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DEPARTMENT OF EDUCATIONAL TECHNOLOGY

BENCHMARKING QUALITY IN HIGHER EDUCATION

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# BENCHMARKING QUALITY IN HIGHER EDUCATION

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# BENCHMARKING QUALITY IN HIGHER EDUCATION

## **Executive Summary**

The purpose of this study was to establish and design a methodology and framework that can be used to assess the relative quality of EdTech programs. Building on previous evaluations performed by EdTech students that have looked at specific components of the EdTech department at San Diego State University, this evaluation focused on the comparison of SDSU with exemplary programs at other universities.

The evaluation conducted for the EdTech department at San Diego State University was a study designed to establish a preliminary framework for examining quality in EdTech higher education programs. The process was a management oriented study designed to help EdTech faculty and staff assess the representation and value of the program in its current state, and determine where adjustments and changes can be made in order to increase prospective student interest and improve graduate success.

To this end, the evaluator conducted a comparative analysis of information that four high-end EdTech programs provide online. Specifically, the evaluator performed a benchmarking study in order to compare the four schools. The nature of a benchmarking study involves reflecting on one's own organizational process, exploring what one's competitors do, assessing the value or impact of those actions, and then adopting or integrating the "best practices" of those organizations. In other words, a benchmarking evaluation involves determine what other organizations do well and using that knowledge to improve one's own organization.

## **Evaluation Process**

In this evaluation, the primary focus was on quality –which was carried out by determining and assessing the value of indicators associated with:

- articulation of information
- distinctiveness of the program
- timeliness of the program
- growth producing potential for the student.

The evaluation process was a continuously evolving procedure that began with establishing possible indicators of quality that a prospective student would look for in an initial program exploration. These indicators were derived from various sources including field specific standards (i.e. instructional design competencies advocated by IBSTPI, AECT/NCATE accreditation standards), external standards (i.e. Baldrige Quality Award criteria), and personal experience.

These sources led to a comprehensive list of items that were examined and evaluated through the information available on each programs website. For the items which provided analyzable data, a score was given to each school based on the evaluator’s assessment of the information quality. The assessment was performed by using a combination of the four dimensions stated above for each item analyzed.

(Note: the combination of quality dimensions used for each item were chosen due to their applicability to each item)

## **Conclusions/ Recommendations**

The evaluation resulted in multiple observations that led to conclusions and recommendation in three areas.

- The established framework
- The evaluation process
- The schools themselves

The following are the primary results from each category:

*Conclusion:* The framework established, including the itemized categories and the subsequent indicators listed within each category, is a valuable tool for investigating program quality, but has limited effectiveness when looking strictly at information online.

*Recommendation:* Use the framework to determine the existence of specific program components and to assess their general representation via the internet, but consider other sources for analyzing quality as well. The items explored and the quality dimensions used are effective, but supplementary sources such as student opinion and face-to-face conversation with faculty and staff are necessary in order to gain a comprehensive depiction of program quality.

*Conclusion:* The framework designed revealed useful data, but the lack of interrelater reliability led to results that need to be substantiated by more than one methodology. These results represent only one data collection method performed and tested by the evaluator alone which did not provide for triangulation of data.

*Recommendation:* The evaluator recommends using the framework in combination with other data collection methods, such as student surveys or interviews. This would increase the validity of the information collected. By the same token, having one or more objective parties test the usefulness of the framework on their own

program or on the programs used in this evaluation, would verify the effectiveness of the framework as a measurement tool.

*Conclusion:* The format of information provided by each school on their program website directly impacted the perceived quality of the program's representation. The programs that received the highest scores for articulation had the highest scores overall because their timeliness, distinctiveness and growth producing potential were easier to assess when the information on the site was extensive, easy to understand and clearly articulated.

*Recommendation:* The evaluator recommends providing information on program websites that addresses important topics of information for students, but is also well articulated. For example, simply stating that there are scholarship and financial aid options available not particularly useful unless there is information about what those options are and how to take advantage of them.

# BENCHMARKING QUALITY IN HIGHER EDUCATION

## Program Description

### Setting

This report outlines a benchmarking study of the Educational Technology program (master's degree and related certificates) at San Diego State University (SDSU). The study was conducted by Tarryn Smith, a graduate student in the Department of Educational Technology at SDSU. The time frame for the project was September to December 2003.

### San Diego State University and College of Education Background

SDSU has a long history, much of its described on the university website (see: <http://www.sdsu.edu/campusinfo/history.html>). In its early years (1897 to 1921), it was a teacher's college—San Diego Normal School. In 1921, the official name became San Diego Teachers College. By 1935, the school was called San Diego State College, and in 1960 it joined the growing California State College system (which itself was part of a name change in the early 1970's). The original campus was located at Park Boulevard, but the school quickly outgrew its surroundings. The present campus opened for classes in 1931. This move signaled the expansion of degree programs, offering students teacher education as well as other specializations in education.

As one of seven colleges within the university, the College of Education (COE) at San Diego State University offers some of the most recognized programs in the country, embracing a "three dimensional mission of excellence in teaching, commitment to research and scholarship, and significant contributions to the larger community" ([http://coe.sdsu.edu/facdev/operations/POLICY\\_FILE-rev.9=12pdf.pdf](http://coe.sdsu.edu/facdev/operations/POLICY_FILE-rev.9=12pdf.pdf)). Among its distinctions is that two of the last seven National

Teachers of the Year and a finalist for National Principal of the year are SDSU College of Education graduates. Additionally, three times since 1988, the Association of Teacher Educators has named the College of Education among the top three programs for teacher education in the country (<http://www.sdsu.edu/viewbook/Education.html>). Today, the COE offers degrees, credentials and/or certificates in a range of programs including:

- Administration, Rehabilitation, and Postsecondary Education (ARPE)
- Counseling and School Psychology
- Educational Leadership
- Educational Technology (EdTech)
- Policy Studies in Language and Cross-Cultural Education
- Special Education (SPED)
- Teacher Education (TE)

The COE, like other colleges within the university, offers several doctoral degrees in coordination with other universities and colleges in the state, as described in the Graduate Bulletin (available online at <http://coursecat.sdsu.edu/bulletin/>). The following doctoral programs are offered:

- The SDSU / Claremont Graduate University (CGU) Doctoral Program offers the degree of Doctor of Philosophy (Ph.D.) in education with a multicultural emphasis
- The SDSU / University of San Diego (USD) Doctoral Program offers the degree of Doctor of Education (Ed.D.) with disciplines in educational administration and policy, educational technology, and teaching and learning

- The SDSU / University of California, San Diego (UCSD) Doctoral Program in Science and Math Education offers the degree of Doctor of Philosophy (Ph.D.) in mathematics and science education.

By providing a variety of degree and certificate options, the COE strives to “provide well-balanced, high quality education for undergraduate and graduate students and to contribute to knowledge and the solution of problems through excellence and distinction in teaching, research, and service,” as articulated in the university’s mission statement (<http://www.sdsu.edu/campusinfo/mission.html>).

## Department of Educational Technology

The Department of Educational Technology [EdTech] offers multiple certificates and advanced degree options. As a leader in the education field, the EdTech Department graduates students who promote the “wise use of systems, environments, tools, products, and strategies that can enhance human learning and competence” (<http://edtec.sdsu.edu/mission.shtml>). Currently there are nine tenured or tenure-track faculty, and nine part-time faculty—several of whom teach the courses in which preservice teachers enroll to meet their state-mandated technology competencies.

The department offers a Master of Arts degree in education with a specialization in educational technology, as well as several certificates including one in Instructional Technology, Instructional Software Design, and Advanced Distance Education. The EdTech curriculum exposes students to both *soft technologies* (referring to systems and techniques that relate to the way people learn), and *hard technologies* (actual software and devices that aid in instruction and learning). Students complete coursework and internships that provide them with instruction in research, evaluation, instructional design and development, and program management. As described in the Graduate Bulletin, graduates of the EdTech program are prepared for careers as instructional technologists, educational specialists, instructional designers, trainers, and educational computing specialists.

## Purpose of the Evaluation

This evaluation was a benchmarking study designed to establish indicators of quality for higher education programs. Using a variety of dimensions, the evaluator assessed the alignment of the EdTech program at SDSU with industry definitions and standards for quality in order to compare it with similar programs considered exemplary in the field. There were two main purposes for this study:

- To establish a framework of quality for EdTech programs as determined by the criterion and standards of outside agencies, internal participants, and exemplary institutions in the field.
- To assess the extent to which the SDSU EdTech program embodies the indicators of educational quality as established above.

## Evaluation Questions

As a first step in generating an EdTech-oriented quality framework, the evaluator generated several investigative questions that collectively signal *practical*, *pragmatic*, *logistical*, and *theoretical* indicators of excellence. These indicators were derived from two types of sources: field-specific (e.g. AECT) and external (e.g. Baldrige).

Table 1 recaps these questions and for each, its associated subquestions, the stakeholders most interested in the results or outcomes, and the importance of the information.

Table 1. *Evaluation Questions*

Evaluation Question	Subquestions	Audiences	Importance of Question
<p>1. Given specific dimensions<sup>12</sup>, what are the quality indicators associated with major EdTech graduate programs?</p>	<p>1.1 Program characteristics (selectivity, course offerings, expenses)</p> <p>1.2 Students (student body characteristics, program expectations and competencies, experiences)</p> <p>1.3 Faculty and staff (characteristics, awards, degrees, publications)</p> <p>1.4 Program selectivity (of students and faculty)</p> <p>1.5 Curriculum (course design and delivery, academic difficulty, level of challenge)</p> <p>1.6 Program support (advising, procedural support, tech support)</p>	<p>EdTech department chair, administrators and faculty.</p> <p>Current and prospective EdTech students.</p> <p>College of Education administrators.</p>	<ul style="list-style-type: none"> <li>• Characteristics internal to the organization and observed by participants.</li> <li>• Indicators of quality based on informal documentation and anecdotal evidence.</li> </ul>

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<sup>1</sup> The following quality dimensions were adapted from Berquist & Armstrong (1986)

1. Attractive and distinctive (it does something to bring people to it, it is unique and unlike other programs in some way)
2. Beneficial and growth producing (it does something that is helpful to the individual and the community involved in it, it enhances growth in different directions of learning)
3. Effective and functional (it does what it does well and can demonstrate its effectiveness to others, it provides learners with attributes needed to perform successfully in today's society)

Evaluation Question	Subquestions	Audiences	Importance of Question
	1.7 Community and market focus (internships, community service, “real world” experiences)		
2. Given specific dimensions, what are the quality characteristics of EdTech graduate programs, as represented by outside agencies, panels, or organizations?	2.1 Program characteristics (selectivity, course offerings, expenses) 2.2 Students (student body characteristics, program expectations and competencies, experiences) 2.3 Faculty and staff (characteristics, awards, degrees, publications) 2.4 Program selectivity (of students and faculty) 2.5 Curriculum (course design and delivery, academic difficulty, level of challenge) 1.6 Program support (advising, procedural support, tech support) 1.7 Community and market focus (internships, community service, “real world” experiences)	EdTech department chair, administrators and faculty.  Current and prospective EdTech students.  College of Education administrators.	<ul style="list-style-type: none"> <li>• Competencies and standards assessed by formal organizations.</li> <li>• Quality based on domains of excellence as defined by recognized authorities in the field.</li> </ul>

## Impact of the Literature Review

The evaluator conducted a thorough review of the literature that informed her understanding of ways to define and measure quality in education. The tenets of Total Quality Management (TQM) are useful for defining educational excellence. An education and training consultant suggests, for example, that "quality is seen as meeting the requirements and expectations of the customer" (Ellis, pg. 30). Bonstingl (1992) argues that educators with a TQM mindset view themselves as facilitators and supporters who can help institutions maximize their potential by helping their colleagues improve. Common to both authors is their focus on whole systems and attention to growth potential, rather than faults. Berquist and Armstrong (1986) draw on principles of TQM to identify domains of quality in higher education as specifically applied to program planning and facilitating academic change.

In general, the literature suggests that providing high-end education to students first requires establishing indicators of quality and then assessing the alignment of particular programs with those indicators. One method of quality assessment that can achieve this objective is benchmarking, defined as "a systematic and continuous process to identify, determine, measure, compare, learn, adopt and implement the best practice obtained through internal and external evaluation of an organization so that performance of a higher standard can be achieved and improved" (Endut, Abdullah & Husain, 2000). In other words, it involves examining and understanding an organization's own internal procedures and then adapting the best practices of other organizations in order to improve performance (Epper, 1999). After considering how benchmarking relates to TQM, the evaluator concluded that it is the TQM connection to benchmarking that provides the most useful framework for comparing quality across institutions and programs. Benchmarking is the process of exploring the Total Quality systems and processes of other

organizations that are considered exemplary and then adapting or localizing the best practices of other organizations to improve performance (Bonstingl, 1992; Epper, 1999). Understanding how quality can be measured and integrated into existing practices guided the design of the EdTech quality framework developed and used in this evaluation.

One fundamental concept derived from the literature review is that universities and colleges use different indicators of quality to assess their own value, and as important, these indicators are derived from a variety of sources, both formal and informal, and used in a range of assessment processes. The subsections that follow explore this concept in depth.

### *Formal*

Accrediting agencies such as the National Council for the Accreditation of Teacher Education (NCATE) in conjunction with AECT (Association for Educational Communications and Technology) have determined standards by which educational institutions or the programs within them are professionally validated and certified. NCATE/AECT advocates for two sets of standards for programs in educational communications and instructional technology (ECIT):

1. Standards for the Accreditation of Initial Programs in Educational Communications and Instructional Technologies
2. Standards for the accreditation of Advanced Programs in Educational Communications and Instructional Technologies.  
(<http://NCATE.org/standard/programstds.htm#aect>)

These standards are based on the Instructional Design Competencies advocated by the International Board of Standards for Training, Performance and Instruction (IBSTPI). Richey, Fields, Foxon, Roberts, Spannaus, & Spector (2000) identify four general domains that reflect the skills and knowledge that instructional designers are expected to master:

- professional foundations
- planning and analysis

- design and development
- implementation and management)

These domains represent the industry specific qualities that graduates of EdTech programs are expected to possess.

### *External*

External quality measures relate to items that are not defined specifically by formal agencies or organizations in the EdTech field. One such quality measure is the Baldrige Education Criteria. The 2003 Education Criteria for Performance Excellence guide institutions toward three goals:

- 1) Delivery of ever-improving value to students and stakeholders
- 2) Improvement of overall organizational effectiveness and capabilities
- 3) Organizational and personal learning

Criteria help institutions enhance their educational services and are “built on a set of common values that characterize all types of high performing organizations and are present in the best schools in the nation” (Blazey, Davison & Evans, 2000). The Baldrige Award measures the existence of core competencies or values within an organization that represent embedded beliefs or behaviors (Baldrige National Quality Program, 2003).

### Issues and Concerns

The factors that affected the conduct of this study are briefly explained below:

- Data collection limitations – Site visits were not feasible under the time and budget constraints of this study; data collection was therefore limited to information publicly available on the Internet. This limited the study by only presenting one venue of information. In some cases hard copies of program information were available, but time constraints prevented the evaluator from obtaining them.

Additionally, not all *functional* information was formally outlined by individual institutions or programs on the internet, such as advising opportunities or program planning. This impacted the depth of data that was able to be obtained.

## Methodology

### Evaluation Design

This was a management oriented study designed to help EdTech faculty and staff assess the representation and value of the program in its current state, and determine where adjustments and changes can be made in order to increase prospective student interest and improve graduate success. To this end, the evaluator conducted a comparative analysis of information that four high-end EdTech programs provide online. Specifically, the evaluator performed a benchmarking study in order to compare the four schools. The nature of a benchmarking study involves reflecting on one's own organizational process, exploring what one's competitors do, assessing the value or impact of those actions, and then adopting or integrating the "best practices" of those organizations. It is important to note that this evaluation was primarily focused on designing a framework for measuring quality, rather than on measuring quality itself.

### Selection of Sources

The evaluation focused on four universities offering professionally recognized programs in educational technology – San Diego State University, Florida State University (FSU), Arizona State University (ASU), and Indiana University (IU). The latter three universities were chosen after consulting with faculty and considering their reputations of excellence within the field. The schools were selected with the intention

of representing a sample of public university programs considered exemplary by reputation, but not necessarily by formal ranking. The materials included in the content analysis were limited primarily to program web-sites, and in some cases where available, the Graduate Bulletin of the university.

## Instrumentation

The evaluation was primarily performed by doing a content analysis of EdTech program websites from several universities, including SDSU. The purpose of using a content analysis procedure was two fold:

- To determine the presence or absence of specific characteristics of EdTech graduate programs
- To assess the relative quality of each program's representation of those characteristics.

## *Frameworks of Quality*

In order to obtain a comprehensive perspective on program quality, the evaluator drew upon several frameworks for exploring quality. The quality indicators were derived from both field-specific and external standards. The field specific sources included the Instructional Design Competencies advocated by IBSTPI, the Certified Performance Technologist standards (offered by ASTD/ISPI), and the Standards for Educational Communication and Instructional Technology (part of the AECT accreditation standards advocated by NCATE). External sources were standards associated with the Baldrige National Quality Award for Education, which addresses organizational performance aspects of program quality and the general guidelines for designing quality education articulated by Berquist & Armstrong (1986). In essence then, the evaluator created a framework that captured indicators from the fields

where EdTech graduates tend to work, the competencies graduates are likely to possess, and the programmatic components that provide high quality education.

### *Content Matrix*

The main instrument used to collect data for this study was a matrix designed by the evaluator to compare the various universities across a series of program components (see Appendix B). Components were organized into the following categories:

- admission criteria
- costs
- programs and delivery
- program components
- areas of specialization
- course facilitation
- instructional strategies
- coursework
- faculty prestige
- support opportunities
- formal interaction opportunities
- informal interaction opportunities

The matrix was designed to:

- Act as a checklist for determining which aspects of each program were present or absent based on the available information
- Interpret and record a quality rating for each program based on the presence/absence of each item and on qualitative observations made by the evaluator.

The following diagram illustrates the development process used to generate the 12 categories listed above.



## Data Processing and Analysis

The data gathering process in this evaluation was carried out in three phases.

### *Phase 1 – Presence of Information*

The matrix was used to record the presence or absence of information available on each school's program website (regardless of quantity or quality).

### *Phase 2 – Qualitative Data*

The evaluator supplemented the matrix with a narrative description of each program and the information provided on the individual websites. Of the 12 categories in the matrix, the internet proved to be a useful source of info for only 7 so the narrative data was focused around those 7 categories. Each category was described in terms of four quality dimensions:

- Articulation – the depth and clarity of the information provided for each item
- Distinctiveness – the uniqueness of the item or program component
- Growth Producing – the extent to which the item provided an opportunity for growth and learning
- Timeliness – the currency of the item in respect to the demands and opportunities of the marketplace

### *Phase 3 – Quantitative Data*

Using the matrix and the narrative data, each school was assigned a numerical quality score for each category, which were then tallied to provide

a total score. The individual scores were generated by looking at each category and rating each on the extent to which they embodied the quality dimensions identified above. Dimensions were rated on a scale from 1 to 4 (1 being the lowest and 4 being the highest) and each category was assessed across a different combination of dimensions, depending on the nature of the category and which dimensions were applicable.

The seven categories analyzed and the corresponding dimensions used for assessment are as follows:

Table 2. *Program Assessment Dimensions*

<b>Costs</b>	articulation
<b>Programs and Delivery</b>	articulation, growth producing, timeliness
<b>Program Components</b>	articulation, distinctiveness, growth producing
<b>Areas of specialization</b>	articulation, distinctiveness, growth producing, timeliness
<b>Faculty Information</b>	articulation, distinctiveness
<b>Admission Criteria</b>	articulation, distinctiveness
<b>Coursework</b>	articulation, distinctiveness, growth producing, timeliness

## Limitations of the Study

The findings provide useful insights about the overall organization and the specific features of EdTech programs considered exemplary in higher education. The data depicts the nature/kind of information available to prospective students and how well (depth/clarity) it is presented. However,

the nature of this evaluation led to multiple limitations regarding the data that could be collected.

- Programs were each housed in different places and labeled by different titles which initially led to difficulty in locating the program site. For example, SDSU has the Dept. of Educational Technology housed within the COE, but IU's program is identified as Instructional Systems Technology within the School of Education while FSU has Instructional Systems located within the College of Ed (a part of the Division of Psychology in Education). This made identifying the correct program difficult without prior knowledge of what an EdTech program looks like.
- Information provided by each program was not always directly stated and so in attempting to determine the presence or absence of specific items, it was difficult to know if an item existed, but was simply not visible, or if in fact it did not exist at all. For example, information such as whether the school is on a quarter or semester system, was not explicitly stated on the website but could be inferred by exploring other sources (i.e. the academic calendar).
- Data collected was obtained from program sites as they existed at that point in time, but information changes, programs are restructured, and web sites are redesigned. This made data collection difficult at times when information that had been located previously, could not be found in subsequent website visits.

## Findings

As noted earlier, a matrix was used to gather the comparative data associated with each of the four targeted EdTech programs. In order to gain a comprehensive depiction of each program, the evaluator explored seven areas that included various program quality indicators. For each topic area, the evaluator investigated how specific dimensions of quality (articulation, uniqueness, growth production, and timeliness) were represented by the information provided through each program's web site.

The following is a list of the specific items investigated within each topic area:

- Program Characteristics – general program components, programs & delivery, costs associated with the program, and areas of specialization offered by the program.
- Faculty and Staff – faculty prestige and background
- Program Selectivity – admission criteria
- Curriculum – course facilitation, instructional strategies, coursework required
- Program Support – support opportunities
- Community and Market Focus – formal interaction opportunities, informal interaction opportunities

### Program Characteristics

Program characteristics were organized into four categories (general program components, costs associated with program, programs and delivery, and areas of specialization) and analyzed for presence or absence of information within each program’s site. Table 2 shows the 17 items that were analyzed and the schools that provided information, regardless of depth or clarity.

Table 3. *Program characteristics*

<b>Category</b>	<b>Item</b>	<b>Schools</b>
Cost	Per unit cost of campus courses and online courses	All
	Resident vs. non-resident tuition	All
	Financial aid/ scholarship options	All
	Lab costs	ASU, FSU

<b>Category</b>	<b>Item</b>	<b>Schools</b>
	Cost of course materials per semester	FSU
	Face-to-face, online, or blended instruction	SDSU
Programs and delivery	Degrees	All
	Certificates	SDSU, FSU, IU
	Other programs	SDSU, FSU, IU
	System (quarter, semester, open)	SDSU
Program components	Program of study (required vs. electives)	All
	Culminating experience (exam, project)	All
	Residency requirements	All
	Credit for work or other classes	All
	Course priority	0
Areas of specialization	Subject specific specialization	All
	Industry specific specializations	SDSU

Generally the indicators noted here are concerns of prospective students. It is not surprising that all four program sites linked to or directly stated information regarding degree options, graduation requirements, tuition, and financial aid since these are important aspects of the educational process and common to most graduate programs. Each of the schools also referred to transfer credit for other courses and indicated the existence of specializations in specific subject areas. None of the schools indicated course priority information, referring to who is given priority to enroll in certain classes. Most likely there is a system in place for determining enrollment, but it is something that is not directly stated on any of the websites.

There appeared to be little or no information available from the schools regarding incidental costs (lab costs and course materials). Both ASU and FSU indicated the existence of lab costs, only FSU provided any monetary figures specific to certain courses. FSU received a higher score than the other three schools in the cost category because they provide a cost calculator tool that incorporates not just tuition and living expenses, but lab and material costs for specific courses as well. To most graduate students, cost is a primary concern, so it is surprising that only FSU includes incidental costs in their promotion of financial information. If schools wish to attract students, providing in depth information about all costs and financial support options is essential.

There is clearly a lack of information available from any of the schools about the instruction type, academic calendar system, and industry specific specializations, but it is not clear whether that is due to the information not being available or whether it is because it is not a component of the program itself. All three of these items refer to information that can probably be inferred from other information sources (e.g. graduate bulletin, academic calendar, course syllabi), but is not explicitly stated. This means that a prospective student who is interested in whether courses are taught primarily face-to-face or not would have to research more extensively to obtain that information. Students, who have specific concerns or interests about program components which may not be similar across the board, will have to approach the process with the mindset that some information may not be realized until they actually enroll in the program.

## Faculty and Staff

There were five elements of this category that were investigated;

- education (schools)
- degrees (subject area, number and type)
- research/ publications
- grants

- awards/ recognitions.

SDSU, ASU, and IU each had information available on all five items. FSU was the only school that did not provide information on each item, omitting information on grants and awards/recognitions for the faculty and staff. Given that the other schools all had information on grants and awards, might lead a prospective student to think that the faculty at FSU is not as prestigious as the faculty at other schools. This is likely untrue, but it demonstrates how information omission can lead to an inaccurate depiction of a program. By the same token, ASU provides cohesive faculty information, both in brief and in depth, with a uniform layout design which makes the information easy for students to find.

### Program Selectivity

This category was explored through the admission criteria of each school. The 6 items examined were:

- application specifics (how to apply, deadlines, where to apply)
- entrance formula (combination of GPA's, test scores, course credit, etc.)
- admission test and minimum score (GRE, ACT)
- undergrad degree earned (major, bachelors degree, associates degree)
- undergrad GPA
- course prerequisites (any courses required for admission to school or program)

All four program sites directly stated the specific application procedures and requirements, including how to apply and application deadlines. Each school also indicated specifically which admission tests were acceptable and the scores required for each, as well as the minimum undergraduate degree and GPA required for admission. It was not evident whether any of the four schools had an entrance formula (such as a GRE and GPA score combination)

that was used for admission. It is likely that one exists, but it appears not to be published information or is just difficult to locate.

### Curriculum, Program support, and Community and Market focus

The curriculum, program support, and community and market focus categories were somewhat illusive in terms of information available on the internet.

The curriculum category included three elements: course facilitation, specific coursework required, and instructional strategies. Program support examined opportunities available in three areas: program specifics, career guidance, and technical support. The community and market focus category explored both formal and informal opportunities for interaction among faculty and students.

#### *Curriculum*

Of all the items examined in these three categories, the most data resulted from investigation of coursework required by the program. Three out of the four schools (SDSU, ASU, and IU) provided access to some type of course information, indicating that there are either exams, projects, client projects, internships, or independent study required. FSU did not provide access to any course information (e.g. syllabi, objectives) and so it was not clear what types of coursework were required from the program. SDSU, ASU, and IU all provided course info, but there was little standardization of the format in which it was presented so the depth of the information varied from program to program and from course to course. This made interpreting the coursework difficult for certain courses. SDSU was the only school that provided direct links to all course info, accessible by current and prospective students alike. In general, for those courses which information was accessible, it was evident whether the coursework consisted of exams, projects, client projects, internships, or independent study.

### *Program Support*

For all four schools, support opportunities appeared to be limited to the assignment of an advisor to each student, although it was not always clear what the responsibilities of the advisor included. In some cases there were websites available for informational support for items such as parking and university procedures, but there did not appear to be any personnel support. Although it seems likely that there is tech support available for students and faculty participating in an EdTech program, there was surprisingly little information regarding what type of tech support existed at each school.

### *Community and Market Focus*

Opportunities for interaction, both formal and informal, were virtually invisible on each program's site. SDSU, FSU, and IU all have student associations which provide supplementary support for students. Both SDSU and FSU had separate student association sites that provided information about events, conferences, and other social opportunities. Unfortunately, FSU's Instructional Systems Student Association (ISSA) is not easy to locate and SDSU's Student Association for Graduates in Education (SAGE) is linked off the main page, but no explanation about what SAGE actually is. Both sites provide useful information for prospective and current students, but unless a student knows that the sites exist, there is no other directive to guide them there for information. Additionally, all four schools provided links to professional organizations (such as AECT or ASTD) but with little information or explanation of what each organization is. A student who has not previously been exposed to the field of EdTech is not likely to have knowledge of these organizations and so it is the responsibility of the individual graduate program to inform students about the external components of the field as well as the internal components of the program.

## Summary

The findings reflect three phases of data gathering that involved recording information present, describing the available information, and assigning a value to the overall information representation in order to compare each school. Tables 4 through 7 show the individual scores assigned to each school based of the four dimensions (articulation = A, distinctiveness = D, growth producing = G, timeliness = T). Each table is followed by a summary of the narrative data collected.

### *San Diego State University*

Table 4.

	<b>A</b>	<b>D</b>	<b>G</b>	<b>T</b>	<b>Total</b>
<b>Programs and Delivery</b>	4	3	3	-	10/12
<b>Program components</b>	4	3	-	4	11/12
<b>Areas of specialization</b>	4	3	3	3	13/16
<b>Faculty information</b>	3	-	-	3	6/8
<b>Admission criteria</b>	4	-	-	4	8/8
<b>Coursework</b>	4	3	3	3	13/16
<b>Costs</b>	3	-	-	-	3/4
					<b>64/76</b>

### *Strengths*

- The main program page links to information for and about students, faculty, alumni, and degrees and programs
- The prospective student page identifies employment industries, program emphasis and program overview

- The application process is laid out clearly in steps
- There are accessible links to campus programs, online programs, and certificates available
- The student association page (SAGE) provides a number of useful links and information about the program not available elsewhere.
- Unlike the other universities, there is a direct link to the Graduate Bulletin and there are links to all course syllabi, which are accessible by students as well as non-students

*Weaknesses*

- Some labels are misleading or unclear. Information separated by current and prospective students makes navigation more complicated
- Information about objectives and competencies is limited.

*Arizona State University*

Table 5.

	<b>A</b>	<b>D</b>	<b>G</b>	<b>T</b>	<b>Total</b>
<b>Programs and Delivery</b>	4	3	3	-	10/12
<b>Program components</b>	4	3	-	4	11/12
<b>Areas of specialization</b>	3	3	3	3	12/16
<b>Faculty information</b>	4	-	-	4	8/8
<b>Admission criteria</b>	4	-	-	3	7/8
<b>Coursework</b>	2	1	1	1	5/16
<b>Costs</b>	3	-	-	-	3/4
					<b>56/76</b>

*Strengths*

- The main program page has links to features, characteristics, faculty, contributors, and EdTech graduates. Also links to programs. courses, admission, faculty, staff
- Masters program page provides information about program of study checklist, admission decisions, program requirements, advisements, program of study, continuous enrollment, comprehensive exam, faculty and resources, financial and housing info
- Course links give brief description, but there are no links to further information
- Faculty page gives basic contact info with links to pages with extensive information. Pages are uniform in design which makes it easier to locate info

*Weaknesses*

- No online programs identified
- Info is provided in overview format, but without much depth
- No direct link to graduate bulletin
- No links to course syllabi or detailed course info

*Florida State University*

Table 6

	<b>A</b>	<b>D</b>	<b>G</b>	<b>T</b>	<b>Total</b>
<b>Programs and Delivery</b>	3	3	3	-	9/12
<b>Program components</b>	3	3	-	4	10/12
<b>Areas of specialization</b>	3	3	3	3	12/16

<b>Faculty information</b>	2	-	-	2	4/8
<b>Admission criteria</b>	4	-	-	4	8/8
<b>Coursework</b>	1	1	1	1	4/16
<b>Costs</b>	4	-	-	-	4/4
					<b>51/76</b>

*Strengths*

- Main program page links to admissions, competencies, masters, doctoral, and certificate degrees
- Extensive description of competencies that in the areas of communication and leadership, design, evaluation and research, implementation, management, and media and technology. Describes in detail what the program is designed around and what students will be capable of when they graduate
- Offers emphasis in program design and major in distance learning
- Student Association (ISSA) lists event, offices and other helpful links
- Financial page provides a cost calculator for tuition cost, including lab and material costs for specific courses

*Weaknesses*

- Faculty page only lists basic contact info. Additional faculty information is only available if faculty has personal web page posted
- No direct link to graduate bulletin
- No links to course info. Site lists courses required, but there is no way to access course syllabi or requirements
- No online options as listed on the program site

Table 7

	<b>A</b>	<b>D</b>	<b>G</b>	<b>T</b>	<b>Total</b>
<b>Programs and Delivery</b>	4	3	3	-	10/12
<b>Program components</b>	4	3	-	4	11/12
<b>Areas of specialization</b>	4	4	4	4	16/16
<b>Faculty information</b>	4	-	-	3	7/8
<b>Admission criteria</b>	4	-	-	4	8/8
<b>Coursework</b>	2	3	2	3	10/16
<b>Costs</b>	3	-	-	-	3/4
					<b>65/76</b>

*Strengths*

- Main program page has links to application procedures, people, information, courses, employment, and organizations
- Masters program overview identifies core content areas – instructional analysis, design, instructional production, instructional evaluation, and implementation and change
- Faculty information is extensive. Provides info about education, publications, and research
- Provides students with ‘goodwill ambassadors’ for multicultural inclusion and student support
- Masters and certificate programs both offered at a distance. Site also provides comparative information of both options.

*Weaknesses*

- Course info is only provided for some courses. Some course info is password protected.
- No link to graduate bulletin

The following table shows the total scores for all four schools.

Table 8. *Quality Scores*

	<b>SDSU</b>	<b>ASU</b>	<b>FSU</b>	<b>IUB.</b>
<b>Programs and Delivery</b>	10	10	9	10
<b>Costs</b>	3	3	4	3
<b>Program components</b>	11	11	10	11
<b>Areas of specialization</b>	13	12	12	16
<b>Faculty information</b>	6	8	4	7
<b>Admission criteria</b>	8	7	8	8
<b>Coursework</b>	13	5	4	10
<b>OVERALL</b>	<b>64</b>	<b>56</b>	<b>51</b>	<b>65</b>

Generally, the overall scores given to each school were intended to represent the quality of how their individual programs are presented. However, it became apparent during this evaluation that the ability to assess the dimensions of distinctiveness, growth producing potential, and timeliness, were directly dependent on the articulation of the information. If the information was poorly described, difficult to locate, or brief in its content, than the ability of the evaluator to assess the remaining qualities was compromised.

## Conclusions and Recommendations

The evaluation resulted in multiple observations that led to conclusions and recommendation in three areas.

- The established framework
- The evaluation process
- The schools themselves

The following are the primary results from each category:

*Conclusion:* The framework established, including the itemized categories and the subsequent indicators listed within each category, is a valuable tool for investigating program quality, but has limited effectiveness when looking strictly at information online.

*Recommendation:* Use the framework to determine the existence of specific program components and to assess their general representation via the internet, but consider other sources for analyzing quality as well. The items explored and the quality dimensions used are effective, but supplementary sources such as student opinion and face-to-face conversation with faculty and staff are necessary in order to gain a comprehensive depiction of program quality.

*Conclusion:* The framework designed revealed useful data, but the lack of interrelater reliability led to results that need to be substantiated by more than one methodology. These results represent only one data collection method performed and tested by the evaluator alone which did not provide for triangulation of data.

*Recommendation:* The evaluator recommends using the framework in combination with other data collection methods, such as student surveys or

interviews. This would increase the validity of the information collected. By the same token, having one or more objective parties test the usefulness of the framework on their own program or on the programs used in this evaluation, would verify the effectiveness of the framework as a measurement tool.

*Conclusion:* The format of information provided by each school on their program website directly impacted the perceived quality of the program's representation. The programs that received the highest scores for articulation had the highest scores overall because their timeliness, distinctiveness and growth producing potential were easier to assess when the information on the site was extensive, easy to understand and clearly articulated.

*Recommendation:* The evaluator recommends providing information on program websites that addresses important topics of information for students, but is also well articulated. For example, simply stating that there are scholarship and financial aid options available not particularly useful unless there is information about what those options are and how to take advantage of them.

*Conclusion:* Relative to the other three schools evaluated, SDSU provides well articulated and highly informative program information. While some components (course details, faculty information) were well presented and indicated a high-end program, there were also areas that could be improved based on observations made about other programs.

*Recommendation:* The evaluator suggests expanding the information about the objectives and competencies that students will be exposed to (consider FSU competencies information). Additionally, it is recommended that the

department examine the information provided to online students that differs from that provided to campus students and consider its potential usefulness to both groups.

### Further Study

In retrospect, this evaluation proved to be more complex than initially anticipated. While the results of this study provided informative data relative to the representation and design of EdTech graduate programs, there are several recommendations for further study that would validate the conclusions stated in this report.

A continuation of this study would require the incorporation of more than one interpretation of the data. Interrelater reliability is essential to establishing the applicability of this data to other schools or programs. Additionally, this report relied primarily on qualitative data which should be triangulated in a future study by other data collection methods such as a survey or interviews with program personnel.

Also, a consideration when approaching this type of evaluation in another study would be to establish a timeframe for repeating portions of the study in order to account for the ever-changing nature of online information. Some of the data presented here might become invalid with the redesign of a program's structure or online information.

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## References

- ASHE-ERIC Higher Education Reports, (2002). *Ensuring quality and productivity in higher education: An analysis of assessment practices*, 29(1), 1-171.
- Berquist, W.H. & Armstrong, J.L. (1986). *Planning effectively for educational quality*. San Francisco: Jossey-Bass Publishers.
- Blazey, M.L., Davison, K.S., Evans, J.P. (2000). *Insights to performance excellence in education*. Wisconsin: ASQ Quality Press.
- Bonstingl, J.J. (1992). *Schools of quality: An introduction to total quality management in Education*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Burrows, A. & Harvey, L. (1993). Defining quality in higher education – the stakeholder approach. In M. Shaw & E. Roper (Eds.), *Aspects of educational and training technology* (pp. 44-49). London: Kogan Page Limited.
- Education Criteria for Performance Excellence, Baldrige National Award Program, (2003). Retrieved October 15, 2003 from <http://>
- Ellis, B. (1993). Total quality management in an education and training context. In M. Shaw & E. Roper (Eds.), *Aspects of educational and training technology* (pp. 29-34). London: Kogan Page Limited.
- Endut, W.J.W., Abdullah, M., & Husain, N. (2000). Benchmarking institutions of higher education. *Total Quality Management*, 11(4/5), 796-799.
- Epper, R.M. (1999). Applying benchmarking to higher education: Some lessons from experience. [Electronic version] *Change*, 31(6), 24-31.
- Grant, R. (2001, November/December). Improving service quality benchmarks. *Educause*, 12-13.
- The Institute for Higher Education Policy. (2002, April). *Quality on the line: Benchmarks for success in internet-based distance education*.

- Muller, D. & Funnell, P. (1993). Exploring learners' perceptions of quality. In M. Shaw & E. Roper (Eds.), *Aspects of educational and training technology* (pp. 44-49). London: Kogan Page Limited.
- Richey, R.C., Fields, D.C., & Foxon, M., Roberts, R.C., Spannaus, T., & Spector, J.M. (2000). *Instructional design competencies: The standards* (3<sup>rd</sup> ed.). Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- San Diego State University, (2003). *Bulletin of the Graduate Division*. Retrieved September 24, 2003 from <http://edweb.sdsu.edu/newedweb/courses.htm>
- Santovec, M.L. (2003). A model for evaluating online courses. *Distance Education Report*, 7(8), 7-8.
- Upcraft, M.L., & Schuh, J.H. (1996). *Assessment in student affairs*. San Francisco: Jossey-Bass Publishers.

## Appendices

### Appendix A: College of Education Programs

This appendix describes briefly the different departments within the College of Education. The information here was obtained from the department websites.

#### *Administration, Rehabilitation, and Postsecondary Education (ARPE) –*

Conducts research, training, and education to enable individuals to work in a variety of leadership positions and to promote the integration of all individuals, including those with disabilities, into school, work, family, and community environments. (<http://www.interwork.sdsu.edu/>)

#### *Counseling and School Psychology*

Prepares graduates to perform as leaders in family, educational, and social systems and to work as professionals who specialize in the design and implementation of interventions that address a combination of human behavior, social, and educational concerns. (<http://edweb.sdsu.edu/csp/home/welcome.html>)

#### *Educational Leadership*

Develops graduates with leadership skills for pre-K-12 school systems by offering quality administrator development programs that focus on teaching, research, and service in the educational community. (<http://edweb.sdsu.edu/edleader/>)

#### *Educational Technology (EdTech)*

Prepares prospective educational practitioners, researchers, and leaders to combine the use of theory with development of technologies and learning systems that reflect current research on innovative technology use in education. (<http://edtec.sdsu.edu/mission.shtml>)

#### *Policy Studies in Language and Cross-Cultural Education*

Prepares professional bilingual and cross-cultural teachers, administrators and other educators who are capable of addressing the needs of ethnically and linguistically diverse learners through collaboration with schools, families and community. (<http://edweb.sdsu.edu/PLC/>)

### *Special Education (SPED)*

Provides educators and other professionals with the skills and knowledge to work with people with exceptionalities and their families. The program prepares special education teachers to work with children with disabilities and their families from birth through young adulthood, as well as those children who are gifted and talented.

(<http://edweb.sdsu.edu/SPED/SPED.html>)

### *Teacher Education (TE)*

Provides professional development for teachers throughout their careers, so that they may provide quality education for the diverse student population of California, through teaching, research, and service.

(<http://edweb.sdsu.edu/STE/mission.htm>)

Appendix B: Data Collection Instrument

		<b>SDSU</b>	<b>Arizona State</b>	<b>Florida State</b>	<b>U. of Indiana</b>
<b>Admission Criteria</b>	<i>*Application specifics</i>	X	X	X	X
	<i>*Entrance formula (if any)</i>	-	-	-	-
	<i>*Which admissions test (and which sections), and minimum score</i>	X	X	X	X
	<i>*Degree earned</i>	X	X	X	X
	<i>*Undergrad GPA</i>	X	X	X	X
	<i>*Prerequisites (course)</i>	X	-	-	-
<b>Costs</b>	<i>*Per unit cost of campus courses? Online courses?</i>	X	X	X	X
	<i>*Resident vs. non-resident tuition</i>	X	X	X	X
	<i>*Cost of course materials per semester (texts, subscriptions)?</i>	-	-	X	-
	<i>*Lab costs</i>	-	X	X	-
	<i>*Financial aid/scholarship options</i>	X	X	X	X

		<b>SDSU</b>	<b>Arizona State</b>	<b>Florida State</b>	<b>U. of Indiana</b>
<b>Programs and Delivery</b>	*Degrees	X	X	X	X
	*Certificates	X	-	X	X
	*Other programs available	X	-	X	X
	*Face-to-face, online, or blended instruction	X	-	-	-
	*Quarter system, semester, or open entry/open exit	X	-	-	-
<b>Program Components</b>	*Program of study (balance of required vs. electives)	X	X	X	X
	*Culminating experience (thesis, project, exam), and student "choice" in determining his/her path	X	X	X	X
	*Course priority	-	-	-	-
	*Residency requirements	X	X	X	X
	*Credit for work experience or other classes	X	X	X	X
<b>Areas of Specialization</b>	*Industry – government, non-profit, corporate (for-profit), education, military	X	-	-	-

		<b>SDSU</b>	<b>Arizona State</b>	<b>Florida State</b>	<b>U. of Indiana</b>
	<i>*Subject specific</i>	X	X	X	X
<b>Course Facilitation</b>	<i>*Instructors (doctorate professors, associate professors, lecturers, graduate assistants)</i>	X	-	X	-
	<i>*Delivery modalities</i>	-	-	-	-
	<i>*Schedule – hourly commitment per course, scheduled class meetings per week</i>	X	X	-	X
	<i>*Enrollment – (online, in person, by phone)</i>	-	-	-	-
<b>Instructional Strategies</b>	<i>*Discussion</i>	X	-	-	X
	<i>*Face-to-face (lecture, presentations, guest speakers)</i>	X	X	X	X
	<i>*Electronic (forums, list-servs, chats)</i>	X	-	-	X
	<i>*Group work</i>	X	X	-	-
	<i>*Peer-teaching</i>	-	-	-	-
	<i>*Self-paced</i>	-	-	-	-
	<i>*Problem-based learning</i>	-	-	-	-

		<b>SDSU</b>	<b>Arizona State</b>	<b>Florida State</b>	<b>U. of Indiana</b>
<b>Coursework</b>	<i>*Exams</i>	X	-	-	X
	<i>*Projects</i>	X	X	-	X
	<i>*Client projects</i>	X	X	-	-
	<i>*Internships</i>	X	X	X	X
	<i>*Independent study</i>	X	X	-	X
<b>Faculty Prestige</b>	<i>*Education (schools)</i>	X	X	X	X
	<i>*Degrees (subject, number, type)</i>	X	X	X	X
	<i>*Research/publications</i>	X	X	X	X
	<i>*Grants</i>	X	X	-	X
	<i>*Awards/recognitions</i>	X	X	-	X
<b>Support Opportunities</b>	<i>*University procedures (payments, parking, employment)</i>	-	-	X	-
	<i>*Program procedures (enrollment, scheduling, graduation)</i>	-	X	-	-
	<i>*Program orientation</i>	X	X	-	X
	<i>*Career guidance</i>	X	X	X	-
	<i>*Tech support</i>	X	-	-	X

		<b>SDSU</b>	<b>Arizona State</b>	<b>Florida State</b>	<b>U. of Indiana</b>
	<i>*Availability of faculty/support personnel (times, methods)</i>	-	-	-	-
<b>Formal Interaction opportunities</b>	<i>*Student association</i>	X	X	X	X
	<i>*Research</i>	-	-	-	X
	<i>*Other interaction opportunities to build community (regardless of delivery modality)</i>	-	-	-	-
<b>Informal Interaction Opportunities</b>	<i>*Social events</i>	X	-	-	X
	<i>*Networking events</i>	X	-	-	-
	<i>*Committees</i>	-	-	-	-
	<i>*Conferences</i>	X	X	-	-