Developing an Evaluation Plan for a Fully Online Degree Program in HRD

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Effectiveness in distance education has been scrutinized for years, but only recently has literature focused on Web-based learning. As more online degree programs are established, the need for evaluation methodologies and processes guiding those activities increases. This paper describes on-going research to develop an evaluation plan for a fully online graduate degree program in HRD, including the theoretical framework, process, methodology, and resulting evaluation plan. Future work includes plan implementation and subsequent reporting.

Keywords: Evaluation, E-learning, assessment

Although the quality of distance education has been discussed for over a decade, it is only in the past few years that the literature has focused on Web-based or e-learning (Calvert, 2003). Online courses and programs are continuing to gain popularity among both institutions of higher education and business and industry as indicated by *U.S. News* who currently lists 263 accredited online graduate degree programs on their website (U.S. News and World Report, US News Online, 2004).

This paper describes the on-going research undertaken to develop an evaluation plan for a fully online graduate degree program in HRD. Through a review of the literature and consultations with program administration and staff, a plan was developed with the purpose of assessing the state of the program in reference to its goals, determining a roadmap for program improvement, and providing a framework for future program decision-making. The theoretical framework, process, methodology, and resulting plan for evaluating the online degree program are all described herein. Specifically addressed is how an online HRD master's degree program evaluation was developed and translated into a plan for use in any online program evaluation in HRD. Future work on this project includes implementation of the evaluation plan and subsequent reporting of the results.

Problem Statement

As more and more completely online degree programs are established, the need to develop evaluation methodologies and processes to guide that assessment practice increases. While much attention has been given to the quality of online courses or components of courses, much less focus has been given to the evaluation of online degree program as a whole. Past research has compared online learning to face-to-face learning (Hoben, Neu & Castle, 2002), explored the effectiveness of online tools such as discussion boards and chat rooms (Spatariu, Hartley, & Bendixen, 2004), assessed aspects of courses (Roblyer & Ekhaml, 2000), addressed evaluating effective online instruction (Graham, Cagiltay, Lim, Craner & Duffy, 2001; Wentling & Johnson, 1999), and assessed the value of online courses in specific fields of study (Carmichael, 2001; McMaster, 2002). There have also been many articles concerning the success or failure of a variety of technologies used in this environment (Feldman, 2002; Smith, 1998). Most of the literature about online evaluation of teaching and learning has been aimed at the individual course level. While these studies make significant contributions to the best practice and theoretical framework for the use of individual tools and processes, they do not specifically explore program evaluation in a holistic manner.

Background of the Project

In the process of undergoing a mandated graduate program review, two observations surfaced. The first observation was that the formal review process was focused on outcomes and not necessarily on improvement. The second observation was that while all programs have similarities, there are certain characteristics of online degree programs that are not addressed in standardized review processes. The degree program under review is a 36 credit-hour master's degree program in HRD. The program was established through grant funding in 2001 and the first fully-online degree students entered the program in the fall of 2002. The program started with a cohort-based model and moved to an open-enrollment model at the beginning of its third year. Courses were developed in a systematic fashion, specifically for the online format. WebCT has been used as the primary learning management system since

its inception and students are required to participate in a short on-campus orientation prior to enrolling in their first course. The entire program is delivered online. The on-campus program from which this program evolved is no longer accepting new students, so this is the only way that students can enroll in this program. The faculty teaching in the program has changed over the past two years with only two of the original five instructors still employed at the institution. While the faculty turnover has been an issue, the program administration has stayed relatively stable and has been a stabilizing force.

Evaluation

Evaluation theory has its roots in social inquiry and the desire for accountability and control. Depending upon the goals of the evaluation, different methodologies and strategies are used to guide inquiry. The methodologies and strategies are selected based on the type of evaluation required. Evaluation falls into three main types, that oriented toward the construction of knowledge, those orientated toward placing value, and those oriented toward how information is used (Alkin & Christie, 2004).

Evaluation is essential to maintaining and improving a degree program. Evaluation can be further broken into two distinct categories, formative and summative (Scriven, 1967). Formative evaluation focuses on processes and summative evaluation focuses on final products (Van der Veer Martens , n.d.). The purpose of this evaluation is to strengthen and improve the program. Therefore, a formative evaluation was selected to guide this inquiry.

Formative evaluation can come in a variety of forms. The purpose of needs assessment is to gather information on whether or not there is a substantive need for an action, evaluability assessment involves deciding whether or not the program or entity can be feasibly evaluated, structured conceptualization defines the program or technology, the target audience, and the possible outcomes, implementation evaluation looks at program delivery, and process evaluation is designed to review implementation of the program, to provide advice in a formative manner to improve implementation and to track systems change (Rossi, 2004; Alkin & Christie, 2004)

Program Evaluation

Evaluators have been criticized in the past for focusing on outcome evaluation and excluding the process side, or focusing on process evaluation without examining outcomes (Fleischman & Williams, 1996). The framework presented here incorporates both the process and outcome sides in an effort to not only determine the effects of the program, but also understand how the program might be improved.

This evaluation must include both process and outcome components. The process evaluation component focuses on describing the program implementation including students, faculty and services provided. The outcome evaluation component focuses on assessments of program effectiveness with respect to measurement standards in the community of higher education.

Graduate Degree Program Evaluation

In accredited institutions of higher education, graduate programs are required to undergo formal program assessment at regular intervals. This assessment is standardized and usually occurs every five to eight years. The formal review in this case is a very structured process, one that is relatively the same for all programs, making no distinct considerations for the type of program or its characteristics. While this process reveals the success or failure of programs to meet predetermined goals, it does not focus on program improvement.

Evaluation in the Online Environment

In 2000, the Institute for Higher Education Policy, in association with Blackboard and the National Education Association, prepared a report titled *Quality on the line: Benchmarks for success in Internet-based distance education*. This study involved a thorough review of the literature in search of what constitutes quality in online education. The researchers used the case study method to compile their information. First, a literature review was conducted to compile benchmarks already reported by other researchers and organizations and in reports and other publications. The literature review resulted in 45 benchmarks. Next, they identified institutions that were already leaders in Internet-based education, and finally they visited each of the selected institutions and assessed the degree to which they incorporated the benchmarks. As a result of the study a final list of 24 benchmarks were established that are considered most essential to the success of an Internet-based distance education program at any institution. The 24 benchmarks are outlined in Table 1.

Table 1. *Benchmarks essential for program success*.

Institutional Support Benchmarks	A documented technology plan that includes electronic security measures is in place and operational to ensure both quality standards and the integrity and validity of information.
	The reliability of the technology delivery system is as failsafe as possible.
	A centralized system provides support for building and maintaining the distance education infrastructure.
Course Development Benchmarks	Guidelines regarding minimum standards are used for course development, design, and delivery, while learning outcomes determine the technology being used to deliver course content.
	Instructional materials are reviewed periodically to ensure they meet program standards.
	Courses are designed to require students to engage themselves in analysis, synthesis, and evaluation as part of their course and program requirements.
Teaching/ Learning Benchmarks	Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and/or e-mail.
	Feedback to student assignments and questions is constructive and provided in a timely manner.
	Students are instructed in the proper methods of effective research, including assessment of the validity of resources.
Course Structure Benchmarks	Before starting an online program, students are advised about the program to determine (1) if they possess the self-motivation and commitment to learn at a distance and (2) if they have access to the minimal technology required by the course design.
	Students are provided with supplemental course information that outlines course objectives, concepts, and ideas, and learning outcomes for each course are in a clearly written, straightforward statement.
	Students have access to sufficient library resources that may include a "virtual library" accessible through the World Wide Web.
	Faculty and students agree upon expectations regarding times for student assignment completion and faculty response.
Student Support Benchmarks	Students receive information about programs, including admission requirements, tuition and fees, books and supplies, technical and proctoring requirements, and student support services.
	Students are provided with hands-on training and information to aid them in securing material through electronic databases, interlibrary loans, government archives, news services, and other sources.
	Throughout the duration of the program, students have access to technical assistance, including detailed instructions regarding the electronic media used, practice sessions prior to the beginning of the course, and convenient access to technical support staff.
	Questions directed to student service personnel are answered accurately and quickly, with a structured system in place to address student complaints.
Faculty Support Benchmarks	Technical assistance in course development is available to faculty, who are encouraged to use it.
	Faculty members are assisted in the transition from classroom teaching to online instruction and are assessed during the process.
	Instructor training and assistance, including peer mentoring, continues through the progression of the online course.
	Faculty members are provided with written resources to deal with issues arising from student use of electronically-accessed data.
Evaluation and Assessment Benchmarks	The program's educational effectiveness and teaching/learning process is assessed through an evaluation process that uses several methods and applies specific standards.
	Data on enrollment, costs, and successful/innovative uses of technology are used to evaluate program effectiveness.
	Intended learning outcomes are reviewed regularly to ensure clarity, utility, and appropriateness

Note. From "Quality on the line: Benchmarks for success in Internet-based distance education" by The Institute for Higher Education Policy, 2000.

In 2001, a formative evaluation of e-learning was completed for a Canadian military organization (Broadbent & Cotter, 2003). The evaluation focused on a 6-week web-based course preparing students for instruction on military management skills. The evaluators used Stufflebeam's CIPP model (context, input, process, product) as a framework for their evaluation plan. The plan employed four data collection methods: written questionnaires from students and instructors before and after training, focus groups with students and instructors before, during, and at the end of the course, direct observation during the training (monitoring web discussions, observations during classroom sessions, and document review.) Broadbent and Cotter concluded that although evaluation is fundamental to grasping the value of an e-learning program that the plans will vary depending on the goals of the program and the budget assigned to the evaluation.

Assessing Quality in the Selection of a Degree Program

When deciding on whether or not to select an online degree program, students face an enormous number of considerations. To aid in the selection process, many online websites devote space to pointing student in the right direction. One site lists four considerations when assessing the quality of an online master's degree program: Does the program use professor-guided web-threaded discussion groups?, (insisting that the omission of this leads the student toward correspondence courses), What does the graduate program use for a course hosting platform? (suggesting student-friendly platforms such as eCollege, WebCT or Blackboard), Does the course use current videos and lecture materials? (Telling students to beware of "canned" courses), and What is the status of the school's accreditation? (Florida Atlantic University, 2003).

Another site tells students to ask the following questions: How is the course presented? (find a school that incorporates innovation), How do students interact with each other? (find a program that requires interaction), Are the instructors qualified? (looks for staff and support personal dedicated to their online programs), What kind of reputation does the school have? (look for a strong program, not just school), How are students evaluated? (ensure the programs involved apply what has been learned), What kinds of library facilities are available? (look for a system that ensures that reference materials are available from anywhere) (Obringer, n.d.).

Theoretical Framework

The model guiding this evaluation is the CIPP model originally developed by Donald Stufflebeam in 1971 as part of the Phi Kappa Delta Commission on Evaluation. The CIPP acronym was formalized in 1983 and updated most recently in 2002 (Stufflebeam, 1974; 1983; 2002). The CIPP acronym stands for the core concepts of the model, context, inputs processes and products. This model recognizes essential types of decisions encountered in education, planning, programming, implementing, and recycling (Wentling, 1980). Context evaluation reflects the environment, identifies needs, and forms goals and objectives.   Input evaluation assesses the competing ways to achieve the goals specified in the context evaluation. Process evaluation reviews how the program operates. Product evaluation focuses on program results, connecting outcomes with the other measurements taken in the earlier areas of evaluation.   Since the model's inception, Stufflebeam has added the additional concepts of effectiveness, sustainability, and transportability. This model was chosen for two main reasons, 1) the model places emphasis on guiding planning, programming, and implementation efforts and 2) the model emphasizes that the most important purpose for evaluation is improvement (Stufflebeam, 2002).

Research Design and Development of the Evaluation Plan

In order to result in a useful and effective evaluation, stakeholders would need to be identified. In this case, the primary stakeholders were identified as the program faculty. The faculty asked for the evaluation and it is they who will be primarily affected by and interested in its findings. Secondary stakeholders included the department head, the director of graduate programs, and the students. All of these entities have an interest in the evaluation results but will not be directly tasked with any of the improvement efforts that may result.

An essential component to any evaluation plan is to obtain agreement from the stakeholders as the goals and expectations of the evaluation process (Stufflebeam, 2002). The first step in this evaluation plan was to meet with the stakeholders, in this case, the faculty of the Training and Development program, and agree on the evaluation parameters and responsibilities. A formal program review was simultaneously occurring through the Graduate School, so there were already some program goals in place, but those goals were largely mandated by governmental and legal entities and were focused on outcomes only. Since this evaluation was to focus on improvement, other goals, ones more highly regarded by the stakeholders, would have to be developed. As a result, the primary stakeholders were interviewed to determine their vision of the program goals and evaluation needs. The results list was reviewed and agreed upon by all primary stakeholders. These goals included:

- Maintain a program focus and course offerings that compare favorably with other top ranked HRD programs.
- Incorporate the benchmarks determined to promote quality in online programs.
- Offer a set of courses that provide students with the proper competencies based on current needs and trends in the field of HRD.

In following the CIPP model, the next part of the evaluation will be the context analysis. This analysis will determine the environment, needs, assets, and problems in the program. Although the environmental questions could be answered by review of extant data, it was determined that there were several groups that would have input into

the needs and problems of the program, the students and the instructors. Students and instructors will both have varying needs and perspectives on the program. They are also two easily accessible groups.

In the input analysis, the evaluation must look at the competition and the strategies and use these as a comparison to those of the program. For this analysis there will be two components, a review of the literature to review published information about the competition and a Web search for information about the competition. The focus of these searches will be to investigate other programs in search of one or more that could serve as models and to compare our program strategies with those of other successful, established programs.

For the process part of the evaluation, program activities must be monitored, documented and assessed. Although there had been no prior formalized program evaluation, there have been other evaluation activities occurring throughout the program's existence. Each course that was taught was assessed through a standardized student end-of-course evaluation. There was also a large assortment of program documents that had been saved and stored. In addition, all of the program faculty and staff that had taught in the program will still be accessible to the evaluator. This will allow the evaluator to not only develop a current accurate profile of the program, but also delve into any situation where more information was needed.

The product/impact part of the evaluation assesses the program's reach to the target audience. This is the part of the evaluation concerned most with the students. Perspectives are at issue here as are any hard evidence of impact upon the intended target audience. Most likely, much of the evidence of impact will come from perceptions. This is one reason that multiple perspectives must be used to assess this aspect of the program.

Effectiveness evaluation looks at the quality and significance of the program outcomes. Effectiveness conjures up many of the standard outcome measures such as graduation rate and retention. Since this program is relatively new and the first cohort has yet to graduate, some of the standard quantitative measures will not yield useful information. So, in addition to measures of retention and grade point average, this part of the evaluation will elicit effectiveness information from the current beneficiaries of the program, the students. In future evaluations, it will be important to also elicit information from other beneficiaries, such as area employers and other community stakeholders.

The sustainability aspect of this evaluation must look at the extent to which the program's contributions are institutionalized over time. Here the evaluation should find out which program attributes should be maintained and which should be redirected and/or removed. The program beneficiaries (the students), the program faculty, and the program administration will need to have input into this part of the evaluation. In addition, the program budget should be analyzed for sustainability and effectiveness for its intended goals.

Finally, the transportability aspect of the evaluation will look at the extent to which the program could and/or should be adapted or implemented elsewhere. As online learning continues in popularity among institutions of higher education, there will be a growing need to identify those program and practices that are successful and effective. To move online learning forward, the structures and processes from the more successful program will need to be adapted by other institutions and programs. In this case, there are already initiatives under foot to establish additional online programs. This part of the evaluation will assist new programs in establishing similar programs in their own environments.

The Evaluation Plan and Methodology

Each of the concepts of the CIPP evaluation model was used as a lens with which to determine the aspects of the program that should be addressed and sources from which data should be collected. This resulted in a list of 18 aspects of the program that should be investigated. This list of aspects and sources of information is displayed in Table 2, along with concept of CIPP model that advised its inclusion.

Once the components of the evaluation were determined, the evaluation plan could be developed. Many considerations were explored when deciding on how the data would be collected and via what instruments. The review of the existing data such as the course materials, program documents, and standard program measures are easily accessible and readily available. The collection and review of this data and other competitive information is relatively straightforward. Several of the evaluation components required input from program faculty. In order to obtain a well-rounded perspective and the fact that all faculty members are relatively accessible, a focus group format was chosen.

There are only three program administrators so an interview methodology was selected for this group. This will not only yield rich data, but was also selected because of the ability to use probing techniques for this group that holds so much of the operating and process information.   Input is also required from current students enrolled in the program. Because this is a distance program, interviewing and group techniques are not practical. As a result, student input will be elicited via an online survey. The final part of the plan is a review of the evaluation that looks

at what aspects of the program can and should be replicated and what aspects should be altered or discontinued. A summary of the elements of the evaluation plan is found in Table 3.

Table 2. *Components of the evaluation plan.*

Evaluation Element	CIPP Concept
A review of program documentation for information on problems, needs, assets, and environment of the program	Context
Input from program administrators and faculty for information on problems, needs, assets, and environment of the program.	Context
Input from program students to gather information on problems, needs, assets, and environment of the program	Context
A review of other HRD programs to determine the top-tiered programs in HRD	Input
A comparison of program's focus and course offerings with the identified top-tiered programs	Input
A review of literature in HRD to determine current trends and issues on which HRD master's programs should be focused	Input
Review of existing program end-of-course evaluations	Process
Input from program staff and administration to gather information on program activities and processes.	Process
Input from current students to assess perceptions of program impact	Impact
Interview with faculty to assess perceptions of program impact	Impact
Review of student GPAs	Effectiveness
Review of retention figures and progress toward degree completion.	Effectiveness
Input from current students as to program effectiveness	Effectiveness
Input from program faculty and administration about program aspects that should be maintained, changed or removed	Sustainability
Input from current students about program aspects that should be maintained, changed, or removed.	Sustainability
Analysis of budget and spending	Sustainability
Review of the evaluation to determine what aspects of the program can be used in establishing and/or improving other online degree programs.	Transportability

Table 3.
Resulting elements of the evaluation plan.

Evaluation Element	CIPP Concept Addressed
A review of existing program documentation including end-of-course evaluations, student GPAs, retention figures, progress toward degree completion, budget	context, process, effectiveness, sustainability
Review of the literature and top-tiered programs in HRD and comparison with program under evaluation in regard to course offerings and focus	input
Focus group with program faculty focused on eliciting information about problems, needs, assets, environment, and impact of the online program	context, impact
Interviews with program administrators about problems, needs, assets, environment, program activities and processes, aspects of the program that should be maintained, changes and removed	context, process, sustainability
Survey of current students about problems, needs, assets, environment, perception of program impact and effectiveness, and aspects of the program that should be maintained, changed, and removed	context, impact, effectiveness, sustainability
Review of the evaluation for best practices and suggestions for future online program implementation	transportability

Next Steps

Evaluation plans should be working documents with the ability to change as new information informs the evaluation. This evaluation plan is no different and will be altered as needed. With program stakeholder approval of the evaluation plan completed, the instrument development will be the next step in the process. This will be undertaken with a continued systematic approach. The data collection instruments will be developed based on the IHEP benchmarks and other measures of quality in the literature (Institute for Higher Education Policy, 2000; Scanlan, 2003). The student survey instrument will be assessed for face validity by program faculty familiar with evaluation processes. It will then be pilot-tested with a group of students outside the sample and assessed for reliability. Focus group and interview questions will go through similar assurance processes. Data collection procedures will be formalized and then data collected. This will be followed by data analysis, development of conclusions and reporting. Both quantitative and qualitative methods of analysis will be used to interpret the data. It is important to realize that all evaluations are limited by time and resources. The resulting evaluation plan is not meant to be the be-all, end-all way to evaluate online programs, but it will serve as an effective model for online program evaluation working within the constraints of the university system.

Implications for HRD

This lack of evaluation of completely online programs can be explained with a variety of reasons such as a lack of university-based fully online degree programs to evaluate in the past and a limited understanding about the benchmarks in assuring quality in those programs. This research attempts to close the gap in the literature by developing a theoretically sound, research-based approach to online program evaluation by reviewing the literature and other relevant sources to develop a practical, yet effective approach to developing a comprehensive evaluation plan for online degree programs. Over the next few years it is anticipated that the number of online degree programs will continue to expand. Like all markets, at some point supply will exceed demand. At that point, weaker programs will disappear. Effective program evaluation is the best way to achieve continuous program improvement. A review of the literature results in little evaluation research focused on on-line-only programs. This may be because these programs are relatively new and have not been in existence or stable long enough to collect meaningful information. The evaluation plan resulting from this project will help guide HRD program administrators in how to structure their own evaluations and inform them of the types of data that they may want to collect. The hope is that the processes and instruments developed will serve not only for ongoing assessment of this online program, but be applicable to the assessment of other online degree programs, locally and at other institutions.

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