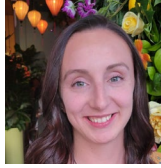


# Transformative Uses of Technology for Learning



## Instructor

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ITLS 6390  
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Virtual Office Hours: Zoom or phone by appointment

## Course Description

This course explores the critical role of technology as one tool in transforming education. Throughout the course, students will examine various technologies that can support learning. Principles and practices of examining and implementing technologies and evaluating their effectiveness are key elements of this course. By the end of this course, students will have the skills and tools needed to help facilitate educational change.

This course includes a number of readings, and students are expected to complete all the reading material and actively participate in the course activities. The culminating experience for this course will be a curricular unit implementing the use of digital technology in some transformative way.

## Course Objectives

- ☐ Describe the role of technology in facilitating educational change
- ☐ Apply theoretical principles and technological tools to facilitate educational change

## Communications

I am available via email/phone/Zoom/Slack to chat through any issues you may have throughout the term. During the week (M-F), I will respond to your request within 72 hours. While I may respond more quickly, please plan accordingly. If I don't respond within this timeframe, please follow up as I may not have received your ask.

## Land Acknowledgement

As a land-grant institution, Utah State University campuses and centers reside and operate on the territories of the eight tribes of Utah, who have been living, working, and residing on this land from time immemorial. These tribes are the Confederated Tribes of the Goshute Indians, Navajo Nation, Ute Indian Tribe, Northwestern Band of Shoshone, Paiute Indian Tribe of Utah, San Juan Southern Paiute, Skull Valley Band of Goshute, and White Mesa Band of the Ute Mountain Ute. We acknowledge these lands carry the stories of these Nations and their struggles for survival and identity. We recognize Elders past and present as peoples who have cared for, and continue to care for, the land. In offering this land acknowledgment, we affirm Indigenous self-governance history, experiences, and resiliency of the Native people who are still here today.

## Inclusion Statement

Your experience in this class is important, and the diversity you bring is viewed as a resource, strength and benefit. It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class.

It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are always encouraged and appreciated.

**Pronoun and preferred name:** It is important to me that our class community respects each other's pronouns and names. [Here is a video from CIDI](#) of how to do change pronouns in Canvas. [Here are instructions](#) on how to change your preferred name (note this happens in Banner not Canvas). Additional information on accommodations USU provides are available at the end of the syllabus, but please reach out if you need assistance navigating this.

**Observation of Religious Holidays:** After reviewing the syllabus, please contact me if you foresee a conflict between the due date for a major assignment and your religious observances.

**Students with disabilities:** USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) as early in the semester as possible (University Inn # 101, (435) 797-2444, [drc@usu.edu](mailto:drc@usu.edu) ). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

**Basic needs:** Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Additionally, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I can.

**Mental Health:** Mental health is critically important for the success of USU students. As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Utah State University provides free services for students to assist them with addressing these and other concerns. You can learn more about the broad range of confidential mental health services available on campus at Counseling and Psychological Services ([CAPS](#)).

Students are also encouraged to download the "SafeUT App" to their smartphones. The SafeUT application is a 24/7 statewide crisis text and tip service that provides real-time crisis intervention to students through texting and a confidential tip program that can help anyone with emotional crises, bullying, relationship problems, mental health, or suicide related issues.

## Required Textbooks and Materials

Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America 2nd Edition by Allan Collins (2018)

ISBN-13: 978-0807759066

The Children's Machine: Rethinking School In the Age Of The Computer by Seymour Papert (1994)

ISBN-13: 978-0465010639

*While this book is out of print, it is still widely available through book retailers such as Amazon, AbeBooks, and ThriftBooks for as little as \$2.00 + shipping.*

Other assigned readings and e-books are provided as .pdf files or USU library links through Canvas.

**Online Course Fee:** \$15 per credit course fee is applied to all online courses to sustain current digital technologies and support services required for engaging and effective online learning.

Course Overview - Further details will be provided in Canvas.

- 1. Class citizenship (10%)**

Throughout the term, you are required to participate in our online learning community, posting comments, asking questions, and responding to each other's posts. Your participation in the community is expected to be thoughtful of course materials, as well as kind and supportive to your peers.

- 2. Discussions & Assignments (30%)**

Some week's you will be required to participate in an assignment around the week's content. The assignments include discussion posts, and short papers. Most often, you will participate in a small or whole group discussion about the content for the week. For these responses, you will engage in critical reflection of the readings.

- 3. Technology Activities (30%)**

Reading about technology will only get us so far. In these technology activities, you get to explore and play with some technology and reflect on what it's like to actually use it.

The expectation is that you will review the articles related to the technology, play (~3 hours) with the technology, and share your experiences in a short (~400-500 word) reflection about your experiences. Some questions you might answer include:

- a. What was it like to use this particular technology?
- b. What surprised you? What did you enjoy? What did you find challenging?
- c. How might you incorporate this into a classroom lesson or instructional activity?

- d. What did you learn from the readings about best practices for using this technology in learning environments?
- e. How did the theory and research from the readings connect with your few hours of experience?
- f. Consider putting in some screenshots of what your experiences were like—this will help your classmates know what you’re talking about when describing aspects of your experience.

*Note:* A few hours are hardly a full experience of what is possible with particular technologies, but hopefully, this gives you some understanding of what it’s like to be a user.

#### **4. Curricular Unit (30%)**

Overview: In this assignment, you will create a short curricular unit. The unit will include a few lessons that are spaced out how you wish. The length of time of your curricular unit is your choice and will be based on the contexts in which you work.

Digital Technology: As this is a course on transformative uses of technology in education, your unit will be inspired by digital technology in some way. Be thoughtful and creative in your planning of digital technology use for your students. Please use the ideas from the texts of the course, your peers, and anywhere else you can find inspiration.

Topic & Setting: Think of a topic and setting that you would like to create or improve. The topic could be a topic that you have to do for your class or business or something that you simply choose to do. You could create something from scratch or re-design something that you work on. The environment could be for a school class, after-school setting, business training, military training, community context, or pick-your-setting. You could consider something that you are already teaching or designing for, or perhaps something that a close friend or colleague is teaching/designing such that they might consider using what you come up with.

Examples from prior classes:

- A geography unit for 4th grade using Google maps to research national or state parks in Utah and create a family vacation. Students had to research the destination, create a family plan, calculate fuel costs based on mileage and their family’s vehicle (or other transportation), and create a family budget. It met social studies, literacy, and math standards.
- A programming unit on Scratch for an informal club. Introduced students to Scratch and led them through a series of projects and activities to help them develop programming skills and computational thinking skills.

*Note:* Maybe your current context would not allow you to implement this unit because of school or business constraints, money, or supplies. That’s okay. Explain that in your outline/explanation, and then just create it anyway. [However, be realistic—you can design something that could be possible given a few changes.] Perhaps you or someone else will be able to use it!

## Late submissions

You may submit assignments up to one week late with a 50% penalty on your total possible grade. You may not submit any assignment more than one week late without prior approval from the Instructor.

## Grading

Your final grade will be computed based on the following percentages. There is no curve for the class. Instead, grades will be assigned based on the scale below, with your final grade rounded to the nearest tenth of a percentage point.

| Grading scale |            |
|---------------|------------|
| A             | 94 – 100%  |
| A-            | 90 – 93.9% |
| B+            | 87 – 89.9% |
| B             | 83 – 86.9% |
| B-            | 80 – 82.9% |
| C+            | 77 – 79.9% |
| C             | 73 – 76.9% |
| C-            | 70 – 72.9% |
| D+            | 67 – 69.9% |
| D             | 63 – 66.9% |
| D-            | 60 – 62.9% |

## Course Calendar

The course calendar is subject to change. Any changes to the course calendar will be communicated via Canvas and Slack in a timely manner.

Each week of the course is considered officially starting on Monday of the week listed in the syllabus. The new week begins Monday at 12:00 am and ends at 11:59 pm on Sunday the following week. That means if the syllabus said that Week 2 starts on May 11 (12:00 am), then Week 2 ENDS on May 17 at 11:59 pm.

*Note:* We will decide through a class poll when weekly assignments are due (either Friday, Saturday or Sunday at 12:00am)

| Week | Starting Date | Topic & Reading                                                                                                                                                                                                                                                                     | Assignments                                                                                      |
|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1    | May 8         | <b>Welcome &amp; Introductions</b>                                                                                                                                                                                                                                                  | Community Introductions<br><br>Discussion post: STEM for ALL<br><br>Poll on Assignment Due Dates |
| 2    | May 15        | <b>Educational Reform</b><br>Watch: <u>Most Likely to Succeed</u>                                                                                                                                                                                                                   | Video Analysis Essay                                                                             |
| 3    | May 22        | <b>How Education is Changing</b><br>Read: Collins & Halverson (2018) Foreword, Preface, Ch. 1, Ch. 2<br>Listen: The Technology Puzzle                                                                                                                                               | Discussion Post/Activity                                                                         |
| 4    | May 29        | <b>Why Educational Reforms Fail</b><br>Read: Oversold and Underused: Computers in the Classroom- Introduction OR Papert TCM Ch. 1<br>Collins & Halverson (2018) Ch. 3, Ch. 4                                                                                                        | Discussion Post/Activity                                                                         |
| 5    | June 5        | <b>New Systems of Education</b><br>Read: Collins & Halverson (2018) Ch. 5, Ch. 6                                                                                                                                                                                                    | Technology Activity #1                                                                           |
| 6    | June 12       | <b>Contemporary Technology &amp; Transformations in Education</b><br>Read: Collins & Halverson (2018) Ch. 7, Ch.8<br>The Class: Living & Learning in the Digital Age- Introduction<br>The Class: Living & Learning in the Digital Age- Ch. 4<br>OR<br>Scardamalia & Bereiter (2006) | Discussion Post/Activity                                                                         |
| 7    | June 19       | <b>Rethinking Education</b><br>Read: Papert TCM Ch. 6                                                                                                                                                                                                                               | Technology Activity #2<br><br>Brainstorm/Overview of Curricular Unit                             |

|    |          |                                                                                                                 |                                                     |
|----|----------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|    |          |                                                                                                                 | presented via meeting with Emily                    |
| 8  | June 26  | <b>Constructionism &amp; Technology</b><br>Read: Read: Papert TCM Ch. 3, Ch. 4, Ch. 7                           | Discussion Post/Activity                            |
| 9  | July 3   | <b>Philosophy for Learning</b><br>Read: Collins & Halverson Ch.9 & Ch. 10<br>Read: Papert TCM Ch. 10            | Discussion Post/Activity                            |
| 10 | July 10  | <i>None</i>                                                                                                     | Curricular Unit Outline<br>Curricular Unit- Part 1  |
| 11 | July 17  | <b>Digital Fabrication &amp; Making</b><br>Read: Kafai & Burke (2014) Ch. 7<br>Dijkers Ch.2<br>Blikstein (2013) | Discussion Post/Activity<br>Curricular Unit- Part 2 |
| 12 | July 24  | <i>None</i>                                                                                                     | Curricular Unit- Part 3                             |
| 13 | July 31  | <i>None</i>                                                                                                     | Technology Activity #3                              |
| 14 | August 7 | <i>None</i>                                                                                                     | Final Curricular Unit<br>Reflection due Aug 11th    |