Rationale Paper

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Introduction

It all came to me one night. I even remember where I was sitting. I knew I wanted to pursue a Master's degree, but I didn't know what field to focus on or where to begin. I wanted something that could merge my two passions: education and technology. I figured I would write my own degree if I had to. I wanted to help empower teachers, students, and parents with the tools they needed to succeed in an exciting 21st Century world. In a bit of a whirlwind, but one with incredible focus and intensity, I joined the M.E.T. program. That was the beginning of a journey that has shaped me, my future, and the world around me.

I am the technology integration coordinator at Lincoln School, a PK-12 international school located in Kathmandu, Nepal. I support administrators, teachers, and students in their 21st Century learning efforts. I have also been involved in some rewarding technology outreach with underprivileged youth in Nepal. Because of my husband's profession, we move to a new country every few years, which gives me a unique opportunity to share the skills I have learned in this program with a broad audience.

While some Master's programs have a final exam or thesis paper, Boise State requires an ePortfolio instead. This rationale paper, along with artifacts and a reflection video, comprise the ePortfolio. The purpose of this rationale paper is to reflect on my journey – and it has been one – and to show what I have learned along the way. More than a list of artifacts, it contains my reflections on each artifact: why I chose it, how it demonstrates AECT standards acquisition, and how it has impacted my real world actions. It is organized around the AECT standards. Ultimately, it tells my story: of learning, of growth, of accomplishment.

Standard 1: Design

Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles of instructional systems design, message design, instructional strategies, and learner characteristics.

1.1 Instructional Systems Design

Instructional Systems Design (ISD) is an organized procedure that includes the steps of analyzing, designing, developing, implementing, and evaluating instruction.

EdTech503: Instructional Design Project

My project was designed to help 9th and 10th grade English teachers use Google Docs presentations and collaboration tools for student group presentations on a poet. This project meets Standard 1.1 by including all of the steps of instructional design: analyzing, designing, developing, implementing, and evaluating instruction (ADDIE) on both the micro and macro levels. The learning goal for this project ["After three hours of classroom instruction, ninth and tenth grade English Literature students will be able to create, publish, and present a multimedia Google Docs presentation on an assigned poet] falls under Robert M. Gagné's description of "intellectual skills" because the students will learn procedural knowledge and then apply that knowledge to a new experience not encountered during instruction (Smith & Ragan, 2004). At the end of instruction, students will know how to do something they didn't know before. The teacher I designed this project for used it and noticed a greater level of engagement among her students as they explored a new tool. Most recently, I used these slides and presentation research when I presented at the Google Apps for Education Summit in Sydney, Australia, in January.

EdTech505: Evaluation Report

While this project also falls well under Standard 5 Evaluation, I included it here because it demonstrates all elements of instructional design as noted in Standard 1.1. I selected and analyzed a program, designed and developed an evaluation plan, implemented the survey, and synthesized the information into an overall evaluation of the entire program. I chose to evaluate

the 6th grade Explore Nepal program, which required an in-depth look at program objectives and how well those objectives were being met. I submitted this report to my administration for their consideration.

EdTech542: Project Me

While this project is also included under 4.1 Project Management, I include it here because it demonstrates another example of creating an entire project from scratch based on instructional systems design. There is significant research to show that project based learning (PBL) increases academic test scores, results in more effective learning, contributes to longer retention, improves student 21st Century skills, and is especially helpful for lower-achieving students (BIE, 2009). Project: Me guides students on a journey to discover more about themselves, their community, and their world. It is also an excellent example of global collaborative learning. I used this project as a basis for a presentation I gave as part of the Global Education Conference in November 2012.

1.2 Message Design

Message design involves planning for the manipulation of the physical form of the message.

EdTech502: Website projects

While this page may look very basic, it represents hour upon hour of learning and intention. I began EdTech 502 with no HTML or CSS knowledge; I emerged with a huge sense of satisfaction and accomplishment. I met Standard 1.2 in this course by not only researching and selecting the content contained within each page but by designing the physical form of the message in each corresponding website. Using Adobe Dreamweaver, Photoshop, Illustrator, and Fireworks, I created banners and graphics, wrote code, and crafted CSS style sheets. Using Kuler, I created color swatch schemes and experimented with various design elements. I began with a blank page and ended with various multimedia learning activities and resources. I have shared several of these pages with other teachers, referred to them in lessons (e.g. Netiquette), and will be using the Virtual Tour Nepal next month as part of a global collaboration project with Grades 3-5. I have since used Weebly as my main website creation tool rather than Dreamweaver, but

my HTML and CSS background has allowed me to tweak templates and make changes I otherwise could not have done.

EdTech541: eBook Activity and Example

eBooks are a powerful tool for Language Arts educators that can help engage students and get them excited about writing. Numerous resources are available online that allow for free eBook creation and collaboration. I created this activity to help students practice their writing skills by creating a short eBook about themselves that they can publish online. This artifact meets Standard 1.2 because I demonstrate creative message design by creating an actual example of a custom-designed eBook to use in the activity. The eBook can be printed in physical form for students to use a tangible example. I have since referred to this eBook several times, and I am currently leading an after-school activity called "Creative Writing in the 21st Century" based on this lesson I created.

1.3 Instructional Strategies

Instructional strategies are specifications for selecting and sequencing events and activities within a lesson

EdTech503: Instructional Design Project

For this project I was forced to think through specific prior cognitive knowledge that would be required of the teacher and student and make sure that each step was explained sequentially. Nothing was taken for granted or overlooked. I created several detailed task analysis flow charts that demonstrate proper sequencing of events of steps within the lesson. This process, while tedious, made me really understand what the activity requires of students and allowed me to better explain things so any teacher or student can understand. I created activities in an ARCS model with specific strategies for gaining attention, establishing relevance, inspiring confidence, and increasing satisfaction. I met Standard 1.3 through intentional planning that incorporates the specific instructional strategies mentioned above.

EdTech541: Integrating Tech Website

The 2010 National Education Technology Plan Executive Summary calls for a "revolutionary transformation" (p. 7) and that no matter whether the subject is English, math, science, social

studies, history, art or music, 21st-century competencies such as complex problem-solving, critical thinking, collaboration, and multimedia communication should be woven throughout. I certainly saw this demonstrated as I designed multimedia projects for each content area. This was the first time I reflected on the relative advantage of a technology or designed a technology integration plan. In these activities I used instructional strategies to sequence, cluster, group, arouse attention, establish real-world relevance, and increase motivation. I planned what technology tool to use and designed the content to match lesson objectives. The end result is a product I'm quite pleased with, and I have shared these resources with colleagues and on my website.

1.4 Learner Characteristics

Learner characteristics are those facets of the learner's experiential background that impact the effectiveness of a learning process.

EdTech504: Synthesis Paper

The entire premise of EdTech504 meets this standard, as its focus is learning theories. This includes dense studies into how learners learn and their characteristics. Smith and Ragan note "a common error resulting from failure to analyze the characteristics of an audience is assuming that all learners are alike" (2004, p. 58). One learning characteristic I explored is the social relationship learners have to their peers. Such social constructionism asserts that learning should occur in realistic settings with tasks that are relevant to the learner's lived experience (Ertmer & Newby, 1993). I explored major learning theories and wrote a synthesis paper on the learning theory and framework that supports the use of social networking in a classroom. The Internet, though not initially designed as such, has become a social experience focused more on relationships than information or content (Lankshear, 2000). Depending on how well it is integrated into course design, social networking can engage learners and foster better retention (Jonassen, 1991). While the jury is still out on how social networking will impact long-term education and achievement, there are some exciting possibilities teachers can use to help better engage their students.

EdTech541: Relative Advantage Chart

I created this chart that directly meets Standard 1.4 by analyzing the needs and experiences of the learners and creating a learning plan for them that will be most effective. For this project, I selected the students I volunteer-teach who are learning English. Taking into consideration their specific prior knowledge (cognitive) and their motivation to learn (affective), I established: ten learning problems, technologies that could be used as resources in solving the problem, the relative advantage of using such technologies, and the expected learning outcomes. Smith and Ragan state "the more designers know about the relevant knowledge and skills that the learners already have, the more effective and efficient they can make their instruction" (2004, p. 69). Through analyzing the characteristics of these students, I was able to design targeted activities and objectives to help meet their learning needs.

Standard 2: Development

Candidates demonstrate the knowledge, skills, and dispositions to develop instructional materials and experiences using print, audiovisual, computer-based, and integrated technologies.

2.1 Print Technologies

Print technologies are ways to produce or deliver materials, such as books and static visual materials, primarily through mechanical or photographic printing processes

EdTech504: Annotated Bibliography

This artifact was designed for the medium of print and meets Standard 2.1. It can easily be printed or bound as supplemental reference material. An annotated bibliography is a blend: part paper, part reference list, part taxonomy. In this case it includes 7-10 resources on a topic of interest relating to educational technology theory. Such topic should be (as our module instructs) "broad enough to allow full exploration of the topic but narrow enough to be a thorough analysis." Not only did I find, read, summarize, and cite such resources from peer-

reviewed sources, I wrote a short paragraph on each one. Each paragraph is much more than a summary or abstract of the article. It is a critical analysis of its purpose, a comparison to other works in the field, an explanation of how it fits into my taxonomy, and included my personal conclusions and observations. This annotated bibliography could also be used to show to a class as a compilation of research or as an example of how research can be organized.

EdTech541: College Admissions Committee: Spreadsheets & Databases

This project was one of my most enjoyable because it allowed me to take the rather boring tools of spreadsheets and databases and use them within an exciting project. Studies have shown that spreadsheets can be useful tools, and teachers who use them believe they help students better understand the concepts behind statistical data (Roblyer & Doering, 2012). I created a project for 8th grade students to help them play the role of a college admissions committee. Using supporting resources and documents to help them chart and analyze various data, they are to determine if a fictional student will be admitted. It is a good reminder that print-based technology, especially when integrated well into an activity, can support learner engagement. This artifact meets Standard 2.1 because I created all of the printable worksheets needed to support this project.

EdTech551: Grant Proposal

I used a variety of print technologies in EdTech551 to meet this standard, mostly through MS Word and Google Docs. The aesthetic appeal of a document is important to me and I think a well-written grant also needs to look good on a page. This grant seeks funding for a 5th grade class to obtain activity monitors to use in brain conditioning exercises prior to reading and math. The idea builds upon compelling research indicating a direct correlation between increased heart rate (and therefore more oxygen and blood pumping to the brain) and cognitive performance (the brain's ability to function and learn). This effort strives to improve standardized test scores in English Language Arts and mathematics through increased cardiovascular activity. Schools across the nation have seen great success through their innovation and creativity by adopting similar fitness practices. A teacher submitted this actual grant and was awarded the requested funding. She has been running a successful program and is pleased with the student results she's seeing.

2.2 Audiovisual Technologies

Audiovisual technologies are ways to produce or deliver materials by using mechanical devices or electronic machines to present auditory and visual messages.

EdTech503: Reading Quiz

This assignment is actually a reading quiz on several dense chapters and course materials. I post it here because it is a good audiovisual example of how a teacher can assess in a creative way that challenges beyond what a standard assessment might. I created a Google Docs presentation that includes 21 slides with specific topics on each one. It was called a "post card" quiz because one slide would be a photo, and the next slide (like flipping over the post card) would include the content from our readings. To take it even a step further and to test my deeper understanding, the photo had to be a metaphor of the topic, not a 1:1 correlation. So, for example, when talking about systematic models, I showed a picture of a haphazardly wired telephone pole here in Nepal that demonstrated lack of order or planning. The result is a product that took a long time but truly tested my reading knowledge in a much more interesting – and lasting – way than a standard written assessment would have. It made me wonder how students might respond if teachers used more creativity in otherwise mundane assessments.

EdTech541: Multimedia Presentations

Some people – likely those who have sat through far too many PowerPoint presentations – may feel that presentations are a thing of the past. I feel differently. If used well and intentionally, presentations can be a powerful audiovisual learning tool for students. While students generally respond more positively to presentation-enhanced instruction, the impact largely depends on how teachers use such tools (Roblyer & Doering, 2012). Presentations can help students be active not passive learners, develop research skills, encourage cooperative learning and problem solving, and engage in more meaningful learning (Siegle & Foster, 2000). Using my EdTech503: Instructional Design Project as a basis, I created this presentation that draws from some of the same slides and research. I have used this in other professional development settings, most recently when I presented at the Google Apps for Education Summit in Sydney, Australia in January. The original presentation, found here, includes speaker's notes, the audio theme song from *Jeopardy!* (it plays within the downloadable PowerPoint presentation), and an interactive quiz

at the end. I've recently shared this presentation during professional development with our teaching assistants to help them understand the benefits of learning presentation software.

EdTech543: Periodic Table of Connectivism

This EdTech543 assignment has been one of the most powerful experiences I've had in this program, simply because what began as a stretch of creativity ended up teaching me the power of social media. The assignment was to create a non-linguistic summary of some very dense reading on connectivism, personal learning networks, and communities of practice. I read all of the articles, picked out several key words, and synthesized everything into a visual periodic table. On Twitter I shared a link to my learning log entry, and it was picked up and shared on various connectivism experts' blogs. It's had nearly 700 views and continues to receive daily hits. This one entry alone has significantly increased the traffic I receive on my learning log and has connected me to people I would not have otherwise found. It is an excellent example of the impact of social media.

2.3 Computer-Based Technologies

Computer-based technologies are ways to produce or deliver materials using microprocessor-based resources.

EdTech502: WebQuest Online Research Sleuth

Nearly every artifact I've created throughout this program meets this standard, but I have deliberately chosen these three to best represent my Standard 2.3 mastery. First, this WebQuest I created as a culminating activity in EdTech502 shows not only how my HTML/CSS web-design skills improved since my early pages, but also how I was able to use those skills to create a multi-layered learning activity. WebQuests are an inquiry-based learning style that can foster collaboration, boost technology skills, and integrate technology into learning (Abbitt & Ophus, 2008). I created this WebQuest to help students determine what resources are available online to help them in their research and how to determine if that information is reliable. The activities and questions guide students through computer technologies such as search engines, website evaluation, online research, and iPads. I have yet to use this in a class but it is a valuable resource and one I will use when given a chance.

EdTech543: MOOC

MOOCs, or Massive Open Online Courses, bring higher education to the masses. Some of the big MOOCs are facilitated through major universities like Stanford, Harvard, CalTech, MIT, and the University of Virginia and on sites like Udacity, Coursera, and OpenCourseWare. The idea is that anyone can join, without admission criteria and without cost (there are fees if you want to obtain credit for the course). They make it possible for anyone, anywhere (with an Internet connection and device) to learn. For this artifact, I co-created a MOOC. Using my idea of a student technology leadership team, we created a hybrid course using Weebly and Edmodo. S.W.A.T., or Students Working to Advance Technology, is designed for Grades 9-12. Drawing on their skills and interests, students will participate in assignments and activities to help them become a pioneering technology leadership guru. We collaboratively created Social Media Guidelines, handpicked several Web 2.0 tools, and created four accompanying learning activities. This activity draws on the best of what computers have to offer to create a collaborative, educational, and fun learning experience for students. It shows how MOOCS could be used in secondary education rather than only within higher education.

EdTech543: Peer-review screencast of MOOC

I've included this artifact here to demonstrate mastery of Standard 2.3 to show how computer tools can provide authentic assessments. For EdTech543, I reviewed a webcast assessment of a peer group's MOOC. I used a combination of Screenr and iMovie, though Camtasia would have worked even better, to record a screencast. I used a rubric to discuss their MOOC website and course design and provided them with video feedback. Assessments via screencasts are being used more frequently in higher education as they help students receive more authentic and clearer feedback. This was a unique assignment and one that encouraged me to try such assessments in the future.

2.4 Integrated Technologies

Integrated technologies are ways to produce and deliver materials which encompass several forms of media under the control of a computer.

EdTech502: Virtual Field Trip Sydney

This advanced activity for EdTech502 tested my HTML/CSS abilities to the extreme. I produced this page to give students an opportunity to visit my favorite places in Sydney virtually, and I am quite pleased with the results. It meets Standard 2.4 by incorporating several forms of media to meet learning objectives, including images, audio files, embedded maps with custom pins and images, external links, and video. Many students are not able to visit Sydney in person and this website provides a variety of options for them to experience the best it has to offer: virtually.

EdTech541: Virtual Tour of Nepal

This is another virtual tour, this time created using Weebly for EdTech541. The purpose of this assignment is to use a virtual field trip to teach Internet Web 2.0 skills to other educators. It was designed to expose 5th grade students to a few highlights of Nepal's geography and culture. It is intended to whet a student's appetite rather than as a complete unit or resource. I have built-in audio clips, videos, images, worksheets and trivia, links, an embedded Google map, and links to several resources for additional information. It shows that with a little effort, educators can either build their own resources or draw from the huge pool of available resources online. I am going to use this website with Grade 3 soon.

EdTech541: Assistive/Adaptive Technologies

Teachers must seamlessly integrate various technology tools in the classroom to meet the needs of all students. This technology can be anything from computers, DVD's, iPads, interactive white boards, smart phones, software, Internet, document scanners, electronic music devices, to digital film and movie cameras. Edutopia (n.d.) states that the use of such technology tools must be "routine and transparent. Technology integration is achieved when a child or a teacher doesn't stop to think that he or she is using a computer or researching via the Internet." This webpage I created meets Standard 2.4 by including technology integration strategies, iPad apps, websites, and videos designed for specific types of learners: students with cognitive, physical, or sensory difficulties, at-risk students, and gifted students. This assignment forced me

to look at technology tools through various lenses, to try to find the best fit, and to explore the tremendous resources available for children with special needs. I still use many of the resources and apps I included on this page, such as Reading Raven, Mathemagics, BrainPop, and Khan Academy.

Standard 3: Media Utilization

Candidates demonstrate the knowledge, skills, and dispositions to use processes and resources for learning by applying principles and theories of media utilization, diffusion, implementation, and policy-making.

3.1 Media Utilization

Media utilization is the systematic use of resources for learning.

EdTech501: Tech Trends

This was an early assignment in my first course EdTech501 and it was meant to help me examine how current and future technology trends affect the way I teach and learn. Through it, I became familiar with the Horizon Report, and as our professor predicted, it has become my favorite yearly publication. It highlights and predicts education trends and their estimated timeframe for implementation. I met Standard 3.1 as I selected one of the 2012 trends (electronic books) and explored how I could use this tool in a classroom. eBooks are gaining popularity as they become more integrated into mobile devices. The Horizon Report 2011 notes that “the most interesting aspect of electronic books, however, is not the devices they are accessed with; it is not even the texts themselves. What makes electronic books a potentially transformative technology is the new kinds of reading experiences that they make possible" (HR 2011, p. 8). I found this so interesting it caused me to reflect on reading in general and how I interact with books. It caused me to look at how my own children learn (by engaging with the material) and it is no surprise that electronic books can really make a difference in teaching and learning. They create a new world of possibility for everyone involved: students, teachers, and publishers. The sky is the limit with what can be accomplished. Reading is no longer a solitary, words-in-print experi-

ence. It can be a social, engaging, collaborative, and tactile adventure. I created this lesson plan for the students I volunteer-teach in Nepal who had just received two donated Kindles. It helped me think through how I would teach someone who was unfamiliar with the device. I never had a chance to use this lesson plan, as the Kindles didn't arrive when expected, but I will likely draw upon it at some point.

EdTech541: Computer Networking Overview

This assignment took me out of my comfort zone and forced me to learn something I knew very little about: our school's network. I met Standard 3.1 through examining a system and creating a resource of learning about that system. I met with the Director of Technology and he showed me around the school, pointing to hubs, nodes, and complicated cables of all colors. He took the time to draw me a map of how everything came together and answer my questions. Because I had read the course materials and had a framework to work from, we discussed various network designs and infrastructures. I created this Computer Networking Overview Prezi to explain the school's computer network to other teachers to make them more informed and to potentially reduce frustrations and problems. I never had the chance to deliver the presentation, but I learned a great deal in the process.

3.2 Diffusion of Innovations

Diffusion of innovations is the process of communicating through planned strategies for the purpose of gaining adoption.

EdTech501: Digital Inequality

The collaboration required for this EdTech501 assignment on digital inequality pushed me to a new level. Our five-member team acted as a pseudo-Task Force assigned to help our state's superintendent make decisions on how to use $50M to reduce statewide digital inequality. I learned a great deal through online research about the differences between digital divide (the have's and the have-not's of computer access) and digital divide (the level to which a user can implement and utilize available tools). It is a complex issue, one I initially knew very little about, and I realized that support and resources must help provide education as well as access. This assignment was to create a VoiceThread, an online slide-sharing program that enables various

users to insert and comment. This presentation took a great deal of distance collaboration. The finished product and represents a three-fold success: 1) acquired knowledge of a complex issue; 2) exposure to and utilization of a new technology; and 3) strengthened collaborative team-building skills. I met Standard 3.2 through strategic planning for the purpose of forming a consensus and presenting complex information to a group for their adoption.

EdTech543: Digital Footprint and PLN

As with several other assignments in this program, what I took away from this went far beyond the content. I created 10 Strategies for leaving a positive digital footprint and growing my Personal Learning Network. It contains helpful links, resources, tools, and research. It meets Standard 3.2 because it diffuses specific strategies for user implementation. Since I uploaded it to SlideShare, it's had 4700 views–well beyond what I could have envisioned for a weekly assignment. I have presented it in a professional development seminar and used it as a basis to apply for a regional conference.

Life Experience: EdTech Didi website creation

About midpoint through the program, I decided I needed another forum for sharing my artifacts and projects with others. My learning log was getting a lot of hits, but it was heavily research-based and pretty dense. I needed something a little lighter that could reach teachers, parents, and students. EdTech Didi was born. On it, I include various projects, resources, and ideas that can help to educate, engage, and empower others. It has become my public blog, my pseudonym on all social media sites, and has provided me an outlet to share planned strategies in hopes to benefit the end user.

3.3 Implementation and Institutionalization

Implementation is using instructional materials or strategies in real (not simulated) settings. Institutionalization is the continuing, routine use of the instructional innovation in the structure and culture of an organization.

EdTech501: Plagiarism Video

This assignment was one of my first in the program and it created a solid foundation from which to build my journey. Using the fun new speech-to-text tool Xtranormal, I created a short video simulated discussion on various types of plagiarism. The *Publication Manual of the American Psychological Association* states that "researchers do not claim the words and ideas of another as their own; they give credit where credit is due" and "each time you paraphrase another author…you need to credit the source in the text" (APA, 2010. p. 15). This assignment meets Standard 3.3 through instructing students about specific plagiarism examples and encouraging them to implement a foundation of honesty in real-world settings. This artifact adds to a wealth of online resources on plagiarism to help reduce the wide-spread cheating culture among students and lessen plagiarism occurrences on an institutional level. This resource is designed for teachers and students of all ages to implement. It is also a perfect example of how BSU's EdTech program has worked and why I love it. I was given a topic to research (plagiarism), and then I presented it using a new technology (Xtranormal). This type of approach has a double benefit and makes learning more applicable in real-world settings and fun.

EdTech501: RSS Feeds

This assignment helped me find educational blogs that I wanted to follow, subscribe to their RSS feeds, and create and share my own list of feeds. I met Standard 3.3 through finding and using instructional material found on blogs and various websites in real-life application and then sharing that knowledge with my institution for the benefit of other teachers and parents. For example, I created a document to help parents subscribe to the RSS feeds of their child's class website for Parent Conferences. Using Google Reader, I still follow many of the blogs I signed up for early on in this course. I have come across resources and ideas, such as conference calls for proposals that have been accepted, that I have applied in real-life scenarios. I also

have since used RSS feeds to follow friend and family blogs, which has improved personal productivity.

3.4 Policies and Regulations

Policies and regulations are the rules and actions of society (or its surrogates) that affect the diffusion and use of Instructional Technology.

EdTech501: Elements of Educational Technology

For this assignment I met Standard 3.4 by analyzing the policy definition of educational technology and its application. I specifically analyzed one word "appropriate" of AECT's definition of educational technology. I looked at this word through my own lens with the students I work with in Nepal and explored the ethical application of providing them with technology tools. I realized that educational technologists, of whom I am now part, have a responsibility to apply their knowledge in a well informed, appropriate way in their present circumstances. For me, that has meant some mistakes along the way as I've continually adjusted and adapted my approach in order to meet the needs of the students I work with. While not without its challenges, I feel it's an exciting time to be part of the educational technology field as I seek to empower others through my efforts.

EdTech502: Copyright Scavenger Hunt

My target audience for this assignment is teachers. I met this standard by breaking down complex copyright and fair use policy, rules, and regulations into manageable chunks that teachers can understand and apply. I used my developing web design skills to create a series of scavenger hunt links that explored: copyright, public domain, fair use, and creative commons. While these issues are complicated and can be very overwhelming to teachers, this assignment helps get the basics across in a way that others can understand. I will likely use this in a professional development setting or as a reference when asked.

Standard 4: Management

Candidates demonstrate knowledge, skills, and dispositions to plan, organize, co-ordinate, and supervise instructional technology by applying principles of project, resource, delivery system, and information management.

4.1 Project Management

Project management involves planning, monitoring, and controlling instructional design and development projects.

EdTech505: Evaluation Report

I met Standard 4.1 through this semester-long project because I planned, monitored, and designed the entire project. I determined an actual program I could evaluate, designed an evaluation plan to determine if objectives were met, and made recommendations to stakeholders for improvement. This project involved monitoring the program and the evaluation plan throughout and using gap analysis to determine where things were and where they needed to be. It opened my eyes to program evaluation, especially since I live near so many international NGOs in need of evaluations. I might consider small-scale evaluation projects in the future.

EdTech542: Project Me

While also mentioned under Standard 1.1, I have included it here because *Project Me* shows my ability to plan, monitor, and control an instructional design project from the ground up. Taking nothing more than an idea, I created a project based learning self-exploration unit that could also be used as a stand-alone elective or as an after-school activity. I developed all supporting resources, including products and performances, assessments, project timeline, teaching guide, and additional support resources for instructors. I have been invited to share this project as a learning session station during ISTE 2013 this summer.

4.2 Resource Management

Resource management involves planning, monitoring, and controlling resource support systems and services.

EdTech501: Digital Inequality

While this assignment is discussed specifically under Standard 3.2, I have also included it here because it meets this standard by implementing task force planning strategies to allocate state resources. It also required our technology management team to plan, monitor, control, and make difficult decisions about resource allocation. We analyzed resource allocation through the larger lens of digital inequality. Living in a developing country, I am no stranger to the so-called "digital divide." Telecommunication infrastructure and frequent power outages limits Internet connectivity. Still, many people visit their local "cyber" for Internet access and can perform basic functions. This assignment opened my eyes to the complex issues surrounding policy and practice in the U.S. Part of me wonders if the divide is lengthened by the expectation of ease and convenience. Here in Nepal, it is not assumed that anyone has reliable connectivity, but with a little effort most are still able to access information and perform basic tasks. In the U.S., it is often assumed that just because people don't have all the bells, whistles, and speed on a personal device at home that they are part of the divide, when they could still use school computers or public computers at the library. This assignment strengthened my management skills that have been called into play as I now plan, monitor, and make recommendations for technology purchases at my school and in my technology outreach efforts.

EdTech551: Grant Proposal

Through the process of crafting a real grant proposal, I met this standard by getting into the details of what resources should be requested in the grant and how they would be used, controlled, monitored, and reported on. The grant writing process is complex and requires a significant amount of research and planning. Such an exercise requires a thorough examination of the project from beginning to end, with all costs, rationale, support, arguments, and practicalities addressed. This grant was actually awarded and has been a great source of satisfaction and achievement for the class.

4.3 Delivery System Management

Delivery system management involves planning, monitoring and controlling 'the method by which distribution of instructional materials is organized' . . . [It is] a combination of medium and method of usage that is employed to present instructional information to a learner.

EdTech501: RSS Feeds

When I completed this assignment early in EdTech501, RSS feeds were new to me. I hadn't realized their advantage. Through this assignment and many practical applications since then, I demonstrate mastery of this standard through organizing the method of instructional material delivery. This assignment is a publicly shared list of RSS feeds I added to Google Reader. It is an attempt to bring information to me rather than me going to find it. While RSS feeds (the medium) is available to everyone and can be a huge aggregator of information and time-saver, it is up to individuals to actually use them to their advantage (the method.) I may not check Google Reader daily, but I like that I have knowledge related to my professional and personal interests sitting there waiting for me to read. I've helped several others, including class parents and high school teachers, follow RSS feeds on websites of interest.

EdTech543: My Personal Learning Environment

This assignment also shows mastery of this standard as it led me through organizing my personal learning environment growth into a visual format that could be (and has been) shared with others. This idea of growing our network, of growing ourselves, aligns well within connectivist framework. Like George Siemens said, "The learning *is* the network" (2004). I chose which resources best represent me, brought them all together into one place, and organized them in a way that made sense. This Pinterest board is a visual depiction of my personal learning environment: favorite websites, online learning communities, productivity tools, professional development ideas, and other resources that capture the brilliant intersection of education and technology. In short, it is my digital footprint. It is me. For the same assignment, I also created a separate diagram that visualizes the network, nodes, connections, branches, growth, or other relationships that are core to a PLE. I attempted to align my communities and

resources with the NETS for Teacher standards. It was the first time I've really mapped my efforts against these standards and I realized I fare pretty well so far.

4.4 Information Management

Information management involves planning, monitoring, and controlling the storage, transfer, or processing of information in order to provide resources for learning.

EdTech501: Zotero Library Assignment

Zotero was a completely new research tool to me, and once I discovered it I wondered where it had been all through my previous research-paper-writing days. To meet Standard 4.3, this assignment helped us collect, organize, annotate, format, and share our research. In and of itself, this assignment model was brilliant and I recently referred to it during my Google Apps for Education Summit presentation. The professor knew that we were new to the program and likely needed a refresher on APA formatting, so she took an otherwise mundane task and turned it into a powerful collaborative activity. She created the shared doc, asked that we each paste the 5 references from our paper into it using correct APA formatting, and then we made comments and suggestions on how each other did. We became the teacher and the expert on a topic we really knew very little about. It made us dig deeper and help each other, and boosted our confidence in our APA skills. It gave us a safe place to try it out, and as a result I have felt confident in APA formatting ever since. To this day, I never read a research article without the assistance of Zotero.

EdTech501: Learning Log

If anything shows my growth throughout this program, or mastery of Standard 4.4, it is my learning log. Encouraged to set it up during the first weeks of my first course, I have spent a significant amount of time and effort to keep it going. It is a place where I post or embed assignments, reflect on what I have learned, and map each assignment to appropriate AECT standards. It is an extended version of an ePortfolio. It has required significant planning, monitoring, aggregating of resources, and time. It also involves technical skills to allow for storage, organization, and formatting resources. Perhaps most valuable, though incredibly time-consuming, are the reflections. These have allowed me to really focus on what I have learned and on great-

er issues than the assignment at hand. I have a solid academic following and feel pleased with the quality of work I've been able to share.

Standard 5: Evaluation

Candidates demonstrate knowledge, skills, and dispositions to evaluate the adequacy of instruction and learning by applying principles of problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.

5.1 Problem Analysis

Problem analysis involves determining the nature and parameters of the problem by using information-gathering and decision-making strategies.

EdTech 501: School Evaluation Summary

For this assignment, I polished my project management and collaboration skills, information-gathering and decision-making strategies, and formative evaluation technique. This assignment is a perfect fit for this standard because it applies all of these skills to determine the adequacy of instruction at a school and offers recommendations. I surveyed our local school's technology environment using Peter Sibley and Chip Kimball's Maturity Model Benchmarks as a framework. The five organizational filters are: administrative, curricular, support, connectivity and innovation. Each of these levels of the organization are addressed with both behavioral and resource/infrastructure criteria. I sent the Google form to a small mix of administrators, teachers, and technology committee members, where I served as a parent representative. My overall technology maturity benchmark rating for this school is "island" which is like getting a two on a scale of one to four (with four being the highest, most intelligently integrated). I gave this report to the technology director, who was quite disappointed with the low marks but was grateful that it opened a new dialogue on what improvements can be made.

EdTech505: Evaluation Request For Proposal

While this paper is a response to a fictional request for proposal, it was still a valuable exercise that made me apply significant problem analysis skills required of this standard. My task was to determine the marketability and salability of a university teacher-training program. I researched the content and design of the program itself in order to determine the overall evaluation method. This evaluation would influence whether or not resources should be committed to market and sell the program to other schools. I included a program description, evaluation method, task schedule, project personnel, and budget. Though the project was fictional, it required both knowledge and skills to write the report in a way that would ideally win me the bid.

5.2 Criterion-Referenced Measurement

Criterion-referenced measurement involves techniques for determining learner mastery of pre-specified content.

EdTech503: Instructional Design Project

To meet this standard, I built into this project an assessment plan that helps instructors measure how well students have learned what has been taught. I developed ten specific learning objectives and created a matrix of objectives that includes: Bloom's taxonomy classification, format and description of assessment, and sample items. The "goal of the criterion-referenced test is to obtain a description of the specific knowledge and skills each student can demonstrate. This information is useful for planning both group and individual instruction" (Linn & Gronlund, 2000, p. 43). The ultimate measure of success for this project is whether or not students can create, publish, and present a Google Docs presentation. I created a self-assessment student worksheet and a grading rubric to help measure student outcomes.

5.3 Formative and Summative Evaluation

Formative evaluation involves gathering information on adequacy and using this information as a basis for further development. Summative evaluation involves gathering information on adequacy and using this information to make decisions about utilization.

EdTech 501: School Evaluation Summary

This is a good example of summative evaluation because the survey gathered information from teachers and administrators, determined the level of adequacy, and made recommendations about how to improve utilization. It asked them to rank various benchmarks to determine how well technology is being used and integrated for learning. While only six people responded (it's a small school), the responses were accurate and helpful. Synthesizing the data and making an ultimate determination by category strengthened my evaluation skills, and provided an outsider's view to the school on how they were doing.

EdTech505: Evaluation Report

This report meets all sub-standards of Standard 5, but I have included it here to demonstrate formative evaluation. The results from the evaluation will be used as a basis to further develop and improve the program. Program evaluation "enables accountability" (Boulmetis & Dutwin, 2011). Everyone, especially in today's economy, wants to know: *What did we get for our money [or time, or effort]? Did it work? Did it do what we hoped it would*? That's what this program evaluation seeks to answer for the Grade 6 Explore Nepal program. Using Lichert-scale and open-ended questions, students and parents completed before-and-after attitude surveys on how the Explore Nepal experience influenced them. I graphed and summarized their answers, and used their feedback to create detailed conclusions and recommendations. The end result is an accurate and informative report that has been given to involved stakeholders.

EdTech543: Curated Resources on K-5 NETS-S Standards

I'm including this here to show how a curated resource can prove beneficial in decisions regarding utilization of resources and program development. At work, I am in charge of writing grade-level curriculum for K-8 based on the NETS for Students standards. For this assignment, I looked through dozens of resources and examples of how other schools and districts have done this. I

listed 25 and made annotations, summaries, and recommendations on each. Curation is "the process of sorting through the vast amounts of content on the web and presenting it in a meaningful and organized way around a specific theme. The work involves sifting, sorting, arranging, and publishing information (Kanter, 2011). Such an effort is not easy, but the results are potent and beneficial. I emerged with a much clearer understanding of which direction we should take and this curated list has proven a great resource for me.

5.4 Long-Range Planning

Long-range planning that focuses on the organization as a whole is strategic planning. Long-range is usually defined as a future period of about three to five years or longer. During strategic planning, managers are trying to decide in the present what must be done to ensure organizational success in the future.

EdTech501: Tech Use Plan

Long-range technology planning is a "major undertaking" that should help schools and districts "focus on integrating technology into the teaching and learning process to transform the way teachers teach and students learn (Missouri Education, n.d.). Standard 5.4 is met through this collaborative presentation that examines a school district's plan in Washington. I proactively thought through the next three to five years and developed a plan accordingly. The plan includes research and rationale behind technology use planning, planning team recommendations, process descriptions, a vision statement, plan objectives, needs assessment, professional development for faculty, evaluation, and a timeline. I explored and analyzed each element of a technology plan and feel much more confident in my ability to contribute to one. I drew from some research suggesting that great emphasis should be on application rather than the technology itself: what should teachers and students be able to do (See, 1992)? I am now a contributing member to our school's technology plan and have drawn from the research and skills gained through this assignment.

Conclusion

The AECT standards I have addressed in this rationale paper are more than a list of skills, benchmarks, or accomplishments. This sampling of artifacts shows some of the extent that I have mastered these standards, but the real mastery is found within me. They are part of me and are infused in everything I have done in the program and everything I continue to do.

Leveraging technology to improve student learning and to prepare them for their future is no small task. It is a complex process that takes an ongoing national team effort of administrators, policy makers, computer developers, corporations, districts, and local and federal governments to improve our children's education. Educators and technology specialists play an integral, front-line role in shaping our educational landscape. Through the standards I have mastered and continue to demonstrate, I will be a key player as our national education story unfolds. I will be a positive force for good and advocate for effective use of technology that educates, engages, and empowers students.

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