Re-Conceptualizing Intimacy and Distance in Instructional Models

John J. Ketterer, Ed.D.
Director, International House Program
Jacksonville State University
jkettere@jsucc.jsu.edu

George E. Marsh II, Ed.D. (Dec., June 15, 2005)
Director, Institute for Interactive Technology
College of Human & Environmental Sciences
The University of Alabama

This article was published posthumously. George E. Marsh II recently passed away. He was a respected member of the OJDLA Editorial Board and will be greatly missed.

Abstract

The idea that distance education lacks intimacy and is therefore inferior is based on an embedded metaphor that sustains a restricted and limiting mental model of ideal instruction. The authors analyze alternative conceptualizations of intimacy, space, and place as factors in the development of effective instructional models. They predict that the traditional instructional model will be increasingly problematic in the face of new and emerging technologies. After a review of a range of factors that will influence the eventual consolidation of new instructional models for higher education, the authors advocate a blending of metaphors and models that will place higher education practitioners in postures of greater flexibility to exploit as yet unidentified opportunities and challenges.

"I see nobody on the road," said Alice .

"I only wish I had such eyes," the King remarked

in a fretful tone. "To be able to see Nobody!

And at that distance, too!"

--Lewis Carrol, Through the Looking Glass

Our daily discourse is predicated on the use of metaphors embedded so deeply in our consciousness that frequently we are scarcely aware of the extent to which they influence our mental models and attitudes (Lakoff and Johnson, 1980). Professional discourse and discipline-specific discourse tend to adopt a nucleus of core metaphors in a conceptual network that guides and shapes the mental model that drives professional interchange and inquiry (Fauconnier and Turner, 2002). Mental models derived from conceptual networks may be said to open avenues of inquiry and establish parameters beyond which inquiry may not venture. When the conceptual network is rich with associative possibility, it may be said to have the salutary effect of broadening and deepening inquiry; the conceptual network may also limit inquiry and practice to the set of known associations.

Metaphors of *place, distance and space* are common in technology, with terms like home page, information highway, global village, electronic frontier, image map, chat room, and navigation in common and general use. These metaphorical terms are embedded in the discourse about technology and comprise a conceptual network of associations that has been particularly rich in yielding new terms. Virtual reality and object oriented MUD (multi-user dimension) are based on spatial and distance metaphors: virtual reality is conceptualized in three-dimensional space and MUD is conceptualized in two dimensions. These observations are congruent with the Gestalt principle *pragnanz* , which explains that people organize reality to make it seem as simple as possible. Thus, electronic learning is called “distance education” because it is considered to be conventional classroom instruction delivered with the added factor of geographical or spatial separation. The analogy is familiar and simple. Is it accurate?

Place analogues are often used intentionally to connote similarity and familiarity, as in the attempt to equate places on campus with an online version, such as electronic library, online office, and online conference. This complex of metaphor and analogy gives meaning and context, enabling learners and practitioners to grasp a complex taxonomy in a discourse framework laden with the familiar. It posits a normative condition, and that condition is the traditional classroom setting. This mental model of “normative” classroom instruction should be subjected to analysis for accuracy and its impact on practice. Rovai and Barnum (2003) said, "The variety of on-line course designs makes it difficult to characterize the typical on-line program; one might as well try to characterize the typical animal in a zoo." Conventional classroom instruction is also difficult to characterize. Joyce and Weil (2000) identified 20 different major models of classroom teaching, and they discuss blends of various kinds.

Linguists and scientists in diverse fields now accept the importance of metaphor, recognizing that human beings think analogically. Language is principally metaphorical, and the metaphor is the major agent in conceptual development and structure. The metaphor can form the structure of thought, a way of imposing order on space that gives rise to spatial inferences. One of the most fundamental structures for metaphoric thought is the interaction of space and distance, because humans traverse their environments temporally and directionally. In English, prepositions, which are based on spatial concepts, are some of the first concepts that children learn. Much of our thought and logic is related to the spatial/distance concepts of figure and ground that form the basis for Gestalt psychology. The concepts and perceptions of places have arisen from concrete experiences in the environment. Distance metaphors are so fundamental that they are the basis for other kinds of metaphors in a developmental sequence from concrete to abstract thought. The bases of intelligence that Piaget described, such as object permanence, conservation, and egocentrism, are formed out of experiences with space and distance. Relational verbs also emerge from spatial and distance concepts. Young children learn relational words early because they need them in order to express meaning, so the ontology of place and space concepts begins very soon in language development (Tomasello & Merriman, 1995). Due to the nature of local circumstances and social customs, people justify their actions, or ways of doing things, in terms of local habits and customs, and characterize those actions as belonging in a particular place (Curry, 1999), or "When in Rome, do as the Romans do." The physicality of the core metaphors of human existence has led some cognitive scientists (Lakoff & Johnson, 1999) to posit a theory of embedded cognition, where knowledge is the result of the interplay between the cognitive unconscious (consisting of base-level and spatial-relations concepts and linguistic processing), the neural network (physiology), and experience (phenomenology).

The simplicity of the distance education metaphor invites comparisons with conventional instruction. Russell (1999) reviewed 355 studies of different distance education models between

1928 and 1998 and found no significant differences in achievement. Although only 40 of these studies involved computer-based instruction, more recent studies comparing student achievement between web-based (asynchronous) and conventional instruction have yielded the same results (Gagne & Shepherd, 2001; Haythornthwaite, Kaymer, Robins, & Shoemaker, 2000). Russell concluded, "No matter how it is produced, how it is delivered, whether or not it is interactive, low-tech or high-tech, students learn equally well" (p. xiv). The equality of distance education means that, even if the dynamics are different, it is a viable alternative to conventional instruction. The effects are the same, and there is as much variation in student satisfaction within a category (i.e. conventional or distance) as across the categories (i.e. conventional and distance).

Despite consistent findings that there are no differences between conventional instruction and distance education, and the continued and rapid growth of distance education notwithstanding, some writers simply regard it as inferior instruction. Carter (1973) commented on distance learning, prior to the use of computers, that the results of research "...might give currency to the false belief that those who can pass the same examination have the same education" (p. 69). More recently, Daniel (1996) identified the "major perceived weakness" of distance education to be interaction. The resistance to distance education comes down to a limitation in the mental model of effective classroom instruction. George Lakoff (1987) identifies INTIMACY IS PHYSICAL CLOSENESS (p 448) as a “conventional idiom” which leads, via a cluster of metaphorical and analogical associations, to the idea that physical distance is by degrees alienating and results in *folk etymologies* that influence our behavior and understanding. Those who remain suspicious of “distance” technology as a method of instructional delivery are influenced by the untested folk truth that intimacy and interaction require physical proximity. In short, they have, in a perfectly rational and human way, succumbed to the limiting influence of their mental model in spite of evidence to the contrary. Our metaphors generate schemas, or ways of reducing reality and experiences to meaning, through a process of sorting and pattern recognition to make sense of the world. The deeply embedded metaphor that links physical proximity with effective instruction leads to the logically circular conclusion that "students far away lack intimate or authentic interaction because they are far away” which, in turn, leads to the notion that distance education must be "impersonal" and devoid of the ideal qualities of personal contact, socialization, and sensory engagement.

The nature of the metaphor dictates implications that are accepted without question because of the power of the conceptual network, and the ineluctable nature of framing possibilities therein. If we continue to speak of distance education as indistinguishable from conventional instruction, we fail to escape the confines of the traditional mental model. As our understanding of the role of language in the construction of knowledge becomes clear, it is possible to see how there can be misuses or errors of good intention. We may expect to see, in the evolving discourse about the use of technology, the mixed usage of expressive and explicative metaphors, models, and analogies. This always has been, in fact, the case in the social sciences. And this should not be seen as an invalidating or even a negative phenomenon. Rather, it must be seen as part of a process of imaginative and intuitive speculation and the combining of knowledge domains, which we sense, rather than know, to be homologous. This process is part of and necessarily preliminary to the development of more formal models, which will have greater explicative power and authority. One such attempt has been the use of "transactional distance" to study interactivity in distance education (Moore, 1973; Moore & Kearsley, 1996). However, is this sufficient to be a foundation for a formal model?

The Concept of Transactional Distance Implicit in Instructional Models

Rovai (2002) notes that persistence in on-line classes is greatly dependent on the sense of community created by the course facilitator. “Those students who possess strong feelings of community are more likely to persist than those students who feel alienated and alone.” Rovai cites *transactional distance, social presence, social equality, small group activities, group facilitation, teaching style and learning stage, and community size* as determining factors of student persistence and satisfaction.

Transactional distance (Moore, 1972; Moore, 1980; Moore & Kearsley, 1996) is a relative pedagogical construct which construes the transactions between a teacher and a learner as an interaction among three variables: structure, dialog, and learner autonomy. Structure is the extent of the responsiveness to a learner's individual needs, dialog is the extent to which a learner and educator are able to communicate with each other, and learner autonomy is a student's commitment to self-direction and study. Moore considered the physical distance and learner autonomy to be measurable, and he proposed that differences in two-way communication, or dialog, and differences in responsiveness (structure) to individual needs could account for differences in satisfaction, and along with learner autonomy, also account for the degree to which a student can function without supervision. Although there has been a paucity of research about transactional distance, a few investigators claim to have confirmed the theory (Saba & Shearer, 1994; Bischoff, Bisconer, Kooker, & Woods, 1996; Chen, 2001).

The concept of transactional distance was generated by considerations about distance education. However, it has clear applications for a reconceptualization of the "distance" between a student and the instructor in a lecture hall. The concept of distance really implies more than physical proximity. Moore 's theory is based on the observation that in both conventional and distance education, the student is passive and the teacher is active. Moore (1991) said:

Thus it can be argued that while transactional distance is a characteristic of every educational program, and that programs differ in transactional distance according to the extent of dialogue and structure within them, there is also variability in the transactional distance between teachers and learners within each educational program, resulting from the interaction of dialogue, structure, and the characteristics of each learner.

The lecture method, derived from the Latin for "to read," has lasted many centuries and remains today as the principal means of instruction. A distance course, especially an asynchronous course, is held to a different standard and regarded as flawed because it lacks immediacy of contact, following from the metaphor. There is a corollary that synchronous courses are preferable because of their apparent similarity to a lecture class, and that asynchronous courses are less desirable because of differences in interaction. Clearly, the understanding of “distance” in these judgments is that of *proximity.* What evidence is there to demonstrate the superiority of the lecture method? Is a lecture more personal, social, and immediate? Do professors and students form interactional bonds? Is there evidence that traditional courses are relatively more effective than models utilizing distance technology? The literature answers these questions.

While distance courses are said to have high dropout rates, the U.S. Department of Education (1999) reported that 60 percent of college students who complete a degree have dropped out of classes, and more than one-third of students ever enrolled drop out before they earn a degree or certificate. While distance education courses are said to be impersonal, it is clear that the lecture format is also impersonal. It does not account for student differences and treats all students with detached uniformity. Each student is provided the same information, without regard to previous knowledge and skills, and all students are expected to meet requirements in a defined span of

time, either a "quarter" or a "semester" lasting so many weeks, that coincides with the agrarian calendar. * Feedback comes in chunks, with students getting grades on homework and tests at times convenient for the instructor. Rarely is there immediate feedback or even useful feedback. Test scores are generally presented as an overall letter grade or percentage without any deliberate attention to what the student did not learn or why some items were graded as incorrect. Most objective tests used in evaluation are notoriously unreliable. Oblinger and Maruyama (1996) made the following summary about research on lecture courses:

- Lectures lack significant interaction.

- Interaction between the instructor is limited to a few individuals, irrespective of class size.

- In classes less than 40 students, 4 or 5 students dominate discussions.

- In classes over 40 students, the number of students who interact is even smaller.

- In a 50-minute lecture period, questions and interaction comprise a total of less than 5 minutes.

- Only 19 percent have ever asked a teacher for advice after class.

- In the average lecture, the instructor delivers about 5,000 spoken words, of which students record only 500.

- Only one-third of students leave lectures with most of the information units recorded.

* The agrarian calendar of most universities neatly ties into the traditional conceptual framework. Agrarian peoples are said to be *close* to the earth, in intimate relation with its cycles.

Negative results have been reported in the lecture method for long-term retention, transfer, and learner motivation (Blight, 1972; Kulik & Kulik, 1979; McKeachie, Pintrich, Yi-Guang, & Smith, 1986; Johnson, Johnson, & Smith, 1991). The lecture is criticized for passive learning and poor critical thinking skills. In the average lecture the instructor speaks about 5,000 words, causing students and investigators to question its effectiveness as an instructional method (Johnstone & Su, 1994). While asynchronous courses have been criticized for delayed feedback from the teacher, there is no evidence that feedback is any more immediate in lecture classes.

Twigg (1999) explains the depth of the problem:

...in many institutions attendance at large lecture sections averages approximately 50 percent compared to attendance in moderate-sized sections, where it may be better than 75 percent. Some students drop out of the course while others stay registered but essentially give up and stop working after the deadline to drop the course.

Although some students may be capable of meeting course requirements in less time, they are not given the opportunity. Students who require more time to master the content are not permitted to do so either, because they must complete the assignments and take all tests within the specified time frame (semester, quarter). Most lecture classes do not engage students. They rely on the lecture presentation in real time, which could be taped or presented in a multimedia format but usually is not, and the rest of the course is based on reading assignments and tests. For large

classes there are often few "papers" because of the extra burden of having to grade them. Therefore, multiple-choice tests are used for speed and efficiency to measure achievement and award course grades.

Rather than establishing discussion groups--a normative online practice--a lecture class is likely to form informal study groups self-selected by students who get to know each other in the course or who have been acquainted before. While some courses may have additional assignments for "groups" of students, rarely do they conform to the principles of cooperative learning. In fact, in courses graded on the "curve," students are reluctant to share information or join in collaborative efforts for fear they will jeopardize their rank in class. In other classes students seek each other out in study groups to cram for tests and support one another.

The lecture does not permit "real world" or hands-on-learning, because the tasks for the student are to listen, write, and read. Even courses that have "labs" associated with them are often disconnected from the lecture class. The content is not necessarily coordinated and students are likely to have a different instructor for the lab than for the lecture. Individualized help is not readily available and tutoring often means a special class where someone else goes over "watered down" content. There is very little individual attention and most students rarely take advantage of office hours. As Twigg commented:

The essential job of the teacher, particularly at the University level, is to direct students to do the work themselves and solve their problems in an informal manner. Not only the protagonists of non-formal education but progressive educationists all over the world hold the view that the lecture method of instruction might have been useful in the past, but in the modern context it tires the teacher and leaves the student uninterested and often hostile. They argue that the students may admire the eloquence of their college teachers, but in the process they relapse into a state of intellectual passivity. Again, the lecture method is such that the lecturer's prime concern in his subject rather than his audience. The average college teacher cares little whether his listeners actually benefit from his exposition. He is only concerned with the accurate exposition of his subject.

Bates (1997) summarized university teaching this way:

...university teaching is not professionalized, in the sense of being based on skills resulting from research into and analysis of the teaching process. For instance, most university teaching has not been influenced to any extent by recent research into the psychology of learning, organizational management research, communications theories or research into human-machine interaction, all of which have been critical for the development of post-modern knowledge-based organizations...The new technologies will be exploited best by those that establish post-modernist forms of organization.

The metaphors and resulting conceptual models that dominate discourse are important because of how they form views and reactions. As Koppell (2000) said,

Consider the widespread acceptance of the term "marketplace of ideas" as a metaphor for free speech. This representation emphasizes one's freedom to enter the arena of discourse, rather than one's ability to be heard. Thus, in the context of campaign-finance regulation, protection of free speech means that unlimited campaign expenditures are sacrosanct, but guaranteeing equal opportunities to reach the electorate is not a consideration. If, in contrast, we imagined not a

marketplace but a classroom, enabling the quietest voice to be heard would be more important than protecting the rights of the loudest. (p. 18)

The Possibility of Reconceptualizing Space

How can two ideas be merged to produce

a new structure, which shows the influence of

both ancestor ideas without being a mere

“cut-and-paste” combination?

--Margaret Boden (1994)

Koppell (2000) revealed frustration with the limited scope of the prevailing instructional model when he said, "But why, exactly, should we think of the Internet as a geographic location? I recently participated in a telephone conference call with people in several other states and countries. Were we all together in another "place"? I doubt that any of us thought so" (p. 16). There are anecdotal reports that people thought of themselves as being in "two places at once" with use of the telegraph, the radio, and television, but these sensations soon disappeared as these became regarded as conduits to places rather than imaginary places to be inhabited simultaneously. As long as the Internet and distance education are represented by place metaphors, contention between warring camps over the uses of technology may continue. It may be better to use a different metaphor. If so, which ones are available and effective? Saba (2004a) challenges the value-laden assumptions about distance implicit in the instructional model:

The distinction between f2f and "distance" defined as geographic separation is a useless one, and leads to conceptual confusion. Transactional distance applies to both so-called face-to-face, and when the learner and instructor are not under the same roof. It resolves useless dichotomies such as learner-centered VS instructor-centered, distance VS f2f, synchronous VS asynchronous and many other distinctions that are not theoretically sound, and have not been empirically verified.

Saba (2004b) rejects the comparison of conventional instruction with distance education, saying "...comparison of interaction in the context of classroom instruction with the kinds that occur in distance education becomes difficult, if not irrelevant." But powerful metaphors that are deeply entrenched in the literature are not so easily dismissed. Cognitive development is deeply rooted in real and symbolic cultural tools (Vygotsky, 1978). In creating and using metaphors, human beings are bound to concrete and symbolic ideations that emerge from concrete and social experience. Metaphors are crucial to discovery and creative imagination because they structure not only language but also a person's conceptual system; they are "not just catchy phrases" but an integral part of how reality is constructed (Weick, 1989). The abandonment of existing metaphors and models implies the emergence of a new model that satisfies anomalies and incongruities previously unaddressed or unresolved, akin to a paradigm shift.

We hesitate to apply any type of theory of scientific revolutions to our discussion of instructional models. However, it is clear that the traditional classroom model of instruction is increasingly problematic in the face of new and emerging technologies of instruction. Moreover, two facts indicate that the discourse framework is changing rapidly. First, the technology itself is

advancing rapidly and “distance” technologies currently in use will shortly be greatly modified or wholly obsolete. Second, the learner we have today is not the learner that we will have tomorrow. In view of these pressures, the discourse framework and the instructional model will no doubt evolve in an organic and seamless process, albeit not without resistance from Luddites and traditionalists unfamiliar with the evolution of their own traditions.

Factors Influencing the Emerging Model:

The Changing Landscape of Higher Education

Another factor influencing the instructional model is the assessment model in use in most educational systems. Unsurprisingly, it involves another set of embedded metaphors: the production model. The metaphor of production with its bean-counting, factory mentality still prevails in our university system. This metaphor emphasizes two principal aspects, greater efficiency and effectiveness. Efficiency refers to the level and quality of service that is obtained from a given amount of resources; effectiveness refers to the extent that the organization meets the needs and demands of stakeholders or customers (Epstein, 1992).

Public, K-12 schools are under tremendous pressure for accountability based on standardized test scores. Rising costs have caused state legislatures to look to similar measures for higher education. As resources diminish, there is greater scrutiny about how resources are allocated and spent, and demands for more cost-effective methods. In many states there are already models in place that use gross measures of productivity, such as standardized test scores, graduation and dropout rates, faculty load, faculty/student ratios, as well as other measures.

Most state universities are no longer truly state institutions but are, in view of decreasing state dollars, state-assisted. Some universities accord preferred colleges and disciplines priority status for internal and external funds. This is an understandable triage system to justify the alignment of finite resources within the university in accordance with its perceived mission. Some programs are more glamorous than others; some are more likely to attract external funding. Higher education administrators evaluate existing programs and redirect funds to programs presumed to have more potential to meet the perceived goals of the institutions. Competition for limited resources in higher education is a major issue confronting colleges and departments on most campuses, forcing less favored programs, defined in terms of university ambitions and traditional status, to delineate and articulate their contributions in order to promote their status and promise for accomplishing university goals. Self-justification often results in hyperbole, such as a crucial connection between the future of America and the need for teachers, engineers, or computer programmers, and virtually all such documents contain statements about the need for "excellence" and programs of "distinction." On any campus certain disciplines have a better competitive advantage than others due to existing social, political, and economic circumstances. For example, a college of engineering or arts and sciences is much more likely to obtain external funding, much of it earmarked in legislation. Similarly, a college of business administration, by the nature and quantity of its graduates, is able to secure generous grants and endowments from distinguished, wealthy graduates and through "networks" in the business community. Other units are at a disadvantage, especially if there are local rules about which units can approach potential donors.

College costs increased 234% from 1980 to 1994, nearly three times the percentage increase of the median household income, and more than three times the cost of living (Source: General

Accounting Office). Over the last decade, costs have risen at twice the rate of inflation, and since 1992, the cost of attending a public university has risen 25%. With disposable personal income up only 18%, students and parents rely more on student loans (Source: The College Board, Washington , D.C.). At public colleges, 50 percent of full-time students receive financial aid; at private colleges, 80 percent receive assistance; 33 percent of all part-time students receive financial aid (Source: Association of American Universities). Next to a home, the cost of post-secondary education is a family's greatest expense. Universities continue to raise tuition and fees, although the portion of support by the state government may not increase significantly. The one significant method to real cost savings can be a capital-intensive approach to instruction. While lecture is popular because it is convenient and probably necessary for many children and immature learners, its use in college instruction has no real justification other than tradition and the inertia of professional practice.

Twigg identified the following assumptions that are barriers to change: (a) improving quality means increasing cost, (b) adding information technology to the mix increases costs; and (c) the use of instructional technology may threaten quality. Researchers can more profitably devote their energies to examining the truly critical factor in determining student achievement--instruction itself. In attempting to determine what “works” in distance education, much of the research has addressed the media used to deliver instruction, comparing the effect of different media on student achievement, and comparing distant learner achievement with student achievement in the traditional classroom. The literature has also addressed student satisfaction with a variety of distance education media and with distance education in general as indicators of what “works.” The research clearly indicates that all media of instruction are equally effective. Biner, Dean, and Mellinger (1994) argued that learner satisfaction is “arguably as important as distance learner performance” (p. 61).

Postmodern Higher Education: The Blending of Metaphors, Models and Methodologies

It has been clearly demonstrated that technology-driven models of instructional delivery can provide instruction that is equal to traditional instruction. If technological applications can be effective in teaching and learning, they may be used to reduce instructional costs and extend other benefits that are currently unavailable on the college campus. We propose that instructional technologies should be used with both distance and resident students to improve instruction and opportunity, develop an engaged model of learning, accelerate completion of courses, reduce course duplication and redundancy, and reduce college costs. Levin (1997) identified five dimensions of productive firms, which can be applied to K-12 schools and, presumably, to higher education:

- measurable outcomes

- incentives linked to success

- efficient access to information

- adaptability

- use of the most productive, cost-effective technologies

Finding a relationship between inputs and student outcomes has been illusive. Teaching is

premised on the implicit assumption that there is a production function (i.e., a mathematical expression of the relationship between inputs and outputs) like that in manufacturing. Research follows the premise that schooling is something done to students instead of something students do for themselves (Levin, 1993). Viewed through the lens of the production metaphor, students are raw materials to be turned out as finished products by teachers. The use of the production metaphor presents different problems. Monk (1990; 1992) concluded that production studies of education have not yielded very much useful knowledge. Outcomes, inputs, and processes are difficult to identify, isolate, and investigate. As Levin noted:

In education, outcomes are multiple, jointly produced, and difficult to weigh against one another. The outcomes of education are not all translatable into a standard metric, such as money, which makes it very difficult to give them relative value. A further difficulty with outcomes has to do with the level at which they should be measured. At various times researchers have been interested in outcomes of individual students, classes of students, schools, school districts, states, nations, ethnic groups, age groups, gender groups, and all sorts of other subsets of the population.

Monk suggested the possibility that no production function exists in teaching, saying that "...no systematic process governs the transformation of inputs into outcomes" (p. 342). Levin (1993) agreed, pointing out that it is not evident what (or who) the raw materials are, who is doing the producing, nor what the product is. Few schools have any real control over their raw materials and basic inputs, except the most prestigious, exclusive institutions that can screen out all but the most talented students for admission. In other words, exclusive schools have the best talent to begin with, so the job of instruction is not very difficult, but schools with less talented students are challenged to meet desirable outcomes. As Levin put it:

Many of the problems of production studies hinge on the role of students; whether they are producers or materials. As soon as students are viewed as individuals with unique capacities and interests, the problems of specifying a production relationship in schools become enormous...Imagine a factory in which the raw materials had minds of their own, and could make autonomous decisions about whether they would be part of whatever was being produced. Just as one was about to weld a piece of metal to be the roof of a car, the part one had in hand would announce its unwillingness to play the assigned role, and its desire instead to be part of an art gallery instead of part of a car, or to become a piece of cloth instead of a piece of metal. A change in welding technique might work for those pieces of metal willing to undergo it, but would hardly solve the problem.

Students learn at different rates, or as Levin put it--different resources at different times and in different arrangements may be necessary for different students. This means there is a unique production function for each pupil (individualization).

Higher education faces difficult choices in the future due to increasing costs. The most important decisions will be how to achieve economies of scale while maintaining quality and effectiveness at high levels. It is clear that the production model that dominates the assessment of colleges and departments will not soon be abandoned. Especially with regard to efficiency and cost/benefit outcomes, the dominant conceptual framework of “production” will persist.

It is also evident that the dominant complex of metaphors that frame the thinking about instructional models is changing. Because students may be anywhere and may engage at anytime, there is clearly a rationale for seeing the resources of higher education as an armamentarium or a

collection of applications--instead of viewing it as a choice between “distance versus lecture" models--as considered in the "blended learning" approach to uses of technology (Marsh, McFadden, & Price, B.J., 2003). For the near future, it is likely that the future holds a multiplicity of instructional models, and no single one—technology-based or otherwise—will be sufficient to dominate the field.

Education could be envisioned as a variety of electronic and face-to-face methods of delivery. Blended or hybrid strategies (Murphy, 2003) may well be transitional artifacts that will improve instruction and enhance student interaction. Students in any setting should have a high level of satisfaction, which would reduce student attrition rates, increase motivation, and improve instruction. Research indicates that the location of delivery is not significantly different in terms of outcomes. Student achievement and satisfaction should be balanced against reasonable measures of cost efficiency. Warehousing students in large lecture classes is a way to diminish costs, but there is significant student dissatisfaction with large lecture classes and concerns about quality. Due perhaps to the limiting effects of the distance metaphor, there has been little research about the use of technology as an alternative or augmentation to conventional instruction (Marsh, McFadden, & Price, B.J., 2003).

Bates (1997) observed that elements of advanced and sustainable forms of postmodern higher education are visible in online programs such as the University of Phoenix , Nova Southeastern University , National Technological University , and the Western Governors' Virtual University . Since he made this observation, other institutions have joined the list, but it is clear that for their endeavors these institutions have also sustained significant criticism from conventional institutions, although a third of the traditional institutions have, to varying degrees, experimented with distance education (Source: National Center for Education Statistics). In part, this is a result of the belief engendered by the instructional model that distance education lacks intimacy and that electronic delivery is a pale imitation of the real thing.

The university fixed in place and time—the hallowed geographical space—will no doubt perdure. The production metaphor and its derived implications may well accommodate the incorporation of evolving instructional models, but is unlikely to be wholly abandoned as long as businessmen drink our wine and plowmen dig our earth. The emergence of competing conceptual models of instruction is salutary, and signals a way to universities to improve services, reach more students, satisfy the adult learner, and survive economic cycles of legislative abandonment. It may well be, as learners evolve, that a totally new instructional model will become dominant. We find that impossible to predict with any specificity because of the rapidity of change and the very likely possibility of future, as yet unanticipated, breakthroughs. In the meantime, universities would do well to promote the blending of metaphors, models, and methodologies necessary to create flexibility and adaptability in their organizations.

Linguistics is arguably the most hotly contested property

in the academic realm. It is soaked with the blood of poets,

theologians, philosophers, philologists, psychologists,

biologists, and neurologists, along with whatever blood

can be got out of grammarians.

--Russ Rymer (1992)

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