

December 2001

# Listen to Your Students: A Proactive Approach to Developing Virtual Education Degree Programs

Anil Kumar

*The University of Wisconsin-Whitewater*

Follow this and additional works at: <http://aisel.aisnet.org/amcis2001>

---

## Recommended Citation

Kumar, Anil, "Listen to Your Students: A Proactive Approach to Developing Virtual Education Degree Programs" (2001). *AMCIS 2001 Proceedings*. 40.

<http://aisel.aisnet.org/amcis2001/40>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2001 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# LISTEN TO YOUR STUDENTS: A PROACTIVE APPROACH TO DEVELOPING VIRTUAL EDUCATION DEGREE PROGRAMS

**Anil Kumar**

Management Department  
The University of Wisconsin-Whitewater  
kumara@mail.uww.edu

## **Abstract**

*This study examines student perceptions about virtual education degree programs and their willingness to enroll in such a program at a comprehensive Midwestern University. Universities across America are planning to develop and offer such programs in an effort to reach more students, but student enrollment and retention is a big concern. Universities need to be proactive and examine student perception and willingness before designing such programs. The results of this study will provide valuable insights for universities that are planning to offer virtual education degree programs. At the same time student perceptions can help alleviate student concerns about virtual education degree programs and make them feel more comfortable in deciding if these programs are suited for them.*

## **Introduction**

The phenomenal growth of the Internet has provided people the opportunity to educate themselves by enrolling for degree programs without physically attending classes. As Internet access continues to increase worldwide more people will be able to enroll for on-line degree programs. Traditional educational institutions will be faced with the challenge of incorporating technology in their institutions to offer on-line degree programs. In a Forbes article Peter Drucker (March 10 1997), comments “universities won’t survive...” 30 years from now and “higher education is in deep crisis.” Among other factors one of the reasons for this is the fact that on-line degree programs continue to attract a sizeable number of students. Young (2000) states that by the year 2002 approximately 2.2 million people will enroll for on-line degree programs. In an effort to educate their employees, corporations across America are also using the Internet and the market for corporate e-learning is projected to reach \$11.4 billion by the year 2003 (Schneider 2000). Some of the major universities, such as Duke and Stanford, in United States are already establishing themselves as the leaders in this endeavor. The traditional smaller and mid-size Universities need to ensure that they are not left behind in this technological revolution or they may never be able to catch up. To address this challenge Universities especially the ones located in rural America need to find out what their students want and need from on-line programs. This will enable these universities to proactively plan and develop on-line programs that meet the needs of their students and increase the chances of success.

This study explores student perceptions about virtual education and their willingness to enroll in a virtual education degree program. It is important to note that the student perceptions are about a “degree program” and not just a few courses offered on-line. In this paper, virtual education (VE) is defined as “knowledge or skill transfer that takes place using the world-wide web as the distribution channel. In a VE environment there are no traditional classrooms. Students are not required to come to the classroom. All instruction and interaction takes place over the world-wide web.” The study seeks to explore the following research questions: (1) Are students willing to enroll in a virtual degree program? and (2) What are students’ perceptions about virtual education degree programs? Most of the studies so far have determined student opinions about a particular course they had taken to evaluate the course; this study takes a proactive approach and seeks to determine student opinions before a university spends millions of dollars to create the necessary infrastructure for virtual education. The students being the customers, it is important to consider what they feel or perceive about the value of this “product.” We believe that it is critical to identify students’ perceptions before actually implementing or developing virtual degree programs. These perceptions can help the administrators to design programs that are responsive to student needs.

## Literature

Several scholars (Gifford 1998, King et al. 2000, Owston 1997, Phipps and Merisotis 1999, Usip and Bee 1998) have examined student perceptions in an attempt to evaluate the effectiveness of web-based courses. Owston (1997) and Phipps and Merisotis (1999) note that while there is no doubt that web based technologies have the potential of enhancing the student learning, there is no empirical data to prove that students learn better in virtual environments compared to traditional classrooms. Most of these benefits are based on assumptions or perceived benefits, as research has not proved that students learn better in virtual environments compared to the traditional environments. Carr (2000) points out that though there is a lack of empirical data, anecdotal evidence indicates that the retention rate is generally lower for distance-education programs compared to the traditional programs. Further none of these studies examines student perceptions on on-line degree programs.

Phipps and Merisotis (1999) in a review of the current research on distant education contend that most of the research so far has focused on studying the effectiveness of individual courses rather than a complete degree program. They further note that research has not taken into consideration individual student characteristics such as gender, age, student experience, motivation etc. These characteristics may impact students' willingness to enroll in a virtual degree program. This study attempts to fill one of the research gaps by exploring student perceptions on virtual degree programs rather than a single course.

## Methodology

This study was conducted in a rural mid-western university with approximately 10,000 students. The students for the study were enrolled in the college of business and economics. Majority of the students enrolled in the university come from neighboring counties and cities within a 250-mile radius. The study was conducted in two phases. Phase I was a pilot study conducted to derive a list of questions that could be administered to students for the final survey. Fifty-nine undergraduate students (30 male and 29 female) were provided a definition for virtual education and asked to respond to the following open-ended questions.

- Virtual education has been defined as the process of knowledge or skill transfer that takes place using the World Wide Web as the distribution channel.
- What would be the impact of virtual education on the future of the education system?
- What in your opinion are the pros and cons of this approach?
- If given a choice would you be willing to enroll for a virtual education based program? Give reasons for your answer.

Student responses were examined for common themes, which were used to develop a 15-item survey (Table 1) for Phase II. In Phase II of the study the common themes identified in Phase I were structured in the form of a statement on a 5-point Likert scale. Respondents were asked to provide their responses ranging from strongly disagree (1) to strongly agree (5). Demographic questions were added to the 15-item survey from the previous phase. The final survey was administered to 255 students in the college of business and economics. The sample was not randomly selected. Instructors from the college of business and economics were selected by the author on the basis of acquaintance and requested to distribute the survey in class. Student participation was voluntary.

## Results and Discussion

All 255 students responded to the questionnaire. One hundred and sixty eight (approx. 65.9%) out of 255 students were male and 87 (34.1%) were female. Twenty-three respondents (approx. 9%) were graduate students and 232 respondents (approx. 91%) were undergraduate students. Of the undergraduate students 25.1% were seniors, 25.1% were juniors, 22.4% were sophomores, and 18.4% were freshmen. Twenty-four students were part-time and 229 students were full-time. Two students did not provide a response to this question.

When asked if they would be willing to register for a VE degree program 103 respondents (41.87%) replied in the positive. The total respondents for this question were 246. Nine people did not respond to this question. More than half (58.13%) of the respondents were not willing to enroll in a VE degree program. This result indicates that though there is some interest in virtual education degree programs, students are not willing to enroll in VE degree programs at this point. It would be interesting to find out if undergraduate standing (freshman, sophomore etc.) and/or major have an impact on this choice. In the following paragraphs we explore the reasons that may provide further insights for the students response to this question. Table 1 provides a summary of these results.

Approximately 94.5 % of the respondents agree that VE degree programs increase flexibility for students to take classes at anytime and approximately 96.1% of the respondents agree that VE degree programs increase flexibility for students to take classes from anywhere. This result is consistent with other studies (Daugherty and Funke, 1998) where it was found that flexibility of VE is what makes it appealing for students. This result is interesting as majority of the respondents (90.98%, n=255) of this study are undergraduate full-time students. Most of the courses that are offered by universities and institutions worldwide are predominantly designed for part-time graduate students.

Surprisingly only 30.2% of respondents strongly agree/agree with the statement that VE increases quality of education by allowing students to learn at their own pace. Learning at their own pace is an important criteria for students that work full-time as they need to allocate their time for getting an education in addition to performing their job, and managing family. Undergraduate students on the other hand join a university with the assumption that the pace for their education is set by others, such as faculty and counselors.

Only 38.9% of the respondents perceive that VE increases quality of education by providing access to more knowledge on the web. Availability of more knowledge by itself may not necessarily be appealing for students, as they need to make an effort to search for relevant knowledge. When asked if VE will increase understanding of concepts and issues as there will be no need to take notes only 16.1% of the respondents strongly agree/agree. It is interesting to note here that 63.1% of the respondents perceive that VE increases on-going learning by providing availability to resources on the web. As undergraduate classes generally speaking are structured around the lecture approach respondents' opinions on taking notes can be understood. The fact that these notes are available on the web after the lecture reinforces the comfort level of students and is a possible explanation for this result.

More than half (54.9%) of the respondents strongly agree/agree that VE increases the diversity in a classroom by allowing students from other parts of the world to enroll in classes. This is self-explanatory as the Internet provides students worldwide the ability to enroll in classes that may be offered from anywhere. Students strongly agree/agree (62.3%) that VE changes the role of teachers to a facilitator rather than an instructor.

More than two-thirds (70.5%) of the respondents strongly agree/agree that VE will be more effective for motivated and self-disciplined students. The ability to chalk out a course of education on their own and be motivated to follow it is a prerequisite for VE programs as similar studies (King, Harner and Brown, 2000) have shown. This result should be interpreted with caution and in the author's opinion the fact that majority of the respondents of this study were undergraduate students explains their perception. Undergraduate students generally speaking need structure, direction, and guidance in their education, which may not be adequately provided in a virtual degree program.

Only 45.0% of the respondents perceive that VE increases "free time" for students to develop skills. The need to search for relevant information on the web, structure this information and then study it, are all time consuming activities. As mentioned earlier, this possibly explains the students' perception that VE does not increase free time for students. Surprisingly only 24.7% of the respondents believe that VE increases the thinking process of students. The need of students to spend more time in finding study materials on the web may not be preferred by everyone. There is a possibility that searching for relevant study materials on the web for several hours may reduce the time that students spend on thinking. What is interesting here is that only 13.7% of the students perceive that students will learn more effectively using the Web? A possible explanation for this response can be the fact that there is a tremendous amount of information available on the Web. Information overload caused by excessive data that needs to be scanned before a student can find relevant information may reduce the effectiveness of the Web as a learning tool.

Approximately two thirds (65.9%) of the respondents strongly disagreed/disagreed with the statement that VE increases interaction among students, and more than half (58.1%) of the respondents strongly disagreed/disagreed with the statement that VE increases one-on-one student teacher interaction. In both these cases the percent of respondents that agreed with these statements is less than 17. This result indicates that student teacher and student-student interaction is an important criterion for respondents and they perceive that VE does not provide these interactions. A possible explanation is the greater need for dependence in the case of undergraduate students, a majority of the respondents, who look up to their instructors and peers for guidance.

Approximately half (55.3%) of the respondents believe that VE reduces the cost of education for students. The students' perception can be based on the fact that there may be no need to pay the same amount of tuition in a VE degree program. As more and more students are gaining access to technology (hardware & software) on their own the initial cost may not be an issue for these students.

**Table 1. Student Perceptions on Virtual Education (Frequency Percent)**

<b>Individual Survey Items</b>	<b>Strongly agree/agree (%)</b>	<b>Neither agree nor disagree (%)</b>	<b>Strongly disagree/disagree (%)</b>
Virtual education increases flexibility for students to take classes at anytime	94.5	3.1	2.4
Virtual education increases flexibility for students to take classes from anywhere	96.1	2.7	1.2
Virtual education increases quality of education by allowing students to learn at their own pace	30.2	39.2	30.6
Virtual education increases quality of education by providing access to more knowledge on the web	38.9	33.3	27.8
Virtual education increases on-going learning by providing availability to resources on the web	63.1	24.3	12.6
Virtual education will increase understanding of concepts and issues as there will be no need to take notes	16.1	28.6	55.3
Virtual education increases the diversity in a classroom by allowing students from other parts of the world to enroll in classes	54.9	25.1	20.0
Virtual education changes the role of teachers to a facilitator rather than an instructor	62.3	30.2	7.5
Virtual education will be more effective for motivated and self-disciplined students	70.5	15.7	13.8
Virtual education increases ‘free time’ for students to develop skills	45.0	31.4	23.6
Virtual education increases one-on-one student-teacher interaction	16.0	25.9	58.1
Virtual education increases interaction among students	10.6	23.5	65.9
Students will learn more effectively using the web	13.7	43.5	42.8
Virtual education increases the thinking process of students	24.7	43.1	32.2
Virtual education reduces the cost of education for students	55.3	34.1	10.6

## Conclusion

This study is an attempt to find out if students in a predominantly undergraduate rural university would be willing to register for a VE degree program. Using proactive student perceptions can help alleviate student concerns about VE degree programs and make them feel more comfortable in deciding if these programs are suited for them. The key findings of this study are as follows.

- There is an interest, though limited, in VE degree programs. Students perceive flexibility to take classes anytime and anywhere as a key reason to register for VE degree programs.
- There is strong evidence that students perceive interaction, student-to-student and student-to-instructor, to suffer as a result of VE.
- Students perceive that VE degree programs place a heavy demand on students to be self-motivated and disciplined and are effective for such students. They believe that for other students VE degree programs may not be as effective.

## Implications for Universities and Future Research

Universities need to be proactive in determining the need for VE degree programs in their regions and then prepare themselves for developing such programs. Care must be taken to ensure that these programs are designed and developed keeping in mind the social needs of students. A significant part of learning for students in a university environment comes from the interaction that takes place among themselves and with teachers. Students that are educated in isolated environments where interaction with peers and teachers is limited may be deprived of “true education.” Education for students is a holistic experience and means more than an electronic package.

In this paper we discussed the perceptions of students regarding VE degree programs. This study is unique as it is proactive unlike other studies where student perceptions are based on courses that have already been delivered electronically. Also in this study

we focused on degree programs rather than individual courses that are offered on-line. Some of the factors that we believe can help explain the students perceptions such as their majors, individual experience with the use of technology before starting college, and educational standing, need to be investigated in future studies. This would enable universities to develop a framework that can guide the implementation of VE degree programs. But even more importantly, the results suggest that the whole complex of student needs should be taken into consideration before our universities commit millions of dollars to these programs. As this is a preliminary study the author does not claim that the results are definitive, only suggestive and revealing. There are suggestive results that show reluctance by all students to enroll for virtual education programs en mass. As this is a proactive study the results are not biased by the fact that the students studied are already enrolled in such programs.

## References

- Daugherty, M. and Funke, B. "University Faculty and Student Perceptions of Web-Based Instruction," *Journal of Distance Education*, (13:1), Spring 1998, pp. 21-39.
- Gifford, L. "Graduate Students' Perceptions of Time Spent in Taking a Course by Internet versus Taking a Course in a Regular Classroom," *Paper presented at the Annual Mid-South Educational Research Association Conference*, New Orleans, LA, November 4-6, 1998.
- King, F.B., Harner, M. and Brown, S.W. "Self-Regulatory Behavior Influences in Distance Education," *International Journal of Instructional Media*, (27:2), 2000, pp. 147.
- Owston, R. D. "The World Wide Web: A Technology to Enhance Teaching and Learning?" *Educational Researcher*, (26:2), 1997, pp.27-33.
- Phipps, R., and Merisotis, J. "Sharpening the Focus on Distance Education: What the Research Does and Does Not Show?" May/June 1999, pp. 10-12.
- Schneider, M. "From B-School to E-Venture," *Business Week*, July 10 2000, pp. 10.
- Usip, E., and Bee, R. "Economics: A Discriminant Analysis of Students' Perceptions of Web-Based Learning," *Social Science Computer Review*, (16:1), Spring 1998, pp.16-29.
- Young, T.S. "Earn Your Degree On-Line," *Essence*, (30:12), April 2000, p 15.