

AT&T Faculty/Staff Awards in Instructional Technology

Course Identifier: CEP 917
Course Name: Knowledge Media Design
Department: CEPSE, College of Education

Primary contact name, phone number, and email:

Dr. Punya Mishra; 517-353-7211; punya@msu.edu

Faculty and Staff Involved in Developing and Offering the Course:

NAME	MSU Affiliation	PROJECT ROLE	E-MAIL
<u>Dr. Punya Mishra</u>	Professor	Course Instructor	punya@msu.edu
<u>Dr. Danah Henriksen</u>	Visiting Faculty	Co-instructor	henrikse@msu.edu
<u>Dr. John Bell</u>	Adj. Asst. Professor	Technology Advisor	johnbell@msu.edu
<u>William Cain</u>	Student Assistant	Technology Asst.	cainwill@msu.edu

Which Competition Are You Entering:

BLENDED/HYBRID OR FLIPPED COURSE (some face to face learning is replaced by online learning)

Semester(s) offered in 2012-2013 and number of students enrolled:

Fall 2012 19 (10 online; 9 face-to-face)

Course URL: <http://punya.educ.msu.edu/cep917/>

Login | Password: guest | cep917is2cool

I. Course Description

The focus of CEP 917 is the idea of design and its relationship to education— design as a way of thinking, working and learning about and with technology. We cover topics such as: design knowledge; how this differs from other kinds of knowledge; creativity and the design process; design-based research; the role of technology in design; design-thinking theories; evolutionary theories of design; learning from and about design; and much more.

In CEP 917 students read and discuss a range of research/theory articles (both in synchronous class sessions and online). Students share and discuss examples of good and bad design in the world around us. They engage in a balance of creative tasks, practice-based/problem-solving projects, and traditional “academic” work. What was unique about this blended version (of a course that has traditionally been face-to-face) is that this was one of the first hybrid courses to have approximately equal numbers of online and face-to-face students. This allowed for a range of new opportunities and interactions between students and faculty.

The class met every other week (for eight synchronous sessions total), and used the dedicated course website, for discussing weekly readings and themes throughout the semester. There were several transformational aspects to making it a hybrid/blended course. These included:

- To make the course available to both traditional doctoral students in the EPET program, and to *hybrid* doctoral students who typically work as full-time educational professionals outside of campus (often out-of-state, or even out-of-country).
- To purposefully and effectively use technology and instructional approaches that fit with and enhanced course content, communication, and learning. Regular synchronous sessions included a mixture of lecture, demonstrations, facilitated discussions, collaborative small-group work, and mini-design activities.

- To involve students in discussing and thinking deeply about design in the context of their teaching, learning, and research interests; and to involve them in design practices in the scope of their projects and assignments – both at smaller and larger scales, in creative work and pragmatic/problem-solving ways. Such activities that highlight creativity, with authentic and real-world contexts, are essential to meaningful learning and understanding (Papert and Harel, 1991; Turkle and Papert, 19xx; Kafai, 1995).

Below we describe the ways that our instructional approach aligned with content and technology, to cross the barriers of physical and virtual space for deeper learning about design and education.

II. Learning and Interaction Goals or Technology-enhanced Innovation

Deep Integration

Technology was thoughtfully employed: it was never the bright shiny toy, never tacked on as an afterthought, but instead the consistent purposeful embedding of the perfect tool for the task at hand — *student quote*

A key part of the design of this hybrid, blended course involved the integration of technology, pedagogy and content – specifically to further the goals of the course. Technology was used as a tool to achieve course goals, not simply for the sake of trying the newest tech innovations. What is interesting is that interesting innovation did occur – emerging organically out of the needs of the course. Taken individually the innovations or ideas from this class may not appear revolutionary (the multi-camera use, the “tripad”, videos

introducing the readings, GoToMeeting, EtherPad, course website features like cartoons on design or random images of participants, etc.) but taken together they form an integrated whole greater than the sum of the individual innovations.

We also attempted to ensure that our content and our approach to the content dovetailed to make one coherent package. That is to say, it was a course about design that also modeled design for the students, through the iterative process of adjusting technology and pedagogy to serve the needs of our learners.

One piece that stood out to me on a regular basis was that the course modeled the content. By this, I mean that it was a course about design while the particulars of the class were a design in motion. All of the participants contributed to evaluating and modifying the design during the experience and this resonated in the readings and course work— *student quote*

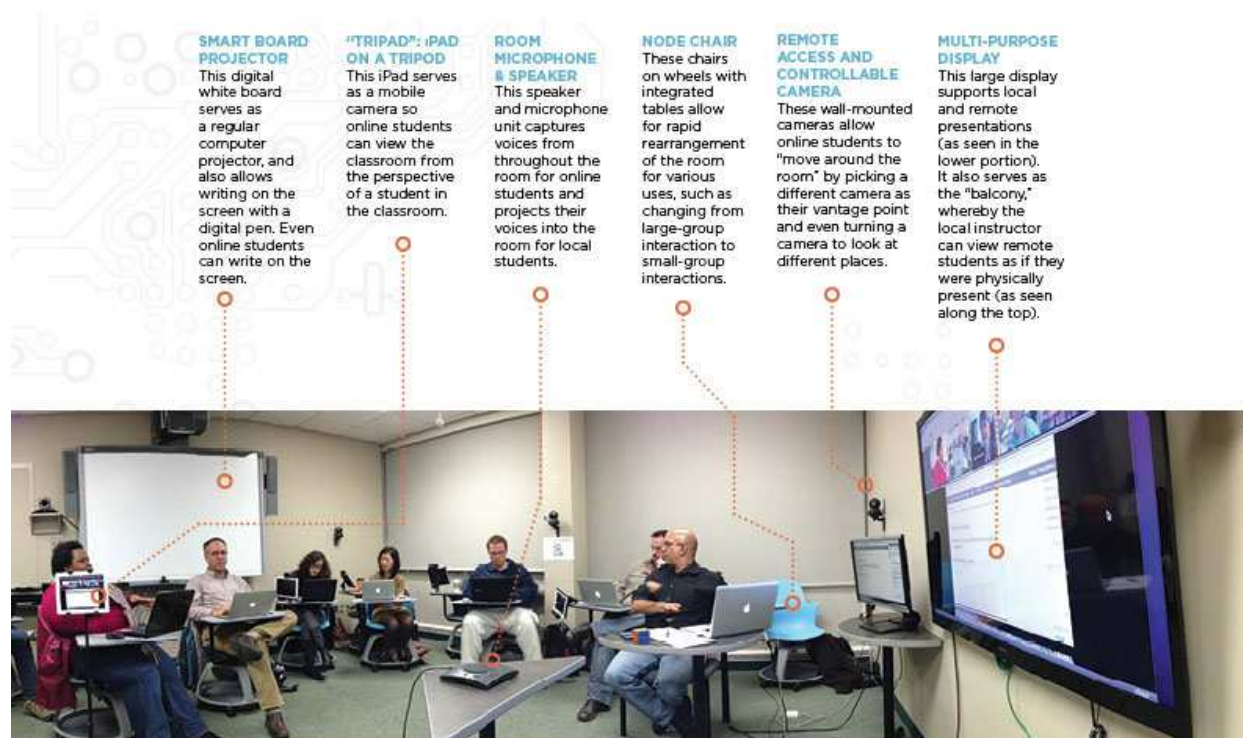
Bringing Online and F2F Students into the Same Classroom Space/Time

CEP 917 proverbially tore down the wall that previously separated online and face-to-face students. We were all part of one learning community—*student quote*

A key goal of this course was to go beyond traditional notions of “blended” learning (which often involves some traditional f2f learning, along with some online learning). But we aimed to bring all students, both the traditional on-campus students, and the online/hybrid doctoral students, into the same “learning space”. This was done with a combination of synchronous and asynchronous approaches. Thus, while the course did have a vital component that was purely online, we also wanted the free-flowing face-to-face

discussions that are integral to doctoral coursework.

Half the students were physically present in class (as in a typical doctoral course) while the other half connected across locations and time zones using a variety of media and networking technologies. Through combinations of video and text-based technologies, we were able to cross the miles that separated on-campus students in Erickson Hall from students in Idaho, Utah, Texas, other Michigan locations, and even the Netherlands. Students engaged with each other in the classroom and across distances, in a mixture of whole class discussions/lectures, smaller group discussions, and mini-design tasks and activities during the course meeting.



Typical class setting for CEP917 – showing the different technologies used for running a synchronous class session.

- *Whole Class Discussions/Lecture*

The use of the video conferencing software GoToMeeting, was central to running each of the synchronous sessions. We set up a “recurring” meeting session in GoToMeeting, which allowed us to open the meeting space at the start of each class session. Each student had the meeting number/invitation, and was able to easily join via GoToMeeting. GoToMeeting allows a maximum of six webcam views to be showing on the screen at any given time. Usually one or two of these were the camera views from the classroom itself -- at least one wider panorama view of the whole room, and one roving “tripad” (an iPad on a movable tripod), which we moved around for a closer view of whoever was speaking. In the remaining available spots, the hybrid students took turns turning on or off their webcams, so that each of them appeared during the class session via GoToMeeting from their own setting/location. Students could also use the “share screen” function to make presentations, which could then be viewed by the whole class.

The “tripad” mentioned above served as a “roving” camera, and was an example of serendipitous (yet purposeful) design that was developed after the semester started. Initially, the only view of the classroom that the remote students had was from a single fixed camera mounted on the wall by the SmartBoard. However, this did not allow students to closely observe the facial expressions, gestures etc. of individuals in the class, especially when they were speaking. Our solution was to use a rolling tripod with an iPad mounted on top (later called “the TriPad”) that could be moved easily to any point in

This class used the overhead camera of the class, but also developed a second in-class camera to make the online students experience better. The instructors put together an iPad on wheels that complemented the overhead view. The fact that this camera was moved around to focus on the people in class when they spoke, really helped me as a learner...This is something that all teachers need to start doing in these courses.
— Quote from a student

the room. Use of this new mechanism meant that for any classroom discussion by the instructor and/or the students could be followed on camera, with a greater degree of closeness and dynamism than the fixed camera could provide. The TriPad also gave f2f participants a sense of advocacy on the part of the remote students – they realized that the remote viewing experience depended on their careful and conscientious placement of the camera angles. This was a unique innovation that, in a sense, created a viewing and participatory experience that more similar for both f2f and remote students alike. The use of this “TriPad” was an emergent and creative technological solution, driven by the need to create a more personal and vivid sense of being in the classroom for all students (even students who weren’t physically in the classroom). Such a uniquely repurposed contrivance is a small but powerful example of synchronous hybrid learning evolving creatively (and nicely dovetailing a course idea about the role of repurposing in design)—an example of the kind of deep integration we mentioned earlier.

This class used the overhead camera of the class, but also developed a second in-class camera to make the online students experience better. The instructors put together an iPad on wheels that complemented the overhead view. The fact that this camera was moved around to focus on the people in class when they spoke, really helped me as a learner... This is something that all teachers need to start doing in these courses.

In the classroom itself, we projected the GoToMeeting session up on a screen (another screen was available for showing presentations during lecture/presentations, etc), so that f2f students had a good, large-scale view of the meeting session and the online students. Using this we were able to manage technicalities of the class session such as: seeing who was present in the meeting at any time, giving presenter rights to any of the students who wanted to show their screen (to show us examples of their project work, or discuss good/bad design examples, etc), and managing the backchannel chat window for any text-based chat among and between students.

Small Group Work/Discussions

During each synchronous session, we not only included some lecture and whole class discussion, but would often have students break off into groups for mini-design tasks or small group discussion that they would later return from and report back to the class on. Each group had a mix of on-campus and online students, and we allowed groups to choose how they wanted to work with each other or communicate (via Google docs, Google video, Skype, EtherPads, or any other technologies of their choosing). In giving students a chance to choose what worked best for them, we found that they had a chance to

The freedom to experiment with the different technologies allowed me to appreciate the subtle nuances between them. My group toyed with a Google hangout and with Skype. However, we felt that the EtherPad was a better platform for us since we each individually were reflective thinkers and preferred to write down our thoughts — *Quote from a student*

I liked the fact that the teachers left small group interactions up to the individuals. When I worked with different groups we used Skype, Google Hangouts, Etherpad, Google chat, etc. Leaving it up to the students to find the application that best suited their unique interaction was a very good idea. That left the majority of the small group time available for actual interaction, rather than messing around with interfaces (as so often happens in blended classes I've taken in the past) — *Quote from a student*

experiment with different modes (both video and text-based), and become knowledgeable about what kind of communication worked best for a given task or situation. This allowed the use of technology to become a student-driven tool – a flexible aid to communication.

In particular, the use of EtherPads became one of the most popular ways for students to work collaboratively. EtherPads support real-time, text-based online collaboration, and also includes a chat window so that students could message each other as they worked (each student receiving a color code on the pad). At the beginning of the

course, we created an EtherPad for groups whenever there was a group assignment, and placed these links on the course site. By the end of the semester, we found that groups quickly created their own EtherPads, without our help.

Fostering a Sense of Community around Design

The online interface created by Dr. Mishra and Dr. Henriksen was well designed, intuitive, and comprehensive. Readings were made readily available, online discussion forums were user friendly, and a frequently updated blog kept students informed and connected.

— *Quote from a student*

During the weeks we did not meet as a class, Punya and Danah still kept the sense of community alive and the lines of communication open by setting up discussion forums around the readings. In one way, this helped me get to know my fellow online colleagues better. — *Quote from a student*

We felt that it was important to cultivate a connection between all students in the course, wherever their location, in order to build a sense of class community both generally, and more specifically, around the subject of design. In order to provide students with a central hub, for class information and discussion in the weeks between each synchronous class session, we used a CEP 917 course website (created through WordPress), designed and maintained by the instructors. This website functioned as an active hub of communication around the readings and design themes (with a set of questions for each weekly discussion forum related to the current readings), and also a place where we could provide weekly updates/reminders/ etc. to keep students organized on anything they needed to do, read, or discuss for the week. This website functioned not only in connecting students around specific class details, but more broadly around design interests in general. We frequently used the running blog on the home page to provide interesting links to articles or videos (TED talks, documentaries, etc.), which focused on design, and related to the course content in a real-world context.

Since design is a detail-oriented activity, it was important that the site include attention to detail, with interesting and changing information. This occurred not only through our blog posts and the discussion forums, but also

through things like: having random and changing quotes about design pop up in one section of the site, or having another randomly alternating “Meet Your Classmates” feature, which picked up a different class member’s photo with each page reload. The screenshot below captures some of these details “in the margins”, designed to focus our community not only in the physical classroom, but also in the virtual one.



Additionally, toward this “design community” end, we ensured that all student work was public. Every student was required to create their own CEP 917 website for posting their design projects and work. The only way that students submitted their project work was to post it online, and we housed a Participants page on our course site, which include a gallery of links to everyone’s work. In this way, students kept aware of classmates work, and were able to give each other feedback (as was sometimes required in class discussion/activities).

III. Points of Interest and Innovation ***A Course about Design that Exemplified Design***

In the first email that Punya sent out, he mentioned this course as a living, breathing example of design, and it was...I appreciate that instructions are elaborate and non-threatening and the combination of forum discussion, in-class discussion and activities, lectures (recorded and live) and diverse assignments allow for different learning styles and preferences. The course website was deliberately designed to be more than a virtual space to house the course content, but also something to enjoy and discover: the logo, the quotes, the randomly displayed photos of the class members, the comics, the instructor’s signature, the frequent announcements. The modifications to different aspects of the course (some technical details in the forum, the activity to connect the online discussion to the class meeting, the tripod and so on) had pedagogical effects on many levels – making learning easier or more effective, and walking the talk of design in a course about design. — *Quote from a student*

The idea of design lies at the heart of CEP 917, and throughout the semester students spend a great deal of time reading about and discussing a variety of aspects of design. We look at design from many angles and perspectives, and students work on creative design and pragmatic design for learning projects. With design this as the intellectual/academic focus, we found this course to be a unique opportunity to cover design topics, while also making the course itself an example of design in process. The fact that this was the first time CEP 917 was taught in a blended/hybrid format meant that there was a great deal of design work that went into the course before it even began, as well as a great deal of design and redesign occurring in process throughout the semester. We used this opportunity to exemplify design in process, and instantiate ideas that were key in the readings and discussions. Everything, from the design of the flow of the assignments and readings, to the design of the course website – from the design of the physical space of the classroom to the “in-between” space navigated through technologies like video conference and cloud computing, were given a great deal of thought and detail.

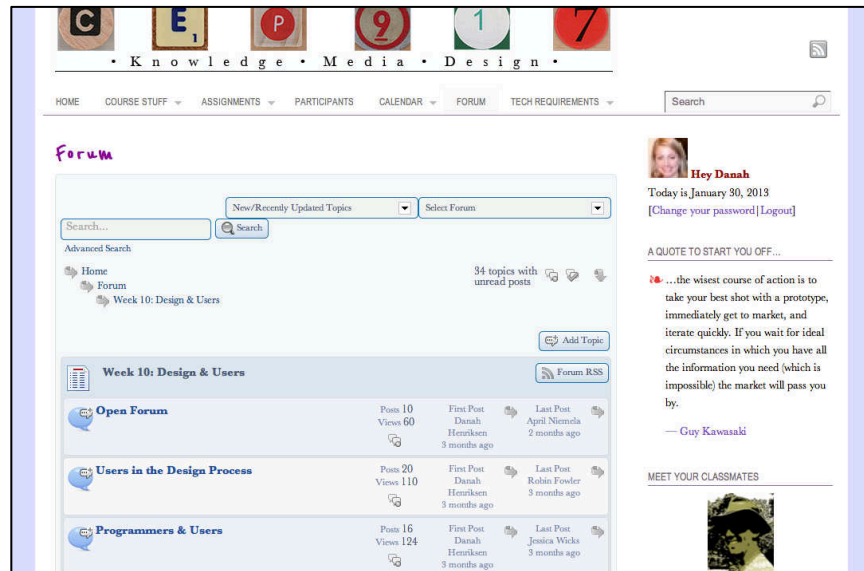
Reading and Think Deeply About Design

An essential pedagogical goal for 917 was for students to become deeply engaged in reading and thinking about issues of design, and to understand the importance of design in education and the world around us. We attempted to ensure that topics and issues permeated not only our in-class interactions, but also in the off-weeks and online work that students engaged in.

- *Online discussions*

While much discussion occurred during class periods, we also used the course website to maintain the levels of discussion in an online setting. This ensured that in the two weeks between each synchronous meeting, there was ongoing discussion of the themes around design. Every week, we created a new forum for whatever the design theme of the week was (Learning by Design, Creativity, Design-based Research, etc.), and included three forum questions that students could participate around. Typically there were two broad questions, followed by an open-forum question, which allowed students to bring up any related ideas that occurred to them. The following screenshot shows the online forum interface.

The course feels rich, and is exemplar of one in which most learning happens beyond the scope of the classroom. — *Quote from a student*



- *Weekly Videos of the Readings*

Like any doctoral seminar, CEP 917 is a reading-intensive course, with several different readings given each week for discussion both online and in-class. These readings come from sources that range from classic design theorists like Herbert Simon or Donald Schon, to modern gurus like Donald Norman, psychologists like Csikszentmihalyi, or design/education researchers like Seymour Papert, Sherry Turkle, or Yasmi Kafai, among many others. Given the complexity and detail in each reading, and the fact that some of these authors were brand new to students, we felt it was important to provide some background/context and a thematic overview of each reading. To do this, we created weekly, narrated presentation videos, made through a combination of Keynote and Quicktime, to give some background on the authors, and general themes or thoughts from the readings. Every week either or both instructors

I liked the weekly videos that helped frame the readings, and provide background information.
— *Quote from a student*

would create a Keynote presentation that outlined the readings and authors through a combination of text and images. Using Quicktime's screen recording tool, we would then narrate the presentation with the necessary information, save and edit it as a movie, then upload it to Youtube and embed it for students on the course site.

These short presentation became a useful pre-reading tool for students, and just a few examples of these videos online can be viewed here:

Video example on theme of "The Social Roots of Innovation"


<http://www.youtube.com/watch?v=JB8VoyuVDgc>

Video example on theme of "Introduction to creativity"

<http://www.youtube.com/watch?v=ytXcQ-9JDpk>

The figure below shows an example of one of these embedded videos on the site:

Coming Up...
The Roots of Innovation (Individuals)
 Short overview/presentation of the Schon and Cross readings below:



Readings
 Schon, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
 - Chapter 3: Design as a reflective conversation with the situation

- *Small Group Design Activities*

As noted, we often alternated between whole group discussion or instructor lecture, and smaller groupwork during class sessions. And while much of the students' larger project work throughout the semester focused on design, we also included some mini-design activities for small groups to be involved in. This could involve anything from "55 Fiction" (designing a short fictional story in exactly 55 words), to design themed and computer generated haiku. As an example of this small group work, for example, the haiku project required that each group come up with 5 or 7 syllable phrases that encapsulated themes/ideas from the semester's readings. We then uploaded these phrases to a random haiku generator (designed by us, available at: <http://punya.educ.msu.edu/haiku/>), and viewed a range of design haikus that students created. This activity introduced a discussion about the readings/themes that students had found relevant, as well as the notion of designing with constraints (5 or 7 syllables, design-themed content, etc.), and issues of authorship in new media (Who's writing the haiku? Is it the students or the program?). For little activities like this, EtherPad was again an invaluable tool for collaboration/brainstorming.

Assignments, Readings and Projects: Balancing the Creative and the Pragmatic

The assignments for this course were purposefully designed to fit into the overall arc and logical flow of the semester. In designing CEP 917, we worked to ensure that student project worked mapped on to the readings that we gave theme, so that there was a thematic coherence between what they read and what they did in terms of assignments. And in keeping with the idea of design itself, we tried to balance the creative/artistic with the practice-based/academic.

Toward this end, we had three major course assignments. Assignment I: Creative Explorations in Design and Technology (done in three parts over the semester, including a Photo Essay, a Radio Story, and an Emotional Map); Assignment II: Applying Design Thinking to a Problem of Practice; and Assignment III: Reflections on Learning & Design.

Assignment I: Creative Explorations, is where the creativity inherent in design came into play. This assignment spanned the semester and was composed of three smaller media design projects (which occurred consecutively, not simultaneous).

- It included a *Photo Essay*, in which students designed a digital photographic representation about the social meaning of objects. They explored what a particular object/item (of their choosing) meant to others, in terms of it's emotional, practical, historic, cultural meanings – in order to consider how the artificial (designed) world impacts people.
- For the *Radio Story*, they had to work in groups to create a podcast, in which each group member had interviewed a professional designer or creative practitioner (in any field) about their

experience of the process of design. Their audio interviews were synthesized into a NPR style podcast, complete with commentary, music, interview clips, etc.

- For the *Emotional Map*, students individually created a conceptual/graphic representation of their own experience of a designed process (the process could be anything – from going through the voting process in the election, to a trip to the bank, to an experience of eating in a restaurant). This map cataloged the details of an experience as well as mapping their affect and thoughts throughout it. It was similar to a “journey map”, created by user-experience professionals to better understand how well as designed process works.

Assignment II: A Problem of Practice, had students first read about and study a five-phase process of design that included Discovery, Interpretation, Ideation, Experimentation, and Evolution, to understand some general stages that often occur in design work (though we also discussed how these often come about organically and can be more “messy” in practice). They selected a problem that they wanted to work on from their own professional practice (it could include building a professional development seminar,

Working within constraints in the service of creativity, function, purpose, and design was a major theme of this course – and the activities designed by the instructors provided ample opportunity for participants to explore that theme through multiple technological perspectives, time frames, distance considerations, and creative capabilities. — *Quote from a student*

designing a new application, re-designing a classroom space, or anything they chose). Over the course of the semester, they worked on each of the phases – creating a report of their activities with any deliverables/sketches/outcomes for each – this culminated in a more detailed full-project report with prototype at the semester’s end.

Assignment III: Reflections on Learning & Design, required students to keep a design/learning journal in a running Google doc (which they

either made public or shared with instructors, and wrote in weekly). This was a free-flowing document, which detailed any of their thoughts, reactions, reflections, or anything that struck them through the week related to course topics, or simply design in general. At the end of the semester, they used these journals to construct a final reflective paper, which synthesized their learning over the course of the semester.

To facilitate a coherence of ideas, we planned out the semester so that readings would match well with projects. For example, the Photo Essay assignment deals with the inherent meaning of objects, so we chose readings from Csikszentmihalyi that week, which dealt specifically with design, the meaning of objects, socially constructed meaning, and the interaction between objects and identity. We did this for all readings and projects, right down to the end of the semester, when they were completing their Emotional Map. Since this activity is drawn from user-experience literature, we had readings that focused directly on this topic from Donald Norman and others. At every point in the semester, our readings and discussions synched up with the work that students were doing in specific and meaningful ways.

Technologies We Used vs. Technologies Used By Students

In creating their projects, students used a range of different technologies to complete their tasks and develop projects. We didn’t set out any specific requirement that they had to use only given software or applications for any of their assignments, rather we let them choose or learn what would work best (though we often did offer some options as to possibilities).

For the Photo Essay, students had to do some digital photography to come up with images, and used applications such as Issuu, or others, designed for photo journaling. For the Radio Story, we allowed them to choose any audio editor they wanted for creating a podcast, Audacity and Garage Band were the most popular choices for audio editing, some students even uploaded the final piece to YouTube (with still image(s)) for sharing. Creative/production software was used for their emotional maps, and we saw a range of possibilities come about, through PhotoShop, PhotoStory, Powerpoint (poster view), and other, more interactive choices. By opening up their options in this way, and incorporating assignments that required multiple ways of representing knowledge, we saw quite a varied array of technology uses, exploration, and learning.

I learned a lot about design and educational design in particular through the projects. The instructors used a wide range of multimedia and multimodal approaches. I have to say that my classmates' projects were also the most impressive class works produced in any of the classes I've taken. The assignments were authentic and it led to some high quality works. — *Quote from a student*

As instructors, the technologies we use in the course focused on communicating and relaying information (synchronously and asynchronously) for teaching purposes (GoToMeeting, videos, online communications, etc). We found it interesting that our students' technology uses for projects were different and diverse. Since students were learning and doing design, the technologies that they used were often about creating or producing things, and communication software/applications were mainly used when they facilitated this creative production.

IV. Evidence of Effectiveness with Students

There are many ways of looking at evidence of effectiveness of a doctoral seminar. They include, the quality of student work; end of semester course evaluations; messages from students and so on. As you must have realized, we have interspersed quotes from students (from e-mails, reflection papers, discussion forums etc.) through this document. Below are the SIRS summary information with additional quotes:

SIRS for Punya Mishra

<i>Instructor Involvement</i>	<i>Student interest</i>	<i>Student-instructor interaction</i>	<i>Course demands</i>	<i>Course organization</i>
<i>1.57 (0.72)</i>	<i>1.55 (0.70)</i>	<i>1.82 (1.03)</i>	<i>1.50 (0.90)</i>	<i>1.71 (0.83)</i>
<p><i>Student comments:</i></p> <ul style="list-style-type: none"> - <i>He's a great example of a translational developer. He knows how to think like a designer and a practitioner. Truly a master teacher.</i> - <i>Phenomenal job, both in the structural organization of the course and in the flexible tweaking of it as we went along. Punya was an exceptional role model for the art and process of design thinking, and his energy, enthusiasm, and exceptional knowledge made this an incredible learning experience.</i> - <i>I have learned more in this class than any other in the EPET program, outside of perhaps the first summer. I could take it again and again and not be bored or under-challenged--another amazing thing about the design.</i> 				

SIRS for Danah Henriksen

<i>Instructor Involvement</i>	<i>Student interest</i>	<i>Student-instructor interaction</i>	<i>Course demands</i>	<i>Course organization</i>
1.60 (0.72)	1.50 (0.69)	1.56 (0.78)	1.42 (0.66)	1.48 (0.61)

Student comments:

- *Danah has done an excellent job of providing timely feedback, supportive encouragement, and insightful lectures or comments. This has been a deep learning experience, replete with play and joy and fun, and I appreciate Danah’s influence and expertise in the crafting of this course.*
- *You’ve been very responsive to concerns and questions, and willing to give up your own time to be helpful. This was much appreciated.*
- *Very good teacher. Enthusiastic for the subject, and seemed to know her field well. I like the fact that she shared some of her published work with us.*
- *Danah is a wonderfully well-rounded instructor, bringing so many resources to the core ideas of the class. She is also an excellent facilitator, bringing with her an excellent sense of the group.*

Examples of student work (also available from the front page of the course website):

- Photo essay: [Sandra Sawaya](#), [Angie Johnson](#)
- Radio Story: [Sandra Sawaya](#), [Andy Driska](#), [Chris Fahnoe & Angie Johnson](#)
- Emotional map: [Sean Leahy](#), [Chris Sloan](#)
- Design projects: [April Niemela](#), [Eun Mi Kim](#)
- Final paper: [Ha Nguyen](#)

These were just a few of many great examples of student work, which can all be accessed on the Participants page of the course website.

V. Plans for Sustainability

For CEP 917, we see “sustainability” as happening at multiple levels – within the course itself, within our hybrid doctoral program overall, and also at the level of ongoing research that contributes to issues of online/blended/hybrid learning at a broader level.

In terms of the course itself, this is a course that has been taught previously only in a traditional format. We felt that we had significant success in this blended version, in terms of both direct comments/feedback we received from students, SIRS feedback, and our own observations of the learning outcomes and work that students in the course did. Given this, we plan to continue to offer CEP 917 in a blended format in future semesters, in order to make it available both to our hybrid Ph.D. students and traditional on-campus students. The structure and content of the course worked well, so ongoing changes and evolution of the course are likely to be at more of a micro-level (tweaking, editing, adding to the content, readings, materials or assignments) rather than at the macro-level of course structure. While the structural aspects of the course content are well established, we hope to evolve it for continued improvement, based on new possibilities for technology, student needs, or new and interesting resources that we encounter (documentaries on design, new readings, possible changes to assignments).

Another level of sustainability involves the course’s place within the hybrid doctoral program in CEPSE, and the model that it currently serves for helping build new courses and other instructors evolve blended learning techniques. We actively worked with the Design Studio here in the College of Education to create the course as a model of effective blended learning. It has all of the elements of traditional doctoral learning (reading, discussion, lecture, group work, detailed/authentic project work),

simply advanced by technology to bring it to students in remote locations and promote interaction between them and on-campus students.

This coincides with the third level of sustainability – that of ongoing scholarship/research around blended learning. Having worked with the Design Studio in building the course, we have continued to engage in working with them on research even after end of the course. We collected data, over the course of the semester, about student experience (both online and face-to-face) during class sessions. These surveys were given to students at the end of each of the eight synchronous sessions, and the Design Studio has been engaged in ongoing data analysis. We also recently submitted a paper to the coming SITE conference (co-authored with a Design Studio student), which describes the way that the Design Studio views CEP 917 as one of three possible models of effective blended learning that they offer to new instructors in this medium (with of course, options and room for changes based on individual instructor needs). The paper details the technologies and instructional approach employed in the CEP 917 model, as a guide to facilitate other instructors' thinking about the role of technology in their blended course. Thereby, CEP 917 has had an integral, ongoing and vital role in our CEPSE hybrid doctoral program.

The best way to sum up my experience as being a face-to-face learner in CEP 917 is a quote that resonated throughout the virtual and actual walls of our hybrid classroom:

“Everyone designs who devises courses of action aimed at changing existing situations into preferred ones”.

The course was about design and in fact, Punya and Danah blurred the boundary between the class content and how the course was set up and showed us an exemplar of design in action. Not only did Punya and Danah devise a course that narrowed the gap between the face-to-face and online learners, throughout the semester they worked at fine tuning the course to improve the learning experience for all the learners — *Quote from a student*