

Summer 2017

**ITLS 6390**

# **Technology & Its Role in the Transformation of Education**

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*I strongly encourage talking with me at least once this summer semester!*

## **Course Overview**

This course explores the critical role of educational technology as one tool in the transformation of education.

As part of this course we will look broadly at technologies that can be used to support learning. We will start by thinking about the right questions to ask: How do technologies fit in larger systems of activity where people learn? Why does most educational software fail to change education? What does good educational software look like? When is technology useful and when not?

In answering these questions we will examine current thinking on and examples of computers in the formal and informal settings. We will ground our inquiries by examining first hand, several exemplary (and not so exemplary) pieces of educational software.

## **Course Objectives**

Upon completion of this course students will be able to:

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

## **Course Format**

Delivery of this course is online, through the Canvas learning management system. Each week of the course begins and ends on a Friday, although occasionally some assignments may have different deadlines.

You can expect the following from the instructor:

- Weekly overviews or mini-lectures that will offer you some background on the week's readings.
- Quick responses to requests to meet with the instructor by phone, in person, or in a virtual conference room (within 48 hours but more quickly on weekdays).
- Office hours by appointment (phone or video chat). Should there be multiple student requests (at least 1/3 of the class), a formal conference day and time will be scheduled and an announcement encouraging others to participate will be made on the course site.

Because this course is *online*, you will be doing a fair amount of independent reading, writing, and exploration; you need to be a self-motivated and independent learner. Please be aware that the mini-lectures and the course readings are complementary. You will not be able to succeed in this class if you only watch lectures or overviews and skip the readings.

Remember that one of the best ways you can learn is from your *peers*. For this reason I required peer reviews on assignments as well as participation in discussion forums. Remember that these requirements are there for your own learning. Reading each others' work and ideas can be an excellent resource for learning!

### **Asking Questions about the Material**

Questions are best asked on a *discussion board*. Many students will benefit from hearing your questions and others' responses. If you have a question, it is very likely that others do too. The discussion board is a great place for us to learn from each other, sharing questions, answers, experiences, perspectives. Questions regarding personal concerns may also be sent to the instructor via email, but most questions should be posted online.

## **Required Course Readings**

Collins, A. & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and schooling in America*. New York, NY: Teachers College Press.

This textbook is available through the USU bookstore and also through online retailers (where books are often less expensive).

**Other course readings** are available through links or pdfs online through Canvas.

Recommended text:

Pitler, H., Hubbell, E. R., & Kuhn, M. (2012). *Using technology with classroom instruction that works* (2<sup>nd</sup> ed.). Alexandria, VA: ASCD. ISBN: 978-1-4166-1430-2T

*Other students in past years have found this text helpful for practical ideas about how to use digital technology. However.... It's now 4 years old so keep that in mind.*

## Course Overview

- 5/19**            **Week 1**            **Reading Response 1**
- Collins & Halverson (2009), Foreword, Preface & Chapters 1-2
- 5/26**            **Week 2**            **Reading Response 2**
- Collins & Halverson (2009). Chapters 3-4
  - Cuban, L. (1999). The technology puzzle. *Education Week*, 18(43), 68-69.
  - Cuban, L., (2009). *Oversold and underused: Computers in the classroom*. Harvard University Press. Introduction. [Available as ebook in USU library]
- 6/2**              **Week 3**            **Tech Choice Activity 1**
- 6/9**              **Week 4**            **Curricular Unit Outline + Part 1**
- Collins & Halverson (2009). Chapters 5-6
- 6/16**            **Week 5**            **Reading Response 3**
- Collins & Halverson (2009). Chapters 7-8
  - [Livingstone & Sefton-Green Introduction](#)
  - [And either Livingstone & Sefton-Green Chapter 4 or Scardamalia & Bereiter \(2006\)](#)
- 6/23**            **Week 6**            **Tech Choice Activity 2**
- Collins & Halverson (2009). Chapters 9-10
- 6/30**            **July 4**            **— Independence day Weekend. No class deadlines —**
- 7/7**              **Week 7**            **Curricular Unit Part 2**
- Collins & Halverson (2009). Chapters 9-10
- 7/14**            **Week 8**            **Reading Response 4**
- Kafai (2006)
  - Papert (1980).
  - Kafai & Burke (2014), Chapter 1
- 7/21**            **Week 9**            **Curricular Unit Part 3**
- Kafai & Burke (2014) Chapters 7,
  - Dijkers Chapter 2,
  - Blikstein (2013).
- 7/28**            **Week 10**           **Reading Response 5**
- Student Choice (Options available!)
- 8/4**              **Week 11**           **Tech Choice Activity 3**
- 8/11**            **Week 12**           **Final Curricular Unit + Reflection Due**

## Class Due Dates

*Assignments* are always due on **Fridays** by 11:59pm.

*Peer Reviews and Comments* on peer's posts are due on **Tuesdays** by 11:59pm.

## Course Requirements

You are expected to check with the course website regularly and meet all posted deadlines. You are also expected to follow the order of the assignments listed in each learning module, unless otherwise posted.

### **Online participation (10%)**

Throughout the term, *you are strongly encouraged to participate in weekly discussion forums*, posting comments, asking questions, and responded to each others' posts. This is the primary way in which we have to learn from each other. I will periodically weigh in on the discussion but find that students can learn a great deal when they discuss ideas with each other. This cohort especially can learn much from each other given your diverse teaching and educational experiences.

## **Weekly Assignments (90%) – 15 points each**

### **Curricular Unit, broken into parts (4)**

#### **Overall Assignment:**

In this assignment you will create a short curricular unit. It could be for a school class, after-school setting, business training, military training, religious context, or pick-your-setting. Ideally it will be 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.

The reason for having this as a unit rather than just individual lessons, is that you can do more with a unit. Think of a topic or area that you would like to create or improve. You could create something from scratch or re-design something that you work on. It could be a topic that you have to do for your class or business or something that you simply choose to do. You need to be able to create something that will stretch across a few lessons or days or weeks. The length of time is your choosing and will be based on the contexts that you work in.

This is a course on transformative uses of technology in education, so it should use digital technology in some way. Perhaps your idea is inspired by technology (e.g., social networking, digital microcontrollers, video games) but does not use digital technology directly, or not very much. A thoughtful implementation of that would be preferable to trite uses of technology. [In other words, please don't have students create powerpoint presentations, join a Facebook group, or type out essays on Google documents and call that a transformative use of technology.] Be creative. Use the ideas from the texts of the course, your peers, and anywhere else you can find inspiration.

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, do be realistic—don't invent some impossible situation. Invent something that could be possible given a few changes.] Perhaps you or someone else will be able to use it!

**Peer Review:** You get many chances to review and build on your unit. At three time points during the summer semester your peers and your professor will review your work. You should feel free to share your ideas with family, friends, other teachers or business leaders—get feedback often and use it to revise and tweak your work. I have built several deadlines into the course; you do need to turn in substantive work at these times. *But* that work could be later revised as you receive feedback, get more ideas, and read more.

**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 skills in programming as well as computational thinking.

Take risks here that you might not so easily take in your teaching situation. Need help? Set up a meeting with Debbie – in a five minute phone call I can probably help you get to the next step.

**Requirements:**

Please submit the curricular unit in .doc or .rtf format through the canvas assignments section in the associated learning modules. Make sure that the unit is organized. It should have:

1. Audience (who is in the class/training?)
2. Instructional objectives (what do you want the audience to be able to do at the end of instruction?)
3. Procedure (What does the instructor do first? Second? What do students do? Etc. This should include how technology is used)
4. An explanation of what is the role of technology in this unit (hint, it should be aligned with the goal discussed in the readings tied to the lesson plan) and how is its use transformative. Also, please indicate how you think the use of technology will enhance student learning and/or teacher performance. *This part is very important. Often it provides information to your peers and your professor about the reasons for doing what you’re doing in the lessons/unit. This is your chance to explain yourself. You can also use it as a place to “think out loud” about what you’re trying to do and ask for help. After all, you get three revisions, so ask your reviewers for specific help!*

The level of detail need not be exhaustive. However, there should be enough *that a substitute or a colleague* could pick up the plan and know what to do.

**Curricular Unit Grading Criteria:**

My goal is not to assess the quality of the lesson plan on an absolute basis, because that is not the objective of the class. Rather, my goal is to assess the extent to which you used technology to **transform** educational practice. Having students type essays in Microsoft Word rather than write by hand is not necessarily transformative. But if you can justify why it is, then that is what I am looking for.

Each part of the assignment is worth up to 15 points.

- Up to 5 points can be earned for the audience, instructional objectives, and procedure (*bullet points 1-3 above*). If you have sufficient detail such that a substitute teacher (or your friend/colleague who takes

over while you're sick, or Debbie should she suddenly pop in) who could use it without problems, then you get the full 5 points.

- Up to 5 points can be earned for *bullet point 4* – the explanation of the transformative role of technology. 5 points is earned if the explanation is well-justified. 4 points is earned if the explanation is lacking an explanation of either how the use of technology is transformative or how this use will enhance student learning or teacher performance. 3 points is earned if the role of technology is explained but neither how such use is transformative nor how such use will enhance learning/performance is explained.
- Up to 5 points can be earned for your *peer review* of a classmate's curricular unit section. To earn the full points, your comments need to be constructive, and provide some good suggestions for improvement.

## Reading Responses (5)

### Reading response general description

For these assignments, you will engage in critical reflection of the readings. In doing so, you will describe how you believe the readings apply to your school/ institution/ experience. Please: do *not* summarize what is in the readings. Rather, think about what they mean, ask questions about things you want to understand more deeply or want to start a discussion about. Reflect deeply about what these things mean!

There may be readings that you do not agree with at all. That is fine and indeed welcome: in that case, please ensure that you explain why you do not agree with the reading.

Please compose your reflection in .doc or .rtf format and submit through the appropriate assignment function in the corresponding learning module. Each reading response should be about 400-500 words (or the equivalent of a 1 page single-spaced, 12-point font).

### Reading response grading criteria

Each reading response is worth up to 15 points. You will receive 10 points if your response (a) is of the correct length, (b) shows critical reflection on and effective application of the reading topics to your experience, and (c) addresses one or more of the questions to consider. Up to 5 points can be earned for your *comments on at least two classmates' reflections*. To earn the full points, your comments need to be constructive, provide some good suggestions for improvement, or respond substantively to your classmates' ideas.

## Tech Choice Activities & Reflections (3)

Reading about technology only gets us so far. In these tech choice activities you get to actually explore and play with some technology and reflect on what it's like to actually use it. Some of the listed activities are more on the popular, informal side of educational technologies and some are more structured and formal. *Caveat*: A few hours is hardly a full experience of what is possible with particular technologies, but hopefully this gives you some experience of what it's like to be a user.

The expectation is that you will *review* the articles related to the technology, *play* (2-3 hours) with the technology and *blog* about your experiences in a short (400-500 word, single-spaced) reflection on what your experiences were like. Consider putting in some screenshots of what your experiences were like—this will help your classmates know what you're talking about. Some questions you might answer include:

- *What was it like to actually use this particular technology?*
- *What surprised you? What did you enjoy? What did you find frustrating?*
- *How might you incorporate this into a classroom lesson?*

- *What did you learn from the readings about best practices for using this technology in learning environments?*

## Grading scale

There is no curve for the class. 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	93 – 100%
A-	90 – 92.9%
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%

## Resubmission Policy

Resubmission of assignments on which you lost points is possible *with instructor permission* by two weeks from the date I submit feedback, or Friday, **July 31**, whichever comes first. You only get to resubmit once per assignment. You may only resubmit if your original submission is complete (i.e., if you submit a partial lesson plan by the original due date, you do not get a chance to resubmit). *If the original submission was late or incomplete, then you cannot resubmit*, barring instructor permission. You may only do this for up to two assignments.

## USU Criteria for Make-Up of Missed Assignments or Projects

Students will be allowed to make up assignments or projects at full credit only if they meet one of the following criteria:

- Incapacitating illness prevents a student from attending classes for a minimum period of two weeks,
- A death in the family,
- Financial responsibilities requiring a student to alter a schedule to secure needed employment,
- Change in work schedule as required by employer (with verification) or,
- Other emergencies deemed appropriate by the instructor.

If there are extenuating circumstances, a student may petition the instructor for time beyond the deadline. Documentation of the circumstances cited to justify the make-up is required.

### **Academic Integrity - “The Honor System”**

Each student has the right and duty to pursue his or her academic experience free of dishonesty. The honor system is designed to establish the higher level of conduct expected and required of all Utah State University students.

*The Honor Pledge:* To enhance the learning environment at USU and to develop student academic integrity, each student agrees to the following Honor Pledge: “I pledge, on my honor, to conduct myself with the foremost level of academic integrity.” A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the USU community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University

### **Plagiarism**

As stated in the USU Student Code, plagiarism is “the act of representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.” Plagiarism is harmful both for the author of the original work and for the plagiarizer. Any individuals involved in plagiarizing work will receive an automatic fail for the assignment or project and will be immediately reported to the university administration.

### **Persons with Disabilities**

Students with documented disabilities who are in need of academic accommodations should immediately notify the instructor and/or contact the Disability Resource Center at (435) 797-2444 and fill out an application for services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.

### **Incompletes**

In accordance with University policy, incompletes are not to be given for poor performance. There will be no incompletes given except for conditions beyond the student's control, including:

- Incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks



- A death in the immediate family
- Financial responsibilities requiring a student to alter course schedule to secure employment
- Change in work schedule as required by an employer

Other, *unexpected* emergencies may be considered on a case-by-case basis. Regardless of the cause for the incomplete, appropriate documentation of the circumstances is required for an extension to be considered.

### **Written Assignments**

Unless otherwise advised in advance, all written assignments are to be completed in the following format:

1. MS Word file with **your name** and assignment type in the file name.
2. 8.5 x 11, single-spaced.
3. Times or Times New Roman, 12 pt. font, **your name** on first page.
4. Submitted by electronic copy through email.

### **All assignments must be original work**

Plagiarism will result in a failing grade. The preferred style for bibliographic referencing is APA (*American Psychological Association*). You can find details about APA documentation on the following helpful website: <http://www.wisc.edu/writing/Handbook/DocAPA.html>. For educational research, the most popular database is ERIC (*Education Resources Information Center*). This can be found online at: <http://www.eric.ed.gov/>.

### **10 Pointers for Good Academic Essay Writing**

1. A good general rule to follow in the structure of your papers is “tell them what you’re going to say, tell them, then tell them what you said”. In the introduction, provide a roadmap of what you are going to say in the paper. It will help your own organization and organizes the paper for the reader to follow your arguments along.
2. Be explicit about your questions, thesis, perspective and put it up front in your introduction. It’s best not to leave your reader(s) guessing what the paper is about.
3. Provide signposts or points to your roadmap, e.g., “in this section, the following point...” or “to summarize” or “having covered the...we will now turn to...”
4. Section titles are also good as signposts but be sure that the content of the section reflects the title of the section.
5. Use transition sentences that build from previous information and connects to the next.
6. Explain terms. Don’t put them in quotes and assume the reader will know what you mean. Try very hard not to make assumptions about what the reader knows even though you know who the reader is and he/she might be an expert in your topic. The point is for you to demonstrate that you know the material.
7. Be consistent with your bibliographic referencing style.
8. Be careful not to over-generalize, e.g., “many theorists...” when you are only referencing one study.
9. Don’t assume everyone sees or agrees with your perspective, you need to convince the reader of your perspective.
10. Summarize in the conclusion, what you wrote about in the body of the paper. Tie your conclusions back to your original question...how have you proven, answered, shown, presented information that addresses it. Don’t introduce new information in the conclusion. It detracts from the cohesiveness.