EDFN 5024 Signature Assignment

Three Lesson Unit with Integrated Technologies

Purpose

This project will help you analyze and utilize digital technologies in learning environments.

Assignment Description

For this assignment, you will demonstrate your ability to select and use digital technologies to support learning in **a face-to-face or hybrid classroom**. You will plan a unit of instruction related to any area you would like. The unit must include at least 3 lessons total. Then you will create 10 digital technology products to support the unit (see details below).

Note, you do not have to plan for all students to use all 10 products; you can support student choice by providing multiple activity options.

Planning and Documentation

Please complete the Project Proposal, including the Lesson Table and Digital Tool Evaluation Table. This will help you think carefully through your plans and digital technology choices. Also submit the Final Products Table with your final draft.

Digital Products

You will create **10 products total**.

3 Products: For each of the three lessons, create a product that both

1. Presents information or activity instructions *and*
2. Supports formative assessment (provides a way for you to evaluate how well students understand the content)

You might use:

- Interactive slides (Examples: PearDeck, NearPod, Google Slides with Google Forms, etc.)
- Interactive video (Examples: PlayPosit, EdPuzzle, Spiral, VideoAnt, Comment Bubble, Kaltura)
- Some other creative approach you come up with

7 Products: These are your choice, but you must include at least one of each of the 4 categories below. A single product can fulfill more than one category.

1. Subject area specific (think of what you learned about TPACK)
2. Peer interaction (flip grid, voice thread, discussion board)
3. Creation (project centered- Canva, students create powerpoint/slides, etc.)
4. Collaboration (Padlet, google doc, etc.)
5. Summative Assessment (Google Forms, PearDeck/NearPod, Quizlet OR student creation) + Evaluation plan (rubric, evaluation criteria)

Be sure to:

1. Follow basic design principles to keep the focus on learning
2. Use Creative Commons resources when possible and include attributions
3. Apply Universal Design for Learning principles to support all students

Steps for Completion

Assignments are due Sunday nights

Week 1: Review project instructions and add questions to the Q&A forum

Week 2: Choose a topic for your assignment and write brief descriptions of each of the 3 lessons in your unit

Week 3: Submit a draft of your Unit Plan and Lesson Table (you do not need to have all of your activities selected; just list a few possibilities)

Week 4: Find digital tools that can support learning in the content area of your topic

Week 5: Submit a draft of your Digital Tool Evaluation Table

Week 6: Submit 5 products for peer critique

Week 7: Submit critique of peers' products

Week 8: Submit full project (Due August 2)

Submitting Your Final Project

Your final submission will be a PDF of the completed proposal template, including the final products table as well as a document that outlines the project as a whole that another teacher could use to teach it. Please revise each piece based on feedback received during the semester.

Proposal Template

Unit Plan

Overview

Unit Topic:

Standard(s):

Why is this important?

What should students remember/know/be able to do in 10 years? (list at most 3 things)

Desired Outcomes

Knowledge:

Skills:

Abilities:

Learners

Age:

Characteristics:

Pre-requisite Knowledge:

Assessment

Formative:

Summative:

Lesson Table

Lesson	**Topic**	**Activities***	**Assessment**
1			
2			
3			

*Include at least one activity that does not rely on digital technologies. You do not need to describe this activity in detail, just list it here.

Digital Tool Evaluation Table

	Description			Technology Evaluation	
Product #	Lesson Number	Tool	Description of Use	PICRAT Category and Justification	Affordances of Tool
1	1				
2	2				
3	3				
4					
5					
6					
7					
8					
9					
10					

Final Products Table

Please fill in the table below with your final products. Include a link to the final product (**make sure it is accessible**!). The link might be to an online activity (such as a Padlet) or to a file stored in a cloud drive.

If your activity is a discussion forum, you may link to a document that outlines the discussion prompt and criteria for completion.

	Description		Required Digital Technology Elements						Final Product
Project-Related File	Lesson Number	Tool	Information + Formative Assessment (1 per lesson)	Subject area specific (at least 1)	Peer interaction (at least 1)	Creation (at least 1)	Collaboration (at least 1)	Summative assessment (at least 1)	Insert Link Here (link to online activity or file stored on cloud drive) **Make sure it is accessible**!!
1	1		X						
2	2		X						
3	3		X						
4									
5									
6									
7									
8									
9									
10									

Summative Assessment Rubric or Evaluation Plan:

Include a rubric or description of how the final assessment will be evaluated.

Full Project for Sharing

Create a final document that outlines the unit and elements of each lesson OR include a link to a LMS shell that includes each element (example: Google Classroom). Include enough detail that another teacher could teach the unit based on the plan. Be sure your final document includes:

- Unit topic and objectives
- Step-by-step description of each lesson, including overall goals/outcomes of each lesson
- Activity instructions and links
- Full assessment elements and plan

Example Project (Unit 1 of our course; tables include some examples but are not complete):

NOTE: For your project, please plan a unit for face-to-face or hybrid instruction. This is a plan for an online unit because our class is only online.

Unit Plan

Overview

Unit Topic: theory and background of educational technology

Standard(s):

ISTE Standards for Education Leaders (https://www.iste.org/standards/for-education-leaders):

> 2a. Engage education stakeholders in developing and adopting a shared vision for using technology to improve student success, informed by the learning sciences.
>
> 3c. Inspire a culture of innovation and collaboration that allows the time and space to explore and experiment with digital tools.

Why is this important?

A careful consideration of what technology is and why we would want to implement it in classrooms can help teachers make informed decisions about the tools they choose to use. Many of the challenges we have with educational technologies today is that they are used uncritically and ineffectively. Often these tools simply duplicate the existing patterns of teaching and learning instead of changing how we teach and learn to better meet the needs of today's learners. Future educational technology leaders need to develop a deep understanding of why and how to use new technologies so they can make informed decisions throughout their careers and so that they can support other teachers in making these decisions. They also need to understand the challenges with getting others to use technology and approaches to help others better integrate digital technologies into their classrooms.

What should students remember/know/be able to do in 10 years? (list at most 3 things)

1- Use the best tool to support the type of learning you are promoting, even if that tool is not a digital technology
2- Learning consists of more than just acquiring information; the most powerful learning experiences are often those that are built on collaboration, construction, and creativity
3- There are many reasons teachers struggle to use new technologies in their classrooms

Desired Outcomes

Knowledge:

- Definitions: technology, affordances, learning theories (behaviorism, cognitivism, constructivism, connectivism)
- Understand models: TPACK, PICRAT

Skills:

- Categorize technologies using the PICRAT model

Abilities:

- Think about educational technologies in a critical way

Learners

Age:

- Adults of varying ages

Characteristics:

- Have expressed interest in educational technology
- Many are teachers wanting to become educational technology leaders
- Many teachers, others recently left teaching, educational technology directors
- Several special education teachers
- A few focused on becoming an instructional designer in various industries (including higher ed)

Pre-requisite Knowledge:

- Basic experience with technology in schools
- Some background in learning theory
- [partly unknown]

Assessment

Formative:

- Discussion Boards
- Questions embedded in video lectures

- Annotations on documents (Perusall)
- Questions embedded in textbook (self-assessment)

Summative:

- Response to a discussion prompt that integrates core concepts: affordances, learning theory, and technology integration/adoption

Lesson Table

Lesson	Topic	Activities*	Assessment
1	What is technology	Video lecture with embedded questions on what technology is, media/method reading; Perusall; Flipgrid intros + affordances	Perusall, Flipgrid
2	Learning theories	Readings, TED Creativity, Mindmap of learning theories, Vialogue annotations	Mindmap, discussion
3	Technology integration theories	Peardeck on tech integration theories, tech integration model readings, diffusion of innovations simulator, Wakelet on technology tools, discussion board	Peardeck, Wakelet, Discussion Board

*Include at least one activity that does not rely on digital technologies. You do not need to describe this activity in detail, just list it here.

Digital Tool Evaluation Table (some example entries):

	Description			Technology Evaluation	
Product #	Lesson Number	Tool	Description of Use	PICRAT Category and Justification	Affordances of Tool; Limitations
1	1	Video lecture/ with questions (EdPuzzle)	Lecture on technology and affordances with embedded comments, links, and questions.	IA: interaction with lecture video; provides instant feedback to instructor beyond what could be done in a classroom	**Affordances:** encourages active watching of video; instructor gets feedback from students, checks for understanding **Limitations:** Focused on acquiring information
2	2	TED Ed Lesson-Creativity	Lesson surrounding Sir Ken Robinson's talk on	IR: Students interact with questions/discussion;	**Affordances:** supports a lesson around a video; structures the

			school paradigms and creativity. Includes discussion embedded in TED Ed.	replaces a lecture/discussion format of a classroom	lesson for me (pushes me to have an intro, watch, think, dig deeper, discuss, summary) **Limitations:** core content must be video, pushes multiple choice or simple questions about video
9	3	Class Wakelet on Technology Tools	Class members share technology apps and tools, comments that would help other teachers choose tools	CT: Students create a shared resource (including links, images, etc) that they can then share with others outside the class; others can create their own versions of the resource and edit to fit their context. They create something together. It transforms learning by opening up their ideas to a broader audience.	**Affordances:** Encourages using links, formatting; many types of resources can be collected; can be shared externally with colleagues **Limitations:** Interface makes collaborating with large groups difficult
10	3	Moodle Discussion Board on supporting effective technology use		IA: Students interact with one another in discussions; the asynchronous discussion format is more open and flexible than an in-person discussion	**Affordances:** Supports ongoing discussion across time, connecting to other students' ideas **Limitations:** forum/discussion format (required if using groups) does not encourage cross-post connections and requires extra clicks

Final Products Table (EXAMPLES)

Please fill in the table below with your final products. Include a link to the final product (**make sure it is accessible**!). The link might be to an online activity (such as a Padlet) or to a file stored in a cloud drive.

If your activity is a discussion forum, you may link to a document that outlines the discussion prompt and criteria for completion.

	Description		Required Digital Technology Elements						Final Product Link
Project-Related File	Lesson Number	Tool	Information + Formative Assessment (1 per lesson)	Subject area specific (at least 1)	Peer interaction (at least 1)	Creation (at least 1)	Collaboration (at least 1)	Summative assessment (at least 1)	Insert Link Here (link to online activity or file stored on cloud drive) **Make sure it is accessible**!!
2	2	TED Lesson-Creativity	X						https://ed.ted.com/on/hbwIurtY
3	3	Pear Deck	X						https://app.peardeck.com/student/tdisihath
5	1	Flipgrid Introductions			X	X			https://flipgrid.com/a3e5696d
9	3	Class Wakelet on technology tools				X	X		Link to Wakelet
10	3	Moodle Discussion Board on supporting effective technology use			X			X	(link to document with instructions…)

Summative Assessment Rubric or Evaluation Plan:

Element	Excellent	Good	Fair	Poor
Application of concept: affordances	The solution and comments reflect a deep understanding of affordances and how they relate to educational technology use.	The solution and comments reflect some understanding of affordances and how they relate to educational technology use.	The solution and comments reflect some understanding of affordances with limited application to educational technology use.	The solution do not show evidence of an understanding of affordances.
Application of concept: learning theory	The solution and comments reflect a deep understanding of learning theory and how it interacts with educational technology use.	The solution and comments reflect some understanding of learning theory and how it interacts with educational technology use.	The solution and comments reflect some understanding of learning theory with limited application to educational technology use.	The solution and comments show no evidence of an understanding of learning theory.
Application of concept: technology integration and adoption	The solution and comments demonstrate a deep understanding of research concerning technology integration and adoption.	The solution and comments demonstrate some understanding of research concerning technology integration and adoption.	The solution and comments demonstrate limited understanding of research concerning technology integration and adoption.	The solution and comments do not demonstrate limited of research concerning technology integration and adoption.
Integration of theory	Discussion posts effectively integrate the theories discussed in the unit	Discussion posts demonstrate some integration of the theories discussed in the unit	Discussion posts show limited integration of the theories discussed in the unit.	Discussion posts do not show evidence of integration of the theories discussed in the unit.

Full Project Document Link: (add a link here; see below for an example of what the linked document might look like)

EDFN 5024 Unit 1: Theory and Background of Educational Technology

Description: This unit introduces adult students to theory and background needed to utilize and develop educational technologies effectively in K-12 settings. The unit covers learning theories as well as technology adoption theories.

Standards:

ISTE Standards for Education Leaders (https://www.iste.org/standards/for-education-leaders):

> 2a. Engage education stakeholders in developing and adopting a shared vision for using technology to improve student success, informed by the learning sciences.
>
> 3c. Inspire a culture of innovation and collaboration that allows the time and space to explore and experiment with digital tools.

Prerequisite Knowledge:

- Experience with technology use in schools
- Basic background in learning theory

Core Outcomes:

- Define technology, affordances, and learning theories
- Understand technology adoption models (TPACK, PICRAT)
- Categorize technologies using the PICRAT model
- Critically evaluate the role of technology in learning

Lesson 1: What is Technology

In this lesson, students will consider what the term "technology" means and how the affordances of technology can support learning.

Learning Objectives:

- Define technologies
- Define affordances
- Exhibit evidence of critical thinking concerning technologies and learning

Note: To access all Perusall assignments in the unit, go to app.perusall.com and create an account. Then:

1. Select Library
2. Select Add → Material from another course
3. Enter the copy code: KK7CQ8RWDL

Activities:

1. Ask students to watch and respond to a lecture on Technology and Affordances via EdPuzzle. Link: https://edpuzzle.com/media/60b3e750fc60b1415590d9c8
2. Ask students to explore the following resources:
    a. EDUTECH Wiki: The Media Debate (http://edutechwiki.unige.ch/en/The_media_debate)
    b. Press Books/OKC: The Media Debate (https://open.library.okstate.edu/foundationsofeducationaltechnology/chapter/2-the-media-debate/
3. Engage students in a discussion around a blog post on the media/method debate through Perusall (see above for access instructions)

Lesson 2: Learning Theories

In lesson 2, students will develop a background in foundational learning theories (behaviorism, cognitivism, constructionism, and connectivism)

Learning Objectives:

- Define behaviorism, cognitivism, constructionism, and connectivism
- Describe the relationship among learning theories

Activities:

1. Ask students to review the following in the The K-12 Educational Technology Handbook:
    a. Introduction and "learning theories" sections of 1.1
    b. Part 1.2: connectivism
2. Ask students to create a mindmap of the learning theories using a tool such as Mindmeister
3. Instruct students to engage in two different discussion formats:
    a. Discussion 1: Sir Ken Robinson using TEDEd
    b. Discussion 2: Will Richardson using Vialogue
    c. Ask students to describe the affordances and limitations of each discussion platform.

Lesson 3: Technology Integration Theories

In lesson 3, students will consider what it means to integrate technology into the classroom and foundational adoption theories.

Learning Objectives:

- Define PICRAT and TPACK
- Describe how scholars have considered teacher technology adoption, such as Diffusion of Innovations, Technology Adoption Model, and 1st and 2nd Order Barriers
- Effectively apply learning theories and adoption theories in response to a scenario.

Activities:

1. Ask students to review the second half of Section 1.1 in The K-12 Educational Technology Handbook

2. Instruct students to complete a Pear Deck activity about technology integration and adoption theories: https://app.peardeck.com/student/tdisihath
3. Ask students to identify a technology tool that can amplify or transform learning. They should post this resource in Wakelet: **https://wakelet.com/i/invite?code=a36d32b**

Summative Assessment

Engage students in a discussion where they apply what they have learned to a scenario:

In the first three weeks of this course, we have discussed theories of technology and learning. This has included:

- What technology is (including idea/product technologies)
- How technologies impact users and how we maximize technological tools (affordances)
- Theories of learning (behaviorism, cognitivism, constructivism, connectivism)
- The relationship (or lack thereof) between school systems and learning
- What it means to integrate technology into schools
- How we might help teachers integrate technology effectively

Before we move on to the next part of the course (topics in Educational Technology), let's step back and consider how these theories might be applied by educational technology specialists.

Consider this scenario:

Mr. Johnson teaches 2nd grade. He frequently uses technologies in his personal and professional life, including engaging in social networking, using word processing, email, and creating PowerPoints to share with his students. However, Mr. Johnson does not believe his 2nd grade students should use digital technologies in the classroom because it would distract them from learning core content, and he says his students get enough screen time at home. As the school technology director, you recently purchased a classroom set of iPads, and you would like Mr. Johnson to try using them in his classroom.

In your post:

1- Use the **theories** we have discussed to analyze Mr. Johnson's situation

2- Describe how you would **communicate** these ideas to Mr. Johnson (use terms that do not depend on having a background in the theoretical frameworks)

3- Ask a **question** that might spark a deeper conversation on these issues.

Return and reply to at least one of your peers' discussions. Also respond to your peers who reply to your post.

Rubric for Evaluating Summative Assessment responses:

Element	Excellent	Good	Fair	Poor
Application of concept: affordances	The solution and comments reflect a deep understanding of affordances and how they relate to educational technology use.	The solution and comments reflect some understanding of affordances and how they relate to educational technology use.	The solution and comments reflect some understanding of affordances with limited application to educational technology use.	The solution does not show evidence of an understanding of affordances.
Application of concept: learning theory	The solution and comments reflect a deep understanding of learning theory and how it interacts with educational technology use.	The solution and comments reflect some understanding of learning theory and how it interacts with educational technology use.	The solution and comments reflect some understanding of learning theory with limited application to educational technology use.	The solution and comments show no evidence of an understanding of learning theory.
Application of concept: technology integration and adoption	The solution and comments demonstrate a deep understanding of research concerning technology integration and adoption.	The solution and comments demonstrate some understanding of research concerning technology integration and adoption.	The solution and comments demonstrate limited understanding of research concerning technology integration and adoption.	The solution and comments do not demonstrate limited of research concerning technology integration and adoption.
Integration of theory	Discussion posts effectively integrate the theories discussed in the unit	Discussion posts demonstrate some integration of the theories discussed in the unit	Discussion posts show limited integration of the theories discussed in the unit.	Discussion posts do not show evidence of integration of the theories discussed in the unit.