# Making the Case for Distance Education in the Health Education and Health Promotion Profession

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## *Abstract*

*Recently, upward trends in distance education (DE) applications in health education and health promotion (HE/HP) have occurred. A number of interrelated factors have spurred the growth of DE efforts including, but not limited to: 1) increased emphasis on prevention and the need to train the public health workforce, 2) enhanced course delivery methods, 3) the emergence of the master's degree as entry-level for the profession, and 4) the increased complexity of society.  Clearly, the need exists for the continued development of high quality DE programs in HE/HP to train the health professionals of the future.  Academic departments across the country are beginning to explore entry into the DE market, or ways to enhance their existing initiatives. As these departments begin to examine how to achieve these goals, they often find a robust and sometimes conflicting literature base on how best to design DE programs in a university culture that may be resistant to change. Often, administrators and faculty members need help navigating the landscape to determine how to best begin the design or review of DE courses and programs. To that end, the purpose of this manuscript is to provide health education and promotion professionals with both information and procedures to "make the case" for DE programs in the health education and promotion profession.*

**Key words**: *Distance Education Programs, Health Education, and Health Promotion*

# Introduction

**T**rends, over the past decade, reveal that the numbers and types of distance education (DE) programs, particularly online courses and programs, have significantly increased in all fields.  According to the *Making the Grade: Online Education in the United States, 2006* report, "online enrollments have been growing substantially faster than the overall higher education student body".[1 p.1] As reported by institutions of higher education, the growth rate of enrollment in online courses and programs is at a record high, with approximately 3.2 million students enrolled in at least one online course in the fall of 2005.  Distance education (DE), for the purposes of this paper, is defined as an educational delivery system in which technology applications are used to deliver education to students who are geographically separated from the instructor.   In addition to increased enrollment, institutions of higher education have also expanded the types of DE programs offered.  Refer to Table 1 for a description of the various types of DE applications, which is adapted from the *Making the Grade*[1] report from the Sloan Consortium.  Although there are various types of DE offerings for students today, the National Center for Educational Statistics reported that students responding to the 1999-2000 National Postsecondary Student Aid Study indicated that undergraduate and graduate students were more likely to enroll in an online DE course than any other type.[2]

Similar upward trends in DE applications in health education and health promotion (HE/HP) have also occurred. A number of interrelated factors have spurred the growth of DE efforts in HE/HP including, but not limited to, the following:

- *Increased emphasis on prevention and the need to train the public health workforce.* The recognition of the role of prevention in improving the length and quality of life of Americans, and the need to reach diverse audiences with prevention information and skills, has led to the integration of DE offerings into many traditional HE/HP programs. In recent years, DE programs, like the ones offered by a variety of traditional universities, for-profit, and not-for-profit ventures, such as: Johns Hopkins University, the University of North Carolina-Chapel Hill, East Carolina University, the University of Massachusetts-Amherst, Emory University, Tulane University, The University of Alabama, Mississippi State University, Walden University, the University of Phoenix, National University, Capella University, Western Governor's University, etc. have grown and flourished.  It has become evident that appropriate knowledge and skills to retool the public health workforce to effectively design, implement and evaluate HE/HP interventions needs to be delivered not only to pre-professionals in the HE/HP fields, but also to mid-career professionals in a wide range of allied health fields. DE programming provides a menu of methods to reach these populations with appropriate training.  In addition, research focusing on training the public health workforce, conducted by Allegrante, Moon, Ault, and Gebbie,[3] Boedigheimer and Gebbie,[4] Gebbie and Hwang,[5] and Tilson and Gebbie[6] emphasized the need to utilize DE technologies as "a mechanism to upgrade the skills of the workforce in place".[7 p. 349]

- *Enhanced Course Delivery Methods*. A wide range of exiting and emerging technologies are available to delivery high quality instructional applications to students, almost anywhere at anytime. These technologies allow course designers to simulate many of the traditional methodologies used in the classroom in online or DE instructional programs.[8] It is becoming more difficult to justify not offering DE courses and/or programs because of the quality of the instruction. These new and emerging distance education or instructional technologies now allow DE programs to simulate or reproduce many of the educational methodologies commonly found in face-to-face instruction. Online applications such as listserves, threaded discussion boards, and Wiki help to improve student-teacher and student-student interactions. These strategies provide both synchronous and asynchronous communication techniques.

- *The Emergence of the Masters Degree as Entry-level for the Profession*. The 2002 Institute of Medicine (IOM) report on the Future of the Public's Health indicated that education is a critical

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component for public health workers.[9] In terms of education level for entry-level health educators and promoters, many job descriptions indicate that a master's degree is becoming the degree of choice when hiring. This is a reflection, in part, on the process orientation of HE/HP. Clearly, the skills to effectively design, implement, and evaluate HE/HP programs require skills and application beyond the cognitive focus of many undergraduate programs. In addition, as mid-career health professionals are asked to provide HE/HP programming in their worksite, the need for these process skills becomes more evident. DE is an effective and cost effective method to retrain the public health workforce.

- *The Increased Complexity of Society.* More professionals today are both time-bound and location-bound.[8, 10, 11] This means that the potential student often needs to travel great distances to complete traditional face-to-face instructional programs in HE/HP (i.e. "location-bound"). In addition, in today's society, often all members of the family unit need to work to support the expected standard of living. This makes it difficult to find a consistent period of time to complete educational studies both at undergraduate and graduate levels. Therefore, DE programs, especially those offered in an asynchronous format, are becoming increasingly effective for students who need to balance work, life and education issues to complete professional preparation programs.

## Purpose of Study

Clearly, the need exists for the continued development of high quality DE programs in HE/HP to train the health education and promotion professionals of the future. Academic departments and colleges and universities across the country are beginning to explore entry into the DE market, or ways to enhance their existing initiatives. As these departments begin to examine how to achieve these goals, they often find a robust and sometimes conflicting literature base on how best to design DE programs in a university culture that is resistant to

change. Often, administrators and faculty members need help navigating the landscape to determine how to best begin the design or review of DE courses and programs. To that end, the purpose of this manuscript is to provide health education and promotion professionals with both information and procedures to "make the case" for DE programs in the health education and promotion profession.

## Methods

### Making the Case: A Global Perspective

Almost all universities in the United States have a mission statement that embraces the teaching, research, and outreach triad. Of the myriad of activities conducted by universities, the delivery of DE and continuing studies programs is one of a handful of university activities that truly embraces all three components of this triad. The teaching and research component of DE are obvious. Instruction applies the latest research findings in ways that applies to health education and promotion practitioners. The true value of DE programs is the outreach to populations of interest who, by no other means, would be able to benefit from the instructional program offered by the university. The bottom line is, as you make the case for the delivery of DE courses and programs in HE/HP, do not overlook the direct link of these programs to the teaching, research, and outreach mission of the university.

### Making the Case: A Relative Perspective

There are numerous ways to make the case for DE programs in HE/HP for academic departments. From a careful and extensive review of the literature on this topic, the authors have arrived at three interrelated factors that drive this argument: student needs, quality, and cost benefit and return on investment factors (see Figure 1).[8, 10-12] The interrelatedness of these three factors is depicted in the generalizations listed below.

- DE programs, driven by student needs, will generate new revenue to the system.
- DE programs must be of high quality to meet the needs of students and other stakeholders.[13]
- DE programs designed to generate revenue must be of high quality to be successful.

Quality can take many different shapes; for the sake of this discussion, an examination of technical quality and the quality of the content in HE/HP will be considered. If the technology used to deliver the course material is presented in an easily-accessible format, students are more likely to enroll in the courses and programs, which can generate a new market and revenue for academic units. Conversely, if the content of the courses and programs does not yield the desired knowledge and skills for students to achieve their specified career goals, students will be less likely to enroll. This is an example of not meeting student needs. To extend this example, often, students pursuing bachelors and masters degrees in HE/HP wish to pass the examination to be a Certified Health Education Specialist (CHES). Therefore, the content and processes in the courses that comprise the program must be sufficient quality to prepare students to pass the CHES exam.

Suffice to say, a focus on the three factors will provide the information necessary to make the case for the design of DE programs in HE/HP. The authors offer one caveat to making the case for DE. The case can be made only in the absence of faculty and administrative beliefs and practice behaviors that violate the spirit of the three interrelated factors or are based on tradition and personal bias. Faculty statements such as, "I want to look students in the eye to see if they are learning", "students learn best in group instruction", and "you cannot provide a quality learning environment outside the classroom" are generalizations based on personal traditional beliefs and are not consistent with contemporary educational philosophy and research on DE applications. In addition, statements by administrators such as "student deserve to pay more for the privilege of taking courses online", "DE students are not cut from the same cloth as on-campus students", and "DE is a technology-driven form of education", are clearly out the mainstream of contemporary thinking and research findings about DE programs. In this manuscript, the authors will provide a valid argument for DE, based on the wealth of literature on this topic. This literature shows that students learn in a variety of ways and that there is no one best way of teaching and learning that meets the needs of all students. The authors firmly believe that DE is another approach to instruction that meets the needs of some, but not all learners.

Quality is a difficult construct to define, because a real consensus of what is generally meant by quality is lacking in the literature. Perhaps the absence of an exact definition of quality in DE results because the process involves a number of disparate factors, such

as instructional effectiveness, professional impact, career mobility, and return on investment.[14] For most of the DE programs in HE/HP, quality is best viewed in the context in which the educational program was designed and implemented. A self-paced training program to enhance student knowledge on an issue requires a different level of quality than a professional preparation credit-bearing course designed to impact knowledge and skill to conduct a needs assessment. In this context, quality is a relative balance between the expected effects of the DE program (goals and objectives) and the actual effectiveness of the program. All too often, critics of DE programs base their arguments on factors that are not germane to the program being delivered. So, an information dissemination course is criticized for the lack of student to student interaction, when such discussion where not part of the course and add little value to the course. Or, the critic calls for the latest technological application available be integrated into all DE courses. Such an approach ignores the tailoring of appropriate applications given the context of the intervention and the organization. Trentin states:

> Efforts to produce multimedia materials of the very highest standards do not in themselves guarantee overall improvement in learning quality. In fact, investment in the design and production of material could shift resources away from student support, which would be counterproductive, especially where interaction and discussion among all participants (students, tutors, and experts) are central to achieving the learning objective.[14 p. 21]

The authors believe the quality in DE is best addressed by examining a relative list of quality indicators from the literature. To this end, Chaney and collaborators[13] conducted a comprehensive list of quality indicators for DE programs. The process used to develop this list of quality indicators is described elsewhere.[13] Table 2 provides a brief list of the common quality indicators identified in the systematic literature review.

From a practical perspective, a proactive evaluation framework should be implemented when designing DE program applications.[15] This proactive approach is similar to other planning models used in HE/HP, such as PRECEDE/PROCEED, PATCH, and *Responsibilities and Competencies for Health Educators*. All include clear directions to "plan to

evaluate" and conduct an extensive review of the learner and the unique context within which the learning is taking place.  Such a careful needs assessment will help the DE program planner develop realistic notions of quality within the context in which the learning is occurring and the goals of the instructional activity.

In all cases, it is important for the program planner to answer the macro questions, "why are you attempting to place this course or program in a DE format?"  The needs assessment process will help answer that question.  With this as a backdrop, the DE program planners can evaluate the quality of the DE instructional activity by focusing on the following five components of evaluation.[15]

- Accountability – did the DE instructional activity achieve the expected goals?
- Effectiveness – did the learners achieve the expected goals?
- Impact – did the program make a difference?
- Organization context – did the culture or organizational support for the program change, either positively or negatively?
- Unanticipated artifacts – what things happened that the DE planners did not anticipate?

## Results

Table 3 provides an example of how quality was assessed for two DE instructional activities, using the five components of evaluation.  The two examples used are the distance education Master of Arts program in Health Education offered by The University of Alabama and the undergraduate health education content courses offered at Texas A&M University.  It should be noted that the measures of quality are not focused on the technology used, but rather the goals achieved based on the needs of students and the academic department.  These five components, along with the quality indicators listed above, provided benchmarks of quality for these two DE applications.

### *Student Needs*

DE courses and programs must address the problems, needs, and interest of the student population of interest to be successful in meeting the quality and revenue generation needs of the initiative.  It is interesting to note that most planning models used to

design HE/HP interventions call for a careful assessment of the needs and capabilities of the learner and an assessment of the context within which the learner or program will take place.  Yet, when designing DE health education applications, developers often make decisions based on available technology and faculty needs, rather then the needs of the students.

The approach has been described by Andreasen and Kolter[16] as an organization-centered marketing approach.  In an organizational-centered approach to marketing and designing DE programs, a) the course or program designed by the faculty and departments is seen as inheritably desirable, b) lack of student enrollment is attributed to student ignorance, and/or lack of motivation, c) the generic competition to the DE program (time, equipment, ease of operation) is ignored.  Also, under this mindset, a minor role is given to research on student needs, marketing (defined basically as promotion), and the organization uses the "one best method" approach to advertise and deliver the program.  Fidelity to the organization-centered approach has yielded some of the generic problems most often presented with regard to DE course programs.

- Student frustration with the instructional delivery process.  When a particular technology platform is selected to meet the needs of the university not the faculty or student (this is an example of the "one best method" approach), then instructional technology difficulties may arise.
- Lack of student enrollment when synchronous instruction is required to a student population in need of asynchronous instruction (keep in mind, the more on-site and synchronous instruction required, the smaller the student population and market becomes).
- Inability of working students to complete DE courses in a semester framework.
- Student frustration when the university fails to modify administrative support services, such as: registration, library access, financial aid, career counseling, etc to meet the needs of DE students.

The bottom line is that a DE course or program may not be successful because of the lack of attention to the unique learning and contextual needs of students.  Keep in mind here that this approach does not diminish the quality or rigor of the course or

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program. On the contrary, in focus group interviews with prospective graduate students, the authors have found that a key cohort of potential students wanted to know if the DE offering was of the same quality or rigor as the traditional campus, face-to-face offering. Students, along with administration, faculty, and parents, are concerned with quality.

A more sound approach to designing DE courses and programs is for the student-centered marketing approach. Under this approach, the focus is on student behavior, such as enrolling and completing courses and programs. As by its name, this approach is a) student centered, b) relies heavily on research and needs assessment, c) is sensitive to market segmentation needs, and d) uses multiple approaches to deliver and communicate the program to students. In addition, the student-centered marketing approach defines the competition in broad terms. Universities are not only competing with other universities for students, but are also competing with time, location, and technology constraints.

The authors agree that a student-centered marketing mindset is the preferable way to design courses and programs to meet student needs. The type of needs assessment required to implement the student centered marketing approach is the heavy lifting of the design process. To help the DE program planners begin a student-centered marketing process, Eddy, Donahue, and Chaney[17] have identified some student-related factors to consider when designing a DE course or program. These factors focus on the characteristics of the learner and the applicability of the technology. Listed below are these factors and some questions the DE program planner might ask in the needs assessment process to work toward a student-centered marketing approach.

- Attitude of the learners/students
    - What are student beliefs about their ability to be successful?
    - What are student beliefs about the ease or difficulty of DE courses compared to traditional courses?
    - What are student beliefs about the computer skills needed to succeed in the course?
    - What are student beliefs about the time commitment and scheduling needed to be successful?

- Technology needs and capabilities (the technology available for DE delivery and the capabilities of students change rapidly). Here are some current technology applications to asses for utility for both students and universities.
    - Delivery platforms (Blackboard, WEBCT, etc)
    - Streaming audio
    - Streaming video
    - Linear video
    - Compressed voice-over PowerPoint's
    - CD-Rom
    - E-mail
    - Chat rooms, list serves, discussion boards
    - Pod-casting, MP3 applications
    - RSS feeds
    - Videoconferencing
- Time commitments of students
    - When do students want to start and complete courses?
    - Do courses need to be offered in an asynchronous format only?
    - Are certain times of the year better or worse?
- Location of learning activity
    - Will students be able to complete course activities at home? At work?
    - How far will students need to travel to access appropriate technology, if at all?
- Fiscal resources and support
    - Who is paying for the course? The student, the organization (agency, school, corporation, etc.).
    - How much can the student reasonably expect to pay?
    - Is financial aid available?
- Learning environment/culture
    - Is the DE activity supported at work?
    - Do family and friends support DE?
    - Is a quiet location available?

- Student related benefits
    - What knowledge and skills do students hope to obtain?
    - Will course program completion lead to career advancements? A raise in salary?
- Quality of instruction
    - Are instructional activities appropriate to achieve educational goals?
    - Do courses adhere to the 17 quality indicators described previously?

DE courses and programs designed to meet student needs help the academic department make the case for offering educational application in this format.

### Cost Benefit Ratio/ROI

DE programs in any academic setting must work efficiently when appropriate business models are integrated into administrative policies and procedures. In this scenario, we are not implying that all universities should be managed like businesses. Rather, we are saying that business principles, especially those related to marketing and entrepreneurship, should be integrated into the management style of the university to enhance productivity and revenue generation. This notion is especially true for DE programs that seek to engage unique segments of students who, by no other means, would be able to benefit from educational offerings of a particular university.

Unfortunately, some institutions choose to move into the distance education business to meet the needs of these unique student groups and to generate revenue without carefully examining the organizational policy and leadership changes needed to yield programmatic and fiscal success. Irlbeck[18] echoes this notion, and states that many studies, commissions, expert panels, and task forces have been established at local, regional, and national levels to address issues and concerns related to distance learning applications. Yet, few of these commissions have addressed the leadership needed to shift from traditional to DE instructional applications. In terms of revenue generation, related to DE, new cost models need to be developed and tested to determine the best way to fund DE courses and programs. Those universities that have the most successful and highly recognized distance education and continuing studies outreach programs integrate cost models for the DE

application that are designed for DE and not traditional on-campus instruction. Such models allow revenue generated for the DE enterprise to fund the DE operation first, with after-costs profits staying with the central administration. These types of cost models provide the opportunity for the DE administrative unit (e.g. academic departments, colleges, or continuing education unit) to integrate business management principles to remunerate all constituencies that contributed to the success of the program. Without such a model, the incentive for faculty and departments to participate in such activities is limited.

Cost benefit models are clearly linked to quality measures of DE program. For example, the publication of the Institute for Higher Education policy[19] titled, "Quality on the Line: Benchmark for Success in Internet-based Distance Education" identified indicators for success in on-line distance education program related to cost models factors. These benchmarks were:

- Faculty will be provided professional incentives for innovative practices to encourage development of distance learning courses.[19 p.14]
- There are institutional rewards for the effective teaching of distance learning courses.[19 p.14]
- Support for building and maintaining the distance learning infrastructure is addressed by a centralized system.[19 p.14]

These benchmarks suggest that successful online DE programs must develop policies and procedures to effectively remunerate faculty and departments for their efforts to design, implement, and evaluate DE courses and programs. All too often, faculty who participate in the design of DE courses and programs are risk takers and early adopters. A solid plan to provide incentives for faculty participation in DE efforts will influence a larger cadre of faculty to participate, especially late adopters. Also, designing DE courses and teaching in the DE program should be built into the merit pay, promotion, and tenure system of the university. Doing so demonstrates that these activities have value from an organizational perspective.

A final note on this topic; integrating the DE efforts into all aspects of the organizational structures is the most effective way to grow and sustain effective DE programs. Such an approach demonstrates that the DE program is "central" to the mission of the university. All too often, DE and continuing learning "language" is included in the mission statements and

vision plans of universities, but, is not evident in the policies and procedures that drive the day-to-day activity of faculty and staff. At a minimum, to establish an effective and cost effective DE program in a university setting, the following policies and procedures are needed in addition to the inclusion of DE in the university mission statement.

- Faculty effort for DE is recognized in promotion and tenure decisions.
- Faculty effort in DE is rewarded in merit pay decisions.
- Departments and Colleges benefit form DE activities.
- University policy and procedures are revised to support the unique nature of DE and online students and instruction in academic units, such as admissions, student financial aid, registration and records, and advising.

The university has a visible senior level administrator (Dean, Vice President, etc.) to oversee and support the DE effort.

# Conclusion

As projected by current trends in DE enrollment and heightened interest in DE courses and programs, the years to come will present unprecedented opportunities for universities, colleges, faculty, and students to embrace the possibilities that technology lends to instructional design and delivery. As suggested earlier, the success of utilizing technological applications to deliver instruction to students does not depend, necessarily, on acquiring the most expensive technology. Success, however, depends on developing a uniform philosophy of all stakeholders where the goal is to meet student, faculty, and administrative needs and providing high quality instruction, based on these specific needs. In order to "make the case" for DE programs and courses in HE/HP, the authors suggest that interested parties, not only emphasize the link of DE to the research, service, and teaching agendas of institutions of higher education, but also embrace the idea that DE is the wave of the future, in which the needs of time-bound and location-bound students can be met (i.e. a new market of students who, by no other way, would be exposed to critical health education and promotion information). Professional preparation programs in HE/HP should approach these changes in traditional education as new opportunities, rather than obstacles in our education system. In doing so, the fields of health education and health promotion can be leaders in providing

exemplary, high quality DE programs and courses by "sticking to their roots" of designing, implementing, and evaluating effective programs. The process used to develop and market health education programs is the same process that the authors suggest using for the development and marketing of high quality, DE programs and courses that meet the needs of all stakeholders. Embracing technologies as a mechanism to: 1) develop and test new instructional methods and theories, 2) reach time-bound and location-bound students, 3) support various learning styles, and 4) generate new revenue streams will prove to be essential for higher education programs in HE/HP. As stated by Meyer, "the use of on-line learning – whether in distance education or on-campus courses – will likely continue to grow. Institutions may see it as a way to reach more students, faculty view it as a way to improve what they do, and students want it because it works for them".[10 p. 103] Therefore, as it stands, DE programs are here to stay! It is up to HE/HP academicians to "make the case" for such programs in training and educating the health professionals of the future.

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**Table 1**. **Types of Distance Education Applications: An Adaptation of the Sloan Consortium Classifications**

| Percentage of Content Delivered via Distance Education Technologies | Type of Course/Program | Description of Course/Program |
|---|---|---|
| 0% | Traditional/On-campus | Course/program content is delivered face-to-face, with the instructor and student in the same physical environment. All material is delivered orally or in writing. |
| 1 to 29% | Web Facilitated | Course/program that utilizes web-based technologies to supplement content that is essentially presented in a face-to-face manner. For example, using a course management system or web pages to provide course syllabi and materials. |
| 30 to 79% | Blended/Hybrid | Course/program that blends distance education and/or online course delivery and traditional, face-to-face delivery. For example, providing a substantial amount of the course/program content online or through another distance education application (i.e. DVD's), and the remainder through face-to-face meetings. |
| 80+% | Distance Education/Online | Course/program with typically no face-to-face meetings. All the course/program content is delivered online or through another distance education application, such as DVD's, live or prerecorded videos, audio files, videoconferencing, etc. |

**Table 2. List of Commonly Cited Quality Indicators in Distance Education Courses/Programs**

| | |
|---|---|
| • Student-Teacher Interaction | • Active Learning Techniques |
| • Prompt Feedback | • Respect Diverse Ways of Learning |
| • Student Support Services | • Faculty Support Services |
| • Program Evaluation and Assessment | • Strong Rationale for Distance Education that Correlates to the Mission of the Institution |
| • Clear Analysis of Audience | • Appropriate Tools and Media |
| • Documented Technology Plan to Ensure Quality | • Reliability of Technology |
| • Institutional Support and Institutional Resources | • Implementation of Guidelines for Course Development and Review of Instructional Materials |
| • Course Structure Guidelines | |

\* Table adapted from Chaney et al.[13]

**Table 3**. **Examples of quality Assessment based on five components of evaluation**

| Component Evaluation | Distance Education MA Program at The University of Alabama (UA) | Undergraduate Health Education content courses at Texas A&M University (TAMU) |
|---|---|---|
| 1.   Accountability | This program meets the three basic goals of the DE initiative: 1) to grow the graduate program student enrollment, 2) to increase the number of students served through DE, and 3) to generate a new revenue stream to support the department, college, and UA activities. | These courses met four TAMU needs based on the university strategic plan: 1) to grow undergraduate enrollment; 2) to ease the demand on campus classroom and parking space needed; 3) increase the amount of weighted student credit hours generated; and 4) to generate a new revenue stream to support departmental and graduate student support |
| 2.   Effectiveness | Students were performing at or above that of on-campus students taught by face-to-face instruction, based on the quality of work submitted and the quality of their comprehensive exams.<br><br>Students completing the MA programs passed the exam to become a Certified Health Education Specialist (CHES). | Student scores were compared to those in the on-campus course and student evaluation scores were higher regarding the distance education courses when compared to the traditional face-to-face classes. |
| 3.   Impact | The MA program made an impact in several ways. First, graduates of the program were using the skills obtained to design, implement, and evaluate high quality health education interventions in communities, schools, and worksites. Second, graduates for the program were using the degree for career mobility and as an entry into doctoral programs. | The undergraduate DE classes afforded students from other majors to take health classes which before had been only open to health majors. As a result, the Division of Health Education has had many students change their majors to community health, and also non-majors have sought out faculty to assist in various research projects.<br><br>Funds generated have gone to fund new development of DE courses and graduate student support. The number of division funded graduate assistants has risen from 1 to 12, and the GA stipends have risen from $9,000 (without a tuition waiver) to $23,000 (plus health insurance and a tuition waiver). |

| 4. | Organizational context | Other departments followed the model used by the Health Science Department to develop similar DE programs.<br><br>Key administrators at UA saw the value and quality of DE programs.<br><br>The College of Continuing Studies at UA developed policies to support the DE masters program. | Likewise, other departments and Colleges on campus have implemented similar programs modeled after the health education experience. Also, other universities have hired the developers to develop similar courseware for their institutions. |
| --- | --- | --- | --- |
| 5. | Unintended artifacts | The program created general goodwill among students, resulting in referral of other students to the UA program and the recommendation by graduates for their children and siblings to work at UA for undergraduate studies. | The availability of the DE course offerings have enabled students to matriculate through the program and graduate faster without having to sacrifice being involved in extracurricular activities and working. |

**Figure 1.  Making the Case for DE:  Three Interrelated Factors**

Student
Need

Quality

Cost
- Return on Investment
- Cost/Benefit Ratio