EdTech 592: That's A Wrap!

EdTech Rational Paper

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Introduction

I have been a Technology Teacher for 10 years, and have taught high school engineering for 6 of those years. Engineering is a subject that can be hard for students to grasp as they are learning about new concepts. The use of Educational Technology was something that I wanted to improve so that I could serve my students better. My state has also been making a lot of progress with online education. I saw an opportunity to use educational technology as a tool to create online engineering courses.

This paper will cover the rationale for my selection of artifacts that demonstrate my knowledge in the five AECT standards that guide the work of the EdTech program. Each of the standards has indicators that demonstrate proficiency in that standard. I have included explanations of the artifacts for these indicators. Because I started my coursework in 2009, some of the artifacts from EdTech 501-503 are atypical of what is represented now due to course changes 2009.

STANDARD 1 - CONTENT KNOWLEDGE

Candidates demonstrate the knowledge necessary to create, use, assess, and manage theoretical and practical applications of educational technologies and processes.

1.1 Creating

Candidates demonstrate the ability to create instructional materials and learning environments using a variety of systems approaches.

Artifact: EdTech 503 Instructor Guide

In EdTech 503, I was tasked with learning about Instructional Design, and creating a lesson that would allow users to learn/practice a new skill. I chose to include an instructor guide for an instructional activity that I created that involved the use of 3D Modeling software. This artifact demonstrates my ability to create lessons that can be used outside of a traditional classroom.

1.2 Using

Candidates demonstrate the ability to select and use technological resources and processes to support student learning and to enhance their pedagogy.

Artifact: EdTech 504 Learning Theories

The Learning Theories paper indicates my research of Behaviorism and its correlation to the ADDIE model of instruction. ADDIE is a systematic methodology for instructional design that includes five phases: Analysis, Design, Development, Implementation, and Evaluation (Chevalier, R. D. 2011). A thorough understanding of ADDIE is necessary in order to select and evaluate the quality of the resources used for instruction. My research of Behaviorism and knowledge of the ADDIE model was used in the creation of different projects for my coursework in the EdTech program.

1.3 Assessing/Evaluating

Candidates demonstrate the ability to assess and evaluate the effective integration of appropriate technologies and instructional materials.

Artifact: EdTech 521 Online Community Strategies

My Online Communities Strategies paper includes strategies that can be used to bring online learners together to build a Professional Learning Community (PLC). The paper includes a rationale for each strategy on how it could be used as well as what type of PLC activity is being targeted. This artifact demonstrates my ability to assess strategies and use them appropriately to get the outcome I want from a PLC.

1.4 Managing

Candidates demonstrate the ability to effectively manage people, processes, physical infrastructures, and financial resources to achieve predetermined goals.

Artifact: EdTech 501 Technology Use Plan

In EdTech 501, I created a Technology Use Plan presentation that was designed to help keep purchases organized, improve staff development, and create accountability for procurements. It was meant to be a document that an organization could use to manage people and processes when dealing with technology. The plan is a vision for the district to follow so that technology can be implemented efficiently and effectively.

1.5 Ethics

Candidates demonstrate the contemporary professional ethics of the field as defined and developed by the Association for Educational Communications and Technology.

Artifact: EdTech 521 Netiquette Scavenger Hunt

Artifact: EdTech 521 Netiquette Reflection

One of the ethics components that comes with an online Professional Learning Community or a student online learning community is the proper use of Netiquette. According to AECT Code of Ethics Section 1, #9, *Users shall refrain from any behavior that would be judged to be discriminatory, harassing, insensitive, or offensive and, thus, is in conflict with valuing and promoting each individual's integrity, rights, and opportunity within a diverse profession and society* (Association for Educational Communications and Technology, 2008).

I have included an artifact of a Netiquette scavenger hunt because it was created to help students understand the importance of the ethics that need to be used when communicating in an online community.

STANDARD 2 - CONTENT PEDAGOGY

Candidates develop as reflective practitioners able to demonstrate effective implementation of educational technologies and processes based on contemporary content and pedagogy.

2.1 Creating

Candidates apply content pedagogy to create appropriate applications of processes and technologies to improve learning and performance outcomes.

Artifact: EdTech 543 Managing your Digital Footprint

Managing one's digital footprint is essential in today's world. Students need to have a solid resource to help them both understand that as well as what they can do about it. By

actively creating a positive digital footprint, students can leave a desirable trail for future employers. (Fisher, n.d.) This guide is meant to be a process that students can use to determine their digital footprint as well as how they can clean it up for the future. As students are creating content during their learning, they need to be conscious of the Digital Footprint that they are leaving behind.

2.2 Using

Candidates implement appropriate educational technologies and processes based on appropriate content pedagogy.

Artifact: EdTech 523 3D Modeling Unit

The 3D Modeling unit that I created in EdTech 523 is my example of being able to implement technology appropriately to leverage a specific outcome. The course is designed for students who need to catch up on their skills. Because the material is delivered in an online environment, it is ideal for students who will be working on the content at their own pace outside of the classroom environment. The course was self evaluated based from an adaptation of a rubric from the International Standards for Online Courses. (Bakken et al, 2010)

2.3 Assessing/Evaluating

Candidates demonstrate an inquiry process that assesses the adequacy of learning and evaluates the instruction and implementation of educational technologies and processes grounded in reflective practice.

Artifact: EdTech 505 Determining Instructional Purposes Proposal

Created in EdTech 505: Evaluation, this artifact is a mock proposal for an evaluation of a company's training package. The purpose of this evaluation was to determine if the training provided by the company was adequate to the users. The proposal is an initial step when evaluating the implementation of educational technology. The proposal also outlines what will be evaluated and how it will be evaluated. I felt that the proposal would be a good demonstration of how I can assess learning and evaluate if the practice is effective. The proposal is explicit in describing how the evaluation will be determined and what is to be measured.

2.4 Managing

Candidates manage appropriate technological processes and resources to provide supportive learning communities, create flexible and diverse learning environments, and develop and demonstrate appropriate content pedagogy.

Artifact: EdTech 543 Mini Curriculum

In EdTech 543, I had to create an online learning community with the help of two other collaborators. The mini unit that I have included as an artifact represents the creation of a unit that uses social media to teach coding. Students must use a variety of different social media platforms in this unit. They have access to asynchronous lessons as well as blogs, social media, and video. The learning environment in this lesson is both flexible and diverse and demonstrates the use of social media, student learning management systems, and content creation.

2.5 Ethics

Candidates design and select media, technology, and processes that emphasize the diversity of our society as a multicultural community.

Artifact: EdTech 541 Social Studies Activity

I created this artifact as a Social Studies lesson for EdTech 541-Integrating Technology. The assignment was designed for students in my community in Idaho. Many of these students have never been outside of the state, let alone the country. I created a lesson that would expose them to architecture that is typically found in Europe and not typical of what they would find in Idaho. The purpose of this artifact was to demonstrate that architecture and engineering is very different in other cultures. Students would be exposed to that world wide diversity through this activity.

STANDARD 3 - LEARNING ENVIRONMENTS

Candidates facilitate learning by creating, using, evaluating, and managing effective learning environments.

3.1 Creating

Candidates create instructional design products based on learning principles and research-based best practices.

Artifact: EdTech 521 Asynchronous Lesson

The asynchronous lesson that I have provided as my artifact demonstrates a lesson about thermodynamics which a learner can work through without having to be in a certain place or setting. It is designed to be truly separate from a brick and mortar environment for learning. In a true virtual setting, the learner can still receive information from the videos, search their own answers, and perform inquiry based labs, all without having to be in a classroom.

3.2 Using

Candidates make professionally sound decisions in selecting appropriate processes and resources to provide optimal conditions for learning based on principles, theories, and effective practices.

Artifact: EdTech 541 Instructional Software

The Instructional Software presentation that I have included as an artifact was chosen because it demonstrates how you might select software based on the learning goals. Many different types of instructional software are evaluated based on their usefulness in areas such as Drill and Practice, Tutorials, and Games. This presentation would serve to help an instructor determine which instructional software would be appropriate in a learning situation.

3.3 Assessing/Evaluating

Candidates use multiple assessment strategies to collect data for informing decisions to improve instructional practice, learner outcomes, and the learning environment.

Artifact: EdTech 541 Relative Advantage Chart

The Relative Advantage Chart defines a learning problem, advantage, and outcome that can be expected from certain instructional technologies. I chose this chart for this artifact because it demonstrates how you can assess multiple technology benefits when trying to determine which technology would serve the learner best.

3.4 Managing

Candidates establish mechanisms for maintaining the technology infrastructure to improve learning and performance.

Artifact: EdTech 541 Networking Project

This presentation goes over the essentials of installing a WIFI network in a medium sized school. I chose this artifact because it demonstrates how to design and maintain an infrastructure of wireless networking in an educational environment. With a wireless network in place, faculty and students have the potential to facilitate further communication inside and outside the classroom.(EDUCAUSE, 2002)

3.5 Ethics

Candidates foster a learning environment in which ethics guide practice that promotes health, safety, best practice, and respect for copyright, Fair Use, and appropriate open access to resources.

Artifact: EdTech 543 Social Media Guidelines for High School

The Social Media Guidelines for High School was an outline that I put together to serve two purposes. The first purpose was to demonstrate that I could create and foster an environment where ethical use of social media could be used. The second purpose was to design a social media guideline that I could use in my school. By creating and abiding by the guidelines in this artifact, learners could be more likely to have safe interactions in a social media environment.

3.6 Diversity of Learners

Candidates foster a learning community that empowers learners with diverse backgrounds, characteristics, and abilities.

Artifact: EdTech 541 Adaptive / Assistive Technology

The Assistive Technology presentation is an overview of adaptive and assistive technologies that are available to learners with a disability, both mental and physical. I chose this artifact because it relates directly to empowering learners with diverse backgrounds to take control of their learning. An effective learning environment would need to take into account any disabilities and be able to adapt to them. This artifact displays the variety of assistive technology available to learners with varying abilities.

STANDARD 4 - PROFESSIONAL KNOWLEDGE AND SKILLS

Candidates design, develop, implement, and evaluate technology-rich learning environments within a supportive community of practice.

4.1 Collaborative Practice

Candidates collaborate with their peers and subject matter experts to analyze learners, develop and design instruction, and evaluate its impact on learners.

Artifact: EdTech 543 Webinars

Attending webinars are a way of getting professional development without having to physically attend. The artifact I have attached is a synopsis of a couple of webinars that I attended. I was able to chat on back channels with presenters as well as ask questions. This artifact demonstrates that I can effectively collaborate with peers who I am not in direct contact with.

4.2 Leadership

Candidates lead their peers in designing and implementing technology-supported learning.

Artifact: EdTech 541 Interactive Presentations

This interactive presentation was created to show how electrical circuits work. Instead of creating a static presentation that the learner would just look at, I created an interactive presentation. Students have to interact with the presentation in order to see what the concepts are. There are elements outside of the presentation included as well. Students would have to go out of the presentation in order to work through a simulated lab. This artifact could be used as an example for teachers who are looking to create lessons that are supported by technology. Students could theoretically use this lesson on various devices to learn Circuit Theory and would not necessarily need to be in the classroom. This type of presentation is not the standard for most traditional learning environments, and that is why I chose it as my artifact.

4.3 Reflection on Practice

Candidates analyze and interpret data and artifacts and reflect on the effectiveness of the design, development and implementation of technology-supported instruction and learning to enhance their professional growth.

Artifact: EdTech 521 Lesson Reflection

The lesson reflection was a reflection on a synchronous lesson that I conducted with my students. At the end of the lesson, I conducted an interview with the participant students to find out their opinion of the learning style. While not scientific, I did get a good insight into their preferences. This artifact includes a recording of the lesson along with the reflection of the lesson. After the lesson was implemented, it was evaluated and recorded for future use.

4.4 Assessing/Evaluating

Candidates design and implement assessment and evaluation plans that align with learning goals and instructional activities.

Artifact: EdTech 523 3D Modeling Lesson

Artifact: EdTech 523 Assessment

The 3D Modeling lesson is the whole lesson that the assessment is based on. In the lesson, students have to create a model from drawings and measurements. The assessment has them take this knowledge further and synthesize it to create an object that they have to find themselves. While there isn't much in the actual assessment, the students have to do a great deal of higher order thinking and problem solving in order to complete the assessment. I included this assessment as an artifact because I felt it represented my ability to create an assessment that truly align with the goals of the lesson.

4.5 Ethics

Candidates demonstrate ethical behavior within the applicable cultural context during all aspects of their work and with respect for the diversity of learners in each setting.

Artifact: EdTech 501 Digital Divide

The memo on the digital divide in my community details and describes the discrepancies in technology access that exists in the school district. It is in memo form so as to address the local school board so they can be made aware of any inadequacies that may exist. My local community is both culturally and economically diverse. This artifact shows my understanding of that diversity and its effects on learning.

STANDARD 5 - RESEARCH

Candidates explore, evaluate, synthesize, and apply methods of inquiry to enhance learning and improve performance.

5.1 Theoretical Foundations

Candidates demonstrate foundational knowledge of the contribution of research to the past and current theory of educational communications and technology.

Artifact: EdTech 504 Project Based Learning

Project Based Learning is a heavily researched topic in education. I have included a synthesized research paper on Project Based Learning. Problem Based Learning can be considered a constructivist approach to education where students solve problems for which they do not have the correct knowledge to solve right away. The students must construct mental models of possible solutions, construct ideas with peers, and develop self-directed learning skills in the process (Yew & Schmidt, 2011).

I chose this artifact because it is a good representation of my understanding of the impact that research has in educational theory.

5.2 Method

Candidates apply research methodologies to solve problems and enhance practice.

Artifact: EdTech 543 Social Media Research

In order to enhance my practice of using social media in my courses, I created a curation of research and articles. The artifact includes a link to my curation of various research articles that I used in my coursework for EdTech 543.

5.3 Assessing/Evaluating

Candidates apply formal inquiry strategies in assessing and evaluating processes and resources for learning and performance.

Artifact: EdTech 505 Evaluation Report

The evaluation report represents an evaluation of an actual program at my school. I evaluated for effectiveness of the program based on data collected from students and teachers. I added the evaluation from EdTech 505 because it demonstrates my ability to use research and evaluation to determine if a program is actually effective versus perceived effectiveness.

5.4 Ethics

Candidates conduct research and practice using accepted professional and institutional guidelines and procedures.

Artifact: EdTech 502 Copyright Guidelines Scavenger Hunt

The copyright scavenger hunt that I created in EdTech 501 is a scavenger hunt that learners go onto find out what the copyright attributions for different resources are. I chose this artifact because it goes further than just citing sources, but actually teaches the different levels of citation for items like pictures and graphics that would be included in research. These guidelines would be used in other research papers in my coursework.

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