

PBS TeacherLine Course Syllabus

Title

Constructing Learning-Centered Environments (formerly INST135)

Target Audience

This course is intended for pre-service and in-service teachers of grades K-12.

Prerequisites

To successfully participate and complete the assignments in this course, the learner must:

- Have past experience using the classroom computer.
- Have past experience working with the Internet.
- Be familiar with taking an online course or have completed the PBS “Practice Learning Online with TeacherLine” course.
- Be familiar with elementary, middle school, or high school educational content.

Course Description

Constructivism is a broad learning theory that can incorporate a number of teaching practices, such as cooperative, collaborative, and inquiry-based learning. Constructivism proposes that students learn by “constructing” new knowledge based on their own understanding of their life experiences. Sometimes new information is discarded; other times preexisting beliefs must be changed. The key characteristics of constructivism are continual assessment and reflection, in which students are actively asking questions, exploring, and continually assessing what they already know. By using the Legacy Model as an approach to incorporating constructivist principles in lesson planning, this course focuses learners on student-centered learning, research, presentations and reflections. To conclude the course, as a final project, learners will collaborate with their peers in a problem-based learning activity. Learners will also be asked to peer review projects developed by two other teams.

Instructor/Facilitator

See instructor/facilitator sheet.

Credits

To be determined by college or university.

Goals

Constructing Learning-Centered Environments offers learners the opportunity to simultaneously learn about constructivism while experiencing a constructivist model of teaching. Learners will examine the role of the teacher and the student in the Legacy Model while reflecting on how these roles may differ from learners’ own initial perceptions. By the end of this course learners will be familiar with the concepts of constructivism, including student-centered, inquiry-based learning, and problem-based learning and understand how to implement these concepts in an educational environment. As a final project for this course, learners will apply what they have learned by developing a proposal detailing how a school can incorporate a constructivist model.



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At the end of this course, you will:

- Understand the key principles of constructivism.
- Adopt strategies to promote active student learning and questioning.
- Learn to apply different constructivist approaches in a school.
- Understand constructivist techniques for creating student-centered experiences and environments.
- Use a problem-based collaborative approach to answer a constructivist challenge.

Outline of Content and Assignments

After previewing the documents in the Course Information area, learners will proceed to Course Content to complete the following six sessions, working through each session in order. Throughout the sessions, learners are asked to articulate their ideas in various forms: they are encouraged to reflect on their ideas and experiences in their online journal; the discussions in the discussion forum are designed to allow learners to glean information from other learners' experiences. As a final project, learners will work collaboratively with other learners through the steps of the Legacy Model. In teams assigned by the facilitator, they will assume the role of consultants who have been hired to create a proposal for a school to incorporate constructivism and make the school "learner-centered."

This course is designed to address ISTE's *Educational Technology Standards and Performance Indicators for All Teachers*. These standards define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings.

This course specifically addresses the following ISTE NETS*T:

I. Technology Operations and Concepts.

Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

- A. Demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education Technology Standards for Students).

II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.

Teachers plan and design effective learning environments and experiences supported by technology. Teachers:

- C. Identify and locate technology resources and evaluate them for accuracy and suitability (as described in the ISTE National Education Technology Standards for Students).

III. Teaching, Learning and the Curriculum

Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning. Teachers:

- B. Use technology to support learner-centered strategies that address the diverse needs of students.



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V. Productivity and Professional Practice

Teachers use technology to enhance their productivity and professional practice. Teachers:

- A. Use technology resources to engage in ongoing professional development and lifelong learning.
- B. Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.

Visit cnets.iste.org for a full list of the ISTE's *Educational Technology Standards and Performance Indicators for All Teachers* and more information about these standards.

Session 1: A Constructivist Model

Learners will begin this session by introducing themselves to fellow learners in the discussion forum and by setting some goals. In addition, learners will reflect on their prior knowledge and experiences related to constructivism and identify some questions and areas of interest in their online journal. Finally, they will explore some concepts of Constructivism and familiarize themselves with the Legacy Model of learning.

By the end of this session, learners will be able to:

- Define their professional goals and expectations for this course in their online journal.
- Explain their prior knowledge about constructivism.
- Reflect on how constructivism can help meet the needs of all their students.
- Discuss and critique a teacher's approach to using constructivism.
- Compare their first thoughts about constructivism to their thoughts after completing Session 1.

Read

- "The Legacy Model"
- "Software for Managing Complex Learning"

View video

- "Decomposition"

Complete activities

- Explore the Legacy Model Interactive

Write in online journal

- Reflect on expectations for this course.
- Reflect on prior knowledge.
- Reflect on how constructivism can help to serve the needs of their students.
- After viewing a video, reflect on the approach used by the teacher.

Participate in an online discussion

- Introduce themselves to other learners.
- Write what they think was effective and ineffective about the teacher's approach And then reflect back on their first journal entry to notice what they have learned and what they would like to learn moving forward.



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Session 2: Generate Ideas

In this session, learners will engage in the 2nd step of the Legacy Model and generate ideas as to what constructivism would look like in the classroom. To guide learners through this process, they will think about ways constructivism can play a role in the classroom, compare constructivist with traditional approaches to teaching, and understand the challenges and benefits of implementing constructivist theory into their curriculum.

By the end of this session, learners will be able to:

- Analyze the use of constructivism in various academic settings.
- Explain how constructivism can help you meet the needs of your students
- Debate whether using debates in the classroom are constructivist.
- Reflect on the ways their classroom might be changed by a constructivist approach.

Read (choose from the following articles and/or continue research on their own)

- "The Challenges of Sustaining a Constructivist Classroom Culture"
- "Some Benefits of Constructivism"
- "Some Criticisms of Constructivism"

View video

- "Peaceful Solutions – Wolves"

Complete activity

- Explore the Learner-Centered Interactive

Write in online journal

- Reflect on the application of constructivism to every subject matter.
- Reflect on how their classroom might be changed by a constructivist approach.

Participate in an online discussion

- Discuss how constructivism can help learners better serve the needs of their students.
- Pick a side and present an argument for how debates are constructivist or why debates are not constructivist

Session 3: Multiple Perspectives

In this session, learners will look to various resources to help them gain insight into Constructivist ideas that will help them with the final project. Learners will also switch from an individual approach to learning to working collaboratively in order to complete the remainder of the final project. As they proceed through the session, learners will examine different Constructivist learning activities and programs to help them revise a lesson they currently teach to be more constructivist. Tips and strategies for successful implementation of constructivism into the classroom are also presented.

By the end of this session, learners will be able to:

- Discuss and analyze the multiple resources they investigated and explain their feelings toward using constructivism.
- Adapt constructivist ideas to a current lesson and reflect on the process and outcome.

Read

- Choose from the following articles and/or research additional articles
 - "They Have Their Own Thoughts"
 - "How to Face Challenges to Constructivist Methods"
 - "Issues to Consider During Lesson Planning Stages"



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- “James Otto and the Pi Man: A Constructivist Tale”

View videos (choose from the following)

- “Tools”
- “Sharks”
- “Peaceful Solutions - Guyana”
- “Peaceful Solutions – Russian Federation”

Complete activities

- Continue research by choosing to review the following school Web sites and/or finding additional schools to research: The Dalton School, Clovis Unified School District, and School of the Future.

Write in online journal

- Reflect on the adaptation of constructivist ideas to a current lesson, as well as the process and outcomes.

Participate in online discussion

- Discuss thoughts on the multiple perspectives they read about, as well as whether they are drawn to constructivism or not.

Session 4: Research and Revise

In Session 4, learners will further develop their ideas of constructivism by researching and revising the final project. This session is going to be different from the previous sessions in that it expects learners to collaborate with their teams to guide their research. They will also think about how technology can support and encourage a student-centered curriculum as well as how state and national standards can be adapted to embrace constructivist theory.

By the end of this session, learners will be able to:

- Reflect on what they still need to learn about constructivism and how they will direct their research to fill in the gaps.
- Share and discuss their research findings with team members.

Read articles related to the learner’s research (choose and/or find additional articles):

- “Becoming a Constructivist Teacher “
- “Student Assessment within the Context of Constructivist Educational Settings”
- “The Role of Assessment in a Learning Culture”
- “Assessment and Constructivism”
- “Filling the tool box: Classroom strategies to engender student questioning”
- “Questioning as technology”
- “Creating a technology climate where the self-directed learner is nurtured”
- “Under construction: On becoming a constructivist in view of the standards”
- “Constructing learning: Using technology to support teaching for understanding”
- “Teacher vs. computer. Where educators stand in the technology revolution”
- Jamie McKenzie’s new book *Learning to Question to Wonder to Learn*
- “Technology and Constructivism”
- “Standards and Constructivism”

Complete activities:

- Review Web sites related to the learner’s research (choose and/or find additional sites)
 - Kathy Schrock’s Guide for Educators, Assessment and Rubric Information



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- E-Portfolios
- GLEF – Assessment Instructional Module
- Constructivism: Knowledge Building in the Secondary Classroom
- Georgia Department of Education-Professional Development Center
- 4Teachers.Org-Professional Development Resources
- GLEF – Project Based Learning Module
- School Reform: What Role can Technology Play in a Constructivist Setting?
- Constructivism and Technology
- Creating a Technology Climate Where the Self-directed Learner is Nurtured
- Questioning as Technology
- Manipulatives
- Constructivist Learning Design Notes
- State Standards
- Virtual Explorers

Write in online journal

- Reflect on what they need or want to know about constructivism and how they will direct their own research to get that information.

Participate in online discussion

- Continue working with teams on final project: discuss research and revise initial ideas.

Session 5: Test Your Mettle

In this session, each team of learners will post their draft of the consultation plan and peer review another team's plan. This "Test Your Mettle" step allows learners to evaluate and assess the effectiveness of the solutions they have come up with to incorporate constructivist ideas into a school. In addition to the peer review activity, learners will also reflect on the feedback provided in the review of their group's draft, and reflect on how a constructivist approach might impact their own teaching practices.

By the end of the session, learners will be able to:

- Evaluate and assess the effectiveness of a consultation plan to incorporate constructivism in a selected school.
- Critically consider and discuss how they can apply what you have learned about constructivism to your own classroom, or in your own school.

Read

- "If I Teach This Way, Am I Doing My Job?"

Write in online journal

- Reflect on your classroom and constructivism.

Participate in an online discussion

- Learners will "peer review" another group's consultation plan.
- Learners will return to their team's discussion board and submit any revisions they'd like to make to the proposal.

Session 6: Go Public and Reflect Back

In this session, learners will complete the Legacy Model learning cycle for challenge #2 by Going Public, Reflecting Back, and Looking Ahead to your next learning challenge.



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By the end of this session, learners will be able to:

- Reflect on their learning experience, and how they might apply their learning to their practices as an educator.
- Assess their learning in this course by comparing their prior knowledge and acquired knowledge in a journal activity
- Analyze the learning experience in this course by reflecting about their professional goals and expectations in the online journal
- Recognize the reiterative nature of the Legacy Model and constructivist learning in general by Looking Ahead and identifying paths for future learning.

Complete assignments

- Learners will complete and submit the final version of their final group project.
- Learners will write and submit a reflection paper that looks at both the process of creating the consultation plan as well as the entire course and how learning about constructivism will influence their futures as educators.

Write in online journal

- Acquired knowledge
- Professional goals and expectations

Schedule

It will take about 30 hours to complete this course. Each session should take approximately 4-5 hours. If you find yourself spending several hours more than this in any given session, please contact your facilitator to make sure this is necessary to complete the given assignments.

Requirements

Learners are expected to:

- Complete all assignments.
- Maintain an online journal.
- Participate and actively engage in discussions with fellow learners while contributing to the social construction of knowledge.
- Be self-directed and self-motivated.
- Ask for assistance when they need it.

Materials (hardware, software, plug-ins)

Technical Requirements

- Word processor
- Internet service provider
- E-mail

Academic Dishonesty Policy

To be inserted by university institution only

Evaluation

This course can be taken for graduate credit on a pass/fail basis, or for a letter grade and graduate credit. See graduate credit details pertaining to specific graduate credit institutions.



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