

# **Evaluation for Educational Technologists**

## EDTECH 505

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### **Course Description** (from [BSU Graduate Course Catalog](#))

Procedures for evaluating educational programs, training systems, and emergent-technology applications. PREREQ: EDTECH 501, EDTECH 503.

### **Plan of Study Impact**

EDTECH 505 is a required course for the educational technology master's degree programs. The major assignments for the class are important pieces of work that will be presented in the student's final electronic portfolio.

### **Professional Standards Addressed**

Students who successfully complete EDTECH 505 will have met selected standards written by a three organizations. the Association for Educational Communications and Technology (AECT), the International Society for Technology in Education (ISTE), and the International Board of Standards for Training, Performance, and Instruction (IBSTIPI). The AECT standards are recognized by the National Council for Accreditation of Teacher Education (NCATE), which is the body that accredits Boise State University's College of Education.

## Course Texts

### REQUIRED

*The ABCs of evaluation* (3<sup>rd</sup> Ed.)  
By John Boulmetis and Phyllis Dutwin  
San Francisco, PA: Jossey-Bass  
ISBN: 978-0470873540

### HIGHLY RECOMMENDED

APA Style Manual, 6<sup>th</sup> Edition  
ISBN: 978-1433805615

*This book is recommended because as a graduate professional, you are expected to correctly document and cite sources using the APA guidelines.*

## Students are expected to have

- A personal, internet-connected computer to which you have **regular** access
- Access to streaming multimedia
- Hardware and software that allows for chat via voice and/or video via the computer
- Access to desktop productivity software
- Materials downloaded from the course learning management system

## Course Goals

1. Define a number of terms related to the field of evaluation and research and apply them to various projects
2. Describe what is meant by evaluation and its role in educational technology
3. Discuss the rationale for conducting an evaluation
4. Identify the role of and audience for evaluation
5. Describe an “Evaluator’s Program Description” and the uses for one
6. Describe similarities and differences between evaluation models, their components, and how they contrast with research models
7. Discuss types and levels of data as well as data collection tools
8. Discuss the issue of sampling as it applies to evaluation
9. Describe the rationale for and the components of an evaluation report
10. Select appropriate evaluation strategies and procedures for a given educational program or instructional product
11. Successfully collaborate on various evaluation projects

## Course Objectives

1. **Define a number of terms related to the field of evaluation and research and apply them to various projects**

*Define terms related to...*

1. the general practice of evaluation
2. types of evaluation (formative, summative, etc.)
3. levels of evaluation (expert, one-to-one, etc.)
4. data and data analysis

*Apply the concepts in the context of...*

5. A case scenario of a program's evaluation
6. Selected product evaluation projects
7. An authentic program evaluation planning document

2. **Describe what is meant by evaluation and its role in educational technology**

1. State commonalities and differences between types of evaluations
2. Characterize the differences between a program's efficiency, effectiveness, and impact
3. Discuss the reasons why educational technologists should conduct evaluations

3. **Discuss the rationale for conducting an evaluation**

1. State the benefits and limitations of evaluation
2. List factors that help ensure a successful evaluation
3. Describe how one might use evaluation results

4. **Identify the role of and audience for evaluation**

1. Differentiate between monitoring and evaluation
2. Discuss the role of evaluation within planning for programs or products
3. State how evaluation results have an impact on decision making

5. **Describe an "Evaluator's Program Description" and the uses for one**

1. State the purpose of an evaluator's program description (EPD)
2. Describe the components of an EPD
3. Describe how an evaluator develops and uses an EPD

6. **Describe similarities and differences between evaluation models, their components, and how they contrast with research models**

1. Describe at least two different evaluation models and their features
2. Detail the component parts of an evaluation format  
Differentiate between "research" and "evaluation"

7. **Discuss types and levels of data as well as data collection tools**
  1. Discuss the differences between quantitative and qualitative data
  2. State the different levels of data that an evaluator might encounter
  3. List at least five different instruments that one might use to collect data
  
8. **Discuss the issue of sampling as it applies to evaluation**
  1. Discuss the difference between a “population” and a “sample”
  2. State why a sample might be preferable for an evaluator to use
  3. Describe five different kinds of sampling
  
9. **Describe the rationale for and the components of an evaluation report**
  1. State reasons why one might need to write a final evaluation report
  2. Describe how one might account for the type of audience for an evaluation report
  3. List the seven sections of a prototypical evaluation report
  
10. **Successfully collaborate on various evaluation projects**
  1. Plan and conduct a problem analysis as it relates to a selected program or product
  2. Develop and apply a criterion-based measurement for a selected program or product
  3. Create and conduct a formative evaluation for a selected program or product
  4. Create and conduct a summative evaluation for a selected program or product
  5. Create a strategic plan as it applies to an organization’s educational technology goals
  
11. **Select appropriate evaluation strategies and procedures for a given educational programs or instructional products**

# ASSIGNMENTS

Details of the assignments will be linked from documents available on the course website.

Reading Assessment (20% of overall grade)

Part 1: Individual (30%)

Part 2: Group (70%)

Evaluation Projects (60% of overall grade)

2 Individual (70%)

2 Group (30%)

Discussion Board Writings and Participation (20% of overall grade)

## Major Projects

### Project #1: Reading Assessment (group project)

Following your reading of the course text, you will submit a short composition (Part 1), and you'll work with one to two other people to complete a test with short-answer questions (Part 2).

### Project #2: Evaluators' Program Description (group project)

Boulmetis and Dutwin explain the "[Evaluators' Program Description](#)" in Chapter 4. Using the template they provide (see examples 4.1 - 4.4, found on pages 85-91), the group will create an EPD using a GoogleDoc spreadsheet.

### Project #3: Evaluation Proposal (individual)

The "Evaluation Proposal" is essentially Part 1 of the "Evaluation Report." It is listed as a separate project because it must be approved (and possibly edited/revised) before one can start the actual evaluation project. The proposal follows a specific format that will be provided.

### Project #4: Web-based Survey (group project)

Working in groups, students will create an electronic survey that asks evaluative questions about some instructional website. Each group will create a report that reports survey results and the analysis of the data. The report follows a specific format that will be provided.

### Project #5: Evaluation Report (individual)

The "Evaluation Report" is an individual project that describes the outcomes of small-scale evaluation project. The report follows a specific format that will be provided. The report will be submitted for peer review in addition to review by the course instructor.

**Course calendar and due dates will be linked from Moodle.**

## Standards Related to Evaluation from the Association for Educational Communications and Technology

(Earle, 2005)

<b>Standard 1: DESIGN</b>	
1.1 Instructional Systems Design (ISD)	
1.1.5 Evaluating	<p>1.1.5.a Utilize a variety of assessment measures to determine the adequacy of learning and instruction.</p> <p>1.1.5.b Demonstrate the use of formative and summative evaluation within practice and contextualized field experiences.</p> <p>1.1.5.c Demonstrate congruency among goals/objectives, instructional strategies, and assessment measures</p>
<b>Standard 2: DEVELOPMENT</b>	
2.0 (includes 2.0.1 to 2.0.8)	<p>2.0.1 Select appropriate media to produce effective learning environments using technology resources.</p> <p>2.0.2 Use appropriate analog and digital productivity tools to develop instructional and professional products.</p> <p>2.0.3 Apply instructional design principles to select appropriate technological tools for the development of instructional and professional products.</p> <p>2.0.4 Apply appropriate learning and psychological theories to the selection of appropriate technological tools and to the development of instructional and professional products.</p> <p>2.0.5 Apply appropriate evaluation strategies and techniques for assessing effectiveness of instructional and professional products.</p> <p>2.0.6 Use the results of evaluation methods and techniques to revise and update instructional and professional products.</p> <p>2.0.7 Contribute to a professional portfolio by developing and selecting a variety of productions for inclusion in the portfolio.</p>

<b>Standard 3: UTILIZATION</b>	
3.0 (includes 3.0.1 & 3.0.2)	
3.1 Media Utilization	<p>3.1.1 Identify key factors in selecting and using technologies appropriate for learning situations specified in the instructional design process.</p> <p>3.1.2 Use educational communications and instructional technology (SMETS) resources in a variety of learning contexts.</p>
3.2 Diffusion of Innovations	3.2.1 Identify strategies for the diffusion, adoption, and dissemination of innovations in learning communities.
3.3 Implementation and Institutionalization	<p>3.3.1 Use appropriate instructional materials and strategies in various learning contexts.</p> <p>3.3.2 Identify and apply techniques for integrating SMETS innovations in various learning contexts.</p> <p>3.3.3 Identify strategies to maintain use after initial adoption.</p>
3.4 Policies and Regulations	<p>3.4.1 Identify and apply standards for the use of instructional technology.</p> <p>3.4.2 Identify and apply policies which incorporate professional ethics within practice.</p> <p>3.4.3 Identify and apply copyright and fair use guidelines within practice.</p> <p>3.4.4 Identify and implement effective policies related to the utilization, application, and integration of instructional technologies</p> <p>3.4.5 Identify policies and regulations which apply to the utilization, application, and integration of distance delivery technologies.</p>
<b>Standard 4: MANAGEMENT</b>	
4.1 Project Management	4.1.1 Apply project management techniques in various learning and training contexts.

Standard 5: EVALUATION	
5.1 Problem Analysis	5.1.1 Identify and apply problem analysis skills in appropriate school media and educational technology (SMET) contexts (e.g., conduct needs assessments, identify and define problems, identify constraints, identify resources, define learner characteristics, define goals and objectives in instructional systems design, media development and utilization, program management, and evaluation).
5.2 Criterion-Referenced Measurement	5.2.1 Develop and apply criterion-referenced measures in a variety of SMET contexts.
5.3 Formative and Summative Evaluation	5.3.1 Develop and apply formative and summative evaluation strategies in a variety of SMET contexts.
5.4 Long-Range Planning	5.4.1 Develop a long-range strategic plan related to any of the domains or sub-domains.

*SMETS = School Media and Educational Technology*



## **AECT Standards 2012**

**AECT Standard 1 (Content Knowledge):** Candidates demonstrate the knowledge necessary to create, use, assess, and manage theoretical and practical applications of educational technologies and processes.

Assessing/Evaluating - Candidates demonstrate the ability to assess and evaluate the effective integration of appropriate technologies and instructional materials.

**AECT Standard 2 (Content Pedagogy):** Candidates develop as reflective practitioners able to demonstrate effective implementation of educational technologies and processes based on contemporary content and pedagogy.

Assessing/Evaluating - Candidates demonstrate an inquiry process that assesses the adequacy of learning and evaluates the instruction and implementation of educational technologies and processes grounded in reflective practice.

**AECT Standard 3 (Learning Environments):** Candidates facilitate learning by creating, using, evaluating, and managing effective learning environments.

Assessing/Evaluating -Candidates use multiple assessment strategies to collect data for informing decisions to improve instructional practice, learner outcomes, and the learning environment.

**AECT Standard 4 (Professional Knowledge and Skills):** Candidates design, develop, implement, and evaluate technology-rich learning environments within a supportive community of practice.

Assessing/Evaluating - Candidates design and implement assessment and evaluation plans that align with learning goals and instructional activities.

**AECT Standard 5 (Research):** Candidates explore, evaluate, synthesize, and apply methods of inquiry to enhance learning and improve performance.

Assessing/Evaluating -Candidates apply formal inquiry strategies in assessing and evaluating processes and resources for learning and performance.

# **Standards Related to Evaluation from the International Society for Technology in Education**

## **NETS for Teachers**

### **2. Design and Develop Digital-Age Learning Experiences and Assessments**

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching

### **3. Model Digital-Age Work and Learning**

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- d. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

### **5. Engage in Professional Growth and Leadership**

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning

# **Standards Related to Evaluation from the International Society for Technology in Education**

## **NETS for Administrators**

### **2. Digital-Age Learning Culture.**

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students. Educational Administrators:

d. ensure effective practice in the study of technology and its infusion across the curriculum

### **3. Excellence in Professional Practice.**

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources. Educational Administrators:

d. stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning

### **4. Systemic Improvement.**

Educational Administrators provide digital-age leadership and management to continuously improve the organization through the effective use of information and technology resources. Educational Administrators:

b. collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning

**Standards Related to Evaluation from the  
International Board of Standards for Training Performance and Instruction  
(IBSTPI, 2006)**

**Professional Foundations**

1. Communicate effectively in written, oral, and visual form.
2. Establish and maintain professional credibility.
3. Demonstrate effective interpersonal skills.
4. Observe ethical and legal standards.
5. Demonstrate awareness of the politics of evaluation.

**Planning and Designing the Evaluation**

6. Develop an effective evaluation plan.
7. Develop a management plan for the evaluation.
8. Devise data collection strategies to support the evaluation questions and design.
9. Pilot test the data collection instruments and procedures.

**Implementing the Evaluation Plan**

10. Collect data.
11. Analyze and interpret data.
12. Disseminate and follow-up the findings and recommendations.

**Managing the Evaluation**

13. Monitor the management plan.
14. Work effectively with personnel and stakeholders.

## References

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- International Society for Technology in Education. (2008). *National Educational Technology Standards for Teachers*. Retrieved from [http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_T\\_Standards\\_Final.pdf](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T_Standards_Final.pdf)
- International Society for Technology in Education. (2009). *National Educational Technology Standards for Administrators*. Retrieved from [http://www.iste.org/Content/NavigationMenu/NETS/ForAdministrators/2009Standards/NETS-A\\_2009.pdf](http://www.iste.org/Content/NavigationMenu/NETS/ForAdministrators/2009Standards/NETS-A_2009.pdf)
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## **College of Education Mission Statement**

The mission of the College of Education at Boise State University is to prepare professionals using models that incorporate integrated teaching and learning practices to ensure high levels of knowledge and skill, commitment to democratic values, and the ability to work with a diverse population. As part of the only metropolitan institution in Idaho, the College of Education provides a collegial environment that supports a wide range of research and scholarly activity intended to advance knowledge and translate knowledge into improved practice at the local, national, and international levels. The College promotes the healthy development of society through outreach, partnership, and technical assistance activities that focus on organizational renewal. It advances personal excellence and respect for individuals  
<http://education.boisestate.edu/teachered/framework.htm>

## **Department of Educational Technology Conceptual Framework**

The Department of Educational Technology supports the study and practice of facilitating and improving learning of a diverse population by creating, using, and managing appropriate technological processes and resources. Believing technology is a tool that enhances and expands the educational environment, we promote the use of current and emergent technologies for teaching and learning in a dynamic global society. Educational technologists are leaders and innovators, serving in institutions of higher education, public or private school settings, federal, state or local educational agencies, community organizations, and the private sector.  
<http://edtech.boisestate.edu/web/edtech.html>.