A Market Analysis of Online Education

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Abstract: The past several years have witnessed a meteoric rise in the number of online degree programs, online colleges and universities, and online students. To be prepared for these new students and new programs institutions need to understand the market forces in place. By examining the growth of the overall online education market and the most popular online program practitioners can gain an understanding of exactly what type of business environment they are working in.

Introduction

Distance education delivered via the internet has experienced rapid growth in recent years, particularly in certain degree programs. The history of distance education can be traced back to programs delivered via mail and followed through to the current development of online learning communities. The online model of distance education offers many advantages to colleges and universities and generally attracts a unique profile of student. There are challenges, however, particularly in the area of preparing faculty members to teach via this new delivery method. Two of the academic disciplines seeing the most growth in online programs, Career and Technical Education (CTE) and teacher education will be explored in detail to see how the programs' online components have grown and what their likely path is in the future.

History

While instruction conducted via the online environment is a new development in the field of education, it is really only the newest form of media being used in the practice of distance education. Distance education as a practice traces its origins back to the English inventor of shorthand, Sir Isaac Pitman, and his method of delivering instruction through the mail in 1840 (Matthews, 1999).

The first major leap for distance education entering the mainstream was Britain's Open University admitting its first students. From Open University's launch in 1969 to the mid-1980's, enrollment of online students increased to a size of approximately 12% of total higher education students. By 1997 estimates indicted that there were a total of 690 degrees and 170 certificates offered online (Matthews, 1999.)

Factors in Growth

With such drastic growth in online education, the question arises as to why the specific delivery system grew as fast as it did. Two primary factors are the driving force behind

online education's expansion; expanding degree programs' market by reaching new populations of students and the changing demographics of students pursuing higher education.

One challenge to the growth of any educational program is defining and reaching sufficient numbers of students to make the program economically feasible. College campuses, traditionally, have been static organizations that require students to travel to them. The marketing advantage of online education is the opportunity for the college to travel to the students. By expanding beyond geographical boundaries, an institution of higher education can quickly and vastly increase its intended audience. Compounding this increased student base is a decrease in facilities necessary to accommodate students in one place at one time. This combination of increased enrollment and decreased facility demands yields considerably higher economic margins for a program capitalizing on online delivery systems.

The students being reached by online education are in many ways as new as the medium. Much of the estimated 33% yearly growth seen in online enrollment is drawing from a new base of students (Bocchi, et. al., 2004), which is exactly the goal of reaching out to increase enrollments in academic programs. An immediate difference between the average online learner and the average on-campus, or traditional, learner is that five out of six online learners are employed and unable to attend traditional classes (Bocchi, et. al, 2004.) In other demographic terms, online students also tended to be older, more likely to be married, and more likely to have children (Halsne and Gotta, 2002.)

Online Learning Design

As a first step to serving the new student base being reached by online education it is necessary to design and implement an instructional environment. This unique environment poses several challenges to an institution of higher education, including decisions on how to support the infrastructure of the system, provide support personnel, and train faculty members.

In designing an infrastructure to support online learning environments the issue of how the instruction will be delivered is of primary importance. The level of interactivity, and the infrastructure required, depends largely on whether the class occurs in a different-time, different place or same-time, different-place environment (Besser, 1996). In the online environment, interactivity is as much a measure of technological capability as it is instructional design. While the decision of whether to use a same-time or different-time model is made at the design stage, the capability to execute that decision is decided when the infrastructure is created.

Some of the questions that must be faced by an institution when designing an online environment are: When will students be required to log in and participate? When will faculty be required to log in and participate? What computing and network resources will be available to faculty? What computing and network resources will students be required to have available? All of these questions and more directly impact the capability of an

online instructional environment. While different-time systems can be relatively simple in terms of network capacity demands, same-time systems can rapidly become very complex. If active discussion is required, faculty and students must have access to, at a minimum, a stable network connection for chat activities. In the case of more advanced applications, such as live video conferencing, faculty and students must have cameras and software, a computer capable of supporting the peripherals, and a broadband network connection. If this is the case, the institution must decide where to locate the resources for the faculty. An interactive environment for online learning can quickly become very expensive for a college or university to implement.

Some institutional barriers are present regardless of the system implemented. Program costs, lack of equipment and support, scheduling, resource availability, instructional concerns, and technical assistance are all potential institutional barriers to entry into online education (Zirkle, 2003.)

Of particular importance in the universal barriers to entry is the question of how technical support will be provided for the new program. Regardless of the chosen environment, online education will require some amount of expansion in terms of software and network activity for an institution. Given that either new support resources will be incorporated or existing support resources will be used differently, it is critical that appropriate support be provided to maintain the online learning environment. Often, support will be provided by existing faculty support services, either graduate students or a dedicated faculty support staff (Besser, 1996). How will a support staff adapt to provide support for new or expanded applications? If the existing staff is maintained, their workload will likely increase, especially during the start-up phase of the new program. This may increase turnover among the staff or reduce the quality of services provided to other departments of the institution. The other option is to expand the support staff. In the case of expansion, how will searches be conducted? How will the new positions be funded? How will demand for the services of new staff be forecast to ensure that the department utilizes the appropriate number of employees?

There are no absolute answers to the questions of how technical support will be provided to a system of online instruction; each institution in each situation will require a unique solution. What is important to the institution considering an expansion into distance education, however, is recognizing that support services are a key part of the infrastructure maintaining an online learning environment for both faculty and students.

Linked closely to the issues of support for faculty and critical to the successful implementation of an online instructional system is the preparation of faculty members to teach online. One example is Troy State University's Fort Benning, Georgia campus where in five years online education has grown from a very small program to one offering over 350 courses. Such rapid growth has posed challenges for Troy State to staff the classes with qualified online faculty members (Rinear, 2003.) Regardless of location, online education poses unique challenges to instructors because they are denied the opportunity to see their students in the classroom and interpret facial expressions, gestures, or other nonverbal communication to see if the students are understanding and

following the material being presented (Besser, 1996.) Because of the unique challenges of the online environment, unique methods must be employed to prepare faculty members.

The Troy State system is a good example of the resources required for an institution to prepare faculty members for the online teaching experience. Troy State's "quick-start training" is a multi-week program consisting of four steps; a common course management system, a structured training program, administrative and academic oversight, and a system of incentives (Rinear, 2003.) The training of a good online faculty member is a complex and multi-faceted exercise. When an institution is planning an online education program, the faculty members are a resource that must be prepared; it rarely works to simply take traditional classroom instructors and move them into the online environment without preparation.

Online Education Pedagogy

The nature of online educational environments is such that different demands are placed on the student and as a result of these demands different pedagogies are necessary for online versus on-ground classes. These pedagogical differences are probably most apparent in asynchronous online environments, situations where students and instructors post to a common area to exchange information at different times and are not online simultaneously for synchronous discussion. In these cases, students must be self-directed and self-motivated to succeed, hence the pedagogical focus on constructivist learning theories in the online environment. Coupled with the need for constructivist learning theory in online education is the recognition of the average online learner as different from the traditional on-ground learner. Adult learners in any environment have different needs and respond to different learning strategies and this fact must be recognized in the online environment.

Technology is obviously a major factor in online education; without networked computers it would simply not be possible for students to access online resources. What must be remembered when designing online instruction is that technology is not the end product of the process, technology exists to facilitate the learning experience for the student (Ascough, 2002).

The driving force in the instructional design of online educational environments is the student population that is accessing these environments. As described in other sections, the mostly nontraditional student body in online education has different needs than traditional undergraduate students. Perhaps more than anything these students are bringing practical experience and a demand for applicable knowledge into the classroom with them. To serve these characteristics online learning environments need to be designed to deliver opportunities for students to transfer knowledge obtained in the class to their own real-world environments (Ally, 2004).

Huang, 2002, provides a framework for how to apply constructivism to the online learning environment.

Appendix A: Constructivism applied in adult learning

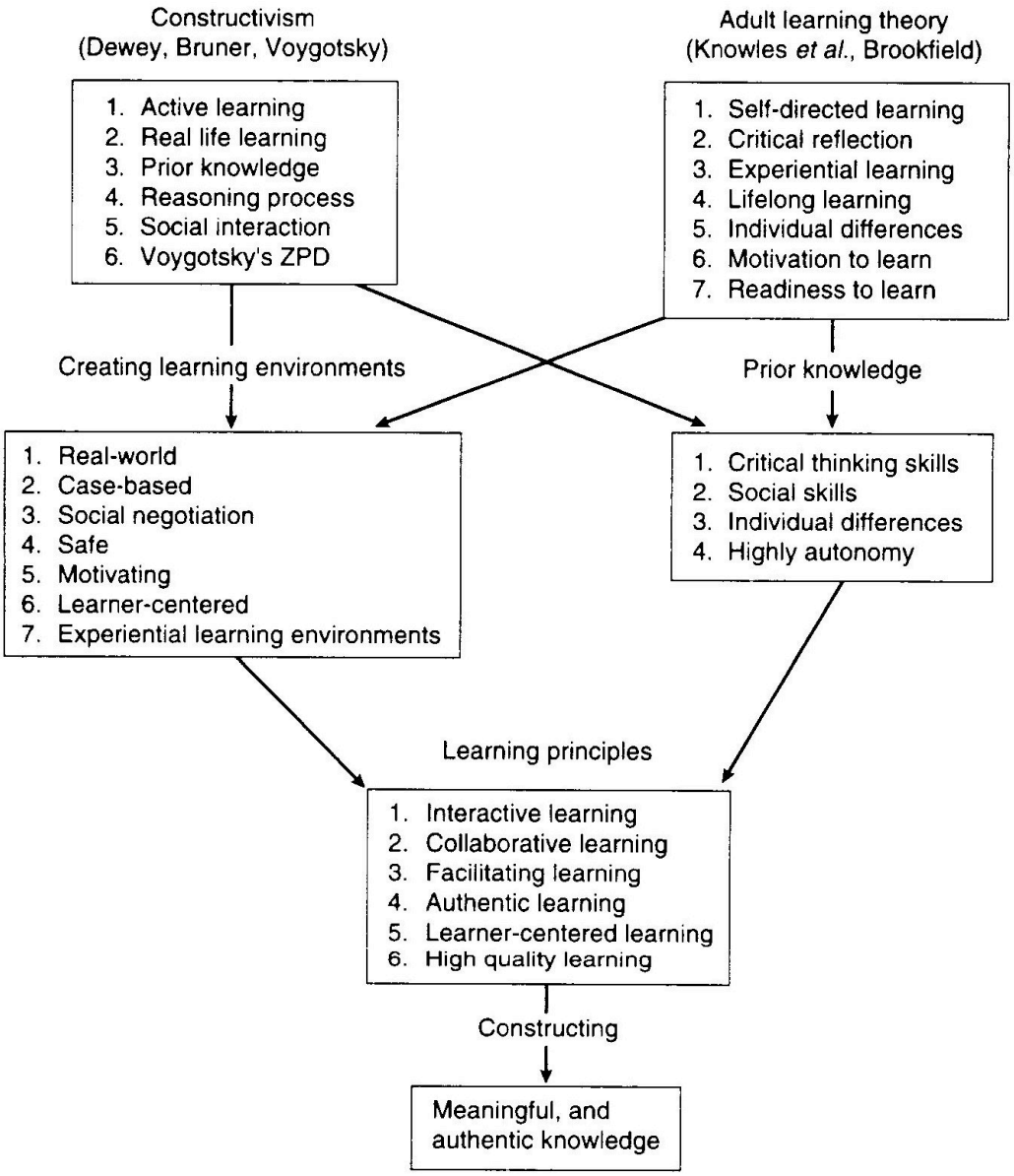

Figure 1. Huang's model for applying constructivism in adult learning.

The Fastest Growing Disciplines Online

After addressing and meeting the challenges posed to a new online education program, what fields of study is an institution likely to enter? By far the largest category of online education is in Career and Technical Education (CTE). Another growing category is the field of teacher preparation, particularly in offering additional certifications to inservice teachers (Zirkle, 2003.) It is important to note here that online education as a field is

seeing rapid growth and that this growth is occurring across many degree specialties, but the two fields highlighted here are being examined because they are the leading growth fields in online education.

CTE is a prime opportunity for online education to flourish. Considering that the majority of online education enrollees are working adults, a larger percentage of this population is likely to pursue CTE than the traditional student base for higher education. Surprisingly, this trend is even more pronounced in CTE, with the average on-campus student being 23 years old and the average online student being 37 (Zirkle, 2003.) In the time period of 2001-2003, surveys indicated that 76.3% of community colleges offered CTE courses through distance learning (Johnson, et. al., 2004) and 47.7% of all institutions offering CTE programs offered some online courses (Zirkle, 2003.)

While the majority of community colleges are offering CTE via distance education, there are multiple delivery options available to them. While most institutions used internal resources to provide online classes, 16.2% work through external providers and 18.9% utilize partnerships with other institutions of learning (Johnson, et. al., 2004.)

Of the institutions providing online instruction without external involvement, almost all (94.3%) used e-mail, and the majority (84.2%) used some type of course management software package (Johnson, et. al., 2004.) Other technologies reportedly used included streaming audio and video, discussion forums, and PowerPoint. The research did not indicate what combinations of technologies were employed, but it is unlikely a program operates on e-mail only, or any other single technological resource. The lion's share of applications, however, go to e-mail and course management software.

In teacher education, a variety of market forces are combining to increase the demand for online education options to add certifications or complete continuing education requirements. In part, the highly qualified teacher requirements set forth in the No Child Left Behind (NCLB) act are sending more educators back to school for additional training. In addition to the need for continued training, there is an increasing demand for teachers that is placing stress on the traditional higher education system. In California alone there is a projected need for 300,000 new teachers in the next ten years (Zirkle, 2002.)

Part of the way this increased need for teacher education is being met by existing institutions is to capitalize on the advantages of online education. By removing geographic boundaries and synchronous time requirements online courses can reach a larger number of potential teachers and make it more convenient for them to complete the requirements for their certifications. Also, there are complementary benefits to moving teacher education online. By completing a program online, teachers gain expertise in the application and use of instructional technology resources (Zirkle, 2002.)

Traditional and Corporate Models of Online Education

Given that online education is growing, what future events are likely to impact the education marketplace? The environment of education itself is moving more towards a free-market economic model each year. Among organizations in this new market, organizations are moving to less centralized structures and the learners engaging these organizations are becoming increasingly independent and self-directed. Both complementing and compounding the free-market model of education competition that is emerging is the increasing presence of partnerships between institutions of higher education and corporate entities. On the technical forefront, the clear leader in importance is the increasing use and availability of the internet, and this factor is linked to the fact that more and more frequently technological competence is becoming a requirement to complete higher education programs.

One dramatic comparison of traditional versus online educational programs is that 4 or 5% of all higher education students enrolled in traditional programs attend for-profit institutions, but 33% of all online students are enrolled in for-profit institutions (Howell, et. al., 2003.) One of the known advantages to online education is its ability to reach an expanded base of students, thus improving both access and enrollment. Already for-profit organizations have recognized the revenue that can be generated from such an arrangement. In the future, competition between traditional and profit-based educational institutions is likely to be a significant factor in planning and managing online programs.

Among the institutions competing in the emerging online education market, their organizational structure will be a central influence on how online programs work. Just as online education creates a decentralized environment for learners, the organizations offering the programs are adopting a decentralized organizational structure (Howell, et. al., 2003.) Moving administration and control of specific programs to the department level is much like the corporate strategy of strategic business units (SBUs). By empowering individual units with the authority to manage themselves and address the needs of their customers as the situation demands, an organization can foster a higher quality, more flexible group. In the field of online education this model fits; it is likely that students in a master's degree program will have significantly different demands of a program than students at the same institution enrolled in a technical associate's degree program.

While the organization of institutions serving students is changing, the product being delivered to students is changing as well. In part due to necessities of the environment, instructors are taking part in "a pedagogical shift…moving from a transition model to constructivist, sociocultural, and metacognitive needs" (Howell, et. al., 2003.) The combination of a decentralized administration and increasingly self-directed students is an interesting challenge for the online faculty member. How will supervision and direction function in this new environment?

Given the increasing similarity between education and business in terms of management and strategy, it is logical that partnerships are forming between traditional colleges and

universities and corporate entities. When examining partnerships with outside organizations, distance learning institutions are actually leading traditional institutions instead of the opposite (Howell, et. al., 2003.) This is another indication of the market power being exerted by online education; traditional institutions are beginning to take some cues from online programs for how to best organize themselves to stay competitive.

Technologically, as more and more people gain access to the internet, online education finds a broader and broader potential market. Studies indicate growth in internet access in homes of 70% since the year 2000 (Howell, et. al., 2003.) As one of the main advantages to online education is accessibility, expanding access to online resources is a prerequisite to expanding the market for online education. The interesting question for the future of online education is at what point the potential online market will reach saturation, that is, when will so many people have internet access that the number will not reasonably grow.

The final emerging trend to be considered is the increasing demand for students to exit a degree program with technical skills. As is the case with online teacher education, a student completing a degree program online can reasonably be expected to be comfortable with computers and technology. The more pronounced the desire of hiring organizations becomes for graduates to possess good technical skills the greater the advantage of online education will become.

Conclusion

The current and future status of online education is far from stable, but it is definitely growing. By knowing how much growth has occurred thus far, and where the growth is likely to occur in the future, the higher education professional can be prepared to capitalize on the potential of online education for both students and learning institutions.

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