is to begin, but to understand is to succeed." Online tools can help an instructor and students stretch toward this ideal.

Framing and presenting content is paramount. A well-planned online discussion is lively and engaging, enabling a teacher to move students away from time-limited superficial discussion to content-focused dialogue. In a face-to-face classroom, discussions are often the result of spontaneous reactions that are not always critically developed. The asynchronous online format provides the time to reflect, to prepare, to organize, to respond. Sometimes it happens at odd times - whenever a

student's best "think time" is available. It gives students time to process, steam a little, look something up, find more information and then come back to it when they are ready.

The practices identified earlier provide answers to the question, "What can we do online that we cannot do as well or as fully in a face-to-face classroom?" *Content engagement*, when it becomes the resulting component, is really the bottom line. In a well developed and expertly taught online course, content engagement is not only amplified but is also restructured to include students' experiences and to provide a context within which pure knowledge can become applied knowledge.

Improving school-home communication

Online tools can help strengthen school-home communication. When teachers develop Web-enhanced learning materials and processes, parents can then gain access to their students' learning environments to discover what is being taught and learned. They can also participate in online interaction with students, the teacher, and even other parents. As a result, parents can quickly become more informed about the instruction their students are receiving and can become more supportive of those efforts.

Student achievement

Online technologies are not magic bullets. However, in the hands of skillful teachers, they can become additional tools for learning, tools that are readily available and, in the right hands, can and do contribute to higher levels of student achievement.

The evidence is clear. This is about teaching and learning *first* and technology second. We *can* improve student achievement with intelligent use of online technologies.