

Teaching School Subject Matter with Technology

A Problem-of-Practice Based Approach



Course Sites: <http://ss15te831wargo.wikispaces.com/>

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Course Overview:

Our contemporary time is increasingly marked by the flows of texts, bodies, and technologies. As digital / virtual tools and a myriad of other mobilities mediate teacher and students' lives, so to do they mediate spaces of learning (both formal and informal). With the advent of the "digital turn," recent rhetoric and curricular reform in K-12 schooling has placed an increased significance on "teaching with technology" and "21st century learning" as key components to educating all students in the 21st century. However, what exactly is meant by "21st century learning", and how can teaching school subject matter with technology develop the knowledge and skills needed for an ever-changing world?

Taking heed of this question, the principal aim of this course is to develop strategies and methods for teaching school subject matter with technology. The course offers a variety of perspectives for integrating educational technology with content and pedagogical practice. Among the topics explored in the course are the National Educational Technology Standards for Teachers (NETS*T), *Technological Pedagogical and Content Knowledge Theory* (TPACK), digital literacy/ies, digital citizenship, Universal Design for Learning (UDL), 21st century learning, and using Internet-based technologies for purposeful educational outcomes. To some degree, this course will also examine the "great debate" (universal access and the affordances and constraints of utilizing educational technology in schools)in the field of educational technology. Yet, **the main purpose of the course is to provide students with ways of thinking about how integrating/making visible technology in school subject matter and offering ideas, discussions, opportunities, and tools for how to do it.** By taking a "problem-of-practice" based approach, one of the primary objectives is to provide authentic learning experiences with using educational technology to teach various subject matter (and grade levels).

Note: Although TE 831 students do not have to currently teaching in a K-12 school to take this course, it is helpful if graduate students have access to a K-12 classroom and students for MANY of the course projects. In this course, there is a high priority placed on doing as a pathway to understanding.

Primary Course Goals:

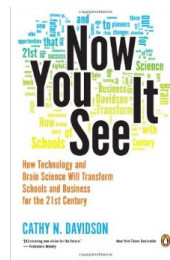
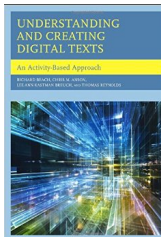
We will:

- Examine conceptual frameworks for integrating educational technology in school subject matter
- Examine and become familiar with issues and terminology related to the field of educational technology
- Discuss, 'tech-tually' listen and collaborate with classmates in order to foster an interactive online community
- Take a problem-of-practice approach to apply technological knowledge and pedagogical knowledge to construct and remediate lessons and projects;
- Create digital media to utilize one's teaching, learning, and reflection

Course Texts & Literature

Required Course Texts:

- *Now You See It: How Technology and Brain Science Will Transform Schools and Business for the 21st Century* by Cathy N. Davidson
- *Understanding and Creating Digital Texts: An Activity-Based Approach* by Richard Beach, Chris M. Anson, Lee-Ann Kastman Breuch, and Thomas Reynolds



Required Readings on D2L:

[Please find on our D2L site here](#)

Wiki Site and Blog:

<http://ss15te831wargo.wikispaces.com/> (where you can access required 'viewings')

Twitter:

When tweeting for class or joining online conversations via Twitter, use **#TE831**

Course Assignments

VODCAST AUTOBIOGRAPHY: WHO I AM AS TECHNO-TEACHER? (15 points)

One of the ways to integrate educational technology into school subject matter is with vodcasts, sometimes referred to as digital stories and/or narratives. Podcasts are audio recordings shared with other via the Internet, whereas vodcasts are audio AND video recordings combined, shared with others via the Internet. Vodcasts may be utilized with any subject matter and allows users to shape and craft content in powerful and purposeful ways. It's also grounded in creativity. Vodcast creation is a digital literacy that blends images, text, first-person narration, and (often) music. Often referred to as vlogs, vidcasts, or video podcasts, video/audio projects enable authors to take content, blend it together, and share it with others. The purpose of this assignment is for students to create their own vodcasts for the purpose of introducing yourself as a person, practitioner, and techno-teacher. While the style and platform for the vodcast is up to each student, *each student must construct a project that will note the disciplinary subject / content / grades they teach. If a student is not currently teaching, they must create a vodcast for a subject/topic they are certified to teach.* The vodcast should be 4-5 minutes in length. Students can use iMovie, PhotoStory 3, QuickTime, Windows Moviemaker, or an alternative tool of choice. Students will upload their vodcast to Vimeo to share their vodcast autobiography.

REMIX/REMEDiate/RE-TEACH! A PROBLEM-OF-PRACTICE APPROACH TO TEACHING WITH TECHNOLOGY (40 points)

As I noted in the opening page of this syllabus, "...part of knowing is doing." This assignment's purpose is about doing. Most technologies are not designed, explicitly, for K-12 learning purposes. What this means is that technologies have to be *creatively repurposed* to make them fulfill their educational potential. This is as true of Microsoft PowerPoint as it is of the iPad. In this case-based assignment, students will identify an Internet technology (i.e., website, online program, etc.) or digital hardware (cell phone, Flip camera, iPad, etc.) – or both – which they may have limited use and experience with (you may choose to integrate more than one for this project). Students will craft a lesson / project / unit remediating the learning outcomes through that piece of technology. The lesson must be connected to content TE 831 students teach. Likewise, the lesson / project / unit should be implemented and taught in their classroom, with their students, prior to the due date for this assignment. Students will also post their lesson plan and voicethread reflection to the wiki, as well as read through their peers' posted projects. A problem-of-practice template and further guidelines for the assignment will be provided on the wiki.

VOICETHREAD REFLECTION: WHAT DID I LEARN FROM TAKING AN INQUIRY AS STANCE APPROACH? (15 points)

Following the Remix/Remediate/Re-teach! Assignment, you will reflect (via Voicethread) on the experience holistically. In particular, you will document your professional learning and development. What, in particular, did you learn by taking a "inquiry as stance" and/or problem-of-practice based approach?

The following bullets are guidelines for how to engage in and construct this reflection:

- What disciplinary and/or content-based "problem" did I interrogate through this process?
- How did the inclusion and visibility of technology mediate and re-purpose the lesson/unit/project?
- How did the inclusion and visibility of technology/ies transform student learning and teaching practice?
- What questions, dilemmas, or insights remain?

A TECHNO-MANIFESTO: REFLECTING ON TE 831 AS 'EXPERIENCE' (10 points)

This assignment asks you to reflect upon and assert, in writing, your own individual *techno-manifesto*. This should be both a statement of your philosophy of using technology in general, and on teaching school subject matter with technology specifically. If you already have experience teaching with tech, you may have some very solidified ideas. If you have yet to teach with technology in meaningful ways, this document is a place to launch your thinking. The primary utility of generating a document like this one—beyond the institutional requirements it might fulfill for a portfolio or CV—is the critical reflection upon our own beliefs and practices it requires of us. Your stand on teaching with technology need not be cutting edge or super-new-fangled. This is a place to express methodological preferences, as well as your teaching priorities and the broader goals you wish for students, yourself, and perhaps the teaching relationship between content, technology, students, and yourself.

ONLINE PARTICIPATION (20 points)

It is essential that you not only "virtually" attend each class session (all readings and assignments completed), but that you are also prepared to be an active class participant (reading the work and responses of your peers). An active participant engages in proactive and responsive tech-tuall listening practices. An important aspect of any classroom learning community (*but especially in an online course*) is the active engagement of students and teachers around worthwhile content. Your contributions to class discussions and activities are essential to your learning as well as to the health and learning of our classroom community. Participation will be evaluated across two elements:

- **Skype / Google hangout / Twitter conversations** will focus on readings for the course. One conversation will center on Davidson's text, which students will read for the course. Other conversations will focus on topics covered during the course. For these Skype / Google hangout / Twitter conversations, students must be on time, complete the assigned reading ahead of time, actively participate in the virtual conversations and send the instructor the required follow-up reflection(s). (*Note: A Doodle Poll will be sent out the first week of class in order to find a time and platform that works for everyone*)
- **Online asynchronous discussion forum postings (150-250 words)** focus on responses to the readings and/or viewings. These are more "open-ended" and intended to provide a way for students to "hear" their classmates' thinking on the week's viewings/reading(s). Students should connect their posts to the materials in the week's lesson; these postings may also have applications to students' classroom practices.

Grading

Each assignment will be graded separately and the graded assignments will be combined to reach a final grade for the semester. **At any point participation deductions may be taken.**

The grading scale will be as follows:

94-100%	4.0
88-93%	3.5
82-87%	3.0
76-81%	2.5
70-75%	2.0
65-69%	1.5
Below 65%	0.0

Course Policies

On Virtual Attendance, E-mail, D2L, and Technology for the Course

The success of any seminar course hinges on active participation and "discussion" by each member. As this is an online course, "discussion" will not look the same as "in-person" coursework. However, each member is expected to participate in weekly online course activities. In this way, each person will only benefit from his/her/hir own efforts and experiences, but also from those of the whole community. Read your MSU email and check the D2L and Wordpress sites ALWAYS, but especially between "opening" (8:00am (EST) on Mondays) and "closing" (9:59pm (EST) on Fridays) class sessions.

Note: *I recognize that unforeseen situations may arise during the semester. However, it is YOUR responsibility to communicate these situations to the course instructor. Even online, a course is only successful if all students put forth their best efforts and share their experiences.*

Incompletes (University Policy)

When special or unusual circumstances occur, the instructor may postpone assignment of the student's final grade in a course by use of an I-incomplete. The I-incomplete may be given only when: The student (a) has completed at least 12 weeks of the semester (6 weeks in the summer session), but is unable to complete the class work and/or take the final examination because of illness or other compelling reason; and (b) has done satisfactory work in the course; and (c) in the instructor's judgment can complete the required work without repeating the course.

Written Work

The written work that you hand in should be quality work, both in its content and form. The content of your written work should reflect your careful and thoughtful consideration of the ideas we are exploring in the various readings and activities that we use – and you should refer to these where this serves to support your ideas. This does not mean you need to write pages and pages for these assignments. It does mean you should carefully craft what you write. Be clear, succinct, and support what you say. Your work should be typed, double-spaced, and presented in an edited format (you have checked it for spelling and grammar). If you are apprehensive about your writing ability, I would strongly suggest scheduling a 1:1 meeting with the MSU Writing Center. You can schedule an appointment at: writing.msu.edu [yes, these can even happen online...]

Using APA Citations

The educational community uses APA formatting, which students need to use for this course. Directions for APA style for references and citations are available [HERE](#). You may also view [an online tutorial from APA](#). There are many additional resources on the web, connected to APA formatting. You may also wish to purchase the *Publication Manual of the American Psychological Association* (6th ed. American Psychological Association: New York, 2008).

Academic Honesty/Plagiarism

Article 2.3.3 of the Academic Freedom Report states "the student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the College of Education adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades, and in the all-University Policy on Integrity of Scholarship and Grades, which are included in Spartan Life: Student Handbook and Resource Guide (<http://www.vps.msu.edu/SpLife/default.pdf>). The specific policy can be viewed at <http://www.vps.msu.edu/SpLife/rule32.htm>. Students who commit an act of academic dishonesty may receive a 0.0 on the assignment or in the course.

Special Accommodations

Students with disabilities should contact the professor to discuss any accommodations needed to fulfill the course requirements and achieve learning objectives. In order to receive reasonable accommodations from the professor, students must have certified eligibility through the Resource Center for Persons with Disabilities (RCPD) located at 120 Bessey Hall (tel: 353-9642; TTY: 355-1293; Email: rcpd@msu.edu; web: <http://www.rcpd.msu.edu>).

Tentative Course Schedule:

Important Dates: Assignment due dates vary – see course schedule below...

MODULE 1 Key Concepts, Theories, & Debates in K-12 Ed Technology Week 1- 4

MODULE 2 Using a Problem-of-Practice Approach to Teaching School Subject Matter w/ Technology Week 5 - 12

MODULE 3 INTEGRATION OR VISIBILITY: FORECASTING A NEW(ER) PARADIGM? Week 13 - 15

- LEARNING AND TEACHING ARE FLEXIBLE, AS IS THIS SYLLABUS. AS WE ENGAGE IN ONLINE DISCUSSIONS, AND I ASSESS LEARNING OUTCOMES/TRAJECTORY, I MAY NEED TO MOVE THINGS AROUND AND/OR ADD/DELETE ITEMS. I WILL ALWAYS LET YOU KNOW AHEAD OF TIME, VIA EMAIL AND IN CLASS ANNOUNCEMENTS, OF ANY ADDENDUMS TO THIS DOCUMENT.

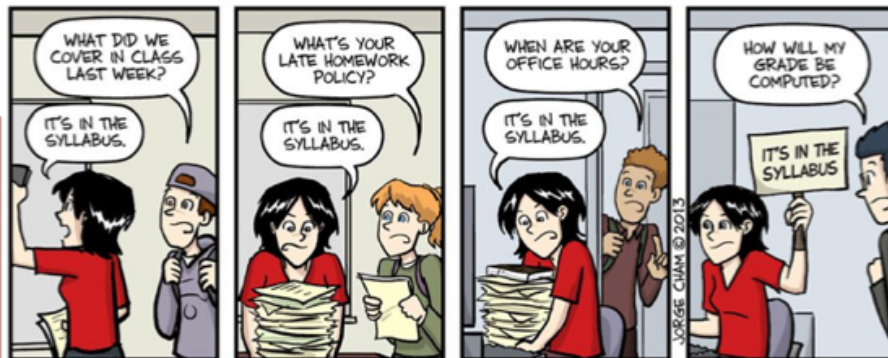
Week / Day	Course Theme & Readings	Assignments Due:
Week 1 Jan 12 th – Jan 16 th	WEEK 1: “But I’m Not Very Tech Savvy...” Techno-Teaching as Stance Readings: <ul style="list-style-type: none"> • Crowley, B. (2012). Tips for tech-cautious teachers. <i>Education Week Teacher</i>. • NET Standards (NETS for Teachers) • NET Standards (NETS for Students) • Wegeriff, Ch. 7 Educating Technology 	Student Survey via GoogleSurvey should be completed by Friday at 9:59pm (EST)
Week 2 Jan 20 th – Jan 23 rd	WEEK 2: Key Concepts, Debates, and Theories: Focus on TPACK Readings: <ul style="list-style-type: none"> • Koehler, M. & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)? <i>Contemporary Issues in Technology and Teacher Education</i>, 9(1), 60-70. AACE. • Harris, J. & Hofer, M. (2009). Grounded tech integration. <i>Learning and Leading with Technology</i>, 37(2), 22-25 • Ertmer, P. & Orrtenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. <i>Journal of Research on Technology in Education</i>, 42(3), 255-284 	Discussion Response #1 due on course Wiki by Friday at 9:59PM (EST)
Week 3 Jan 26 th – Jan 30 th	WEEK 3: Digital Natives? Using Technology to Teach Subject Matter: Part I Readings: <ul style="list-style-type: none"> • Prensky, M. (2001). Digital natives, digital immigrants. <i>On the Horizon</i>, 9(5). • Davidson, C. N. (2011). <i>Now you see it: How the brain science of attention will transform the way we live, work, and learn</i>. New York, NY: Viking. [Read: Introduction and Part One] 	VLOG Autobiography Due by Monday, January 26th at 8am EST
Week 4 Feb 2 nd – Feb 6 th	WEEK 4: Digitally Naïve: Using Technology to Teach Subject Matter: Part II Readings: <ul style="list-style-type: none"> • Davidson, C. N. (2011). <i>Now you see it: How the brain science of attention will transform the way we live, work, and learn</i>. New York, NY: Viking. [Read: Part Two] • Rose, D.H. & Meyer, A. (2002). <i>Teaching every student in the digital age: Universal design for learning</i>. Alexandria, VA: ASCD. [Chapter 4] 	

<p style="text-align: center;">Week 5 Feb 9th – Feb 13th</p>	<p>Week 5: What Knowledge Has Most Worth? Techno-Inclusion as Literacy?</p> <p>Readings:</p> <ul style="list-style-type: none"> Beach, R., Anson, C. M., Breuch, L. A. K., & Reynolds, T. (2014). <i>Understanding and Creating Digital Texts: An Activity-based Approach</i>. Rowman & Littlefield. [Chapter 1 & 2] Zhao, Y. (2008). What Knowledge Has the Most Worth?. <i>School Administrator</i>, 65(2), 20-27. Buckingham, D. (2007). Digital Media Literacies: rethinking media education in the age of the Internet. <i>Research in Comparative and International Education</i>, 2(1), 43-55. 	<p style="text-align: center;">Problem of Practice Identified in Wiki Discussion Post</p>
<p style="text-align: center;">Week 6 Feb 16th – Feb 20th</p>	<p>Week 6: Taking an Inquiry as Stance Position to Practitioner Research</p> <p>Readings:</p> <ul style="list-style-type: none"> Cochran-Smith, M., & Lytle, S. L. (2009). <i>Inquiry as stance: Practitioner research for the next generation</i>. Teachers College Press. [Chapter 2] Dinkelman, T. (2003). Self-study in teacher education a means and ends tool for promoting reflective teaching. <i>Journal of Teacher Education</i>, 54(1), 6-18. Benson (2012). Creativity in the Technological Classroom Campbell, K.H. (2013). A Call to Actin: Why we need more practitioner research. <i>Democracy & Education</i>, 21(2), 1-8. 	
<p style="text-align: center;">Week 7 Feb 23rd – Feb 27th</p>	<p>Week 7: Using Technology 2 Teach English Language Arts & Content Area Literacy</p> <p>Readings:</p> <ul style="list-style-type: none"> Beach, R., Anson, C. M., Breuch, L. A. K., & Reynolds, T. (2014). <i>Understanding and Creating Digital Texts: An Activity-based Approach</i>. Rowman & Littlefield. [Chapter 4] Bull, G., & Kajder, S. (2004). Digital storytelling in the language arts classroom. <i>Learning and Leading with Technology</i>, 32(4), 46-49 Bailey, N. M. (2009). " It Makes It More Real": Teaching New Literacies in a Secondary English Classroom. <i>English Education</i>, 207-234. --OR-- Doering, A., & Beach, R. (2002). Preservice English teachers acquiring literacy practices through technology tools. <i>Language Learning and Technology</i>, 6(3), 127-146. 	<p style="text-align: center;">Wargo will Meet with PLC Groups for Skype Call</p>
<p style="text-align: center;">Week 8 Mar 2nd – Mar 6th</p>	<p>Week 8: Technology as Play; Or, Using Tech Tools in the Early Childhood Classroom</p> <p>Readings:</p> <ul style="list-style-type: none"> Beach, R., Anson, C. M., Breuch, L. A. K., & Reynolds, T. (2014). <i>Understanding and Creating Digital Texts: An Activity-based Approach</i>. Rowman & Littlefield. [Chapter 8] Vasquez, V. M., & Felderman, C. B. (2012). <i>Technology and critical literacy in early childhood</i>. Routledge. [Chapter 1 & 2] Murphy, K., DePasquale, R., & McNamara, E. (2003). Meaningful Connections: Using Technology in Primary Classrooms. <i>Young Children</i>, 58(6), 12-18. 	<p style="text-align: center;">Twitter Discussion #1</p>
<p>SPRING BREAK</p>		

<p>Week 9 Mar 16th – Mar 20th</p>	<p>Week 9: STEM and STEAM: Envisioning and Enacting the T of Technology</p>	
<p>Week 10 Mar 23rd – Mar 27th</p>	<p>Readings:</p> <ul style="list-style-type: none"> Beach, R., Anson, C. M., Breuch, L. A. K., & Reynolds, T. (2014). <i>Understanding and Creating Digital Texts: An Activity-based Approach</i>. Rowman & Littlefield. [Chapter 5] Olive, J., Makar, K., Hoyos, V., Kor, L. K., Kosheleva, O., & Sträber, R. (2010). Mathematical knowledge and practices resulting from access to digital technologies. (pp. 133-177). Boston, MA: Springer US. Waight, N., & Abd-El-Khalick, F. (2007). The impact of technology on the enactment of "inquiry" in a technology enthusiast's sixth grade science classroom. <i>Journal of Research in Science Teaching</i>, 44(1), 154-182. Hudson, R. A., Cross, D. I., Lee, M. Y., & Rapacki, L. (2012). Learning to tinker. <i>Teaching Children's Mathematics</i>, 18(8), 508-513. 	<p>Twitter Discussion #2</p>
<p>Week 11 Mar 30th – Apr 3rd</p>	<p>Readings:</p> <ul style="list-style-type: none"> Bolick, C., Berson, M., Coutts, C. & W. Heinecke (2003). Technology applications in social studies teacher education: A survey of social studies methods faculty. <i>Contemporary Issues in Technology and Teacher Education</i> Teacher Blog [Glenn Wiebe]: https://historytech.wordpress.com/ Rose, S. A., & Fernlund, P. M. (1997). Using technology for powerful social studies learning. <i>Social Education</i>, 61, 160-160. Krutka, D., & Milton, M. K. (2013). The Enlightenment meets Twitter: Using social media in the social studies classroom. <i>The Ohio Social Studies Review</i>, 50(2). 	<p>Twitter Discussion #3</p>
<p>Week 12 Apr 6th – Apr 10th</p>	<p>Week 12: TE 831 Writing Week and Getting Ready for Peer Review</p>	
<p>Week 13 Apr 13th – Apr 17th</p>	<p>Readings:</p> <ul style="list-style-type: none"> None <p style="text-align: center;">TE 831 Peer-Review and Revision</p>	<p>Peer Review Plan due to Wargo</p>
<p>Week 14 Apr 20th – Apr 24th</p>	<p>Readings:</p> <ul style="list-style-type: none"> Doering, A., Hughes, J., & Huffman, D. (2003). Preservice teachers: Are we thinking with technology? <i>Journal of Research on Technology in Education</i>, 35(3), 342-361. 	<p>Voice thread Reflection and Remix/Remediate Assignment Due</p>
<p>Week 15 Apr 27th – May 1st</p>	<p>Readings:</p> <ul style="list-style-type: none"> None 	<p>Techno-Manifesto Due</p>
<p style="text-align: center;">FINALS WEEK: May 4th – May 8th</p>		

A Final Caveat On Writing for this Course:

This is a writing intensive course. As such, as you begin to work through your ideas for course papers and final projects it is important that you recognize the tenets and criteria that I look for when grading and assessing student work. In general, I consider the following: **rigor** (are you pushing past surface level and summary oriented observations about the text? are you engaging with literary meaning rather than summarizing?); **engagement** (does your work build on and/or extend class discussion and insight?); **rhetorical argumentation** (do you have a "main" claim? do you use evidence and provide warrants for your claim?); **originality** (are your thoughts unique to your read? are you engaging in the text and developing an argument grounded in helping you understand your own experience of reading?); **organization/structure** (is the paper organized? can I, as a reader, engage with the writing in a manageable way?); **clarity** (is your writing tight? are elements of style and prose clean? is your paper free from typos? [i.e. have you spell-checked and/or grammar-checked your paper?])



IT'S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

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