

# Issues Related to Creating Web-Based High School Courses

*Ross Perkins & Robert Cobb, Jr.*

## Value of Distance Education for High Schools

**E**xtending the learning choices in any school excites both teachers and students. Because of this, distance education has found a niche in secondary schools across the country. It is an appealing option for smaller high schools that want to offer students more choices for credit. Proponents say that distance education can give high school students in districts with limited financial resources opportunities to take advanced or specialty courses (Carr & Young, 1999). Web-based learning is appealing because all one needs is Internet accessibility and applications to access a course (ie: a browser, e-mail program, certain plug-ins, etc.) Many of these tools are available to educators and students.

## Other reasons for offering web-based courses to students include:

- Creating opportunities for a more diverse, collaborative learning experience by opening access to peers in other locations.
- Providing technology-rich instruction by challenging learners to become technologically literate.
- Enhancing a teacher's skills in technology. These skills can then extend to the classroom.
- Addressing teacher shortages in certain subject areas.
- Delivering instruction to suits learners who have interpersonal deficiencies or who may not be able to attend school due to physical ailments.
- Offering a wider variety of courses to help end scheduling conflicts.
- Creating an environment where resistant learners cannot adversely affect others.

## Who's offering web-based courses to high school students?

Virtual high schools are organizations that bring together instructional design resources of local universities or private companies and offer distance education courses (most web-based) to high school students. The states of Arizona,

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California, Kentucky, Florida, Massachusetts, Michigan, Nebraska, and Utah all have accredited virtual high schools. Most of these virtual high schools provide courses only to students within their respective states, but some offer courses that extend beyond state boundaries. There are some private companies that offer courses for high school students, but often operate independently of school systems.

Exciting to note is that web-based classes can also be created at the local level. Terri Breyman, an English teacher at Falls Church High School (Fairfax County, Virginia), and Sandy Todd, of Fairfax County's Office of High School Instruction, presented at the Virginia Society for Technology in Education (VSTE) conference in March 2001. Advice that Breyman and Todd gave to attendees is included in this article. The fact that creating and teaching web-based courses is within the purview of instructors who have time, patience, and a willingness to learn was among the most important insights they shared. One does not need a doctorate in distance education, a contract with a national organization, or access to thousands of dollars worth of technology equipment to create a course.

The focus on distance education will be narrowed even further to a system that is of immediate practical use to classroom teachers, which is web-based learning (WBL). Other distance education systems, such as video conferencing, satellite-based systems, correspondence courses, etc. will not be discussed. Specifically, this article will address to common criticisms of distance education, look at the characteristics of distance learners, provide practical tips for building a web-based course, and pose some questions germane to distance course development.

### Addressing the common criticism

Skeptics of web-based learning often interject, "An on-line course is not as good as one taught in the classroom." To some extent, they are right, although only in one way. They are right because there is a lot to be said for face-to-face interaction – we are, after all, social creatures. Learners who enroll in distance education courses do so for many reasons, but avoiding human contact is not among them. They often report that they miss the personal interaction that they had in traditional classrooms.

But the critics who say that web-based courses are "not as good as" face-to-face classes are making some erroneous assumptions. All traditional classes are not of the same quality, and not all learners process information in the same manner. Given the reality of negative classroom experiences, are we to believe that any traditional course is better than any on-line course? Certainly not. Some people excel in face-to-face situations, where others benefit from a web-based instructional context with minimal personal interaction.

Those who claim that students enrolled in on-line courses are more motivated and/or who have higher test scores than their peers enrolled in building-based courses make as much of a mistake as detractors of distance education. Such claims are simply not examples of quality distance education research (Lockee, Burton, & Cross, 1999; McIssac & Gunawardena, 1996).

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Comparing distance education courses to its classroom-based counterpart is tantamount to comparing the proverbial apple and orange; the distance learning experience is inherently different for both the teacher and the student. One must evaluate distance courses against other distance courses and at the same time, examine those qualities about the course that help people learn. This article rests on the assumption that on-line courses either in whole or in part (as enhancements to classroom-based courses) can be a valuable part of the instructional process.

### What are some characteristics of distance learners?

The typical successful distance learner is one who is focused, self-motivated, self-directed, and independent. This type of learner needs little external interaction in order to attain goals or tasks. The ability to perform these skills is most prominent in adult learners due to their experiences that come with age – qualities that correlate with self-regulation. A self-regulated learner is able to use skills according to metacognitive, environmental, and behavioral standards. Implementing these skill prompts the learner to set goals, utilize strategies, judge the effectiveness of these strategies, and modify them accordingly. Unless the learner actively seeks help, these things occur internally, without any external interaction.

In the virtual high school environment, there are students participating in the courses who are "atypical" distance learners. Some of the virtual high schools claim to service unmotivated students, such as those who have been expelled from school or those who resist the educational process. The most common claim made by many of the virtual high schools presently in existence is that they can provide an equal and fair educational experience for a larger body of learners. In actuality, this environment is only beneficial to a minimal number of learners who are targeted for educational services. This attempt to service a multitude and diverse group of learners has nothing to do with physical accessibility to the subject matter. The concern lies within the psychological capability of the student to learn from the content in an on-line environment.

The teacher who creates a web-based course should not believe that only students with the aforementioned qualities will be successful. A teacher will prompt learners to use strategies that will increase the probability of their completion and success in a web-based course. Evidence indicates that students can be taught to use many discrete cognitive strategies and that their immediate performance can be elevated by explicit practice in the use of these strategies (Boekaerts, 1997).

### Some practical tips

The teacher must be aware that time is an extraordinarily important factor when designing a web-based course. To construct a quality web-based class, Breyman emphasized that teachers must plan for weeks of preparation time. Completing a portion of the instruction and adding the rest as the course progresses is ill advised. Completing the course before it begins "allows you to

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fix snags, allows you to determine discussion topics, allows you to spend time on-line with students, and allows you to have a life" (Breyman & Todd, 2001).

### Administrative Issues

The same things that help a student understand what is expected in a traditional classroom are those things that help a student who is taking an on-line class. A clearly defined syllabus with assignments and due dates, a list of course materials, rules and procedures for turning in homework, a late-work policy, attendance policy, etc. should all be included. Teachers must make every effort to ensure that students are "in the know." Doing so helps alleviate misunderstandings and helps reduce what is known as "psychological distance," which refers to the feeling of isolation from other learners and the teacher. Therefore, easily accessible information is all the more imperative.

Keeping in contact with students other than by e-mail alone is important because, as Breyman stated, students do not check e-mail as often as the teacher would like. In order to do this a database of student names, phone numbers, addresses, and other pertinent information should be created. This allows the instructor another means of holding students accountable. How to accept, organize, grade, and return student work, most of which will be done electronically is another issue.

Breyman found it became necessary to establish "office hours." She did so because students need to know when the teacher is going to be on-line and available to take questions or give immediate guidance on assignments. Students may also just want to share ideas. A teacher should build in time for students to get to know each other on-line or post biographical sketches. Activities such as these help decrease psychological distance as well.

### Instructional Design Issues

All teachers must be keenly aware that creating an on-line class is not simply creating one's notes in hypertext (HTML) format. Good teachers create interaction in their classes even if most of the information is lecture-based. Developing opportunities for interaction in a web-based class requires a lot more forethought than simply "opening the floor for discussion." Guided questions should be part of the instruction in a web-based class.

If an on-line discussion is implemented, will it be synchronous (such as through Instant Messenger) or will it be done asynchronously, as with a bulletin board? If the discussion happens at a specific time, the teacher must set ground rules for how people will "talk" to each other – moderation is an important component of a good discussion. Some course management software includes moderation tools, but many high school teachers and students do not have access to such a system, thereby necessitating "rules of interaction." These rules require forethought, research, and consultation with other experienced educators.

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Getting students to work together on projects is not as simple as telling them they must do so. Teachers who use collaborative learning effectively know that it takes a great deal of preparation to ensure that each student contributes equally. Clear instructions and written examples of all work that a teacher requires are imperative. The teacher is advised to pilot-test any on-line course before going "live" with it. Student feedback during formative evaluation can save many headaches later.

According to Osman and Hannafin (1992), research has provided concrete evidence that [self] regulation strategies may be embedded within instruction" (p. 88). The instruction is able to facilitate and prompt learners to use such strategies. Ley and Young (2001) address four instructional principles that can be employed in an asynchronous or synchronous web-based course. The four principles are preparing and structuring the learning environment, organizing and transforming instructional material, record keeping and monitoring, and evaluating performance. The premise of these four principles are based on the six self-regulation components: goal setting, environmental structuring, organizing material, self-monitoring, self-evaluation, and reviewing previous materials. If the learner is provided with activities within the context of the instruction, along with explicit instruction concerning the function of the activity, these skills can be attained and transferred within a web-based (or traditional) classroom setting.

### Related Concerns

In the question and answer session following Breyman & Todd's presentation, a number of tangential issues were raised by fellow educators. We do not have the space to address the concerns individually, but we would like to give the reader some questions to consider.

### Support

1. Do you have the support of administrators in your district to ensure that the course is offered for credit?
2. How will your course be promoted to students in your school or district?
3. If video and audio are integrated into your course, do you have access to multimedia resources for creating digital files?
4. Do you have technical support staff available?
5. How will handle student registration be handled?
6. Do you have support from counselors to ensure students have met the course prerequisites?

### Compensation

1. If you have been asked to create a distance learning course for your district, are you being fairly compensated or is it among your "expected" planning duties?
2. What kind of extra training (or education) will your school or district provide should they want you to coordinate other web-based courses?
3. How much release time will you have to design and then teach the course?
4. Will students be charged to take the course?

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## Intellectual Property

1. Once you have created the course, who owns it? (Are you able to teach it in the same form if you move to another district?)
2. Is course ownership in contractual language, or just "word of mouth?"
3. If you use materials from other sources as part of the course, are you able to distribute them over the web?

## Access & Security

1. What kind of resources will your audience need? If you want to deliver multimedia over the web, do students have a connection robust enough to receive the files?
2. Is the interface easy-to-use for learners of the targeted age group?
3. Have special-needs issues been address, such as size of font, labeling of pictures, access to audio descriptions, etc.?
4. If the course you create is hosted on the school server, is there enough security in place to protect it?
5. Are students who are not enrolled in your district (such as those being home-schooled or those attending private schools) eligible to access the course for credit?
6. Are students in other states eligible to take your course for credit?
7. Do you need to protect course content from being viewed by a world-wide audience? If so, how will access be granted or denied?
8. Will students have to buy books and materials, or will they borrow them from a local school?

## Final Thoughts

For teachers who want to begin building a course or even web enhancements to a face-to-face class, there are at least two options on the web that allow them to do so without having to know anything about hypertext markup language (HTML), creating secured access, or building a discussion forum. One option is Blackboard's on-line learning tool called "CourseInfo." The other has recently become available through Yahoo! (Y! Education). The URL for each tool is listed at the end of this article.

Both tools are available for free, but read the Terms of Understanding carefully, especially on the Blackboard site. File space is limited in both, but the interfaces provide a great solution for some of the administrative issues raised above. The Blackboard site also includes a number of links and articles that promote the professional development of teachers who are teaching web-based classes. The Y! Education site, which has similar features to CourseInfo, lacks assessment and grading components that some teachers find quite useful. The selection of one tool over the other requires the designer to take some time to look over the features and decide which is easier to use – both for the teacher and the student.

Building and teaching a web-based class is a lot of work and there are certainly a number of issues to resolve, but those who do it have found that this mode of teaching and learning can be rewarding for everyone involved.

# Web-Based Courses, continued

## URLs

**Fairfax County Public School On-Line campus:**

<http://www.fcps.k12.va.us/DIS/OHSICS/onlinecampus2/index.htm>

**CourseInfo:**

<http://www.blackboard.com>

**Yahoo! Education:**

<http://education.yahoo.com>

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## About the Authors

Ross Perkins and Robert Cobb, Jr. are doctoral students in the instructional technology at Virginia Polytechnic Institute and State University. They can be reached at: [rperkins@vt.edu](mailto:rperkins@vt.edu) and [rcobbjr1@vt.edu](mailto:rcobbjr1@vt.edu)

