

Learning in Informal Contexts

15:262:620

(VERSION 2) Spring 2014 Syllabus

Course Information

Instructor Information

Instructor: Dr. Catherine Eberbach

Class Location: Online

Telephone/Text: 412-867-7049

Email: catherine.eberbach@gse.rutgers.edu

Virtual Office Hours are by appointment: I will log in at least 3 times per day (morning, afternoon, evening) and will respond to your queries promptly. If you have an immediate or personal concern, email me directly at c.eberbach@gse.rutgers.edu. Alternatively, you may meet individually or in groups with me via Skype or Google Hangout.

Course Description

This course focuses on the theoretical and practical dimensions of learning in out-of-school contexts. As such, we primarily draw upon learning theory from sociocultural perspectives of knowing and learning and seek to connect this theory to informal learning experiences. Our readings, discussions, and activities draw upon Learning Sciences research from out-of-school settings, including science centers, art museums, after-school programs, hobbyist groups, aquariums, botanical gardens, as well as virtual and life-long learning communities. Through these explorations, we will examine and reflect upon our ideas about learning—and instruction—and also consider connections between school and out-of-school learning environments.

Course Objectives:

- 1) You will develop an appreciation and knowledge of the complexity of learning in out-of-school contexts and the learning research from this area of study.
- 2) You will develop a deeper understanding of different perspectives of sociocultural theory and implications for the facilitation and design of learning experiences in out-of-school contexts.
- 3) You will become familiar with informal learning resources available online.

Course Readings

Required Text:

Bell, P., Lewenstein, B., Shouse, A. W., & Feder, M. A. (Eds.). (2009). *Learning science in informal environments*. Washington, D. C.: The National Academies Press.

Research articles are posted within the appropriate unit folder (e.g., Week 1) on **e-college** as each unit becomes available to students. Please refer to the reading list at the end of this document. This list is subject to modification.

Optional but Recommended Texts:

Falk, J. H. & Dierking, L. D. (2000). *Learning in museums*. Walnut Creek, CA: Altamira Press.

Participation Schedule

Because learning in this course is predominantly via discussion, it is **essential** that you complete all readings for each week **prior to the start** of discussions. For example, we are scheduled to discuss Week 2 Topic starting on 2/5. Complete all readings on Topic 2 **BEFORE** 2/5. As we discuss Topic 2, you are expected to concurrently read readings assigned for Week 3 that starts 2/10. A schematic of the weekly schedule looks like this:

Su	M	T	W	TH	F	SA
			Discussions for current week start Wednesday .	Continue contributing to current week's discussion. Begin reading next week's readings.	Continue contributing to current week's discussion. Continue next week's readings.	Continue contributing to current week's discussion. Continue next week's readings.
Continue next week's readings. Weekly assignments for current week is due by midnight.	Next Week's discussion questions posted		Discussions for next week start Wednesday	The cycle repeats each week		

Course Structure & Expectations

This course is structured as an online course and much of our interactions will be through asynchronous discussions. However, you will also: 1) collaborate on selected course assignments and 2) meet as a whole class for virtual synchronous

meetings at least 4 times during the semester. The dates and times for these synchronous discussions will consider your schedule and availability. I will initially schedule four meetings when assignments are highly visual or when the topic is particularly nuanced. However, the class may also request up to two additional meetings. Go-to-Meeting will enable us to share screens, have discussions, and get real-time reactions to your ideas and work.

This is a reading and writing intensive course. You are responsible for keeping up with the weekly readings and being prepared to participate in online discussions during the week, and to submit all assignments as per the deadlines. Online discussions will be whole-class and in dyad settings. **You can expect to put in 6 – 9 hours each week in preparation, participation, and homework assignments.** Given the online nature of the course, you can determine your own timing and plan your schedule **in order to meet the weekly deadlines.**

My goal is to make your experience productive, practical, and personally meaningful. For this to happen, it is vital that you understand how the course is structured and what the expectations are:

- We will have asynchronous discussions online on a weekly basis on the topic under consideration. Throughout the semester, you will discuss the readings and other uploaded documents, which might include research articles, school and out-of-school scenarios, videos of informal learning and facilitation, and actual learner artifacts/products. These readings and activities will help in understanding learning and facilitation practices in informal settings.
- You are also encouraged to share articles, current news-stories, videos, simulations, and/or other related materials that can help to explain, clarify, or elaborate on ongoing class topics.
- All components of this course require your active and consistent involvement and participation in class. If you have any questions or concerns regarding online participation or writing, please address this with me as soon as possible. **Please make sure that you plan your schedule so that you can meet all deadlines.** Late submissions are strongly discouraged and a pattern of missed deadlines may result in a lower grade. You can expect feedback on weekly assignments before the next assignment is due.

Communication

Most of our communication in this online course is via asynchronous discussion and exchange of ideas via shared work (e.g., group assignments). Assigned readings and any introductory text or slides are typically reviewed individually and then we will discuss our ideas on the discussion board.

In an effort to enhance communication and to make things more personable, I will occasionally upload mini-video segments discussing certain aspects of the week's discussion as appropriate. As already noted, I will also host whole class or individual virtual meetings via Go To Meeting or Skype, whereby we could meet one

on one and/or in group as needed to review any queries you may have. I am available on email and can also talk to you via phone or Skype if we schedule a predetermined time.

Course Assignments and Grading

• Online Discussion Participation	20%
• Individual Reading Reflections (3)	5%
• Observations (4)	20%
• Literature Review	25%
• Informal Learning Project	30%

Grading Scale

90 and above = A; 87-89 = B+; 80-86 = B; 77-79 = C+; 70- 76 = C; 60-69 = D; Below 60 = F

Course Requirements

Online Discussion (20%)

Because this course is primarily online, all of our review, understanding, and discussion of weekly readings will be conducted via the e-college discussion board. All students **must** complete the weekly readings and review any additional information that may be posted including video, slides, and handouts for the week's topic. You are also required to engage in the online discussion by responding to the questions of the week and possibly raising your own questions about the readings.

You are expected to either respond to these questions, identify questions that they have about the readings, and/or share critical ideas that stem from the readings. Posting 2-3 lines of general ideas is **NOT** considered as effective participation and **WILL** reflect on your participation grade. On the other hand, posting a 2-page long summary on the discussion board is also ineffective. Make sure that you are addressing the posted question and not summarizing the entire reading.

In order to demonstrate your opinion, understanding, and critical analysis of the reading, you must contribute a significant number of ideas and also respond to other students' questions. I expect that **you will each contribute at least 3 initiating comments and/or elaborated questions on different topics within the readings AND respond to at least 3 posts by other students each week.** Remember, these postings need not be perfect or represent your final understanding of the topic. These are your thoughts, ideas, and reactions to the reading. Your understanding and final stances on the topics will evolve after sharing, discussing, and reflecting on these ideas. **You will learn more if you focus on the content and depth of discussion rather than the number of posts required.**
*Deadline: So that you have sufficient time to discuss topics as well we to prepare for the following week's discussions, online discussions are scheduled **Wednesday***

through Saturday. You must post your own initial comment on **Wednesday by 8pm.** These discussions are asynchronous and a lot of back and forth exchange of ideas is expected to take place. Discussions will close for each topic on **Saturday at 8pm.** Clearly, waiting until the last minute to post your comments or respond to other's responses makes it difficult to contribute productively to discussions and to building community understanding—especially in a small group. The new discussion topic will be available on **Monday mornings.**

Personal Reading Reflections (5%) [Modified]

All class members are expected to post **personal reading reflections** on **3 readings** from the syllabus. You may do this at any time during the semester when a paper resonates with your personal, research, or practice interests. Post your reflections using the Share Tool in ecollege. Your reflections may address the strengths and weaknesses of a paper and why this paper resonates with you. In addition, you should anticipate commenting on at least 5 posts by other students.

Informal Learning Observations (20%)

All students are required to conduct 5 hours of informal observations over the course of the semester. You will be provided with methodologies for conducting your observations and a list of venues, both locally on/near Rutgers campus and others within close proximity to Rutgers. (With prior written approval from the instructor, you may also use alternative informal venues.) You are to keep an Observations Journal either on paper or electronically, that can be reviewed electronically for a grade. (See Course Schedule for deadlines.) You are also encouraged to conduct observations with other students in the course. However, each student is still required to conduct and document your observations independently.

Literature Review (25%)

All students will write a paper on a topic of their choosing that is related to informal learning. This will be a 10-12 page, literature review-style paper. You will be expected to find original, primary source literature on your topic of choice. The paper is to be written as if it were to be submitted to a peer-reviewed journal and you are expected to use APA Style. Specific details about the paper will be forthcoming.

Informal Learning Project (30%)

There are three options for the final Informal Learning Project:

- 1)** Develop a coherent field trip, after-school, or summer camp informal learning experience of your choice. You do not need to conduct the field trip, etc, but you may if so choose. You will submit your lesson plan at the end of the semester along with a draft at mid-semester.
- 2)** Conduct a short study on informal learning using established informal learning research methodologies and protocols. This study will include a short research proposal (due prior to beginning your study) and a final write up (due at the end of the semester).

3) Propose an alternative project, such write as a funding proposal, extended research proposal (as preparation for a thesis or dissertation), analysis of video of informal learning experiences. (I have access to video that I could make available to you.) Please discuss with me.

Topic proposal and outline due March 2; Initial draft and/or Analyses due April 20 (5%); final Informal Learning Project due no later than May 11 at 11:59pm (25%).

Academic Integrity Policy

- You should not submit the same work in two separate classes without specific written approval of the faculty involved.
- All students must follow the RU Code of Student Conduct which can be accessed at: <http://rci.rutgers.edu/%7Epolcomp/judaff/ucsc.shtml>
- For information on the academic integrity policy, please go to: <http://www.rci.rutgers.edu/~polcomp/integrity/policy.shtml>
- A multimedia presentation on plagiarism can be found at: <http://www.rci.rutgers.edu/~polcomp/integrity/realifeexamples.html>

Related regulations may also be found in the Rutgers Graduate School of Education Catalog **Important Note:** This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check **ecollege** for corrections or updates to the syllabus. Changes will be clearly noted in course announcements or via **ecollege** email.

Accessibility

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>."

Updated Course Schedule (3/12/2014)

	Date	Topic	Readings & Resources	Assignments & Activities
Part 1: CONCEPTUALIZING Informal Learning				
1	Jan. 27-Feb. 2 ONLINE	Course Overview	Course Syllabus	- Survey & Online introductions due Jan. 28. -Asynchronous discussion: syllabus, assignments, & upcoming readings
2	Feb. 3-9 ONLINE	What is informal learning?	<i>Bell et al., (2009), Chapter 1 & 2; Falk & Dierking (2000), Chapter 1; Hsi et al., (2004);</i> Formal-Informal Video	-Asynchronous discussions
3	Feb. 10-16 ONLINE	Measuring Learning in Informal Contexts	<i>Crowley et al (2001); Dierking (2008); Hein (1998, Chapter 4); Yalowitz (2004)</i>	-Asynchronous discussions
4	Feb. 17-23 ONLINE	Methodology: Assessing the Impact of Out-of-School Experiences	<i>Bell et al., (2009), Chapter 3; Ellenbogen (2002); Falk & Adelman (2003)</i>	-Asynchronous discussions - Informal Observation #1 due 2/23
5	Feb. 24-Mar. 2 ONLINE	Theoretical Perspectives: Sociocultural	<i>Ash & Wells (2006); Lave & Wenger (1991); Nasir et al., (2006)</i>	-Asynchronous discussions - <i>Individual Meetings</i> - <i>Informal Learning Resources</i> -Observation Tools - Informal Learning Project Proposal due 3/2
Part 2: PRACTICING INFORMAL LEARNING				
6	Mar. 3-9 ONLINE & Synchronous	Learning, Interest, & Identity Development	<i>Barron, (2006); Crowley & Jacobs (2002); Renninger (2007)</i>	- Discussions: Synchronous (3/6, 8-8:30pm) & Asynchronous Informal Observation #2 due 3/9-16
7	Mar. 10-16	Learning in Families	<i>Ash (2004); Ochs & Taylor (1992); Palmquist & Crowley (2007)</i>	-Asynchronous discussions -What is a

			Supplementary: <i>Bell et al.</i> , (2009), Chapter 4	literature review? -Reflection 1 due 3/16
8	Mar. 17-23	SPRING BREAK—Have some out-of-school fun!		
9	Mar. 24-30 ONLINE & Synchronous	Designing Object-Centered Learning Environments	<i>Eberbach & Crowley</i> (2005); <i>Rowe</i> (2002); <i>Stevens & Hall</i> (1997) Supplementary: <i>Paris & Hapgood</i> (2002)	- Discussions: Synchronous (3/27, 8-8:30pm) & Asynchronous -Informal Observation #3 due 3/30
10	Mar. 31-Apr. 6 ONLINE	Creating Learning Spaces Outside of School	<i>Allen</i> (2004); <i>Botelho & Morias</i> (2006); <i>Hohenstein & Tran</i> (2007) Supplementary: <i>Bell et al</i> (2009), Chapter 8	-Asynchronous discussions Lit Review Outline due 4/6 -Reflection 2 due 4/ 6
11	Apr. 7-13 ONLINE & Synchronous	Public Understanding and Participation in Science & Technology	<i>CAISE</i> (2009); <i>Price & Lee</i> (2013);	- Discussions: Synchronous (4/10, 8-8:30pm) & Asynchronous -Informal Observation #4 due 4/13
12	Apr. 14-20 ONLINE	Broadening Participation: Diversity & Equity	<i>Crowley et al</i> (2001); <i>Feinstein & Meshoulam</i> (2014); <i>Rogoff et al</i> (2003) Supplementary: <i>Bell et al</i> (2009), chapter 7	-Asynchronous discussions -Informal Learning Project Draft due 4/20
13	Apr. 21-27 ONLINE	Informal-Formal Learning Connections	<i>Leinhardt & Gregg</i> (2002); <i>Poleman & Hope</i> (2014); <i>Tal & Morag</i> (2007)	-Asynchronous discussions -Literature Review due by 11:59pm on 4/27
14	Apr. 28-May 4 ONLINE & Synchronous	Life-Long, Life-Wide, Life-Deep Learning	<i>Bathgate et al.</i> , (2014); <i>Torrey et al.</i> (2007)	- Discussions: Synchronous (5/1, 8-9pm) & Asynchronous -Reflection 3 due 5/4
15	May 5-11 ONLINE	Final Project due	No readings	-Informal Learning Project due by 11:59pm on 5/11.

Academic Integrity Policy

- You should not submit the same work in two separate classes without specific written approval of the faculty involved.
- All students must follow the RU Code of Student Conduct which can be accessed at: <http://rci.rutgers.edu/%7Epolcomp/judaff/ucsc.shtml>
- For information on the academic integrity policy, please go to: <http://www.rci.rutgers.edu/~polcomp/integrity/policy.shtml>
- A multimedia presentation on plagiarism can be found at: <http://www.rci.rutgers.edu/~polcomp/integrity/realifeexamples.html>

Related regulations may also be found in the Rutgers Graduate School of Education Catalog **Important Note:** This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check **ecollege** for corrections or updates to the syllabus. Changes will be clearly noted in course announcements or via **ecollege** email.

Accessibility

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>."

Course Readings (Subject to modification)

- Allen, S. (2004). Designs for learning: Studying science museum exhibits that do more than entertain. *Science Education*, 88(1), 17-33.
- Ash, D. (2004). Reflective science sense-making dialogue in two languages: The science in the dialogue and the dialogue in the science. *Science Education*, 88, 855-884.
- Ash, D. & Wells, G. (2006). Dialogic inquiry in classroom and museum: Actions, tools, and talk.. In Z. Bekerman, N. Burbules, & D. Silberman-Keller (Eds), *Learning in places: The informal education reader* (pp. 35-54). New York, NY: Peter Lange.
- Barron, B. (2006). Interest and self-sustained learning as catalysts of development. *Human Development*, 49, 193-224.
- Bathgate, M. E., Schunn, C. D., & Correnti, R. (2014). Children's motivation towards science across contexts, manner of interaction, and topic. *Science Education*, 98, 189-215.

- Bell, P., Lewenstein, B., Shouse, A. W., & Feder, M. A. (Eds.). (2009). *Learning science in informal environments*. Washington, D. C.: The National Academies Press.
- Botelho, A. & Morias, A.M. (2006). Student-exhibits interactions at a science center. *Journal of Research in Science Teaching*, 40(10), 987-1018.
- CAISE. (2009). Public participation in scientific research: Defining the field and assessing its potential for informal science education. Washington, D.C.: Center for Advancement of Informal Science Education.
- Chittenden, D., Farmelo, G. & Lewenstein, B. V. (Eds.) (2004). *Creating connection: Museums and the public understanding of current research*. Walnut Creek, CA: AltaMira Press.
- Crowley, K., Callanan, M., Jipson, J., Galco, J., Topping, K., & Shrager, J. (2001). Shared scientific thinking in everyday parent-child activity. *Science Education*, 85, 712-732.
- Crowley, K., Callanan, M., Tenenbaum, H. R., & Allen, E. (2001). Parents explain more often to boys than to girls during shared scientific thinking. *Psychological Science*, 12(3), 258-261.
- Crowley, K., & Jacobs, (2002). Building islands of expertise in everyday family activity. In G. Leinhardt, K. Crowley, and K. Knutson (Eds.), *Learning conversations in museums* (pp. 333-356). Mahwah, NJ: Lawrence Erlbaum Associates.
- Dierking, L.D. (2008). Evidence and categories of ISE impacts. In A. Friedman (Ed.), *Framework for evaluating impacts of informal science education projects* (pp.19-30). Retrieved from: http://www.aura-astronomy.org/news/EPO/eval_framework.pdf
- Eberbach, C. & Crowley, K. (2005). From real to virtual: Learning from museum objects. *Curator*, 48(3), 317-338.
- Ellenbogen, K. M. (2002). Museums in family life: An ethnographic case study. In G. Leinhardt, K. Crowley, and K. Knutson (Eds.), *Learning conversations in museums* (pp. 81-102). Mahwah, NJ: Lawrence Erlbaum Associates.
- Falk, J. H. & Dierking, L. D. (2000). *Learning from museums*. Walnut Creek, CA: AltaMira Press.
- Feinstein, N. W. & Meshoulam, D. (2014). Science for what public? Addressing equity in American science museums and science centers. *Journal of Research in Science Teaching*, 51(3), 368-394.
- Friedman, A. J. (Ed.) (2008). *Framework for evaluating impacts of informal learning projects*. National Science Foundation.
- Hohenstein, J. & Tran, L.U. (2007). Use of questions in exhibit labels to generate explanatory conversation among science museum visitors. *International Journal of Science Education*, 29(12), 1557-1580.
- Hsi, S. Crowley, K., Finke, C. L., King, H. (2004). Models of learning and theories of practice for informal learning environments. *ICLS Conference Proposal*.
- Hsi, S. (2007). Conceptualizing learning from the everyday activities of digital kids. *International Journal of Science Education*, 29(12), 1509-1529.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Forward & Chapters 1-2 (pp. 13-58). Cambridge, UK: University Press.

- Nasir, N.S., Rosebery, A.S., Warren, B., & Lee, C.D. (2006). Learning as a cultural process. In R.K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 489-504). Cambridge, UK: University Press.
- Ochs, E., & Taylor, C. (1992). Science at dinner. In C. Kramsch & S. McConnell-Ginet (Eds.), *Text and context: Cross-disciplinary perspectives on language study* (pp. 29-45). Lexington, MA: DCHearth.
- Palmquist, S., & Crowley, K. (2007). From teachers to testers: Parents' role in child expertise development in informal settings. *Science Education*, 91(5), 783-804.
- Paris, S. & Hapgood, S. F. (2002). Children learning with objects in informal learning environments. In S. Paris (Ed.), *Perspectives on object centered learning in museums* (pp.37-54). Mahwah, NJ: Lawrence Erlbaum Associates.
- Poleman, J. L. & Hope, J. M. G. (2014). Science news stories as boundary objects affecting engagement with science. *Journal of Research in Science Teaching*, 51(3), 315-341.
- Price, C. A. & Lee, H.-S. (2013). Participants' scientific attitudes and epistemological beliefs during an astronomical citizen science project. *Journal of Research in Science Teaching*, 50(7), 773-801.
- Rennie, L.J. (2007). Learning science outside of school. In: S.K. Abell & N.G. Lederman (Eds.), *Handbook of research on science education* (pp. 125-167). Mahwah, NJ: Lawrence Erlbaum Assoc., Inc.
- Renninger, K.A. (2007). *Interest and Motivation in Informal Science Learning*. National Research Council.
- Rogoff, B., Paradise, R., Mejia Arauz, R., Correa-Chavez, M., & Angelill, C. (2003). Firsthand learning through intent participation. *Annual Review of Psychology*, 54, 175-203.
- Rowe, S. (2002). The role of objects in active, distributed meaning making. In S. Paris (Ed.), *Perspectives on object centered learning in museums* (pp.19-36). Mahwah, NJ: Lawrence Erlbaum Associates.
- Siegel, D.R., Esterly, J., Callanan, M.A., Wright, R., & Navarro, R. (2007). Conversations about science across activities in Mexican-descent families. *International Journal of Science Education*, 29(12), 1447-1466.
- Stevens, R. & Hall, R. (1997). Seeing tornado: How video traces mediate visitor understanding of (natural?) phenomena in a science museum. *Science Education*, 81, 735-747.
- Tal, T. & Morag, O. (2007). School visits to natural history museums: Teaching or enriching? *Journal of Research in Science Teaching*, 44(5), 747-769.
- Torrey, C., McDonald, D. W., Schilit, B. N., & Bly, S. (2007). *How-to pages: Informal systems of expertise sharing*. Paper presented at the ECSCW 2007: Proceedings of the Tenth European Conference on Computer-Supported Cooperative Work, Limerick, Ireland.
- Yalowitz, S.S. (2004). Evaluating visitor conservation research at the Monterey Bay Aquarium. *Curator*, 47(3), 283-298.