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The Evolution of Teaching Philosophies
Self-Analysis Statement for Teaching and Learning Technology

In the early to mid-1980s, I was stuck in the cube farms of various companies in the Milwaukee area as a bored corporate controller and CPA. The last firm that I worked for designed and fabricated highly dense circuit boards. That experience got me excited about technology in education. At the time, I became interested in the intersection of technology, education, business, and psychology. My life changed by taking correspondence, face-to-face, and television courses to qualify for graduate school in educational psychology (while minoring in educational technology) at the University of Wisconsin. When I arrived in Madison, I was hired to help design a national syndicated telecourse called "*Teachers Tackle Thinking: Critical Thinking in the Classroom*." The person who hired me had been my instructor for two of the correspondence courses that I had previously taken. Suddenly, I was hooked on nontraditional forms of learning; especially distance learning.

In a way, every pedagogical experiment with technology and every technology research project I have conducted since that time is my way of paying the world back. I am currently in my 33rd year as a college faculty member; 30th year at IU after three initial years at West Virginia University. I feel fortunate to have arrived at IU in late August 1992 just as workers were taking the tape off the elevator doors of the fancy, new, federally-funded IU School of Education. With advanced writing and infrastructure from AT&T, the Wright Education building was designed to be a demonstration site for technology in education. My father worked for AT&T his entire life, so when he heard that I was interviewing at IU, he was elated. Needless to say, I accepted the position. Thanks dad.

The Evolving Teaching Philosophy

In the mid to late 1990s, I drafted a teaching philosophy which I posted to my homepage (see http://curtbonk.com/teaching.html). It is still there. In it, I say, "As a learning environment theorist, I believe that experts, technology tools, peers, teachers, curriculum, self-reflection, and assessment all impact learning. Effective use of these resources can result in active student learning. In using my student-centered teaching philosophy, I try to include some active learning and student choice within every lecture or lab activity. A visitor to any of my classes would note that I use various combinations of tasks such as concept mapping, timelines, taxonomies, summary writing, jeopardy quizzes, fireside chats, Web searching, scavenger hunts, group activities, portfolios, conference-style presentations, scholarly journal creations, etc…"

I further stated, “Across my teaching, research, and service activities, I have attempted to inspire students, college instructors, practicing teachers, trainers, and administrators by promoting innovative practices with emerging educational technologies. I am deeply committed to expanding access to education through nontraditional means such as Web-based instruction, computer conferencing, videoconferencing, and courses and workshops taught directly in schools and workplaces. I feel fortunate that some of my pedagogical experimentations with technology now serve as models for teachers both in Indiana and around the globe. I often advise my graduate students to try to "make a dent" when they leave IU. I have tried to do the same back here at IU and beyond.” Remember that statement involving Web-based learning was circa 1998 and I remain committed to it today.

That philosophy still holds today. In fact, it is at IU that I have continued to refine my instructional philosophy and approach into a highly learner-centered one where the instructor is part concierge, part coach, part counselor, part curator, part consultant, and, part 15 other “C” words which I hope to document in my next book, *Education 20/20*. The role of instructor is surely undergoing massive transformation today. In fact, the term “assister of learning” is likely a better way to describe the instructor now. Basically, what we do is challenge students and then provide the support structures to help the learner meet or exceed such challenges. As someone who teaches a course on theories of learning, I believe that there is no one best theoretical perspective or approach to teaching and learning. The most effective instructors today attempt to design or engineer learning environments using the wealth of learning resources at one’s fingertips. These truly are exciting times to be in education!

In addition to the 20 new instructor roles, in my “*Education 20/20*” book project, I also detail 20 principles of learning using my “**L**earning **A**ctivation **S**ystem **T**emplate” or LAST principles of instruction (Note: Dr. David Merrill already coined the “First Principles of Instruction”). These “LAST” principles include the principles of:

> (1) Flexibility; (2) Convenience; (3) Cheerfulness and Optimism; (4) Empowerment and Autonomy; (5) Passion and Inspiration; (6) Relevance and Meaningfulness; (7) High Expectations; (8) Collegiality; (9) Organization; (10) Sharing; (11) Support and Feedback; (12) Spontaneity; (13) Choice and Options; (14) Trial and Error; (15) Nontraditional Learning; (16) Expanded Resources; (17) Purpose and Vision (18) Human Connectedness; (19) Cognitive Apprenticeship; and (20) Openness (see 2011 blog post)

Each of these principles coalesce to create a psychologically safe environment for knowledge exploration, construction, negotiation, connection, and evaluation.

From a learning theory standpoint, a learning environment based on Education 20/20 ideas is effectively an eclectic mix of them all—behavioral, social learning, cognitive, constructivist, connectivist, etc. As such, it recognizes that no one theory or perspective is omnipotent. Each has a role depending on the situation and

prevailing cultural tools, norms, and needs. When properly understood and employed, each of these distinct views of the learner and the learning process can play a vital role in transforming educational settings.

The idea of "Education 20/20" entails notions of learner empowerment, autonomy, choice, and self-direction as well as opportunities to take risks and fail and iteratively learn from those mistakes and try again. Learners will be more motivated to make a series of attempts when the task or situation is personally relevant and meaningful. Above all, there is a spirit of exploration and discovery that leans toward the self-initiation of learning; a "freedom to learn" as the famed psychologist Carl Rogers widely advocated. As with the recent movement toward participatory forms of learning with social media, Education 20/20 also attempts to make the generation and sharing of products and ideas as essential as the consumption of them and accountability for them.

In this era of learner production and participation in the learning process, there is a struggle to not overteach and overreach. I am reminded of a quote in Parker Palmer's (2007) book, *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. As Palmer states, "Like most professionals, I was taught to occupy space, not open it: after all, we are the ones who know, so we have an obligation to tell others about it! Even though I have rejected that nonsensical norm, I still feel guilty when I defy it. A not-so-small voice within me insists that if I am not filling all the available space with my own knowledge, I am not earning my keep." Such views on teaching and learning ownership are also salient in Stephen Brookfield's various thought-provoking books, *The Skillful Teacher* (1990), *Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions* (2012), and *Powerful Techniques for Teaching Adults* (2013). I particularly resonate with Brookfield's work on learner empowerment and fostering self-directed learning among adult learners.

At times, I, too, suffer from an overriding abidance to these norms of teaching as occupying space instead of opening it up. I sometimes catch myself standing and lecturing, and, in the process, overteaching and overreaching. At the same time, I authored a book, "*The World is Open: How Web Technology is Revolutionizing Education*" in which I promoted expanding or opening up spaces to learn. Whether it is P540, R546, R511, or R678, students find my courses rich, resourceful, meaningful, engaging, challenging, comprehensive, and offering them freedom to learn as I attempt to be inclusive and open up all the relevant resources that I find and are potentially useful. Suffice to say, there is a continual struggle between opening spaces and personal trails for learning through providing sufficient freedom to learn and stepping in to lend your advice and expertise in the form of unique personal insights, stories, and experiences.

R678 (and P540) Course Reflections: Products and Paths

Let's look at Education 20/20 principles and how they have found their way into student learning, creativity, motivation, and assessment. In terms of access and opening student spaces to learn as Parker Palmer and Stephen Brookfield recommend, R678 Emerging Learning Technologies allows for numerous alternative pathways to learn the content. As a prime example, students can select three or four online open access articles each week from a list of many articles found in the 80-page "monster" syllabus. This pedagogical idea coincides with my Principle of Sharing as well as my Principle of Choice and Options, mentioned earlier. Students appreciate the free nature of the open educational resources (OER) and the degree of latitude they have in selecting articles and topics that fit their needs and interests. To integrate their learning, I have them write reflection papers on what they choose to read at midterm as well as write "super summaries" of their readings and explorations at the end of the semester.

Another example of using technology to open up spaces to learn in R678 (and also P540 Learning and Cognition in Education) is through the use of massive open online courses (MOOCs). I encourage students to enroll in a MOOC on a similar topic to the class during the semester. If they complete it and earn a certificate, they can eliminate one of the assignments provided they write a short reflection paper on the MOOC experience and their personal growth within it. Importantly, given the recent popularity of this assignment, I have designed a rubric for assessing their MOOC reflections. Students gain valuable self-directed learning skills from experiencing a MOOC plus the MOOC hopefully reinforced their learning in R678. Most notably, this activity relates to the Principle of Nontraditional Learning, the Principle of Expanded Resources, and the Principle of Choice and Options.

Another highly popular option in R678 (and P540) is to have students design a YouTube video summarizing their experience. I have used this option for nearly a decade. Many students spend extensive time producing highly creative videos summarizing key concepts in the course including four students that sang songs, played music, or read poetry. Some produce documentaries or podcast shows on key issues or trends. Students have such a high standard for these videos or podcasts that we often have a final class movie night. And these videos are reused as task examples for students in the following semesters. This option relates to the Principle of Relevance and Meaningfulness. Of course, it also relates to the Principle of High Expectations.

There are many other types of final products in R678. Some students have designed Prezi presentations or Jing tutorials. In addition, several students have created Pinterest websites for the tidbits (i.e., news stories) as well as Facebook fan pages. And, for many years, I required that all R678 students blog on their readings. Doing more

than the requirements, a couple of them have produced rich and impressive multimedia glossaries with links to videos and pictures for terms that they have defined. Also going well beyond the assignment, two teams last year created mobile learning training for teachers in Puerto Rico after Hurricane Maria closed schools for weeks and limited their Internet access (News #1, News #2). Similarly, I have had a student create a mobile app of the history of mobile learning and another build an elegant timeline of the field the of distance learning using Timeglider, both of which I often show at my conference keynotes and workshops. Such task options relate to the Principle of Empowerment and Autonomy, the Principle of Relevance and Meaningfulness, the Principle of Trial and Error, and the Principle of Expanded Resources, among others. Many of these ideas are documented in my two books with 100+ activities for engaging learners online, "*Empowering Online Learning*" (2008) and "*Adding Some TEC-VARIETY*" (2014); the latter of which is free to download (see http://tec-variety.com/). The over 200,000 downloads to date of all, or at least part, of this book, indicates significant impact of its ideas.

In addition to videos and timelines, I am also utilizing the Principle of Empowerment and Autonomy as well as the Principle of Relevance and Meaningfulness with student production of digital books. For example, I started experimenting with Pressbooks in the spring of 2019. Similarly, from 2006 to 2008, I pilot tested the use of wikibooks as a tool for learning. In the fall of 2007, my classes created extensive wikibooks in P540: (1) *The Practice of Learning Theories* (The POLT), and (2) in R678: *The Web 2.0 and Emerging Learning Technologies* (The WELT) with students from Dr. Mimi Miyoung Lee's classes at the University of Houston, an alum of my program. In addition, the WELT project included graduate students from Beijing Normal University in China, a university in Taiwan, and Indiana State University. Since that time, students in P540 and R678 have continued to expand these two digital wikibooks. A resulting publication in the *Internet and Higher Education* from these experiments with wikibooks received a first-place award from the AECT division of distance education.

A key goal of mine since I entered academia has been finding ways to increase social cognition and perspective taking using collaborative technologies. The cross-institutional nature of the wikibooks opened students to diverse points of view. As our research showed, some were ready for this learner-centered approach where no one's name is on the product and some certainly were not. Similarly, another top 10 teaching moment occurred in this class nearly a quarter century ago in 1995 when I experimented with combining two videoconferencing systems--PictureTel and CU-SeeMe technology--to bring in synchronous guest experts whose articles my students were reading and discussing. The students first debated their articles in VAX Notes and then met the authors for

question and answer sessions. Importantly, an article describing that unique form of apprenticing students into a discipline was soon published in *Educational Technology* magazine. The goal was to enhance learner perspective taking and social cognition by combining synchronous and asynchronous events. Through such videoconferencing, my students began to realize that one idea or article does not represent a person and that key ideas and statements of scholars change over time. As might be expected, there are many Education 20/20 principles embedded in that one class activity including the Principle of Trial and Error, the Principle of Nontraditional Learning, the Principle of Expanded Resources, the Principle of Human Connectedness, the Principle of Cognitive Apprenticeship, and the Principle of Relevance and Meaningfulness.

Fast forward more than two decades, and it was time to once again experiment with combining two videoconferencing systems. Starting in 2018, I have used Crestron technology and Zoom in R678 and R546 to virtually bring in researchers, authors, and other scholars sometimes with just an hour or two notice. In the process, students are exposed to many unique ideas and perspectives. Interestingly, two former students from the 1995 experiment with PictureTel and CU-SeeMe came back in the spring of 2019 when I combined systems to bring in guests from Stanford, Seoul, and the UK via Zoom. It was magical! (See review letter from Dr. Sonny Kirkley, IU.)

R546 Course Reflections: Embracing Diversity and Course Inclusiveness

Another course in which I have relied on synchronous technologies is R546 on instructional strategies. For almost 25 years, I have used videoconferencing to bring together graduate students from various IU campuses and Indiana schools (i.e., IU-NW, IUPUI, IU-SE, IU-B, Lebanon and Turkey Run School Districts, etc.). This inclusive approach fosters an appreciation of different points of views. It also facilitates the sharing of instructional strategies between K-12 teachers who might be in urban schools and those in extremely rural ones. I find that the more locations, the higher quality the examples. I must point out that it requires extensive planning and organization; such as getting the resources to students at the remote site and simply getting a classroom, which is increasingly difficult; especially after the IUB and IUPUI Schools of Education became separate schools rather than a core campus school. I have learned to start with views or questions from the remote site first and to sometimes travel to the remote location to engage my students. Here, the Education 20/20 principles include the Principle of Support and Feedback, the Principle of Organization, the Principle of Sharing, and the Principle of Nontraditional Learning.

In recent years, the student base in R546 has become highly diverse; in fact, the course has felt like a mini-United Nations event with students from 10-15 different countries in the room. During the past five years, about 40

award winning Fulbright teachers from 10 different countries (i.e., India, Taiwan, Singapore, New Zealand, Botswana, Morocco, Mexico, Palestine, Israel, and Finland) audited it. They must audit two IU classes during their four-month stay and the majority have selected the R546 class from all available classes at IU due to its practicality, timing, learning outcomes, and reputation (see the support letter from Fulbright teachers). In addition, I had perhaps 75 visiting scholars from China (mostly English professors), Korea, and Taiwan sitting in R546 during that time; 30 Chinese scholars in one semester alone. Basically, they are there to learn the latest in technology, pedagogy, and learning. In fact, when teaching R546 in the fall of 2015, 2016, and 2017, I approached fire code safety regulations despite it being an elective class offered on Saturday mornings at 8 am. Clearly, R546 has a solid reputation.

R511 Course Reflections: Experts from Anywhere

R511 on the foundations of educational and instructional technology, is an introductory course which I have been teaching for a few years. I have built numerous options for students to learn the content (Principle of Choice and Options). Students can read the articles assigned online, they can engage in discussions in Canvas, or they can watch or listen to narrated PowerPoint presentations from two retired professors who created the course nearly four decades ago. They can also attend my lectures in Zoom. Many, instead, decide to download the PowerPoint sides. They can learn through my interviews with experts in Zoom. In addition, expert interviews in Kaltura are available whenever that want. And many of the most prominent people in the field can be found in the AECT Legends and Legacy interviews in YouTube. Last year, I published an article in *TechTrends* that on the cognitive apprenticeship benefits from such synchronous conferencing chats in Zoom as well as using shared online videos interviews of experts in AECT Legends and Legacy website. Using such technologies, students learn from both past and present leaders. In this way, I have enhanced and extended the way that R511 has been taught.

Recapping

As detailed above, I have used multiple videoconferencing technologies to bring in synchronous guest experts and book authors from around the world into my R511, P540, R678, and R546 courses. I have experimented with many midterm and final projects involving technology where students design podcast shows, online concept maps and timelines, mobile apps, videos of final projects, website designs, documentaries, and multimedia glossaries. Last year, two teams in my R678 class designed mobile app training projects for teachers in Puerto Rico who lost electricity in the aftermath of Hurricane Maria. Additionally, I have experimented with webstreaming of my course lectures so that students can participate in my classes from a distance; this includes

people just wanting to sit in when and where possible. Importantly, I attempt to make all my course resources free and open. As an example, I have an 80-page "monster" syllabus for R678 wherein all course content is free.

There is often much interaction, energy, and creativity in my classes. We use active and engaging learning techniques like online and FTF role play activities, mock trials, the six hats technique, reciprocal teaching, flipping the classroom, short video concept anchors, cross-institutional debates, top ten competitions, reverse brainstorming, poster sessions, nominal group process, metaphorical thinking, freewriting, and SWOT. Technology support tools might include concept mapping and mindmapping, online chats, blogs and wikis, online discussion forums, Kahoot!, Sli.do, Google Docs, Course Networking, Flipgrid, and Piazza. The fact that students include their final class products in their e-portfolios and dossiers from which they apply for jobs indicate that this approach is personally impactful. Few students drop out and many visitors drop in. Student learning is so rich that I use their projects as task examples and I have prior students showcase their projects in ensuing semesters. Suffice to say, in a multitude of ways, learning technology has thoughtfully and successfully been deployed across all my courses.

Proof of Learning Impact. How do I know that such technology integration and use has resulted in elevating student learning? Class projects have equipped students with skills to: 1. Receive job interviews from their podcasts; 2. Become G (Google) Suite certified; 3. Get their book reviews published; 4. Learn how to design educational videos; 5. Design websites and digital marketing materials for their employer; 6. Collect research data that has been presented at conferences and later published; 7. Design functional mobile apps for a client; 8. Get funding for small technology grant; 9. Create a mobile book; and 10. Become school and statewide leaders in technology integration (e.g., N = 125 teachers from 25 rural Indiana schools in the TICKIT project).

My teaching philosophy continues to evolve. Clearly, the 20 principles and 20 instructor roles in Education 20/20 require a new type of instructional approach. Learning technology is increasingly pivotal in that approach. I have used technology to enhance student learning with podcasts, online videos, and digital books. Pushing further still, I have employed technology to extend learning by having students collaborate as well as debate with peers in similar course at other institutions. And, I have transformed the curriculum with learning technology such as having students design cross-institutional wikibooks and mobile apps for clients. The means to enhance, extend, and transform the curriculum with technology tools and resources will continue to grow during the coming decade at breathtaking speed. (Note: support letters available from: Professor Minkyoung Kim, Univ. of West Florida, and Professor Meina Zhu, Wayne State Univ.; and online course review letter from Dr. Gamze Ozogul, IU).