

Meaningful Integration of Technology

Syllabus – MiT Winter 2014

Here you are -- a teacher of Theater or Math or Social Studies -- how do you decide when it's worth the time and effort to use a technology? What kinds of knowledge and experiences do your students have with technology? What kinds of technologies are out there that teachers find useful and valuable for supporting student learning? What roles, if any, do technologies play in helping students uncover, discover and critically engage with their worlds?

The main goal of this methods strand is for you, as a teacher, to understand what powerful and educative uses of technology entail. You will increase your awareness not only of types of technologies, but also perhaps more importantly, you will clarify the reasons and strategies for embedding specific technological tools into your curriculum. A secondary goal of this strand is to cultivate your imagination for different ways to help students discover, read, and problem solve within their worlds. You will collectively explore how to develop units that are tools for learning about important aspects of student's local communities. A final goal, is to collectively develop & publish a resource that can not only support the work of our cohort now, but one that will continue to develop through the contributions of future MiT students ([see link to *Investigations in our Town* blog](#)).

Knowledge and skills you will acquire as a result of this unit:

You will become familiar with:

- How youth use technology in their everyday lives
- OSP's learning standards for integrating technology into the curriculum
- The difference between Tier 1, 2 & 3 uses of technology in the classroom
- Types of technology used in your content area

You will know:

- Principles for integrating technology into the curriculum so that students are critically engaged as consumers, participants and/or authors.
- Strategies for refining your technology knowledge and skill.
- Steps for choosing technology that is appropriate for learning goals.

You will be able to:

- Plan a unit that meaningfully leverages technology in order to meet content learning goals.
- Analyze how using a specific technological tool might support both (i) investigation in the discipline, and (ii) student learning.
- Analyze and identify the kinds of teaching/scaffolding that are implicated in using specific technologies.
- Access professional development resources for learning and engaging the technology in your classroom.
- Complete a multimedia project such as the kind that your students might do.

You will demonstrate your knowledge and skill through the following assessments:

- [Unit plan outline](#) (i.e. UBD stage 1-2) that meaningfully leverages technology in order to meet content learning goals (*see week 9*)
- [Technology Presentation](#) that includes resources for learning technology you'll use in your unit, and illustrations of its educational application. (*see week 7*)
- [Written analyses](#) of: (i) how the technological tool will leverage students investigation and learning in your unit; and
(ii) the types of scaffolding students may need when using technology for learning in your unit (*see weeks 5, 7, & 9*)

- Webpage for the community resource that clearly communicates information about your unit & about technology (*due 7, 9 & 10*)
- Professional development plan with specific goals, steps & strategies for integrating technology into your spring quarter student teaching. (*due week 10*)
- Synthesis of Learning Folder Entry(*due week 10 – see directions in main winter quarter syllabus*)

Assessment for learning (engaging metacognition):

- Regular formative assessment prompts in which you communicate insights and refinements to your understanding of meaningful uses of technology in the classroom. (*weekly wiki reflections*)
- Self- assessment and peer review of unit plans, written analyses & web pages.
- Self-assessment of technology using Activity type, EALRs, & OSPI’s Technology Proficiencies for educators to inform professional development plan. (*due week 3*)

Assessment Criteria for your work this quarter

Criteria	I’ll be looking at the degree to which you...
Attention to meaningful leveraging	<p>... use technology to serve a content goal.</p> <p>... explain how and why the technology is important/useful to student learning (e.g. how does technology support knowledge building, or knowledge expression).</p> <p>... make use of professional resources to support your explanations.</p>
Awareness of scaffolding	<p>... consider relevant ways to structure critical engagement, student thinking, problem solving, collaboration, project management, etc. when using that technology. I’m looking for specificity here.</p>
Meaningful reasons and ideas for professional development	<p>... specify what you do and don’t yet know about the technologies you review.</p> <p>... identify and spell out (i) knowledge of PD resources in the district, (ii) on-line tools for learning, and (iii) teacher models to emulate/adapt. I’m looking for specificity here.</p>
Use of	<p>... create multimedia presentations that are (i) clearly written, (ii) well organized, and that (iii) attend to structure of the community resource.</p>
Unit plan	<p>... develop unit focus that helps students to uncover knowledge about their local community, town or environment.</p> <p>... make clear and accurate use of stages 1 & 2 of backward design</p>
Professional participation in community learning activities	<p>... come prepared for workshops (i.e. timely, posts completed, etc)</p> <p>... engage with peer review process</p> <p>... active participation with community knowledge building through tools such as the class wiki</p>

SCHEDULE OF ACTIVITIES AND ASSIGNMENTS

	Workshop	Workshop Preparation
<p>Week 1 Jan 8th</p>	<p>Intro to Technology Strand</p>	<ul style="list-style-type: none"> • Use your phone, camera, or other tool to take photographs of things that represent/symbolize what someone in your discipline would study in order to learn about <u>your</u> home-community, town or place. • Bring (on paper, phone, or computer, etc) the 5 best images to class – be prepared to explain (i) why someone from your discipline would focus on these elements; and (ii) why they represent important ways to learning something about your town/community/place. <i>(Save copies of these images to use for our technology blog)</i>
<p>Week 2 Jan 15th</p>	<p>Who is the Digital Generation? What do they know and need to learn?</p> <p>Why engage technology in the classroom?</p> <p><i>Post workshop reflection & additions to wiki</i></p>	<p>Carefully read:</p> <ul style="list-style-type: none"> - Living and learning with new media (Ito et al, 2008) <p>Watch on line:</p> <ul style="list-style-type: none"> - Technology, Integration and Teaching by Mishra & Koeller <p>Be familiar with:</p> <ul style="list-style-type: none"> - OSPI Technology Standards pages 1-10, plus the standards for where you'll be student teaching next quarter (either middle/high school) - Technology Proficiencies for educators (OSPI) - "Information, Media & Technology Skills" from framework for 21st Century Skills (by Partnership for 21st Century Skills)
<p>Week 3 Jan 22nd</p>	<p>What does a meaningful vs. techno-centric integration of technology entail?</p> <p>What types of technology are important to the discipline I teach? Why?</p> <p><i>Post workshop reflection & additions to wiki</i></p>	<ul style="list-style-type: none"> • Carefully read : <ul style="list-style-type: none"> – Instructional Planning Activity Types as Vehicles for Curriculum-Based TPACK Development (Harris & Hofer, 2009). – The activity types & related technologies for your content area posted on Learning Activity Types Wiki • Print out activity types list for your content area. <ol style="list-style-type: none"> a. Add technologies not yet listed that you know/have heard of that could serve particular activity type purposes. (Review Tech EALRs & Tech Proficiencies documents for possibilities too) b. THEN Assess your own knowledge of technologies listed in the "Activity Types" documents. Bring this highlighted document to class. Use green highlighter on tools you are comfortable using and could teach. Use orange to highlight tools you are familiar with but would need to review/practice some more if you are to use the tools with students. Use red to highlight the tools you have either never heard of or do not know how to use. • Review & bring book to class: <ul style="list-style-type: none"> – Types of thinking and engagement necessary for learning that are outlined by the learning cycle in Zull
<p>Week 4 Jan 29th</p>	<p>What does a study of place entail?</p> <p>Word press Workshop</p>	<ul style="list-style-type: none"> • Workshop prep: TBA

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Week 5 Feb 5 th	Peer review of unit plan & ideas for integrating technology <i>Post workshop reflection & additions to wiki</i>	<ul style="list-style-type: none"> • <u>Create (post on moodle & bring to class):</u> <ol style="list-style-type: none"> a. Write up the UBD stage 1 of the backward design template for your unit (this part of the template outlines the big idea, goals, standards, essential questions, new knowledge & skills refined by the unit) b. List 5-6 types of technology that you could integrate to support learning in your unit. c. For each technology – brainstorm, investigate and list (i) what activity type(s) it would support in this unit; (ii) how it might support learning; and finally (iii) what <u>you</u> might need to anticipate in your planning and learn if <u>students</u> are to effectively make use of this technology.
Week 6 Feb 12 th	Workshop TBA Word press workshop	<ul style="list-style-type: none"> • <u>Workshop prep: TBA</u>
Week 7 Feb 19 th	Technology Presentation <i>Post workshop reflection & additions to wiki</i>	<ul style="list-style-type: none"> • <u>Investigate & prepare presentation of technology you plan to use for your unit.</u> <ol style="list-style-type: none"> a. Include information that helps you understand and explain the nature of technology you plan to use b. List 3-4 “live” links of examples that are available on the web to help you illustrate different ways this tool can be used in a classroom. c. Identify which activity types could make use of this form of technology. Describe how this might look. d. Write up a list of the things to attend to in order to effectively scaffold this form of technology. e. Post on Class Blog using WordPress
Week 8 February 26 th	Workshop TBA	<ul style="list-style-type: none"> • <u>Workshop prep: TBA</u>
Week 9 March 5 th	Unit Presentations <i>Post workshop reflection & additions to wiki</i>	<ul style="list-style-type: none"> • <u>Prepare presentation of your Unit that includes:</u> <ol style="list-style-type: none"> a. A description of the unit using stage1 of UBD framework b. A stage 2 detailed description of the <u>assignment</u> that involves a student using the technology in order to meet part of (i) the <i>disciplinary</i> learning objective and (ii) overarching goal for the unit. c. Links or references to 4 resources that a teacher could use to further investigate the big idea of the unit. d. Written explanation of technology use that addresses: <ul style="list-style-type: none"> - how this use of technology would help students meet the learning objectives. - what you’d need to anticipate through structure or mini lessons to help students be successful in this project. e. A self-assessment of your skill in both using and teaching with this tool. f. A concrete plan for how you could develop your skills that entails: (i) knowledge of Professional Development (PD)resources in the district, (ii) on-line tools for learning, and (iii) teacher models to emulate/adapt. • Post on Class Blog using Word Press
Week 10 March 12 th	Finalize Wiki for Powerful uses of Technology	<ul style="list-style-type: none"> • Final revisions on websites w/ written reflection on how made use of feedback from peers and faculty. • Professional development plan with specific goals, steps & strategies for integrating technology into your spring quarter student teaching.

Assessment Criteria

- (Example: Look at Sonja's ideas about what a psychologist, who studies how people think and make decisions, might observe & study to learn about Olympia.-([link to come](#)).

WORKSHOPS NEEDED

Build the Rationale for learning about Technology Integration

1. What and who is the Digital Generation? What does this mean for your teaching?

readings: [Living and learning with new media \(Ito et al, 2008\)](#)

PBS Digital Nation (2010) <http://video.pbs.org/video/1402987791/>

<http://www.fredrogerscenter.org/blog/diversity-in-childrens-media-is-more-than-just-race-or-gender/>

<http://www.npr.org/2014/01/02/259082766/malcolm-jamal-warner-on-growing-up-on-the-cosby-show>

2. Why engage technology in the classroom? What is its role in the discipline? How does it support learning?

What is a technological tool? Refocus and address possible misconception that reason for using tech is to engage students as opposed to using it as a tool for discovery/meaning making/communication in the discipline (TC) How make sure focus is on exploration and learning?

readings: [Video presentation : "technology, integration and teaching" -- Mishra & Koeller. Technology EALRs with focus on your endorsement age and content area](#)

handouts: [Tier 1-3 uses of technology in schools](#)

3. What is meaningful vs. technocentric integration of technology for learning & discovery?

Revisit learning principles and teaching that makes use of these principles. -- PART ONE:

Revisit principles of learning and connect to activity types. What activity types are implicated by the four parts of the learning cycle (P). What kinds of activities types are specific to learning and investigating in the discipline? (CP) Students will brainstorm and identify activity types for general and disciplinary learning using the learning cycle model. They will then investigate the activity type handouts to extend their initial investigations. Homework is reading Harris & Hofer's work on this and doing a closer read of activity types. **PART TWO:** Collective analysis of activity types implicated by units/lessons (note: could use differentiation text unit). Examine purpose for learning of the activity type. Identify alternative activities that could meet similar goals for learning (i.e. different activities same activity type). Focus on possible technologies could use. What affordances does the

technology provide? (i.e. why use the technology vs. simple pen paper?) (TPK) PART THREE: Self-assessment using EALR and Tech proficiencies now?

readings: Review Zull pages _____ & Bransford principles of learning for transfer.

handouts: Instructional Planning Activity Types as Vehicles for Curriculum-Based TPACK Development (Harris & Hofer, 2009)
Activity types website pertinent to endorsement area

4. **Stepping back to identify the larger learning purpose: Studying the local**

What does it mean to use discipline to reveal something about a community? Examine examples of place based learning – what do different disciplines focus on? What disciplinary learning outcomes help uncover and build knowledge of the local? Identify possible areas of investigation for units. Students can use the same area of focus, but their investigations of tech and plans are individual.

readings: something on using disciplines to explore real world issues.
Jigsaw reading of resources on place-based community investigations

Sort through and decide on what to use....perhaps 4 examples? Need urban exploration example...

- Place-based Education: Connecting Classroom and Community (Sobel):<http://www.antiochne.edu/wp-content/uploads/2012/08/pbexcerpt.pdf>
- http://www.promiseofplace.org/curriculum_and_planning
- http://www.promiseofplace.org/assets/files/PBE_Manual_2012.pdf
- <http://www.promiseofplace.org/assets/files/ReadingtheLandscapeIntro.pdf>
- <http://www.uvm.edu/place/>
- <http://thefoodproject.org/food-systems-curriculum>
- http://www.footprintnetwork.org/en/index.php/gfn/page/footprint_basics_overview/
- *Pollution Challenge!* <http://www.simcityedu.org/>
- South Sound Green: Water quality testing <http://www.thurstoncd.com/south-sound-green.html>

5. **Presentations & Peer reviews**

Two days for: Unit plan that meaningfully leverages technology in order to meet content learning goals. Presentation of technology for unit that provides resources for learning the technology and illustrations of educational application.

Then workshops on these days should provide input to help students refine the following for context of webpage: Written analyses of: (i) how technological tool will leverage students investigation and learning in your unit; and (ii) types of scaffolding students may need when using technology for learning in your unit

6. **Workshops on Wordpress?**

In my case, if I were to try to learn something about Olympia through the eyes of a psychologist who is interested in decision making: I might take pictures of local places where people deliberating difficult decisions (, (, pictures of types of information about the local place that people use to make decisions, perhaps the editorials from the local news paper highlighting point/counter point, etc.. I might take pictures of facial expressions of local people (with permission of course) to capture the feelings that are involved in making decisions... etc.