Owston (1997, p. 27) pointed out that, “Nothing before has captured the imagination and interests of educators simultaneously around the globe more than the World Wide Web.” Other scholars claim that the Web is converging with other technologies to dramatically alter most conceptions of the teaching and learning process (Bonk & Cunningham, 1998; Duffy, Dueber, & Hawley, 1998; Harasim, Hiltz, Teles, & Turoff, 1995). From every corner of one’s instruction there lurk pedagogical opportunities—new resources, partners, courses, and markets—to employ the World Wide Web as an instructional device. Nevertheless, teaching on the Web is not a simple decision since most instructors typically lack vital information about the effects of various Web tools and approaches on student learning. Of course, the dearth of such information negatively impacts the extent faculty are willing to embed Web-based learning components in their classes.

What Web-related decisions do college instructors face? Dozens. Hundreds. Perhaps thousands! There are decisions about the class size, forms of assessments, amount and type of feedback, location of students, and the particular Web courseware system used. Whereas some instructors will want to start using the Web with minor adaptations to their teaching, others will feel comfortable taking extensive risks in building entire courses or programs on the Web. Where you fall in terms of your comfort level as an instructor or student will likely shift in the next few years as Web courseware stabilizes and is more widely accepted in teaching. Of course, significant changes in the Web-based instruction will require advancements in both pedagogy and technology (Bonk & Dennen, 1999). Detailed below is a ten level Web integration continuum of the pedagogical choices faculty must consider in developing Web-based course components.
THE WEB INTEGRATION CONTINUUM

Advances in communications and distributed learning technology have increased the levels and means for incorporating the Web in one’s instruction. Instead of lofty promises about world renown researchers coming to your classes via Web-based videoconferencing, this paper will address ways to incorporate the Web in instruction from low-end course advertisement and resource support to high-end shifts in one’s teaching practices and institutional offerings. Using this Web integration continuum, instructors can decide on the degree of instructional risk they are willing to take as well as reflect on the risks they have already taken.

To denote the different levels for incorporating the Web in one’s instruction, we have designed a ten level Web integration continuum of the pedagogical and technological choices faculty have in developing Web-based course components (see Table 1) (Bonk & Dennen, 1999). In effect, the lower end of the continuum—Levels 1-5—primarily represent informational uses of the Web. For instance, the Web can be a tool used to market courses or share syllabi with potential students and colleagues. In addition, the Web, at times, symbolizes the idea that students need time to explore the vast stores of knowledge in which a field is based. It can also be used as a way to recognize student efforts by creating course legacies or posting previous students’ work. The Web can also be used by instructors as a vehicle for posting sample work such as course handouts and supplemental resources. When these student or instructor Web resources are deemed valuable enough, one may decide to repurpose them for instructors and students in similar courses. The repurposing of Web resources, Level 5 of the continuum, may, in fact, be the most exciting and potentially explosive part of Web-based instruction.

At none of these first five levels of our framework is the Web a required component of a course. Instead, the Web might be viewed initially as an information source or place to share resources and prior work. Only when we enter the latter five levels does the Web entail graded components of a class or program. At that point, the atmosphere surrounding Web integration may change since students are held more accountable for their efforts.

Not only are students more accountable at the higher end of the continuum, but there is also a greater time commitment on the part of instructors here. For example, when the Web is no longer just a free information source, instructors have to be more selective in what is linked to their course Web site. They also are charged with updating it and making sure that there are few, if any, unusable or dead Web links. As Web integration moves to Levels 6 and 7, instructors begin to experiment with on-line debates, electronic class discussions, and perhaps even virtual role-play activities.

An instructor in such situations needs to reflect on his or her role. Will you dictate the content covered or will you be a coach or consultant for student learning? The answer here is not particularly easy since it may depend on the task, timing within the semester, and level of students in the class. What makes it even harder is that we lack comprehensive resources regarding how to be a mentor or facilitate student learning on the Web. In response, we have published an initial set of guidelines to scaffold student learning electronically (Bonk & Kim, 1998; Bonk, Malikowski, Angeli, & East, 1998; Bonk, Malikowski, Supplee, & Angeli, 1998) based on the sociocultural work of Gallimore and Tharp (1990) and Collins, Brown, and Newman (1989). While these guidelines provide some brief examples of how to question, offer feedback, structure an electronic task, and push students to articulate and explore, they are just a first step in rethinking the role of the instructor when teaching on the
Adapting Levels of Instructional Support to Optimize Learning Complex Cognitive Skills
www.igi-global.com/chapter/adapting-levels-instructional-support-optimize/25740?camid=4v1a