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Evaluating E-Learning

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Glossary

- g0005 **Blog** – A website on which the author keeps a record or log of whatever he/she wants.
- g0010 **Course-management system** – An Internet-based system for organizing and operating a learning and teaching course.
- g0015 **Blended courses** – The combinations of face-to-face and online or distributed instruction.
- g0020 **E-learning** – Learning utilizing any form of electronic technology or media.
- g0025 **Evaluand** – An object of evaluation.
- g0030 **Evaluation** – Assessing the merit or worth of an evaluand.
- g0035 **Metaevaluation** – Evaluation of evaluations.
- g0040 **Personal-learning environments** – The combinations of digital learning resources learners assemble to bring information to them and through which they can communicate with others to improve their own learning.
- g0045 **Stakeholder** – A person with interests in the evaluation of an object.
- g0050 **Web analytics** – An analysis of how viewers are using a website.
- g0055 **Wiki** – A website that allows multiple authors to jointly create the contents.

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Evaluating E-Learning

p0005 Hopeful visions for using new technologies are transforming the nature of learning and possibilities for teaching people of all ages (Wesch, 2007). Multiple participants' innovations with technology-mediated learning require dynamic evaluative inquiry (Allen and Seaman, 2007; WestEd, 2008). Evaluators identify evolving evaluation objects (evaluands) in idiosyncratic combinations, involve stakeholders in prioritizing their values to select from thousands of possible evaluation questions, gather, analyze, and report answers to those questions, and make recommendations for action, while simultaneously meta-evaluating and improving their evaluation activities.

p0010 This article employs a flexible evaluation framework (Williams, 2006), exemplified in most articles of this volume and in evaluation literature, to illustrate a way to conduct e-learning evaluations (see Figure 1). Consideration of

challenges and opportunities facing e-learning participants and evaluators, as educational uses of technologies proliferate, complete the article.

As Figure 1 illustrates, evaluation involves several activities for reaching judgments by clarifying what should be. This usually entails understanding the evaluation context by consulting with stakeholders to identify evaluands to evaluate, clarify criteria that stakeholders value, and compose questions about the evaluands' nature and performance. Then, evaluators collaborate with stakeholders to determine what is by clarifying methods to effectively answer the questions, and collecting and analyzing associated data. Finally, evaluators and stakeholders juxtapose what should be with what is to judge how well what is meets what should be, make recommendations, and meta-evaluate the entire process and results.

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Elements of E-Learning Evaluation

After illustrating how activities summarized in Figure 1 facilitate evaluation of e-learning experiences and results, an extended case is presented to demonstrate processes for clarifying what should be, describing what is, and comparing them.

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Clarifying What Should Be

Clarifying what should be involves identifying context, stakeholders, evaluands, and criteria to generate evaluation questions.

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Context

Beginning an e-learning evaluation involves understanding the context and setting the stage for deciding who the stakeholders will be, what evaluands will be studied, and what the criteria for judging the evaluands will be. For example, Table 1 shows four scope levels that are often considered in e-learning contexts (Graham, 2006). At the institutional and program levels, administrators are often the primary stakeholders, while at the course and activity levels, faculty and learners are often the primary stakeholders.

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Context also includes other variables summarized in Table 2: The setting for e-learning, the evaluation purpose, who is evaluating, who is learning, evaluation formality, the evaluand's stage of development, and evaluability of the evaluand. Diversity of contexts complicates the evaluation

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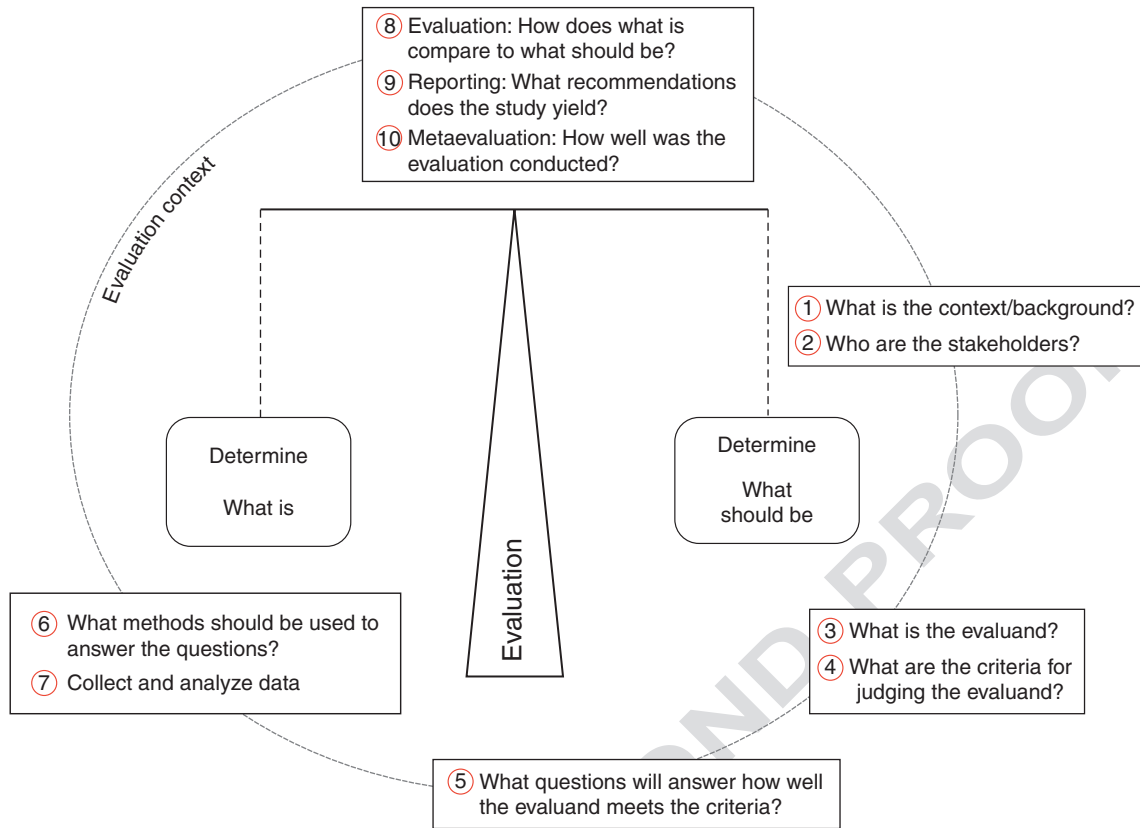


Figure 1 Key components in the evaluation process.

Table 1 Scope, stakeholders, and possible evaluands in an e-learning context

Scope of context	Primary stakeholders	Sample evaluands	Example criteria
Institutional level	Administrators	E-learning initiative Online course offerings	Cost effectiveness Enrolments
Program level	Administrators	E-learning policies Distance-learning program	Completion rates/satisfaction Enrolments
Course level	Instructor/learners	Online course	Student satisfaction Student access
Activity level	Instructor/learners	Course activity	Resource/tech requirements Student satisfaction, learning, engagement Participant time involvement

of e-learning; however, clarifying contexts involved as part of the evaluation process helps focus selection of stakeholders, possible evaluands or their characteristics, and criteria for judging the evaluands, and simplifies data gathering and interpretation.

The diversity of possible e-learning evaluation contexts is apparent in a review of article titles in the *International Journal on E-Learning*. The October 2008 issue includes articles on online communities, blended learning, students' perceptions of value of online learning, self-regulation by learners, designing and implementing courseware and systems, and many others.

Stakeholders

To clarify what should be, the contextual issues and others discussed below are clarified, usually through negotiation among stakeholders (those internal to the learning process such as students, teachers, and instructional designers, as well as those who have a more external role, such as some administrators and independent evaluators), as led by both internal and external evaluators. Who are the stakeholders? Who should have a say regarding the quality of e-learning associated with various combinations of technologies, pedagogies, learners, and teachers?

10010 **Table 2** Context variables and examples associated with e-learning

Context variables	Examples
Setting	<ul style="list-style-type: none"> • Distance • Face to face • Blend of both
Purpose	<ul style="list-style-type: none"> • Formative (for improvement) • Summative (for judgment)
Who is evaluating?	<ul style="list-style-type: none"> • Learners (internal) • Teachers (internal) • Instructional designers (internal and external) • Administrators (internal and external) • Professional evaluators (internal and external)
Who is responsible for learning?	<ul style="list-style-type: none"> • Learners through personal-learning environments • Learners through institutional learning-management systems under instructor direction
Formality of evaluation	<ul style="list-style-type: none"> • Informal • Formal
Evaluand development stages during which evaluation is being conducted	<ul style="list-style-type: none"> • Before development and implementation • During implementation • After implementation
Evaluability of the evaluand	<ul style="list-style-type: none"> • Stability of the evaluand • Availability of evaluation resources • Availability of guidance from literature • Interest and attention of stakeholders

in evaluations of their learning experiences and outcomes as growing uses of personal-learning environments and Web 2.0 tools suggest should happen. An Internet search on personal-learning environments provides videos and documents exploring how learners are using emerging tools to personalize e-learning.

A growing literature explores the nature of learners as key stakeholders in evaluating e-learning. For example, Clifford (2006) and Ito *et al.* (2008) conducted studies of learners' uses of social media and other technology tools to identify values, habits, learning styles, and characteristics of e-learning stakeholders. Evaluations of e-learning expand this growing literature and invite stakeholders to clarify their idiosyncratic values and evaluands. p0060

Evaluands

What evaluands do stakeholders care most about and how do they define them and the issues associated with them? This is one of the more complicated questions to be answered in clarifying what should be in e-learning. Why? This is because stakeholders often struggle to agree about what the evaluand is in e-learning. **Table 3** lists a range of categories of evaluands often considered in e-learning contexts. The growing literature on the interface between technology, pedagogy, and content knowledge (TPCK) suggests most evaluands are complex combinations of these and other variables. To evaluate isolated effects of technological or pedagogical interventions does not make sense (Koehler and Mishra, 2008), as the literature on no significant differences due to technology indicates. Technology never operates alone in learners' personal-learning environments or in curriculum-supporting learners (Oblinger and Hawkins, 2006). p0065

Criteria

What are stakeholders' values, criteria, and standards for judging evaluands as they operate in particular contexts? Given the variety of e-learning stakeholders and their definitions of evaluands they want to evaluate, there are many criteria to consider in evaluating e-learning (see **Table 3** for examples). Most criteria may be organized as learning quality (knowledge, skills, and dispositions as measured through direct and indirect performance indicators or learning outcomes), efficiency (lower costs for equal or higher performance), and improved access to learning opportunities (Graham, 2006) – or in terms of inputs, processes, and outcomes for each of five pillars of e-learning (Lorenzo and Moore, 2002): cost effectiveness and institutional commitment, learner access, learning effectiveness, student satisfaction, and instructor satisfaction. p0070

In addition, industry standards for judging subsets of a learning experience might be considered important by some stakeholders and could be taken into account. For example, there are standards for web-based e-learning p0075

p0050 Logically, the most important stakeholders for e-learning are e-learners, ranging from preschool children to university students, to people of all ages participating in social networks and/or learning on their own, to adults participating in corporate-training events. Learners are the ultimate evaluators of the knowledge and learning environments they receive; so e-learning evaluations should take their views, needs, and values into account along with the views of teachers, parents, administrators, educational company owners, government leaders, instructional designers, and others who care about the learners.

p0055 In recent years, evaluation theorists have promoted various participatory evaluation approaches (Cousins and Whitmore, 1998) to identify and include values of all people with interests in evaluands, particularly recipients of services, such as learners. Learner participation is especially important in e-learning evaluation because increasingly, there is no designated teacher in many e-learning situations. Learners' values and needs are becoming more essential

10015 **Table 3** Examples of a few evaluands and criteria in diverse e-learning contexts

<i>Categories of evaluands</i>	<i>Example evaluands</i>	<i>Example criteria</i>
Content	Module	Quality
	Materials	Accuracy
	Course	Cost
Pedagogy	Pedagogical assumptions	Access
		Student engagement
	Course activities	Student satisfaction
		Student learning
Technology	Course-management systems	Access to technology
	Production and delivery tools	Student/instructor technology skills
	Labs/specialized equipment	Cost of infrastructure
		Scalability
Instructor/learners	Online teaching/learning knowledge and skills	Instructor training
	Instructor/students dispositions toward e-learning	Instructor/student comfort in online setting
	Independent study model	Cost effectiveness
Business model	Teacher-led e-learning model	Enrolments
	Open-learning models	Completion rates/satisfaction
	Others	Scalability Balance between human and materials interaction

called Sharable Content Object Reference Model or SCORM (Advanced Distributive Learning, 2004) and for content areas such as math (National Council of Teachers of Mathematics, 2000) and reading (International Reading Association, 2004).

Questions

Exploring the four components of the evaluation framework yields what should be or criteria and standards that evaluators translate into questions stakeholders want answered so they can evaluate what is against those criteria. For example, in a university economics department, faculty and students as key stakeholders might agree to ask if the computer programs they anticipate buying to train students in economic statistics meet standards such as minimal cost, easy Internet access to minimize lab use, large data-set capacity, reduced need for faculty mentoring, and high student-performance scores when using them, while also meeting SCORM and other technical standards. Once criteria are identified, articulated evaluation questions focus on assessing how well competing computer programs meet these standards.

Clarifying What Is

Once what should be and associated questions are established, e-learning evaluators select methods, and gather and interpret data to answer the question of what is.

Selecting methods to fit questions

Funding pressure has grown to evaluate with randomized control group trial studies. However, professional evaluators (AEA, 2003) and other experts (AERA, 2003) agree that answering questions about what is compared to what should be involves quantitative, qualitative, or mixed data, collected through many designs including experiments, quasi-experiments, surveys, and case studies.

Likewise, a review of methods and results for evaluating e-learning for K–12 children (WestEd, 2008) suggests that the most useful evaluation studies triangulate multiple stages and methods to replicate and confirm findings. In this review of seven online learning-program evaluations, the US Department of Education guide identifies challenges and recommends methods for meeting needs of multiple stakeholders, building on existing literature, recognizing evaluands as multifaceted, doing comparison studies whenever possible, gathering valid data, and moving stakeholders to action with evaluation results. Many resources for facilitating K–12 and higher education e-learning evaluations are noted.

Data gathering and analysis

Depending on the questions asked, data gathering may involve observing, interviewing, artifact reviewing, testing, surveying, and measuring unobtrusively (e.g., web analytics). Analyses include statistical description and hypotheses testing to make inferences about the power of findings as well as thick qualitative descriptions and identification of patterns and themes to facilitate interpretation of results.

The seven studies mentioned earlier (WestEd, 2008) illustrate these multimethods. The evaluators used comparison studies when possible but remained flexible in order to address emerging interests of multiple stakeholders through multistage studies that addressed formative and summative questions. They used surveys, observations, interviews, tests, and computer-usage data to examine the implementation and impact of distance-education programs, teacher-training programs, self-paced online classes, blended courses, online mentors, digital libraries, online learning activities and diagnostics, video-conferences, podcasts, blogs, games, and other digital tools to enhance e-learning.

Completing the Evaluation

Evaluation: Comparing what is to what should be

The heart of evaluation involves comparing the current activities and/or outcomes associated with an evaluand to the criteria that stakeholders care about and deciding how

worthy or meritorious that evaluand is. E-learner could make this comparison regarding their own personal-learning environment and their learning process and outcome goals, asking if they are learning what they want and need from sources they select. Parents could compare what their child is learning while participating in a computer lab to what they want them to learn or what the lab sponsors claim they should be learning. A business could compare how efficiently they are able to train their employees using an Internet-based simulation and how well employees can perform before and after training. In each case, evaluation compares described reality to the stakeholders' ideals and invites them to make formative or summative decisions about the evaluand.

Carliner and Shank (2008) combine many evaluations made by experts in e-learning based on their experiences and evaluations of efforts to use innovative technologies to enhance learning. They conclude that e-learning has been over-sold and efforts to evaluate and enhance e-learning should be more critical and rigorous. Several authors in their edited book note that e-learning has not grown as fast as projected and some stakeholders treat e-learning as another educational fad – demanding the latest new developments without demanding evidence that the results are effective or available cost efficiently. A few meta-analyses have been done of e-learning (see several in the section titled 'Further reading') but conclusive evidence regarding the effects of technology, pedagogy, teacher content knowledge, and the many other variables discussed in this article continues to elude researchers. Ongoing evaluation of e-learning over time may estimate how well educators using technology to enhance learning are succeeding and how e-learners judge the quality of their experiences in those programs as well as their own personal-learning environments.

Reporting and recommendations

Reports may be automatically generated and shared efficiently by posting user ratings, as exemplified on Amazon.com and other websites. Khribi *et al.* (2008) encourage such web-usage mining to generate recommendations from internal consumers' perspectives. Usually, findings are presented in written and/or oral reports, for review by stakeholders, with encouragement to collaborate with evaluators to generate and implement recommendations.

Recommendations may urge stakeholders to buy an e-learning tool after comparing it to standards, to revise an e-learning curriculum to better meet standards, or to reject an e-learning data-management system from further consideration. Stakeholders who will need to implement them are in the best position to decide how realistic and sensible recommendations are, even though they usually benefit from collaboration with external third-party evaluators who are less invested in the outcomes.

Metaevaluation

Professional evaluators have collaborated with stakeholder groups to create standards for judging evaluations (Sanders, 1994) and principles to guide sound and ethical evaluation practice (AEA, 2004). Stakeholders of e-learning evaluations can use these resources to ensure that the evaluations proposed and implemented are trustworthy, valuable, and useful. However, very few examples of e-learning stakeholders using evaluation standards and principles are found in the literature (Williams and Campbell, 2001).

Extended Case Vignette

To holistically illustrate principles and practices identified above and demonstrate how e-learning can be evaluated, a sample study is analyzed below. In this case, an online e-learning activity was integrated into a face-to-face university class. Such blended learning has been called the single greatest unrecognized trend in higher education (Young, 2002: A33) and was also identified by the American Society for Training and Development as one of the top ten trends in the knowledge-delivery industry (Rooney, 2003). Examples from informal social network-based learning, K-12 schooling, adult education, and corporate training could also be used to illustrate the use of e-learning evaluation.

Clarifying What Should Be

The framework activities presented in **Figure 1** for clarifying what should be are illustrated in this example.

Context

A university instructor decided to create a class wiki to encourage class members to build a learning community. She invited students to join her in contributing weekly to the wiki by summarizing readings, issues, and accomplishments associated with their own research projects, questions they wanted to answer, and responses to others' entries. Throughout this innovative experimentation, the instructor invited the students to internally evaluate the experience with her.

The scope of the evaluation study was focused on the wiki activity within a blended setting. The instructor wanted to formatively refine use of wikis or some form of virtual collaboration for use throughout the semester and beyond. Many of the students were summatively judging whether they would ever participate in a class using wikis in the future. The instructor and the students together were internally evaluating their own use of the wiki and associated learning. Although this process was initiated by the instructor as a way to enhance the students' learning through an institutional-management system, the students were free to interpret the use of the wiki in

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various ways and could make it part of their own personal-learning environments to whatever degree they preferred.

p0155 This evaluation was formal in that the instructor planned to gather data systematically from the students by observing their use of the wiki and by interviewing them. The evaluation continued through all stages of the wiki's development as the instructor interviewed students about her plan and invited them to join her in evaluating their use of and learning from it during and after implementation of the wiki. The wiki was evaluable because the instructor introduced and monitored it in a stable way, provided sufficient evaluation resources by making evaluation of the wiki a part of the course, and built upon literature she had reviewed regarding the use of class wikis. The instructor and students, as co-stakeholders, were willing to participate in making the experience evaluable.

s0095 p0156 **Stakeholders' evaluands, criteria, and questions**

The stakeholders were the instructor and students using a class wiki. The instructor was tempted several times to dominate the study because the wiki was her idea and she would be teaching this class after the students finished as well. However, she wanted to understand the students' experiences and judgments of the wiki activity too. So, she invited them to not only evaluate it but to tell her at the earliest stages possible what their expectations and worries were concerning use of the wiki. They had the opportunity to collaborate with her in creating the wiki and in evaluating this learning activity and their own learning while using it.

p0165 The most apparent evaluand was the class wiki. That was what the instructor explicitly invited the students to jointly evaluate. But she also invited them to help create it. So, the wiki emerged during its evaluation and changed throughout the semester by accretion from the entries participants made. Each student chose to contribute to the wiki in slightly different ways, and thereby made it their own to different degrees. Some students gravitated to some parts of the wiki more than others and their views of the value of the wiki modulated, as did their learning associated with what they put into and took from the wiki activity. Thus, the evaluand became a combination of the Internet and computers which made creation and use of the wiki possible, the pedagogical purposes guiding the instructor's identification of this learning community-building activity, the wiki product the collaborators generated together, the differential energy and interest given to this activity by the students, and the related learning activities and outcomes in which they participated.

p0170 The instructor's main criteria for the wiki activity were that the students would participate in using it to record their experiences and understandings associated with

their readings and projects and they would learn better by participating in a collaborative learning community. The students' criteria varied from being able to earn a good grade by meeting the instructor's expectations sufficiently, to learning from the wiki activity, to expanding their personal-learning environments. They wanted to meet not only their class-learning goals but also their own personal-learning goals.

Based on the context, stakeholders, evaluands, and criteria, the main evaluation questions for this emerging evaluation became:

1. Do the students participate to the instructor's satisfaction in using the wiki?
2. Do the students learn better by participating in the wiki activity than they would have without participating?
3. Do the students meet additional personal goals to their satisfaction?

Clarifying What Is

The instructor selected formal methods for gathering and interpreting data regarding the e-learning associated with the students' use of the wiki. However, the students played key roles in that data collection and analysis and therefore modified it from the instructor's original plan.

Selecting methods to fit questions, data gathering, and analysis

As this was a class-level study, the instructor could have randomly assigned half the students to participate with the wiki and the other half to form a control group. However, she knew they would be referring to the students' use of the wiki during class discussions; so she decided she would compare the students' behaviors, performance, and attitudes to data she had collected from students in previous semesters and to the students' own judgments of their experiences and views before, during, and after the class.

In addition to her analysis of the wiki itself and the students' participation in writing entries in it, the instructor assessed students' performance on the course-learning outcomes and interviewed them about their learning experiences, opinions regarding their growth, and how well they achieved their personal goals associated with the wiki activity, if they had any. She also invited the students to interview one another about their experiences and individual goals they had set for themselves. The analyses were both quantitative and qualitative. The instructor counted the number of entries per student and the length of their entries as estimates of their level of participation. But she focused mainly on the quality of the students' entries, descriptions of their experiences and opinions

about their growth, and understanding what their personal goals had been, how they evolved, and how well they were achieved.

s0110 **Completing the Evaluation**

p0195 The teacher invited the students to collaborate with her in comparing their experiences to their goals and to identify recommendations for continually evaluating and improving the use of technology to enhance learning in future semesters.

s0115 **Comparing, reporting, recommending, and metaevaluating**

p0200 In response to the evaluation questions, which reflected the instructor's and students' criteria, they found that 85% of the students participated very actively (with more than 50 words per entry and made entries in the wiki at least 90% of the 30 times they could have contributed). This was more than satisfactory to the instructor. In addition, the instructor judged that the students learned better by participating in the wiki activity than they would have without it, based on her experiences with prior classes and the students' ratings of their learning before, during, and after the semester. Finally, the majority of the students noted that they had developed and accomplished several additional personal goals to their satisfaction.

p0205 As this evaluation was completely internal and formative, the instructor did not write up a report but shared the results with the students and with her rank-advancement committee to certify that she was seeking feedback on her teaching initiatives and would continue using the wiki as an e-learning tool because most students said it was helpful. She noted that a few students did not participate in using the wiki and they did not learn as well or have as positive views of the content as did those who participated. She visited with them about their experiences and decided she should explore ways to engage future students who do not participate in the wiki activity. The students who participated were so positive about their additional learning and achieving of personal goals that she decided to continue the wiki activity the coming semester with just a few modifications.

p0210 Students who participated most in the wiki activity also reported they expanded their personal-learning environments to include blogs, wikis associated with other classes, and tools associated with other social media they believe will enhance their formal education, personal, and informal learning experiences.

p0215 The instructor did not metaevaluate her evaluation of the wiki activity before or during its implementation, which she learned later is the recommended process. But she was able to go to a website where a checklist

(Stufflebeam, 1999) guided her through several key questions regarding the evaluation in terms of metaevaluation standards. She plans to use what she learned from this self-evaluation to conduct better studies of her teaching and her students' e-learning in subsequent semesters.

Challenges and Opportunities

Challenges

p0220 Major challenges with evaluating e-learning include understanding how to engage stakeholders in clarifying their evaluands of interest and criteria for judging them, and helping stakeholders systematically gather and analyze data to compare against those ideals. Metaevaluations are needed to raise the quality of e-learning evaluations.

p0225 Why do these challenges persist? There is a tendency to champion new learning technologies without collecting associated evidence. There are also difficulties evaluating phenomena that are constantly changing and as complicated as those found in e-learning situations. As the WestEd (2008) studies show, evaluators of e-learning must anticipate difficulties and adjust designs to skillfully complete helpful studies. Multiple sources of information and replications of studies are needed to reach dependable conclusions.

Opportunities

p0230 In spite of challenges, there are hopeful opportunities associated with evaluation of e-learning. Government efforts to encourage evaluation of various forms of e-learning instruction are growing. Many stakeholders in the private sector also acknowledge that data-based decisions can make their efforts more profitable, ethical, effective, and efficient. There have been significant advances in evaluation theory and methodology, which can enhance e-learning evaluations.

p0235 Perhaps most hopeful is the growth in social networks and other forms of communication that encourage learners to take responsibility for their own learning, whether in formal education settings or on their own. Development of personal-learning environments implies development of personal-evaluation skills through which learners decide what resources to use to meet their learning goals, test themselves through reality-based performance opportunities, and share their findings and self-evaluations with others through various peer-based reviews.

p0240 Research into e-learning itself will continue but inquiry into the evaluation of e-learning must also proceed. This field is dynamic and involves people of all ages and in all walks of life who are shaping their criteria and definitions of what constitutes e-learning success faster than evaluation can evolve by itself.

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See also: Curriculum, digital resources and delivery (00063); Instructional System Provided Feedback (00312); Peer and self assessment (00313); Assessment in schools - ICT and technology (00321); Assessment and Instructional Planning (00351); Challenges of developing and implementing formative assessment practices in schools (00357); Assessment and learning theories (00359); Formative Assessment (00360); Assessment and the Regulation of Learning (00362); Summative Assessment by Teachers (00363); Leadership and technology (00436); Learning as inquiry (00495); Learning from multiple information sources (00496); Learning outside of school (00525); Peer interaction and learning (00529); Technology Literacy/Fluency, Concepts of (00694); Informal settings, Tech for learning in (00702); Computer Games, Learning through (00704); Evaluating the Implementation of Educational Technology (00712); Classroom use of tech to manage instruction (00731); Inquiry Skills, Tech supports for acquiring (00734); Lifelong Learning, Tech supports for (00737); New Media, Learning from (00740); Internet-based education, Secondary (00755); Achievement in Schools, Media Use and (00759); Technology and Learning: Overview (00762); Effective use of technology in teaching and learning (00867); Progress Measurement (00894); (01056); Purposes of evaluation in education (01592); Defining quality in evaluation (01593); Evaluation models (01594); Needs assessment in Education (01596); Internal and external evaluation (01597); The history of evaluation (01599); Moral and ethical issues in evaluation (01601); Cultural Issues that Can Affect the Validity of Educational Evaluations (01602); Evaluation and accountability (01604); Evaluation use/utilization (01606); Costs in evaluation studies (01607); Evaluation Methodology (01608); Qualitative evaluation methods (01609); Quantitative approaches to multi-site and multi-level evaluation (01610); Longitudinal evaluation designs (01611); The role of stakeholders in educational evaluation (01613); Setting evaluation standards (01614); Evaluation reporting and communicating (01616); Curriculum evaluation (01617); Program Evaluation (01618); International evaluations (01635); Methods to evaluate technology (01640); Evaluating informal/alternative educational settings (01646); An Evaluation Framework for e-Learning in the Arab World (01708).

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Relevant Websites

- <http://blogs.aace.org> – Association for the Advancement of Computing in Education (AACE), with information on e-learning and related topics.
- <http://www.aace.org> – Association for the Advancement of Computing in Education, International Journal on E-Learning.
- <http://link.brightcove.com> – Brightcove, Wired Campus TV.
- <http://chronicle.com/blog/Wired-Campus/5> – Chronicle's Wired Campus Newsletter; Chronicle of Higher Education Information Technology.
- <http://online-journals.org/i-jet> – Online Journals, International Journal of Emerging Technologies in Learning (IJET).
- <http://www.shambles.net> – Shambles, Training Evaluation.
- <http://www.sreb.org> – Southern Regional Educational Board, Educational Technology Cooperative.
- http://video.google.com/videosearch?q=personal+learning+environments&ie=utf-8&oe=utf-8&rls=org.mozilla:en-US:official&client=firefox-a&um=1&sa=X&oi=video_result_group&resnum=4&ct=title# – Videos on Personal Learning Environments.
- <http://www.inacol.org/research/nationalstandards/>

Non-Print Items

Abstract:

Technological innovations have spurred exponential use of electronic resources for learners of all ages over the last decade. These global developments also require continual advancement of electronic e-learning evaluation. Evaluation is the process of clarifying what should be and comparing that to what is, to facilitate evaluative decisions about success and ways to achieve it. This article outlines a process for doing evaluations of e-learning and identifies common critical-evaluation elements. An extended case vignette of an e-learning evaluation and references to others and related literature illustrate the use of these critical elements and associated emerging results.

Keywords: Distance education; E-learning; Evaluation; Internet communication; Online learning; Online systems; Personal-learning environments; Social networks; Stakeholders; Technology; World Wide Web

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