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ABSTRACT

As online education becomes more pervasive and increasingly acceptable in society, there is a need to critically examine the merits and underlying assumptions driving the justification, design, and teaching of such courses. This paper explores some of the symbolisms, namely myths and metaphors, pertaining to online higher education, with the ultimate goal of investigating if and how they apply specifically to information systems education. The first step in discovering the myths and metaphors utilized to describe online education involved the selection of articles for analysis, using Pro-Quest Direct and ERIC. Twenty-one articles were chosen for review. The second step in the analysis was to examine each article in search of common myths and metaphors embedded in the discourse on online education. Finally, after making a comprehensive list of the myths and metaphors found in these works, they were sorted in order to determine which myths and metaphors were the most prominent throughout these articles. (Contains 47 references.) (AEF)

UNEARTHING HIDDEN ASSUMPTIONS REGARDING ON-LINE EDUCATION: THE USE OF MYTHS AND METAPHORS

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ABSTRACT

As on-line education becomes more pervasive and increasingly acceptable in society, there is a need to critically examine the merits and underlying assumptions driving the justification, design, and teaching of such courses. In this paper, we take a first step in this direction by uncovering several symbolisms, in the form of myths and metaphors, discernable in the discourse on online learning. Future research will involve an empirical examination regarding the validity and consequences of these myths/metaphors identified, specifically in the context of information systems education.

INTRODUCTION

According to estimates from IDC, a Framingham, Massachusetts-based market research firm, the worldwide e-learning market will grow from $2.2 billion in 2000 to $18.5 billion by 2005 (Moore, 2001). Peter Drucker, economist and futurist, caused quite a stir in the academic community when, in an interview for Forbes magazine, he stated that universities thirty years from now would be "relics ... [and] won't survive" (Lenzer and Johnson, 1997, p. 127). Money Magazine has said, "Online education may be the greatest technological advance to hit academia since the No. 2 pencil" (Clarke, 1998, p. 66) and John Chambers, the chief executive officer of Cisco Systems, has declared that "e-learning is the next major killer app"of the Internet ("The Virtual Classroom," 2000; Moore, 2001). In fact, it has become such big business, that major investors, such as Michael Milken's Knowledge Universe and Paul Allen's click2learn.com, are jumping on the bandwagon to offer courses to both college students and corporate trainees (Molenda and Harris, 2001). Media financier, Herbert Allen, Jr., is the prime backer of Global Education Network (GEN), a consortium of top-notch liberal arts colleges and ivy-league universities, including Brown, Wellesley and Williams, brought together to provide online education ("The Virtual Classroom," 2000; Weber, 2000). Additionally, some universities, such as University of Maryland and Columbia University, are forming their own for-profit subsidiaries to offer online degree programs in order to exploit their "intellectual capital," presumably without diluting the reputation of their brick-and-mortar university (Molenda and Harris, 2001). Thus, it is evident that higher education institutions, including those with outstanding "brick-and-mortar" historical reputations, as well as major investors, are charging ahead in an effort to capture a share of the online education market. This pattern is noticeable among Business Schools in general, which are increasingly leaning toward offering online programs, especially in the area of Information Systems whose courses are in high demand. But what are the driving forces behind this trend toward online education?

A number of reasons are cited in the literature. Adult students, those 25 years of age and over, currently represent nearly one-half of credit students enrolled in

higher education (Kasworm, Sandmann, and Sissel, 2000), yet they have greater work and family responsibilities that prevent them from attending school full time. These students, then, may be choosing an online course because of *lifestyle issues*. Another driving force is the increasing cost of education and the lack of financial aid available for those students who would like to attend full time (Raymond III, 2000). Thus, students may be forced to choose an online course for *financial reasons*. The pervasiveness of information technology into the workplace has also created a *growing societal demand* for continuing education, requiring many workers to acquire new skills (Molenda and Harris, 2001). In this day and age most large companies are sold on the idea that *continual training and retraining* of employees will pay off big ("The Virtual Classroom," 2000). In addition, *technology in and of itself* is a major driving force. As more and more people have access to a computer and the Internet, it is easy to fall into a mindset of thinking "since it's there, we should use it." Finally, as government support for public institutions is shrinking, *nonprofits are being forced to find their niche in the marketplace and operate more like a for-profit business*. Many of these institutions are turning to online education as a way to support themselves within the marketplace (Molenda and Harris, 2000). As such, for-profit and non-profit institutions are competing for the upper hand in the headlong rush to implement new technology. Herbert Allen, Jr.'s for-profit venture, GEN, has its own conception of the driving force behind this trend and is targeting four distinct markets with its online courses: "lifelong learners" who graduated from college decades ago but want to challenge themselves; college students at smaller institutions who want to supplement their studies with courses not offered on their real-life campuses; high-school students gearing up for competitive college-admission processes; and students overseas who want access to U.S. institutions (Weber, 2000).

While online education is being touted aggressively, there are some opposing voices that seem to be muted by the sheer weight of technological and economic determinism, the basis for much of the uncritical optimism regarding on-line teaching and learning. Among those voices are 840 faculty members from the University of Washington (UW) who signed an open letter objecting to Governor Gary Locke's 1998 proposal of a distance-learning initiative that suggested traditional state-university courses could be partly replaced by online learning (Cleary, 2001). These opposing faculty argued that education should not be reduced to "the downloading of information, much less to the passive and solitary activity of staring at a screen" (Cleary, 2001). It is worth noting that the UW professors are not alone in their skepticism of online education. When Peter Lange, the Provost of Duke University, was approached by GEN he was impressed by what GEN had to offer. Yet, he expressed his reservation regarding the extent to which online education can be universally effective, and suggested that online learning be approached on a course-by-course basis. "Can a company like GEN put together a full curriculum which would substitute for what you would get if you came to Duke? The answer is clearly no," he says (Weber, 2000). William S. Reed, the vice president for finance and administration at Wellesley, declared that he is not sure if Wellesley's courses can be successfully translated into Web pages (Weber, 2000), yet Wellesley has agreed in principle to join the GEN venture. Even the U.K.'s Open University, an institute that creates and studies ways to apply new technologies to learning, has some harsh words regarding online education. "For online education to become mainstream is kind of a depressing thought, because it is such a crappy experience. The bottom line is that learning online is a soul-destroying experience. It really, really stinks. It's always second best (to face-to-face learning)", said Marc Eisenstadt, chief scientist for the Knowledge Media Institute at the U.K.'s Open University (Hamilton, 2001). Moreover, the jury is still out on the issue of online education at organizations such as the AACSB, the primary accrediting organization for business schools, which typically house Information Systems departments as well. While the St. Louis, Mo., organization "encourages innovation and experimentation in education" in its guidelines, the AACSB also cautions "simply adopting new technologies without thinking about the implications for quality assurance would raise troubling questions" (Cleary, 2001). The sentiments of those who are erring on the cautious side before jumping feet first into online education can be properly summed up by Arthur Levine, president of Teachers College at Columbia University in New York, when he said, "We still don't know if online education is any good" (Cleary, 2001).

As IS educators, the authors' own position in this debate is one of cautious optimism—while we see significant gains that can be derived from online education, we consider the *taken-for-grantedness* of the presumed merits, largely fuelled by financial and technical

opportunism, as being detrimental to the long-term interests of the society to produce reflective Information Systems practitioners.

Given the hype that has accompanied this new form of learning, and the significant investment of both money and time that has gone into creating e-learning ventures, we believe that there needs to be a critical examination of the assumptions underlying the discourse on this topic, with the goal of separating hype from reality. In order to delve deeper into the question of whether online education is an appropriate supplement to, or replacement for, traditional education, following the approach of Hirschheim and Newman (1991), we explore some of the symbolisms, namely myths and metaphors, pertaining to online higher education, with the ultimate goal of investigating if and how they apply specifically to information systems education.

SYMBOLISMS—MYTHS AND METAPHORS

Symbols embody a community's views (or theories) about particular phenomena, which in turn explain behaviors exhibited by members of the community. Thus, symbolisms, such as myths and metaphors, can be used to make sense of situations that are new, problematic, ambiguous, or unsettled (Frost and Morgan, 1983). Symbolism revolves around shared meanings—patterns of beliefs, rituals and myths, which evolve through time and function as social glue, binding communities together (Smircich, 1983). In the realm of online education, where there exists for many an absence of experience to guide practice, the images and ideas embedded in the discourse reflect and simultaneously shape people's views (Schultze and Orlikowski, 2001) towards this new form of education. Thus, unlike mainstream positivist research studies, which are concerned with the empirical testability of theories in an attempt to increase predictive understanding of phenomena, the current study calls for an interpretivist approach, as we are attempting to understand phenomena through accessing the meanings that participants assign to them (Orlikowski and Baroudi, 1991). The interpretive perspective emphasizes the importance of subjective meanings and social-political, as well as symbolic, action in the processes through which humans construct and reconstruct reality (Morgan, 1983, p. 396) and asserts that the language humans use to describe social practices constitutes those practices (Orlikowski and Baroudi, 1991). According to this perspective, an examination of embedded symbolisms, or more specifically, myths and metaphors, in the language of writers/speakers on online education will enable an understanding of the common attitudes and beliefs surrounding online education, and thus a comprehension of the (socially constructed) reality regarding this phenomenon.

Myth can be defined as

> A dramatic narrative of imagined events, usually used to explain origins or transformations of something. [It also reflects] an unquestioned belief about the practical benefits or certain techniques and behaviors that is not supported by demonstrated facts (Trice and Beyer, 1984, p. 655).

Myths are often communicated through the telling of a story; nonetheless, they are not merely recountings of any particular tale, but ways of classifying and organizing reality (Polkinghorne, 1988, p. 83). Myths are devices of mind that have been used throughout time to provide explanations, reconcile contradictions, and help resolve dilemmas; however, myths have also been known to distort images and misdirect attention (Bolman and Deal, 1984). Negative traits notwithstanding, "myths are necessary to create meaning, solidarity and certainty" (Bolman and Deal, 1984) and serve the following functions: 1) myths explain, 2) myths express, 3) myths maintain solidarity and cohesion, 4) myths legitimize, 5) myths communicate unconscious wishes and conflicts, 6) myths mediate contradictions, and 7) myths provide narrative to anchor the present to the past (Cohen, 1969). An example of this is the "myth of academe," which represents the belief that faculty lead lives devoted to the selfless pursuit of knowledge in institutions carefully organized to support that pursuit (Shaw, 2000). It is important to note here that myth is not necessarily empirically invalid. Rather, it is a belief *that is assumed to be valid* in the presence of contrary evidence or in the absence of any evidence at all.

Metaphors have been described as a way of understanding and experiencing one thing in terms of another. Aristotle spoke of the value of metaphor almost 2,200 years ago: "Ordinary words convey only what we know already; it is from metaphor that we can best get hold of something fresh" (Embler, 1966, p. 12). According to Morgan (1986, p. 12), metaphors are used as "a way of thinking and a way of seeing that pervade how we understand our world generally." A metaphor has the power to shape reality and structure the thoughts of the

people who are caught up in a particular metaphor and its entailments (Duncan, 1968; Graber, 1976; Lakoff and Johnson, 1980). The true effectiveness of metaphors is their almost paradoxical ability to point out dissimilarities and contrasts between two objects while simultaneously demonstrating that there are considerable similarities between the objects being compared (Weaver, 1967). Based on the work of Koch and Deetz (1980) we can make the following assumptions with regards to metaphors: 1) they are fundamental in the English language, 2) basic metaphors entail others, 3) complex networks of metaphors permeate our language, leading us to conceptualize certain things in certain ways, 4) metaphors are usually coherent and can be traced back to fundamental forms of experience, and 5) inconsistent metaphors can be explained by tracing them to different realms of experience. An example of a metaphor is the phrase "time is money", which entails the idea that time is valuable, can be spent, saved, lost, and so on. From this example, it is evident to see how metaphors can be helpful as carriers of meaning; however, they can also be dangerous fantasies "and not suited for guiding serious meaning" (Boland, 1987, p. 367).

METHODOLOGY

The following steps outline how went about unearthing the myths and metaphors embedded within the literature on online education. The first step in discovering the myths and metaphors utilized to describe online education involved the selection of articles for analysis. We used Pro-Quest Direct and ERIC to search for peer-reviewed articles that contained at least one of the following terms: online learning, online courses, online education, online instruction, web-based instruction, web-based courses, Internet courses, e-learning, computer-based instruction. Published research articles were used as the unit of analysis as they "provide a clear sampling frame, as well as the best view of what is accepted in the research community" (Watson-Manheim, Crowston, and Chudoba, 2002). Most of the articles chosen for analysis came from journals in education research, while a few came from business journals. Although the articles selected for analysis ranged in publication date from 1996-2002, a majority of the articles (14 out of 21 chosen) were published between 2000 and 2002, as this seems to be the time at which online education emerged as a hot topic. A total of twenty-one articles were chosen for review based on the fact that they contained recommendations for how to design and teach an online course, offered "lessons learned" from real-life experience in teaching an online course, or presented issues to consider when teaching an online course. The second step in our analysis was to examine each article in search of common myths and metaphors embedded in the discourse on online education. Finally, after making a comprehensive list of the myths and metaphors found in these works, they were sorted in order to determine which myths and metaphors were the most prominent throughout these articles.

ANALYSIS

Myths

Technological connectivity implies interaction. Interaction is one of the key components in any learning experience (Dewey, 1938; Vygotsky, 1978) and has become one of the most pervasive constructs in distance education. In fact, there exists the belief that online education provides an element of interaction that is absent in the traditional classroom. It has been suggested that unlike a traditional university, where students have difficulty finding time to meet with and to learn from one another, online education offers students the opportunity to interact whenever they have time (Shedletsky and Aitken, 2001). The technology used to teach online education is also said to facilitate and promote interaction through its ability to provide synchronous as well as asynchronous communication (Schrum, 1999) rendering face-to-face communication unnecessary (Liaw and Huang, 2000). The interactive component of technology is also believed to eliminate the time and space barriers between instructors and their physically distant students, thus recreating the classroom environment and allowing learners to engage in learning at their convenience with respect to place and time (Bernard, Rojo de Rubalcava, and St.Pierre, 2000). A further benefit of technology that appears in the literature is that the student can receive individual and immediate feedback and reinforcement from both instructors and peers (Raymond III, 2000).

On-line courses are more effective because they embody a student-centered learning philosophy. Distance education researchers portray the traditional classroom setting as a teacher-centered, talking-head, passive-student model which is characterized by a boring lecturer who drones on while students sit idly by trying to absorb enough information so that they can regurgitate it for a test and forget it (Markel, 1999). Online education, on the other hand, is declared to be "a

more student-centered, collaborative, and egalitarian learning environment" (Weisenberg and Hutton, 1996). In this new paradigm, students become self-motivated managers of their own learning instead of passive bystanders, while instructors move from oracle, lecturer, and purveyor of knowledge to facilitator, guide, and mentor (Weisenberg and Hutton, 1996; Shedletsky and Aitken, 2001; Eastmond, 1996; Bernard, Rojo de Rubalcava, and St.Pierre, 2000; Raymond III, 2000; Murphy and Cifuentes, 2001). In essence, it is believed that the online forum breaks down the teacher-student hierarchy (Weisenberg and Hutton, 1996).

Any faculty member can teach an online course, any course can be taught online, and anyone can learn online. This myth starts with the belief that professors will be eager to participate in an online venture, and that being successful in this environment does not require any traits or skills that are different from teaching a traditional course. An additional notion is that the web is an appropriate medium for any type of course. This part of the myth views the web as a medium that enables the delivery of courses that were created within another framework (Carr-Chellman and Duchastel, 2001), and that all a professor needs to do is to make a few changes to his traditional course to prepare it for the online environment. In many cases, entire degree programs are being offered online, which inherently implies that any course can successfully be taught online. Online education is also seen as the remedy for the large masses of the population who for some reason or another cannot attend a traditional university. In fact, it has been stated that if technology continues its rapid growth, the need for student's to be physically present in the classroom will be eliminated (Charp, 2000). This bold statement makes the assumption that the online learning environment is appropriate for everyone and that there are no technological, motivational, or cognitive/ intellective skill barriers that would prohibit entry into, or successful completion of, an online course or program.

Faculty receive the same support and rewards for teaching an online course as they do for teaching a traditional course. The fate of a faculty member's success in the online education domain relies to some degree on administrative decisions, even though these decisions may be made by people who have no expertise in computer pedagogy, scholarship, or general computer operation (Shedletsky and Aitken, 2001). This myth is based on the belief that administrators are aware of the time and effort that goes into converting a traditional course into an online course and are prepared to offer the technical support that may be required when designing and teaching an online course (Markel, 1999). It also presumes that course-load policies will be adjusted in recognition of the fact that an instructor teaching an online course spends significantly more time communicating with students on an individual level (Markel, 1999), thus making faculty workload significantly higher. The myth also implies that many faculty who are embarking on an online endeavor may be under the impression that they will retain the intellectual property rights to the courses they have created. They may also believe that they will be rewarded the same for teaching an online course as they will be for teaching a traditional course when it comes to issues such as tenure and promotion (Markel, 1999).

The students and their instructor become one big happy family. The online environment is said to overcome isolation (Eastmond, 1996; Bernard, Rojo de Rubalcava, and St.Pierre, 2000), promote serendipitous encounters (Eastmond, 1996), and provide valuable intellectual exchanges profitable to all (Carr-Chellman and Duchastel, 2001). It is believed that online education transcends cultural, economic, and political systems thereby allowing us to increase our knowledge of one another and to recognize the similarities among the people of the world (Schrum, 1999; Anderson, 2001). It is also alleged that this forum provides all students with a voice, thus everyone has the same opportunity to express their opinions and beliefs and no one person can dominate the conversation (Swan, 2001).

Metaphors

Just-in-time learning. Primarily used in logistics, the concept of *just-in-time* processes originated from increasingly rapid modes of transportation and communication. The concept behind the idea was that items would arrive precisely at the time they were required for use or dispatch. Thus, in a learning context, this metaphor is used to describe the flexibility of online education. Just-in-time learning implies that the information can be communicated to students when and where they need it. In other words, students have access to the right information at the right time (Carr-Chellman and Duchastel, 2001). In the traditional classroom, most instruction content quickly becomes "inert", as it has little relevance to the life experiences of the learners (Gagne, Yekovich and Yekovich, 1993). However, it is believed that through the concept of "just-in-time" learning, which is made possible via the Internet,

learners can "download" their own knowledge as per their immediate requirements. The learner-objective environment promoted by the Internet makes learning resources and instructional activities available to the learner anywhere, anytime, thus allowing them to create links and search for knowledge that can interact with their own prior experiences (Shedletsky and Aitken, 2001; Liaw and Huang, 2000; Carr-Chellman and Duchastel, 2001).

Dual-mode institution. The word dual means of, or pertaining to, two. The word mode refers to a particular type or form of something, which in this context pertains to the way in which instruction is being offered. Thus the metaphor—dual-mode institution—is used to refer to those institutions that offer traditional residential programs as well as distance education programs (Carnevale, 2000). The dual mode system is said to be characterized by an interlock of student choices exercised within a set of academic and organizational constraints (Guiton 1992). The metaphor also seems to imply that institutions can undertake the responsibility of both traditional and on-line education with equal ease and effectiveness.

Land-rush mentality. This metaphor creates the image that the race to enter into the online education domain is similar to the Oklahoma land rush of 1899, which has been called the most competitive event in history. Just as people dashed westward to stake their claim on a piece of land, both for-profit and non-profit institutions are scurrying to capture a piece of the online education market. Interestingly enough, the Okalahoma land rush meant disappointment to many, as the soil was not as rich as it had appeared and food and provisions were scarce. In fact, after months of starvation and being disillusioned, most returned to more civilized areas. Some say that the opening of the Indian lands in the Oklahoma Territory created as many problems as it solved.

Sage on the Stage/Guide on the Side. This metaphor stems from the second myth mentioned above regarding the changing role of faculty. The word sage refers to an experienced or profoundly wise person, whereas a guide is someone who assists or supervises. Thus, in a traditional education setting, the instructor is referred to as a sage and the classroom serves as his stage. However, in the online domain, the instructor acts as more of a guide, assisting students in knowledge construction from the sidelines rather than projecting knowledge from center stage. This metaphor therefore implies that on-line education requires a change in attitude/approach of the instructor in order to be effective (Coppola, Hiltz, and Rotter, 2002).

Digital Diploma Mill. Robert Reid, in his 1959 study of diploma mills for the American Council on Education, described the typical diploma mill as having no classrooms and faculty that are often untrained or nonexistent. Thus, the term "Digital Diploma Mill", which was coined by David F. Noble, a professor at York University in Toronto, refers to the automation of higher education in which most teaching is done by machine, not faculty, and in which there are no classrooms. This metaphor conjures up a picture of an institution churning out commercialized, computer-based education created by faculty members who may or may not be involved in the dissemination of the courseware over the Internet.

Corporatization. In the realm of online education, the term corporatization is used to "refer to the tendency of nonprofit organizations, such as universities, to operate more and more like businesses" (Molenda and Harris, 2001). As government budgets are shrinking, nonprofit organizations are being forced to operate more and more like a for-profit business by generating new ways of supporting themselves in the marketplace. This metaphor implies an erosion of the basic values of academia such as academic freedom, autonomy over course content and pedagogical styles (Molenda and Harris, 2001). Instead, the term "corporatization" conjures up an image of a uniform and structured production-oriented environment that places value on productivity and contribution to the bottom-line.

CONCLUSION AND FUTURE DIRECTIONS

For fear of being left behind, many universities are plunging into the online education waters without giving much thought to the pedagogical or economic costs that may follow. These institutions seem to think "everyone else is doing it, so there must be something to it"—it is a competitive necessity. What is not known is the kind of impact this computer-mediated or computer-delivered education will have on the faculty and students. This paper has explored some of the myths and metaphors that seem to be embedded in the discourse on online education, in hopes of unearthing and carefully examining some of the commonly held implicit beliefs that surround this new phenomenon. These beliefs, whether accurate or not, will be responsible for molding the perceptions of those involved in online education,

which will in turn constitute educational practices for several years to come. Hence, it is critical that we question the myths and metaphors that pervade the online-education literature in an attempt to shed some light on the so-called truths that are being set forth.

The next phase of our investigation will involve the interviewing of faculty members who have designed and taught a variety of information systems courses online, and students who have taken such courses. The interview data, we are hopeful, will facilitate the discovery of additional symbolisms, and also allow a more definitive evaluation/elaboration of myths and metaphors discussed in the context of information systems education.

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