# The Distance Learning Playing Field: Do We Need Different Hash Marks?

by **Stephen Ruth** and **Jiwan Giri**

Universities are increasingly involved in the deployment of distance learning approaches across the curriculum. Not surprisingly, different units on campus often possess widely varying perspectives on the role and potential contribution of distance learning. A university's chief financial officer may view distance learning as a mixed blessing, offering a possible reduction in unit costs in the long term but with potentially severe upfront expense. A dean or faculty chairperson may regard distance learning with enthusiasm that is tempered with concern about faculty workloads and rewards. The individual faculty member may worry about being supplanted someday by a virtual teacher. Students' views are equally complex—some welcome the convenience of distance learning, while others fear losing the face-to-face interaction of the more traditional learning experience. As in a highly competitive athletic contest, the various players and coaches stake out their positions and contend for the best possible result at each institution. Our purpose in this article is to try to define the playing field and the players a bit more clearly—to suggest an approach to classifying distance learning methodologies so that they can be conveniently viewed on a two-dimensional scale, like an athletic field.

There are many ways to define the hash marks of such a field. We examined several possible methods before making our selection. One approach can be found in the Web Integration Continuum developed by Curtis Bonk and his colleagues (Bonk, Cummings, Hara, Fischler, & Lee, **2000**). They describes 10 levels of course integration into Web-assisted activities. At the first level, the Web is used simply as a method of advertising and promoting course development ideas. The levels progress with gradual integration of features, content, and student services until, at Level 10, the course is so completely integrated into Web processes that it can be embedded in university or for-profit offerings. This approach to classifying courses is quite useful, and its authors offer several typical examples of university programs at each of the 10 levels. However, we could not use it for our purpose because it is too complicated for a two-dimensional scale.

Another approach we considered was Ruth and Shi's (**2001**) suggestion that the distance learning playing field can be defined in terms of cost and yield. They describe examples of distance learning approaches that are relatively high in yield

and low in cost, like correspondence courses, and others, including many virtual universities, that remain expensive with a proportionately low yield. Intermediate examples include combinations of technologies like CD-ROM/VCR or radio/Internet/CD-ROM. The popular press has become quite involved in the cost/yield debate as well. A recent *Wall Street Journal* article described the problems that virtual universities have encountered, indicating that only one such institution in the US, the University of Phoenix, had achieved major financial success (Rewick, 2001). A similar feature article in the *Chronicle of Higher Education* indicated the same generally low financial success rate for virtual university programs, indicating that only a few were currently paying for themselves (Carr, **2001**). In terms of yield, there is a very active debate, often seen on the pages of *The Technology Source*, about how to measure the results of distance learning in terms of student outcomes (e.g., see Phipps & Merisotis, **1999**; Brown & Wack, **1999**). The "No Significant Difference Phenomenon" discussions epitomize the difficulty of determining yield, at least in any scientific manner, for most courses currently taught in such a virtual format. The cost/yield approach possesses considerable utility, since it allows the inclusion of distance learning alternatives that are often lost in the debate, particularly correspondence courses. However, such an approach is inherently cumbersome, and there remains little justification for most measurements of yield.

The approach we ultimately selected was prompted by several articles by Kenneth Green, founder and director of the Campus Computing Project, that elaborate on *Megatrends* (1982) author John Naisbitt's language of "high tech" and "high touch." Green discusses comparisons between traditional and distance learning approaches and suggests the idea of the technology dimension (tech) and human interaction dimension (touch) as a way of describing different approaches to distance learning (Green, **1999**, **2000**). We found this idea to be helpful since it permits all types of distance learning, even correspondence courses, to fit with relative ease on an x-y scale—our proposed two-dimensional playing field. Having made our choice, we examined a large number of these offerings and found that the majority fit into some dimension of the tech-touch scale. Most courses are still taught in a traditional way that employs little technology but features a very high level of personal interaction. The more complex approaches to distance learning also seemed to fit, as touch was exchanged for tech to facilitate wider outreach. Using this approach, we felt that we had a viable playing field for the classification of varied approaches to distance learning.

**The Path Across the Tech-Touch Playing Field: How Can the Various Approaches to Distance Learning Be Classified?**

Our methodology consisted of examining several hundred distance learning programs worldwide and determining where each would fit on the scale. We used three levels of tech and touch for this analysis. (We have also used four-by-four scales, but they result in considerably more analytical complexity.) The tech classifications are relatively straightforward, ranging from little to abundant use of information technology (IT) interventions. For touch, the distinctions are more subtle. At the low end, there is little or no contact with the teacher, and all learning is self-paced. However, as the linkages with the teacher/professor ascend the scale, there are combinations of touch techniques that involve the Internet, phone, audiocassette, office hours, meetings with assistants, and—at the high end of the scale—significant levels of personal interaction with the professor, either face-to-face or electronically. A course that Ruth teaches at George Mason University called "Teamwork in Cyberspace" meets only four times in the classroom but includes extensive online activity (Ruth, Foreman, & Tschudy, **1999**). It was relatively easy to classify that course as moderate in touch and moderate in tech. **The Open University** (OU) in England, one of the world's premier distance learning practitioners, was more difficult to classify. While there is little face-to-face contact in OU courses, the program offers many opportunities for direct communication with the instructor. We decided to classify it also as moderate in both tech and touch. In assembling our data, we were surprised to learn that worldwide correspondence courses are still a significant force in distance learning (Jurich, **1999**). We classified most of these correspondence degree programs as low tech-low touch. However, some cases perplexed us. In South Africa, for example, correspondence courses include significant teacher commentary and reaction, which sometimes is transmitted by e-mail. The following descriptions classify each of the nine cells in our approach and offer links to some of the examples we have included in each category.

*Low Tech-Low Touch*: This approach is characterized by meager use of instructor and machine resources, emphasizing instead the use of simple structures between the learner and the course material. Representative topics: management, business, psychology, computing, fitness, and health. Many vocational courses also employ this method. Examples: **Australian Correspondence Schools** and the **University of Nairobi**.

*Moderate Tech-Low Touch*: This approach is characterized by a relatively small amount of instructor support and some use of machine resources, focusing on simple Web-based structures to link the learner with appropriate material. Representative topics: accounting, economics, and organization management; some of the Web development courses available on CD-ROM such as writing in English, calculus, and computer programming. Examples: **Center for Distance Education at the Johns Hopkins University** and **Virtual Training Suites**.

*High Tech-Low Touch*: This approach is characterized by low levels of instructor contact and extensive employment of Web-based tutorials, interactive modules, and course material. Many of the most successful courses offered by major hardware and software vendors employ this approach. Representative topics: Many IT courses on topics such as database, computer networking, application development, HTML, JavaScript, DBA, XML, VB, and e-business. Examples: **IBM**, **Oracle University**, and **SmartForce**.

*Low Tech-Moderate Touch*: This approach is characterized by meager use of machine resources and considerable instructor presence, either through face-to-face interaction or e-mail correspondence. It includes correspondence courses with postal mail feedback from the instructor—still one of the most popular nontraditional teaching approaches in developing nations. Representative topics: aerospace engineering, electrical engineering, health, physics/radiological engineering, and industrial and systems engineering. Examples: **Middle Tennessee State University**, **Keller Graduate School of Management**, **Indira Gandhi National Open University**, and **Korean National Open University**.

*Moderate Tech-Moderate Touch*: This approach is characterized by adequate use of machine resources and solid instructor presence through classroom meetings, occasional course seminars, e-mail correspondence, or audio and video conferencing. Representative topics: e-commerce, technology management, and telecommunications. Examples: **Western Governors University**, **Kent State University**, and the **Tennessee Board of Regents Program**.

*High Tech-Moderate Touch*: This approach is characterized by extensive use of technology resources with a solid instructor presence via some classroom lectures, seminars, e-mail, real audio and video, as well as use of a discussion board, bulletin board, and I-Chat. Representative topics: business management, organizational learning, project management, business ethics, and computer programming.

Examples: The **University of Phoenix**, the **University of Columbia**, and **New York University (NYU)**.

*Low Tech-High Touch*: This approach is characterized by extensive use of instructor support and a meager application of machine resources. It also represents the so-called "traditional" approach, offering some course materials online but also requiring regular interaction between the instructor and the learner in a face-to-face classroom setting, occasional labs, and designated office hours as well as by telephone and e-mail. Representative topics: all disciplines employ this approach. Examples: **Webber College** and **York County Technical College**.

*Moderate Tech-High Touch*: This approach is characterized by extensive instructor involvement in a Web-enabled classroom setting with traditional use of online learning resources (e.g., e-mail, "town halls" for discussion, use of online training software like WebCT and Blackboard, etc.). The learners work with well-structured course materials and enjoy regular interaction with the instructor either in a classroom or via e-mail or I-Chat. Representative topics: journalism, poetry, decision science, e-commerce, and information technology. Examples: management courses at **NYU**, software engineering and information technology courses at **Carnegie Mellon University**, and the **University of Idaho**.

*High Tech-High Touch*: This approach is characterized by extensive use of instructor support with exceptional leveraging of machine resources, high bandwidth, and well-structured course materials in a high-tech "virtual classroom" with streaming video technology, real audio, and multimedia. The instructor is available via e-mail, telephone, and electronic conferences. Representative topics: electronic engineering, aerospace engineering, management science, and management information systems courses for the MBA. Examples: **Stanford University** and the **Duke University MBA Global Executive Program**.

**Conclusion**

We have suggested an approach to classifying distance learning on a two-dimensional scale. How can this scheme be used? First, it can be employed in considering any distance learning intervention, including correspondence courses, to compare one program offering with another. Second, the scale can assist in some aspects of budget planning. As mentioned earlier, we were not able to include cost in our tech-touch continuum, but there is clearly some incremental expense associated with improving one level in either tech or touch. For example, an institution

considering a move from traditional (low tech-high touch) to exceptional (high tech-high touch) could quickly learn about the kind of transformation and the magnitude of the resources required in establishing programs comparable to the Duke MBA or the Stanford EE program.

Third, our approach can easily be linked with some existing university-based assessment methodologies like **Flashlight**. Each of the cells could have an assessment dimension appropriate to the individual institution (i.e., are assessments much higher when the method moves from low to moderate tech or touch?). Fourth, this scheme might also be useful to multilateral organizations such as the United Nations and the World Bank in considering educational policy options in developing nations. The most frequent users of distance learning programs are developing nations like China (usually in a moderate tech-low touch mode). Some countries, like Brazil, have found it necessary to bar the use of external distance learning providers to ensure the quality of their programs (Bollag, **2001**). Our scale can be set up as a simple quality matrix to assist in determining the best providers of the desired level of tech and touch.

Because we have given several dozen examples of actual programs that fit into this scheme, we hope that this article will stimulate discussion and criticism ultimately aimed at revising the hash marks that we have proposed and improving on this approach.

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