

Oregon State University
Science and Mathematics Education – College of Education

SYLLABUS

Designing Learning Environments: Physical dimensions of free-choice learning

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Course Description

The Contextual Model of Learning is a conceptual framework that posits that learning is influenced by the interaction of variables within three contexts: personal, socio-cultural and physical. Learning is influenced by variables interacting within the personal, socio-cultural, and physical contexts. This course explores the *physical context* of learning environments, including the role of macro scale environmental factors such as space, crowding, novelty, and behavior settings and the role of micro scale environmental factors such as how exhibition, program and instructional design elements, real objects (including animals and plants), different media, etc. The course goes on to examine how learning leaders can build on these dimensions of learning in order to successfully engage lifelong learners. The course will be richly illustrated by real world examples of learning in out-of-school settings and be designed to support future learning leaders' efforts to engage diverse audiences and facilitate lifelong science and mathematics learning.

Measurable Student Learning Outcomes

Overall Course Outcomes (OCO): As a result of the class you will gain experience in:

1. Read and analyze a variety of research papers focused on different aspects of the physical nature of learning:
 - a. Identify key questions and issues being raised
 - b. Connect theoretical foundations to their day-to-day or planned day-to-day work (practice).
2. Design a prototyping study, which:
 - a. Focuses on a design or experience that needs improvement
 - b. Frames an appropriate set of question(s) or goals
 - c. Situates the study with relevant literature to support that line of inquiry
 - d. Suggests appropriate methods for a prototyping study
 - e. Collects and analyzes data and presents results useful to other practitioners.

The objectives will be assessed through the weekly discussion assignments, reflective journal entries, activities, and a final project.

Specific Learning Outcomes (SLO): Participants will be able to:

1. Describe the nature and importance of free-choice learning as a component of lifelong learning.
2. Use the Contextual Model of Learning as a conceptual framework for analyzing learning in free-choice contexts.
3. Articulate and share examples from cited references and own experience on the roles that physical factors play in lifelong learning.
4. Leverage the physical context to support learners of all ages and backgrounds across a diversity of settings.

Learning Resources

In addition to the required textbooks, there are a variety of readings for each module posted online or linked electronically. See the readings section under each module in the Canvas course.

Required Text:

- ñ Falk, J. H., & Dierking, L. D. (2000). *Learning from museums: Visitor experiences and the making of meaning*. Lanham, MD: AltaMira Press.

Course Content and Evaluation of Student Performance

The course is broken up into 5 two-week modules. **Each module begins on a Monday and ends on a Sunday** and consists of readings, data collection and analysis activities, reflective writing, and online discussion. All coursework is designed to lead to the final prototyping study, by which the student learning outcomes will be assessed.

Module	Topics		OCO	SLO
1	Introduction to Physical Dimensions of Free-Choice Learning	Assignment + Reflection	1	1, 2, 3
2	Environmental and Ecological Psychology	Assignment + Reflection	1	1, 2, 3
3	Five Senses and Emotions	Assignment + Reflection	1	1, 2, 3

4	Setting and Structure of Activity	Assignment + Reflection	1, 2	1, 2, 3
5	Conducting a Prototyping Study	Final Project + Reflection	1, 2	1, 2, 3, & 4
Overall	Participation			1, 2, 3, & 4

Canvas: This course will be delivered via Canvas(Learning Management System) where you will interact with your classmates and with your instructor. Within the course Canvas site you will access the learning materials, such as the syllabus, discussion boards, assignments, and final project.

For technical assistance: If you experience computer difficulties, need help downloading a browser or plug--in, assistance logging into the course via Canvas, or if you experience any errors or problems while in your online course, you can contact WorkSpace technical support for assistance. Call (541) 737--4197 (8 a.m. to 5 p.m. PDT Monday through Friday) or email workspace@oregonstate.edu with questions.

If the problem is with the Canvas platform, most FAQs can be answered within the Canvas student guide. You can access Canvas HELP features from the orange link at the upper right of the Canvas screen.

Canvas has a 24/7 Support Hotline at (844) 329--3084 as well as a 24/7 Support Live Chat feature accessible through the HELP link.

Guidelines for Module Tasks

Weekly Discussions – You will be receiving a starting prompt for all modules. It is important that you:

Read you classmate’s posts and respond to them during the week so as to facilitate the discussion. In the spirit of collaboration and co--construction of our understandings of the personal aspects of free--choice learning, we will be using discussion board assignments heavily. We expect participation, engagement, and kind respectful discussion focused both on our own experiences and the class readings. There is no minimum number of posts per week. But you are expected to participate in every discussion board with more than a single statement. The discussion board is only as good as each individual’s contribution.

Module Assignments – In addition to reading assignments and postings, each of the first 4 modules will include some kind of hands--on assignment. These will range from

individual thought experiences and write-ups to small scale data collection exercises. Each assignment should be completed on time, and show completeness and evidence of application of appropriate concepts and ideas.

Reflection Assignments –Students will respond to reflective journal prompts provided at the end of each module. Students will also be asked to write a personal reflection about what they have learned over the course of the past two weeks. This is a fundamental part of the course;; the timely completion of these bi-weekly reflections contributes to the overall outcomes of the course.

Final Project -- Each student will design and conduct a prototyping study of a free-choice learning experience to investigate how some aspect of the physical dimensions of free-choice learning is at play.

Link to PCTE Conceptual Framework: This course supports the Professional Teacher and Counselor Education (PTCE) unit at Oregon State University. The PTCE unit Conceptual Framework is based on four foundational or core values that are listed below. To find out more about how the knowledge base relates to the National Council for Accreditation of Teacher Education (NCATE) guidelines, review the Conceptual Framework at the website:

<http://oregonstate.edu/education/accreditation/>

- ñ Ethics and Professionalism
- ñ Reflective Practitioner
- ñ Lifelong Learners
- ñ Diversity and Equity

Link to National Standards: With respect to national standards, this course includes application of NCATE content knowledge, professional and pedagogical knowledge and skills, dispositions, and student learning. NCATE Unit Standards:

<http://www.ncate.org/public/unitStandardsRubrics.asp?ch=4>

Link to State Standards: The Oregon TSPC Standards embedded in this course include the following:

- ñ Standard 1: Plan Instruction that supports student progress in learning and is appropriate for the developmental level.
- ñ Standard 2: Establish a classroom climate conducive to learning.
- ñ Standard 3: Engage students in planned learning activities.
- ñ Standard 4: Evaluate, act upon, and report student progress in learning.
- ñ Standard 5: Exhibits professional behaviors, ethics, and values.

Course Policies

Expectations for Student Conduct: Student conduct is governed by the university's policies, as explained in the [Student Conduct Code](#).

Academic Integrity: Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit [Student Conduct and Community](#)

[Standards](#), or contact the office of Student Conduct and Mediation at 541--737--3656.

Conduct in this Online Classroom:

Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the [university's regulations regarding civility](#).

Guidelines for a Productive and Effective Online Classroom:

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.