2011

Social media as a venue for personal learning for educators: personal learning networks encourage application of knowledge and skills

Linda S. Eller

Pepperdine University

Graduate School of Education and Psychology

SOCIAL MEDIA AS AVENUE FOR PERSONAL LEARNING FOR EDUCATORS: PERSONAL LEARNING NETWORKS ENCOURAGE APPLICATION OF KNOWLEDGE AND SKILLS

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Educational Technology

by

Linda S. Eller

February, 2012

Kay Davis, Ed.D. – Dissertation Chairperson

This dissertation, written by

Linda S. Eller

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATIONAL TECHNOLOGY

Doctoral Committee:

Kay Davis, Ed.D., Chairperson

Jack McManus, Ph.D.

Fonda Na'Desh, Ed.D

TABLE OF CONTENTS

Page

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

DEDICATION

To my family and friends who have supported, encouraged, and believed in me as I have made this journey.

VITA

Linda Eller

EDUCATION

2006-2011: Doctoral Candidate, Ed. D. Program, Pepperdine University, Malibu, CA. USA
2005: Administration and Supervision Certification, Christian Brothers University, Memphis, TN. USA
1994: Masters + 30, University of San Diego, San Diego, CA. USA
1986: Master of Education, Curriculum and Instruction, University of Memphis, Memphis, TN. USA
1975: Bachelor of Science in Education, Tennessee Technological University, Cookeville, TN. USA

PROFESSIONAL EXPERIENCE

2009-2011: Information Services Administrator, The Delta Kappa Gamma Society International, Austin, TX. USA
2008-2010: Adjunct Instructor, University of Memphis, Memphis, TN. USA
2004-2009: Tennessee State Editor, The Delta Kappa Gamma Society International, Memphis, TN. USA
2001-2009: Professional Development Coordinator for Instructional Technology, Memphis City Schools, TN. USA
2005-2007: Adjunct Instructor, Christian Brothers University, Memphis, TN. USA
1998-2001: Technology Coordinator, Newberry Elementary, Memphis City Schools, Memphis, TN. USA
1977-1998: Classroom teacher grades 1-6, Memphis City Schools, Memphis City Schools, Memphis, TN. USA
1976 -1977: Classroom teacher grade 3, DeSoto County Academy, Jackson, MS. USA
1975-1976: Teacher/Tutor, elementary grades, Jackson Tutorial Academy, Jackson, MS. USA

SKILLS / WORKSHOP PRESENTATIONS

2011: Presented *Web 2.0 and You* at DKG Regional Conference in Hershey, PA
2011: Presented *Web 2.0 and You* at DKG Regional Conference in Edmonton, Alberta, Canada
2011: Presented A Technologist as an Artist, DKG Regional Conference Baden-Baden, Germany
2011: Participant- Texas State Leadership Management Seminar, DKG, Dallas, Texas
2011: Presented Communicate- Social Media Creates a Bridge new Methods of Communication, New York State Convention, Rochester, NY
2010: Presented *Social Media- Starting and Growing a Private Social Network* the New Learning Technologies Conference, Orlando, FL

2010: Presented *Communication and Media-Getting There and Going Further*, Missouri State Convention, Jefferson City, MO
2010: Presented *Personal Leadership Brand at Arizona State Convention, Phoenix, AZ*
2009*:* Presented *Learning Village Curriculum Building* at Memphis City Schools Technology Conference
2008*:* Presented *Technology Tools for the Classroom,* Memphis City Schools Technology Conference, Memphis, TN
2007: Presented *Using United Streaming Video with Instruction* at West Tennessee Technology Association Conference, Jackson, TN
2007: Presented *Using United Streaming Video with Instruction* at Tennessee Middle School Association Conference, Memphis, TN
2006: Presented *Communication Tips* at the Tennessee State Convention, DKG, University of the South, Sewannee, TN
1998-2004: Presented technology workshop at Memphis City Schools Technology Conference, Memphis, TN
2002: Presented *Tips and Tricks with Learning Village* at IBM Learning Village Conference, Toronto, Canada
2001: Presented *Using Learning Village for Curriculum Development* at the Association for Elementary and Secondary Principals Conference, Atlanta, GA
1998: Presented workshop *Building Quality Lesson Plans* at Newberry Elementary School, Memphis, TN
1997: Presented *Curriculum Traveling Trunks* at the Tennessee Reading Association Conference, Chattanooga, TN
1995: Presented workshop *Using AV Equipment* at Raineshaven Elementary School, Memphis, TN
1994: Presented workshop *Presenting Great Art Work* at Raineshaven Elementary School, Memphis, TN

AWARDS

2009: 2012: SIIA CODIE Awards judge
2008: Biltmore's – Who's Who
2003: Apple Distinguished Educator, Apple, Inc.
2002: IBM Grant Recipient
2001: Strathmore's Who's Who
1998: National Faculty Fellow, National Faculty
1998: Who's Who in American Education
1998: Teaching and Learning Academy Fellow, Memphis City Schools
1997: Technology Grant, Tennessee State Department of Education
1997: Memphis Rotary Teacher of Excellence
1997: Walmart Teacher of the Year
1997: Channel 5, WMC-TV, Thanks to Teacher Award Finalist
1995: National Faculty Reading Team
1994: Delta Kappa Gamma Society International
1986: Kappa Delta Pi

ABSTRACT

Social media sites furnish an online space for a community of practice to create relationships and trust, collaboration and connections, and a personal learning environment. Social networking sites, both public and private, have common elements: member profiles, groups, discussions, and forums. A community of practice brings participants together to share a common interest, to learn from experts, and develop relationships. This dissertation study focused on Apple Distinguished Educators (ADE), a social network, and presents findings on how their participation affected personal learning, how their personal learning impacted their professional practice, and how participation resulted in new network connections and more collaborative work.

The findings of this study included gains in personal learning by both male and female educators across experience levels and ages. Overall, males found a higher degree of personal learning than did females. Learning new technology skills and gaining new collaborations were ranked as the greatest personal learning experienced from males while females scored making new network connections and joining in collaborative projects as their greatest gain in personal learning. 54% agreed that participation added to their personal learning. Gains in personal learning laid the foundation for new collaborations. 78% of elementary teachers, 75% of middle schools educators, and 42% of high school educators found collaborative projects as a result of their participation. 63% of university instructors found new connections for collaborative project work. Adding the use of technology to instruction was rated as the highest new strategy gained from participation in the ADE community. The second highest rated new strategy used in instructional practice was using connections to experts. Other strategies added to

instructional repertoires included using Web 2.0 tools and online collaboration with other classes and other countries. Several collaborative projects surfaced regularly, including Rock Our World, a music project spanning the globe, and an online global conference, The Global Education Collaborative.

Conclusions drawn from this research show that social media provides a personal learning environment. Participants gain new knowledge and skills and as a result add to their professional practice innovative techniques. Study of other social media sites and personal learning is recommended.

Chapter 1. The Problem

Since their emergence during the 1990s the Internet and the World-Wide Web have grown spectacularly, and can be regarded as one of the most significant technological and social developments in human history. They are changing the way people work, the ways in which businesses, schools, governments and other organizations operate, and the ways in which people communicate with each other. This study explores one aspect of these developments, the use of educational technology and social networking in schools and universities. It does so by surveying members of an online group known as the Apple Distinguished Educator (ADE) community, prominent users of educational technology. It examines the ways in which they use technology in education, the tools that they use, the web sites and places where they gather online, and how this technology is changing schools and the learning experiences of students.

Purpose of Study

The purpose of this study was to explore how teacher knowledge and practices are influenced when teachers participate in an informal, online learning community that is designed based on principles of social networking, the ideas of a community of practice, and the approach provided by personal learning environments described in the 2011 New Horizon Report (Johnson, Smith, Willis, Levine, & Haywood, 2011). Specifically, the research objective was to determine the impact that participation in social media sites designed for educators has on participants' knowledge and skills applied to classroom instruction as perceived by participants of the K-16 environment. Participants were surveyed about their perceptions of their participation in the social network site as it

pertained to their learning of new technologies, Web 2.0 tools, and how that learning has impacted change in instructional practices.

Research Questions

With the web developing so rapidly, and a younger generation of users emerging that use these tools much more extensively than their predecessors, it is important that the academic community and society at large be kept abreast of the latest trends and developments. The overarching research questions guiding this study are:

1. What new personal learning has been reached from participation of this social media site?
2. What new collaborative networks or connections have been established as a result of participation in a social media site for educators?
3. What instructional practices have changed as a result of participation in the social media community?
4. What are the opinions regarding the features currently available within the community?

Overview and Background

Technology and web-based applications change very rapidly, often bewilderingly so. Web-based tools provide innovative ways to address day-to-day activities in business and education while creating challenges for teaching and learning. In this emergent context, educators have opportunities to transform their personal learning as they prepare the youth of today for the unknown future. Today's young people, 18-24 year olds, function in the online environment to obtain news, shopping, entertainment, and communicate with friends and family. Educators can meet this generation in the online

world and accomplish new dimensions of instruction. Polin (2007) described the behavior of Web-savvy students as users who "create, consume, comment on, and rate Web material on a regular basis. Most understand, at least intuitively from experience, the power and value of networks and networking with like-minded or similarly interested peers" (p. 15).

Instructors, kindergarten through post secondary, are learning to use online communities and social media to harness the new possibilities for connecting with students. Social networks, designed for educators, can provide informal learning spaces for classroom instructors to strengthen the skills needed to reach tomorrow's citizens.

In today's global economy and technological changing times, students who will become the workers of the future need a new set of skills (Ranieri, 2004). From the perspective of Lehigh (2008), mastering the new skills means learning how to think critically and creatively, work collaboratively, use the Internet to do research, and communicate clearly and effectively.

Dede (1993) explained that moving the educational system in new directions requires innovative thinking and new paradigms. A paradigm shift requires a different pedagogy for using emerging media and technology for communication, collaboration, and learning. A survey conducted by Pew Internet and American Life Project in 2007 found that 55% of all American young people between 12 and 17 who were online used social networking sites for communication (McLester, 2007).

Dede (1996) wrote, "learning is social as well as intellectual. Individual, isolated attempts to make sense of complex data can easily fail unless the learner is encouraged by some larger group that is constructing shared knowledge" (p. 14). Capelle (2008)

claimed that educators need to understand the shared community and the relationships that social networking helps to build. Barab and Duffy (1998) discussed community as something larger than oneself: "Education and learning, from this perspective, involves 'taking part' and 'being a part,' and both of these expressions signalize that learning should be viewed as a process of becoming a part of a greater whole" (Sfard, 1998, p. 6, as cited by Barab & Duffy, 1998, p. 15).

Social networking, online communication based on relationships and connections, has become a popular method of communication, a development that, according to Tanase (2010), is accelerating. Understanding the community and relationships that social networking helps to build can provide a foundation for the application of social networking as a learning tool. The relationships established through social networking communities such as *MySpace*, *Facebook*, and *Classroom 2.0* allow users to keep information current, build relationships with online communities, extend the depth of face-to-face relationships, and learn from one another. Teaching young people today requires understanding of these online activities and social learning. Capelle (2008) believed that educators must embrace the use of new technologies to reach students in the digital lives they lead. Brown and Adler (2008) described the Internet as having a profound impact, "an impact that has yet to be fully realized, is its ability to support and expand the various aspects of social learning" (p. 18). Social learning is participatory. Brown and Adler continue explaining social learning as follows:

> The simplest way to explain this concept is to note that social learning is based on the premise that our understanding of content is socially constructed through conversations about that content and through grounded interactions, especially

with others, around problems or actions. The focus is not so much on what we are learning but on how we are learning. (p. 18)

Learning is a social activity in which participants learn by doing. More traditional approaches to pedagogy, where the teachers lectured and the students learned, no longer reflect the contemporary social aspects of learning. According to Wenger, McDermott and Snyder (2002), as participants spend time together either online or in face-to-face environments they begin to value their interactions with one another. Dulworth (2008) stated, "Learning from your network can be more powerful than other types of learning because you are often learning from other people who have 'been there and done that'" (p. 11). He further described his development of a community philosophy for his company as he collaborated with Wenger (as cited in Dulworth, 2008), and explained:

> I think there is a shift happening in the world today where people are starting to recognize that in fact network interactions are one of the keys to learning not only for professionals but for people in general. Because when you have a peer network you hear the story of someone else who is in a similar situation to you so there is almost an immediate validity of what you are hearing because you recognize that this person faces the same problems. There is something about hearing the words of someone who is a peer that makes the relevance of the knowledge that you get very immediate. (p. 11)

As stated in the Horizon Report (Johnson, Smith, Willis, Levine, & Haywood, 2007), "Social networking sites not only attract people but also hold their attention, impel them to contribute, and bring them back time and again—all desirable qualities for educational materials" (p. 12). Social media sites for educators enable members to attend

online live events, join a specific learning group, interact in forum discussions, and connect at face-to-face events held at national conferences. Social media sites can be considered as an online community of practice for educators. Each community provides different opportunities for connecting, learning and collaboration. New members are encouraged to join the groups that meet interests. Members can participate in a manner of involvement that meets the individual's needs.

New methods of communication can reshape how and where learning occurs. According to the National Research Council, "modern learning theory is that different kinds of learning goals require different approaches to instruction" (Bransford et al., 2000). Online communities specifically designed for teachers can provide different approaches to adult continuous learning. Participation in online communities allows followers to experience the power of conversations in a network or group of like-minded individuals, open up collaboration around the world, and provide learning about using Web 2.0 and social media technologies within instructional practices.

Participatory learning can also open innovative platforms for empowering teachers to create new models or approaches for compelling learning with or without classroom walls. According to Wenger et al. (2002), combining formal learning and informal online support can provide a community of practice whereby participants develop a stronger knowledge base, create interactions, build relationships, and begin to practice their shared knowledge.

Rationale for Study

As teachers learn about and use new technologies and Web 2.0 tools, they have the potential to engage in interactive conversations and discussions, respond to others

with personal reflections, share digital images, ask questions of other educators about classroom practices, have more flexibility in managing their own professional growth, and build supportive learning communities with their peers. Jenkins (2006) discussed Gee's idea of informal learning cultures, which Gee refers to as *affinity spaces*. According to Jenkins, Gee (as cited in Jenkins, 2006) contended that,

> affinity spaces offer powerful opportunities for learning because they are sustained by common endeavors that bridge across difference in age, class, race, gender, and educational level, because people can participate in various ways according to their skills and interests, because they depend on peer-to-peer teaching with each participant constantly motivated to acquire new knowledge or refine his or her existing skills, and because they allow each participant to feel like an expert while tapping the expertise of others. (p. 177)

Significance of Study

The study may be significant for educators on the verge of change. Educators must continuously learn of new methods, techniques, and strategies to create a learning environment that meets the global demands. To meet those demands and prepare students for the future, change is needed in instruction, classroom design, learning space, expectations and the educational system at large. Learning in a personal learning space or community may provide the support and expertise to move toward changing instructional practices. Schools that have vision and foster innovation have begun to make changes.

Solomon and Schrum (2007) provided real world examples of how new media and technologies are affecting teacher learning. These samples help demonstrate the

changes new media and informal learning can create for teachers and their students. For example, Karl Frisch, a high school teacher, uses a blog for staff development to expose teachers to constructivism and 21st century skills. An Oregon principal, Tim Lauer, uses the same tool to provide information to the school community. Blogs are easily updated, making them a simple tool to use for student-to-teacher communications, teacher-to-teacher learning, and school-to-home connections. Another Oregon principal uses both wikis and blogs to communicate. The principal expects all teachers to have at least one page for classroom communication within the school blog.

Other uses with blogs cited by Solomon and Schrum (2007) include Scott McLeod, assistant professor from the University of Minnesota, who provided twelve reasons for administrators to use blogs. McLeod's reasons included providing news and events that affect the entire school, sharing progress of grades, classes and the school overall, marketing the school, providing quick instant important alerts, building strong positive public relations beyond the local community, creating good customer relationships, branding a school and its reputation, being an advocate for education, publicly acknowledging community support, providing thoughtful leadership and vision toward change, and to replace a static website.

Another example, podcasting, a web-based tool, is used by The New Hampshire Department of Education to inform educators statewide. Podcasting creates audio files available over the Internet that users may download and listen to on their iPods or smart phones. Podcasts may also contain still images, music, or video files. Each example shows how change in classrooms can take place once the educator has the skills for implementation.

Conceptual Foundation of Study

Online tools have the potential to build a sense of community through common communication and sharing. Personal learning for teachers using web-based tools provides the foundation for building community, encouraging informal learning, and inciting teachers to ask questions. As teachers participate in collaborative community learning, they engage in interactive conversations, reflect about personal classroom practices, and develop connections across the globe. As new technological tools continue to expand, knowledge and skills in using technology will be essential if educators are to meet and reach student learning in the digital world. These new forms of professional development and interaction represent innovation, change, and challenges for many. Educators must consider how to change their own learning methods and activities in response to these new technologies and practices.

The conceptual framework for this study was based on Lave and Wenger's (1991) community of practice, Cavazza's (2008) social media landscape, and personal learning networks or environments. According to Lave and Wenger, “learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation” (p. 29). Participation by teachers in social media communities could lead them to mastery of new knowledge and skills. With new knowledge, skills, and greater confidence, teachers can work to bring new methodology and strategies to their instructional repertoire.

Cavazza (2008) described social media as "places, tools, [and] services allowing individuals to express themselves (and so to exist) in order to meet, share" (para. 5). Different tools and services make up the social landscape (see Appendix A for the 2008

Social Media Landscape chart), which Cavazza put in categories, including: publication tools, sharing tools, discussion tools, social networks, micro-publication tools, social aggregation tools, platforms for livecast, virtual worlds, social gaming platforms and massively multiplayer online role-playing games (MMORPG).

Li and Bernoff (2008) referred to the joining of social media activity, interaction, reflection, and continued growth as a groundswell. Their research found that more people join social networks than contribute to blogs. Additionally, members of Generation Y, 18 to 27 year olds, join and participate in social networks 60% more than other age groups. The Gen Y group is the student in today's post-secondary classrooms. The groundswell of digital media in the lives of young people today requires educators to create modern methods for learning and to meet students in the online connected global world of today.

Unilever and Dell, two companies reviewed by Li and Bernoff (2008), discovered that engaging with customers who are part of the groundswell could transform a company. The manner in which teaching and learning occurs must transform itself in order to reach today's students. Active participation in a community of practice such as *Classroom 2.0*, *Teachade*, *ADE*, *Teacher 2.0* or the *Future of Education* can provide the knowledge and skills needed for transformation.

Limitations

This study is limited to the online community known as the Apple Distinguished Educator (ADE) community. The site is designed for educators who are technology leaders and innovators in using technology in education, who have completed the process of application, and have been granted the ADE status.

Definitions

Blog. Short for 'web-log,' a blog is an online journal that can be used as an informal method for learning. It is an online space for sharing ideas, strategies, and participation (Solomon & Schrum, 2007). According to Richardson (2010), a blog is a website that is easy to create, update, and maintain. Blogs also foster interactive conversations between author and consumer. Blogs can provide a space for innovative publishing. Some blogs are maintained by individuals, whereas others have multiple posters and large communities of commenters, and thus may be considered a form of social networks.

Collaborative networks. Networks are groups of people who join together when needing help in solving problems. Dulworth (2008) sees two kinds of collaborative networks: peer-to-peer networks and communities of practice. Bacon (2009) refers to collaborative networks as community with a sense of belonging. He defines community as a group of people "who interact together in the same environment" (p. 4). In relation to this study, collaborative networks are groups of adult learners who join together to solve problems, create new ideas, and share knowledge.

Collaborative projects. In classrooms from K-16, students work with others in completing an assignment, or project. Collaborative project work is an "in-depth study of a particular topic that one or more children undertake" (Katz & Chard, 1989, p. 2). In particular to this study, collaborative projects are tasks, assignments or projects completed by students and their teachers in classrooms around the globe.

Elluminate. *Elluminate* is a software platform that allows users to chat using instant messaging, talk using audio input and output settings, and to share visual

presentations. This web conferencing tool offers a virtual meeting connection for multiple attendees.

Ning. *Ning* is a web software platform that allows users to create their own social networks. *Classroom 2.0*, developed by Steve Haragdon, is a Ning site as is English Companion Ning.

Podcast. Podcasts were originally audio (speech or music) distributed over the Internet, similar in many ways to old-fashioned radio. However, podcasts may now also contain either still images or video clips. They may be downloaded and listened to over users' iPods and smart phones.

Social network. When a computer network connects people or organizations, it is considered a social network. Just as a computer network is a set of machines connected by a set of cables, a social network is a set of people (or organizations or other social entities) connected by a set of social relationships, such as friendship, co-working or information exchange (Garton, Haythornthwaite, & Wellman, 1997). "Computer networks are inherently social networks, linking people, organizations, and knowledge" (Wellman, 2001, p. 2031). Preece (2000) defined a social network group as a

> special type of network whose members are highly interconnected. Groups may be closely knit and maintain many different kinds of relationship. Their members may also be tightly bound and maintain connections more with each other than with others outside of the group. (pp. 173-174)

Facebook is a well-known example of a social network.

Web 2.0. Web 2.0 is a designation for the latest generation of web tools and applications. They are more fluid than the first generation of web sites, and generally allow for user involvement and creation of content with a higher level of interactivity.

Wikis. Wikis are multiple web pages linked together focusing on a specific topic or broad idea. Wiki comes from the Hawaiian word meaning quick. *Wikipidea*, an online encyclopedia in which users can add or edit information, as they desire, is probably the best-known example of wiki technology.

YouTube clips. *YouTube* (http://www.youtube.com) is a web site owned by Google, Inc. that allows users to upload video and audio clips of a variety of types. These may include musical performances, clips from television shows or movies, interviews and lectures, 'how-to' demonstrations, or user-created clips of all types.

Social Media and Networking

Common Craft (LeFever, 2007) videos provide easy to understand explanations for a variety of topics. Housed at *YouTube.com*, a succinct online definition of social media is provided by LeFever (2008). The explanation of social media includes free tools such as blogs, wikis, podcasts (audio and radio-type programs distributed over the Internet) and video for new ways of communication, and is presented in simple images making it easy to understand. Social media tools allow anyone to publish ideas and opinions, post ratings and add comments to web sites, wikis and blogs while participating in a new way to create communication with others who care about similar topics. Social networking has been defined by Gunawardena, Hermans, Sanchez, Richmond, Bohley, and Tuttle (2009) as

> the practice of expanding knowledge by making connections with individuals of similar interest. In the Web 2.0 environment, social networking is linked to technological service and software that make it possible for people to communicate with others from anywhere, at any time. Social networking sites are online spaces that can be customized to a large extent by their users, providing space for personal profiles, which users complete in order to make connections with others. (p. 4)

Social networking sites can provide alternatives for personal learning. Participation is on a volunteer basis, not required. Learning that may take place is informal. Experiences are based on the domain of using modern technological tools in education. Becoming a member of a social media site designed for educators could be an alternate opportunity for informal learning that addresses the needs of participants interested in making changes in their profession.

Chapter 2 will present relevant literature that is used as the underlying foundation of this study. Literature reviewed includes communities of practice, how learners learn, social networking history, learning motivation, change, and Web 2.0 tools.

Chapter 2. Review of Relevant Literature

This literature review encompasses material about how learners learn, a history of social networks, learning motivation, change, and the importance of relationship building in the connected world of today's Internet. In addition to topics more directly linked to information communication technologies (ITCs), literature examined in the context of this research also includes investigations of communities of practice (Lave & Wenger, 1991), how teachers learn from their own practice (Bransford et al., 2000), and building communities of practice (Wenger et al., 2002).

How Learners Learn in the Digital Age

According to Brown and Adler (2008), social learning, due to the growth of the Internet, has become a method for how we learn together and from one another. In the past, learning was centered in one venue with one target audience. Now learning can occur anytime, anyplace, and with other learners located around the world. As learning avenues transform, the ways in which people learn continue to evolve. New technology is forcing new behaviors and thus new paradigm shifts (Gunawardena et al., 2009). These shifts create pressures of necessity for modifications in professional practices including how individuals and groups embrace the required changes.

Learning has formal and informal spaces. Formal learning is structured, usually prescribed, while informal learning has a flexible, fluid movement that is part of the social world of everyday life. Internet searching provides information on demand. Web 2.0 tools enable shared informal learning to take place. The capabilities of up-to-date hardware, infrastructure, web-based software, and Internet speed provide new spaces for learning within a community.

A Brief History of Social Media

Before *Facebook* and the social media explosion, web-based software included user groups, bulletin boards, and listservs used during the 1970s, 1980s and 1990s. Online services such as *Prodigy* and *CompuServe* followed by instant messaging services including *Instant Relay Chat* (IRC), appeared in the 1980s. ICQ, an instant messaging software client, arose in the 1990s. Text abbreviations, avatars, and emoticons (tiny images inserted in messages to add emphasis), first appeared in ICQ. In 1999, Live Journal opened as a social network encouraging users to follow others, create groups, and interact online. In the early 2000s, gaming software, known as MMORPOG or Massively Multiplayer Online Role-playing Games, became popular (Webdesignerdepot, 2010).

Friendster, a social networking site (SNS) popular in Asia, arrived on the web in 2002, with *MySpace* and *LinkedIn* appearing in 2003. From a parental perspective, *MySpace* targeted pre-teens and teenagers. *MySpace* sites contained a profile section for adding an avatar, an image representing an individual or group, and personal information. Members could choose the site design via template and color scheme, post diary or blog entries, collect friends, and respond to postings. *LinkedIn*'s audience directed its offerings to the professional set. The site has similarities to other social networks. The difference sets it apart. *LinkedIn* members manage an online resume and network connections to similar professionals. The site has a section that is free, and areas that, for a fee, provide additional capabilities. These sites are all about connecting with friends or career professionals online (Webdesignerdepot, 2010).

Originally designed for college students, *Facebook* began on the Harvard University campus in 2004 but by 2006 was open to any person with an Internet connection. By 2009, *Facebook* had reached 200 million accounts (Simmons, 2009), and as of this writing in 2011 is up to 800 million users (Facebook, 2011). It is very popular all around the world.

At the South by Southwest Interactive conference held in 2007, *Twitter*, a micro-blogging site, began by broadcasting thousands of postings as attendees responded to happenings at the conference (Webdesignerdepot.com, 2010). *Twitter* allows users to broadcast short messages, up to 140 characters, to a community of followers. Like *Facebook*, it has become extremely popular all around the world.

Tim O'Reilly (2005) coined the phrase 'Web 2.0' and was the first to write about the concept. In a brainstorming session with Dale Dougherty, the two developed a list of Web 1.0 to Web 2.0 comparisons (O'Reilly, 2005) (see Table 1).

Table 1

History of Social Media, Comparing Web 1.0 and 2.0 Technologies and Sites

Web 1.0	Web 2.0
DoubleClick	Google AdSense
Ofoto	Flickr
Akamai	BitTorrent
mp3.com	Napster
Britannica Online	Wikipedia
personal websites	Blogging
page views	cost per click
screen scraping	web services

Five years later O'Reilly and Battelle (2009) revisited these ideas and wrote about how the web is currently all about harnessing collective intelligence. The connectedness of the web extends to mobile phones and wireless connections in multiple places. The introduction of smart phones and wireless connectivity hotspots make harnessing knowledge a relatively simple process. Rheingold (2002) referred to users of portable devices and easy connectivity as 'smart mobs' because users can cooperate and communicate in ways never possible. New technologies make it increasingly easy to ask questions and receive almost instantaneous responses.

The web is an environment of participation, not just a space for retrieving information. Embedded in blogs or wikis, online videos and 3D animations have become common elements to social networks. Social networking sites continue to develop on the Internet. At the site *Go2Web20.com* (2008) users can find a plethora of choices for networking, editing photos, blogging, sharing content and more, all part of the growing world of Web 2.0. *Go2Web20.com* continuously updates new tools that are available at no charge, and which help users participate and stay connected.

Participation and Learning

Participation in online communities provide the means by which many people can join together to share common knowledge, learn new trends, and develop relationships that encourage and support one another. Green and Hannon (2006) enumerated four key components to learning: finding information and knowledge, doing something with it, sharing it with an audience, and reflecting on it. Social media tools provide a pathway for all four components to occur. Russo, Watkins, and Groundwater-Smith (2009) stated, "Social media technologies have broadened learning options, shifting the focus from

individual/institutional custodianship to participatory relationships where those involved in the learning process are seeking and sharing new knowledge" (p. 156).

Knowles, Holton, and Swanson (2005) found that adult learners are self-directed and self-motivated, bring their own personal experiences to learning, learn when there is a need to know, and that their orientation to learn is life-centered. The concept of learning together, sharing information and knowledge leads to learning in a community of practice. According to Riel (1996), a community is the interactions and relationships between and among people who gather together. Members of a community of practice must learn the skills and language of the community as they move toward becoming a master practitioner.

Communities of Practice

According to Wenger et al. (2002), a community of practice (COP) consists of a group of people who share specific interests or seek to solve a common problem in ongoing interactions with group members. Groups come in many sizes and structures from a small informal group meeting over lunch discussions to formal structured meeting times and places. Group members come together to share ideas, ask for assistance in solving issues, offer solutions to questions, and help the members of the group. Over time group members gain new understandings, perspectives, and knowledge as they develop personal relationships.

During the Middle Ages, guilds served the role of communities of practice. Masters served as teachers and taught newcomers the skills necessary to master a trade. Communities of practice exist today in schools, at work, at home and in hobbies. Lave and Wenger (1991) explained, "learners inevitably participate in communities of

practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of the community" (p. 29). As members grow, share, and learn within the community of practice, they move toward mastery of knowledge. The journey to mastery enables established members to continually begin fresh learning cycles with newcomers to the group community.

Communities of practice share three similar elements that bind the group as a collaborative entity including: (a) a domain of information or knowledge, (b) a group of people interested in the domain, and (c) the practice that comes out of the domain (Wenger et al., 2002). The domain provides the common interest, knowledge or content of the community. The topic attracts members, who then form a group community. Members are willing to share knowledge, build new ideas, and assist others with learning content as the cycle of learning continues with the addition of new members. As group members continue this cycle of learning, demonstrating knowledge and understanding, the practice of the community emerges from the common interest.

Thomas and Brown (2011) shared an example of these elements as Thomas described his experience in teaching a gaming course at the University of Southern California. He outlined his course as part lecture, part discussion, and part demonstrations. Thomas thought he had a good plan with excellent resources and reference materials for students to absorb and discuss (domain). As the course began, students (group of people) asked to spend more and more time demonstrating what they learned, understood, or discovered after class meetings. The students established a community based on the gaming theories and applications the professor wanted to see in class. Their community time and efforts were outside class time.

More and more the in-class activities became demonstrations (practice) of what students discovered on their own outside of class (community). The professor thought he had completely lost control of his course but in reading the end-of-course papers he discovered the students did understand the content offered, as it was evident in the students' writings and references. Shortly after the course ended, the professor happened to see a student and commented on his surprise at the writings from students as a whole. The student responded, "What, did you think we were just playing games all semester?" (Thomas & Brown, 2011, p. 25).

Communities of practice connect people to knowledge, experts and expertise. A strong community spans over time, builds knowledge, and provides human connections in the confines of knowledge that deepen relationships, and respect as the community grows. Wenger et al. (2002) established seven design principles for establishing and maintaining communities of practice. These elements are not considered to be a recipe for success but include overarching ideas that make the cultivation of communities valuable. The principles include: (a) design for evolution, (b) open a dialogue between inside and outside perspectives, (c) invite different levels of participation, (d) develop both public and private spaces, (e) focus on value, (f) combine familiarity and excitement, and (g) create rhythm for the community.

American Idol (Minor, 2011), a Fox-TV reality show, illustrates the seven design principles. The design of the community evolves from season to season as viewers participate in the fan community available on the network site. The show, now in its tenth season, provides connections to the contestants through blogs, photo galleries, video-clips of backstage events, recaps of aired shows, and a private community section;

all on the Fox Network web site (Fox Network, 2009). The site has grown, changed, and evolved from an informational site the first season to a robust and interactive space teeming with thoughts, concerns, suggestions, questions, and encouragement from the fan community to the contestants in the tenth season.

An entire private section is devoted to the fan community. Those interested must create an account and complete settings to enter the community. Within the private section of the entire site, members can meet others, join forums, respond to blog postings, and share insights with other members. Fans can reach back to season one and immediately see the evolution of the community.

Fox Network has created a world with dialogue coming from multiple perspectives of the fan community and within the television network, evident by the extensive site, including both public and private participation, to meet the demands of fans and viewers. One can participate by voting on the open section of the network site as the show progresses or dive deeper and become an inside member of the community striving to learn more about the people who are the contestants. Fans and viewers value the section this community offers as the rhythm of the community heightens during the season. The site stays familiar with factual information but maintains a sense of excitement as new video is added after each weekly episode.

The community members participate to learn about contestants, master facts, trivia, and analyze the talents of contestants. The *American Idol* community represents a participatory world of learning that is valuable to the community, advertisers, and the Fox Network. Brown and Adler (2008) referred to this mastery not as learning about but learning to be. As the fan members of the community participate many become experts

on the show. The practice is the sharing of knowledge and connections made with each other and the entertainment world. Members learn through participation in a specific situated activity or legitimate peripheral participation (Lave & Wenger, 1991) that is only available in the online space of *American Idol*. Members master knowledge from one season to another, develop relationships in the community and assist newcomers in becoming part of the group.

Tu, Blocher, and Roberts (2008) discussed situated activity as collaboration in authentic activities as group members learn in a social collaborative manner. Collaboration is multi-directional involving anywhere from a small intimate group to larger groups working together on a shared project or activities. According to Bosworth and Hamilton (as cited by Tompkins, Perry, & Lippincott, 1998),

> Collaborative learning may well be the most significant pedagogical shift of the century for teaching and learning in higher education. It has the potential to transform the learner's and instructors' views of learning, knowing, and understanding as it acquaints students with the skills needed to cooperate, negotiate, and formulate productive responses to the changing demands of this increasingly complex world. (p. 102)

Web 2.0 tools enable groups to engage in meaningful, authentic learning based on a common interest. Social learning, also termed as networked or virtual learning by Allan and Lewis (2006), offers "cooperative or collaborative group activities, and learning communities or communities of practice" (p. 843).

In this sociocultural learning, participants join with others to work on common problems or issues. The concept of *legitimate peripheral participation*, as described by

Lave and Wenger (1991), supports the notion that personal connections and interactions within communities are central to the learning of the community. According to Lui, Magjuka, Bonk, and Lee (2007), collaboration, communication and community membership makes students or community members feel a sense of belonging. They also found that the sense of belonging created in an online discussion group showed a positive impact in team learning and online academic experiences. Brown and Adler (2008) described these online virtual communities of practice in stating, "These communities are harbingers of the emergence of a new form of technology-enhanced learning—Learning 2.0" (p. 28).

Based on communities of practice, Gunawardena et al. (2009) suggested that the elements of communities of practice are found in online environments as well as face-to - face meetings. In online communities of practice the discourse or language of the community must be negotiated to establish a community of belonging where members have mutual respect and understanding. Gee described discourse as "socially accepted association among ways of using language, other symbolic expressions, and 'artifacts' of thinking, feeling, believing, valuing, and acting that can be used to identify oneself as a member of a socially meaningful group or 'social network'" (as cited by Gunawardena et al., 2009, p. 10).

Community of Practice in Social Networks

Building on the work of Wenger (1998) and Wenger et al. (2002), Dulworth (2008) explained that a community of practice has three components: the domain, the topic or area of interest; the community, the people who have a vested interest in the topic; and the practice, the action members take to learn, solve problems, and increase

understanding. According to Dulworth, two kinds of networks are effective in solving problems. These are peer-to peer networks and communities of practice. In peer-to-peer networks, members have similar interests and responsibilities and need to solve similar problems. In a community of practice people join together in collaboration to help others learn something or solve a problem. As one becomes a practicing member, expertise is developed in the shared interest area. A member joins a community of practice voluntarily and is willing to share knowledge as well as receive new thoughts and ideas.

Gunawardena et al. (2009) defined social networking "as the practice of expanding knowledge by making connections with individuals of similar interest" (p. 4). Learning in a community of like-minded people builds relationships that impact learning. An online community of educators provides a space to come together because they use or are interested in using innovative technology, Web 2.0 tools, social media sites, and collaborative technologies in educational settings. The online community represents a community of individuals who participate in the process of learning from one another as they learn together in legitimate peripheral participation (Lave & Wenger, 1991). Participation in the community is critical for becoming part of the community and working toward mastery as the community continuously evolves. Time spent in the community provides opportunities for the learners to make the culture of practice their own. Activities, tasks, functions, and understandings do not exist in isolation; they are part of broader systems of relations in which they have meaning. “These systems of relations arise out of and are reproduced and developed within social communities" (Lave & Wenger, 1991, p. 53).

Russo et al. (2009) argued that informal learning could be understood as "learner-centered, or learner-directed, where the learner has agency over what is being learned, how it is being understood and evaluated, and how it will be used" (p. 158). Green and Hannon (2006) found that informal learning situated in gaming involves self-motivation, ownership, a purpose for doing, and includes peer-to-peer learning. These same elements are found in the legitimate peripheral participation that Lave and Wenger (1991) discuss. For example, one 14-year old interviewed by Green and Hannon said, "My friend showed me how to build a website and I showed him how to get into World of Warcraft" (p. 48). One has a skill the other desires and finds someone in his world to help him learn that skill and in turn shares previously acquired knowledge.

According to Allan and Lewis (2006), situational learning is a social activity. Human beings are social beings making connections and social interactions, "and that interactions with others are central to learning within a community" (p. 844). Social media sites evolve as technology changes as it maintains a community of users who join to learn about technology and Web 2.0 tools in education.

Some of the types of tools and forums currently being incorporated in the social media sites include Google apps in the classroom, incorporating a *Flip* camera in the classroom, iPads in the classroom, *SortFix* as a search engine, and using *Skype* as a collaborative tool (Hargadon, 2008). One teacher posted a forum about virtual conversations (Gendron, 2011) on March 2, 2011 and received nine tips and ideas within 24 hours. Responses suggested *Edmodo*, a private social network, *VoiceThread*, a multimedia slide show, or *TypeWithMe*, an online text editor, all Web 2.0 applications, as tools to review.

The online group or community for the current study, the ADE community sponsored by Apple, includes working educators from all levels. The practice within the community of sharing successes, trial and error attempts, and possibilities demonstrates itself as members continually help other members in their quest. Lave and Wenger (1991) explained, "An extended period of legitimate peripherality provides learners with opportunities to make the culture of practice theirs. From a broadly peripheral perspective, apprentices gradually assemble a general idea of what constitutes the practice of the community" (p. 95).

Social media sites evolve as the community numbers grow and as new technologies appear. Online spaces have discussion areas and forums for members. Sites directed at educators are interested in the educational setting, some with particular emphasis. Experts in specific areas offer suggestions and advice. Questions asked by members address topics of interest and thereby express the value found in the community. An online community may maintain a new members forum and adds new technologies as available. The seven design principles of communities of practice as established by Wenger et al. (2002) (design, input, value, dialogue, multiple levels of participation, the familiar, and the new, all coupled with rhythm), all live within social media sites where members gather to learn and grow in knowledge and skills.

Gender and Generations

"Women and men perceive emotions differently" (para. 1), stated blogger Judith Anne Cavey (2010) as she discussed an interview with author Sandi Feit. Cavey continued with, "While males and females have different styles of communication, it

must be both parties adjusting, as much as possible, to prevent misunderstandings in the workplace" (para. 14).

Al Roker (2007) of the Today Show interviewed Dr. Leonard Sax on *Why Gender Matters*, who discussed briefly how males and females are indeed hard-wired differently from the first day of life. Dr. Sax mentions research that showed a woman on one side of the room and a moving mobile hanging on the other side of the room. From day one boys looked to the active mobile and movement compared to girls who found the woman's human face. He further explains that vision and hearing are different for both genders. Females see more colors earlier and have better hearing. Hahn and Litwin (1995) created a list of gender perceptions in the workplace to help both men and women have a greater understanding of different strengths of each gender and the validity of each gender's perception (see Table 2).

Table 2

Gender Based Perceptions in the Workplace

	Feminine	Masculine
Organizational structure	**participative** (see colleagues as complementary)	**hierarchical** (see colleagues as potential competition)
Focus of interpersonal attention	**process** (care about how people treat each other in carrying out work)	**outcome** (care about "where they stand" in relation to others)
Operating style	**interactional** (interact to connect, arrive at understandings)	**transactional** (interact to pass information and give directions)
Problem-solving style	**intuitive** (trust instincts; will provide proof/explanation as necessary)	**linear** (based on methodical thinking; will not trust intuition until proof is presented)

(*table continues*)

	Feminine	Masculine
Individual work style	**collaborative** (see work as part of a whole; discuss and review with colleagues)	**independent** (see work as a separate piece; complete work without the "help" of others)
Management style	**supportive** (seek to aid, support, facilitate, and provide comfort, meaning, and rewards)	**directive** (seek to test, direct, organize, and provide challenges, goals, and incentives)
View of work-related conflict	**disruptive** (seek to create harmony; view negative comments as unproductive)	**normal** (accept a level of conflict as inevitable; view negative comments as normal part of work)

Bress (2000) explained the different communication styles of men and women insomuch as men feel comfortable in a lecturing role that demonstrates expertise or status and women are comfortable in a listening role. Listening shows a desire to cooperate and make connections. In studying teaching styles, Bress showed how decision-making and dealing with problems were other areas of communication in which men and women managed differently. Decision-making for men is an aggressive behavior and prepares men for the competitive workplace. In decision-making, women are perceived as a peacekeeper and are more prepared for interpersonal relationships. Body language was often found to be different for males and females in dealing with problems. With awareness and experience, Bress found that gender influenced teaching style less and provided more efficient teaching.

Generational differences span the workplace as multiple generations come together in a work environment. Lancaster and Stillman (2002) and Zemke, Raines, and Filipczak (2000) explained how each generation’s values, experiences and attitudes impacted decisions, expectations, and work ethics.

Zemke et al. (2000) divided the generations into four groups: The Veterans, born from 1922-1942, the Baby-Boomers, born from 1943-1960, Generation Xers, born from 1960-1980, and Generation Nexters, born 1980-2000. Veterans survived World War II, believed in hard work, civic pride, loyalty, and respect for authority. Baby Boomers grew up in optimistic times, believed in growth and expansion, valued teamwork, and had mixed feelings about the Vietnam War. Gen Xers think globally, are self-reliant, have non-traditional orientations about time and space, are technologically savvy, and see authority in a casual manner. Nexters, also known as Millennials or the Internet generation, are technologically savvy, have a tenacious spirit, witnessed new depths of violence in the Oklahoma City bombing and the Columbine High School massacre, and display multitasking capabilities.

Lancaster and Stillman (2002) describe four generations with slight differences. The four generations include the Traditionalist, born 1900-1945, the Baby Boomers, born 1946-1964, Generation Xers, born 1965-1980, and the Millennial Generation, born 1981 to 1999. Traditionalists lived through two world wars and the Great Depression and are described as loyal. This generation thrived in a top-down industrial management approach to work and life. Baby Boomers changed everything from music to the supermarket. The booming economy gave them an optimistic viewpoint to everything. They grew up in a "relatively affluent, opportunity-rich world" (p. 22). Gen Xers are seen as skeptical and are "possibility the most misunderstood generation in the workforce today" (p. 24). This generation was the first to experience the continuous media explosion. They are resourceful yet independent. Millennials, comfortable with technology, demonstrate a keen understanding and acceptance of diversity, and are action

oriented yet realistic. Understanding the traits, personality styles, work ethics, and expectations of each of the generations can create a strong workforce where collaboration and fun occur at work.

Participation and Change

One example of an online community designed for educators is *Classroom 2.0*. Steve Hargadon (2008), developer of *Classroom 2.0*, provides arenas for educators to join groups, forums, watch live interviews, and attend webinars using *Elluminate*, which is web conferencing software. *Classroom 2.0* has the components of a community of practice. The topic or domain of *Classroom 2.0* that draws educators to join is the use of emerging technologies or Web 2.0 applications and tools in educational settings. The individuals joining *Classroom 2.0* consist of undergraduate education students and educators from kindergarten to the university level from around the globe to experienced users of Web 2.0 technologies and first-timers (Hargadon, 2007).

The practice of these members involves informally learning from other educators who have attempted a new strategy or technique and share the experience in groups. The process is iterative and brings in newcomers repeatedly. Members participate in discussions in the forum area and attend live events with known experts via web conferencing tools. Like *Facebook*, *MySpace* and *LinkedIn*, members complete a profile during the sign-up process. Shortly after sign-up, the potential member receives an email with login information and confirmation of membership. Other sites have similar components and requirements. Wenger's (1998) and Dulworth's (2008) explanations of a community of practice show that *Classroom 2.0* actually is a community of practice.

Educators using social media and emerging technology tools enter the online community to share and learn continuously.

Kotter (1996) pushed the urgency of change. Hargadon exhibits that urgency and his vision as he blogs about educational issues and establishes live events with educators who are changing practice in classrooms. *Classroom 2.0* has a strong following that understand or are interested in the vision Hargadon created in establishing a world where members can transform their efforts into new practices completing the cylindrical nature of a community of practice. The strategies toward change with *Classroom 2.0* are varied and address individual needs. The vision is communicated when first landing on the site. New members can join the newcomers group for the first stage of success while veterans can choose to start a new discussion, help newcomers with technology tools, or volunteer to be a host. Change in whatever form is difficult, challenging, "painful and risky but above all it requires a great deal of very hard work" (Drucker, 2002, p. 73). Participants in *Classroom 2.0* learn by active participation in any or all venues offered within the online environment.

As Brown and Duguid (2002) interpreted learning in a community of practice, they summarized it by stating, "learning . . . is not simply a matter of acquiring information; it requires developing the disposition, demeanor, and outlook of practitioners" (p. 126). Members are motivated by their own drive to learn more, experience new things, stay current in emerging technologies, and to build connections with like-minded individuals.

Motivation to Learn

Pink (2009) categorized the three elements that drive people to complete or excel in a task as autonomy, mastery, and purpose. Autonomy, as Pink (2009) wrote, "means acting with choice" (p. 90). Social media tools allow users to choose what they belong to, whom they interact with and how they share information. Mastery seems self-explanatory but has three laws, with the first being, "Mastery is a mindset" (p. 121). Mastery has two types of goals: learning, and performance leading to full mastery. Dweck (2009) noted, "students with a growth mindset seek out learning, develop deeper learning strategies, and strive for an honest assessment of their weaknesses so that they can work to remedy them" (p. 9).

Pink (2009) described the second law as, "Mastery is a pain" (p. 124). It takes effort to accomplish the mastery one seeks and without the effort it has little meaning. If mastery is important, then the effort and hard work required achieving that mastery is worthwhile. Lave and Wenger (1991) discussed this concept by using examples of apprenticeship from midwives to tailors. The effort of becoming a master midwife or tailor creates the desire for continually working toward mastery, as the learner becomes the master.

The third law of mastery has a connection to algebra. The third law, according to Pink (2009) is, "Mastery is an asymptote. You can approach it. You can hone in on it. You can get really, really, really close to it. But like Cezanne, you can never touch it. Mastery is impossible to realize fully" (p. 127). The midwife, in Lave and Wenger's (1991) examples, accomplishes a level of mastery yet has more to learn with each disease, difficulty, and birth. Yet once designated with the title midwife, community

members accept that mastery. But the master midwife continues to learn of additional tips, tricks, and about tools of the trade. Educators move through the levels of preparation toward mastery as they learn informally from other educators, attend required professional development, and gain participatory experience. Finally, comes purpose, which provides context for the work and motivation of mastery (Pink, 2009). Social networks, offered for free, help provide the context for working toward mastery of new skills and knowledge. The effort makes it worthwhile to join, interact, or participate in acquiring new skills.

The members of social media sites are part of the groundswell defined as a social trend where people use technologies to get to new things, knowledge or information from others (Li & Bernoff, 2008). Social media sites designed for educators are spaces for changing knowledge, skills, and perspectives. With time, patience, and hard work, individuals joining the community become part of a community of practice located in a specific social network. Learning becomes collegial, cooperative, and collaborative as it continuously regenerates. According to a 2007 Technographics survey (Li & Bernoff, 2008), 25% of the adults in North America or one in four adults, 21% of Europeans, and 35% of South Koreans either make monthly visits to social network sites or have formally joined one. The groundswell in social networking connects people who otherwise would not connect, offers a place for sharing opinions, and encourages support from other members.

A collaborative culture exists in social media communities that may kindle creativity, innovation, and change in the practices of its members (Robinson, 2001). This community of practice maintains its own culture with other educators, who come together

through their own motivation for collaborative learning. Bacon (2009) described this community as "a collection of people (or animals) who interact together in the same environment . . . It is not merely the group that generates community but the interactions within it" (pp. 4-5). Community brings with it a sense of belonging and from Bacon's perspective, a social economy, or domain (Wenger et al., 2002). The social economy is generated from the existing community due to the sense of belonging and the interactions of that community. That social economy consists of the content, context, knowledge, and skills of the community.

Studies have found that collaborative activities build or foster a sense of belonging (Barab, Thomas, & Merrill, 1999; Liu et al., 2007). Rice-Lively (1994) found that simple tasks in a collaborative network assisted in developing a sense of community. Tompkins et al. (1998) found that collaboration and cooperation were important aspects of participatory learning. For a community to be successful, belief in the community by its members is paramount (Bacon, 2009).

Social networking web-based software opens alternative venues for learning for students and teachers. With students understanding and using the digital way of life as part of their everyday lives, educators must continue to gain and use innovation learning methods, styles, and options. Barab and Duffy (1998) noted that individuals participating within social worlds not only are shaped by their own identities but by their experiences as well. He explained, "the interactions constitutes and is constituted by all of the components—individual, content, and context" (p. 6). As individuals become part of a community of practice, each member develops knowledgeable skills by way of

participation in the community and in turn adds to the contextual knowledge of the community. The boundaries of individual, domain, community, and practice blur.

Web 2.0 "encompasses themes that are important to the modern Internet including ease of use, high levels of user-generated content, and broad data and information sharing" (Simmons, 2009). With the growth of Web 2.0, a wide selection of web-based applications has become available with little or no cost. Social media furnishes members of the education profession with contemporary pathways for gaining the knowledge needed for staying on the cutting edge of technology, and its immersion within instructional practices. Goddard (2003) spoke of the rapid changes in technology putting vast pressures on educators in providing students with the knowledge and skill they will need to lead successful lives: "The challenge, then, lies in our ability to decide how and what we should do to best use technology as it evolves" (p. 21).

Social media provides the environment for learning with others about new technology when available. Martinez (2008) offered suggestions in her blog about creating successful change through collaboration, consensus, and vision. Without first having the vision of what change looks like, in this case using technological tools successfully in education, individuals, groups, or teams have no direction to follow. For ultimate success vision must be larger than each individual and come from all stakeholders. Dede (1993) stated that vision communicates "desirable, achievable futures quite different from where the present is drifting" (p. 1).

Allan (2008) noted that change produces fear and uncertainty. He recommended three phases for change, including preinstruction, instruction, and performance. Preinstruction can be perceived as a newcomer in a community of practice and the

instruction stage as the domain that drives the community. The performance stage would then represent the practice that comes from learning within a community of practice. Change must have a purpose. Members of an organization must understand that change can make things better for all stakeholders.

Cavazza (2011) spoke of social media as a landscape of seven families and seven primary uses of social media. The seven areas include publishing, sharing, commerce, location, discussion, networking, and gaming. The seven families contain specific social media tools as part of the family. The landscape of social media is a space for increasing personal learning networks through a community of like-minded individuals who willingly band together to add to personal knowledge, and share that knowledge with others (see Appendix B for the 2011 Social Media Landscape chart). Barab and Duffy (1998) presented three components to community: "1) a common cultural and historical heritage, including shared goals, negotiated meanings, and practices; 2) individuals becoming part of something larger; and 3) the ability to reproduce as new members work alongside more competent others" (p. 26).

The focus in *Classroom 2.0* is using Web 2.0 in educational settings open to all with this common interest. The site has a short history from 2007 to the present. Members can partake of an overabundance of venues for learning, including forum discussions, specific groups, media, live shows at Learn Central, show recordings, chats, attend workshops and face-to-face conference sessions.

Summary

As educators continue participation and broaden their personal learning network, they bring improved knowledge and skills to their work. With different perspectives and

advanced knowledge, educators can create or develop stimulating approaches to instructional practice that harness redesigned procedures. Several moderators or hosts are available to assist new members or answer questions from members about the network.

Social media provides a space for learning about the profusion of tools available today and for the future. From Godkin's (2008) perspective, the community of practice existing in social media sites is a tribe, "a group of people connected to one another, connected to a leader, and connected to an idea" (p. 1). In the realm of social media, these elements co-exist. The Web provides the connections, each site has a vision with an idea, and educators are following. Hargadon (2009) said,

> Web 2.0 has so significantly changed our relationship to information and our own personal learning opportunities outside of formal education that we're beginning to see a set of software tools emerge that are profoundly altering both learning processes and outcomes. These tools allow us to see the start of a radical evolution in education that will bring such dramatic changes that we'll soon be at a point where we won't be able to imagine education without them. (p. 1)

As members join social media sites and become full participants in the community, the potential for learning from others' untried strategies and techniques can lead toward changing practices. Through the opportunities and support of communities of practice within social networks, change becomes possible. Zander (2002) connected participation and creativity in practice when he wrote, "Enrollment is the art and practice of generating a spark of possibility for others to share" (p. 125).

The next chapter describes the methodology for this study. In view of social media site as an informal professional and personal learning community, the

methodology outlined in the next chapter provides a framework for examining the impact participation in social media sites has on participants' knowledge and skills of educational technology and Web 2.0 tools.

Chapter 3. Methodology and Procedures

The purpose of this descriptive study was to determine the impact that participation in a social network designed for educators had on participants' knowledge and skills applied to classroom instruction, as perceived by participants in the K-16 environment. Survey data was gathered from one online community.

Research Questions

The overarching research questions guiding this study are

1. What new personal learning has been reached from participation of this social media site?
2. What new collaborative networks or connections have been established as a result of participation in a social media site for educators?
3. What instructional practices have changed as a result of participation in the social media community?
4. What are the opinions regarding the features currently available within the community?

The Online Communities for Educators

Social media provides convenient methods of connections and collaborations. The National Education Association (Long, 2009) provides a listing of social media sites for educators, including *Classroom 2.0*, *The Educator's PLN*, *Teachade*, *English Companion Ning*, *Teachers 2.0*, *The Apple*, *ClassroomEarth*, and *NextGen Teachers*. These sites assist educators in connecting with other like-minded educators who are seeking connections and growth. The educators who use social media communities provided a source for obtaining data.

The targeted community for the current study was the Apple Distinguished Educators (ADE) social network. The site was established in the early 2000s as a method for communication, collaboration, and networking among those educators obtaining ADE status. The ADE community is composed of educators from both K-12 and university environments. The community is described as follows on the site login page:

> The Apple Distinguished Educator (ADE) program is a relationship program focused on educational excellence and leadership. ADEs are members of a select group of K-12 and Higher Education professionals possessing an identified expertise in educational technology leadership. This group of over 1,500 educators spans the globe with membership in the USA, Asia, Australia, Canada, Europe, Japan, Mexico and New Zealand. (Apple, Inc., 2011)

Educators interested in becoming an ADE must complete an application, provide evidence of exceptional technological use of Apple products, and be recommended by an Apple employee. Once an educator is accepted as an ADE, the community is made available to them as they are provided a username and password. Members then complete profiles and begin sharing their expertise in applications and technology tools. Members may search the membership database with keywords, cities, countries or names. Some members provide more complete profiles than others. Members of the community have access to the membership listings.

The ADE community meets online to share ideas, thoughts, and opinions in order to learn from one another. The community includes forums for discussions, groups, blogs, a gallery for creating photo albums of experiences, a member directory, and a team

of moderators who keep the activity flowing. ADEs are encouraged to be as active as possible.

Members also gather annually for an intensive training orientation or institute, held in a different location each year. Apple is responsible for the content and presenters at the yearly conference; some presenters may be past graduates. The community continues to grow, evolving as the technology changes.

Sampling Process

The current study focused on ADE members who identified themselves with an elementary, middle school, high school or a higher education label. In March 2011, the total community membership was 1,787. There were approximately 930 members with labels in their profiles that designated their educational level, thus representing a stratified sample of the entire population.

All members of the stratified sample were extended an invitation to participate in this study and complete a survey online. The sampling criteria may have limited participation of members who have not completed portions of their profile as educators. The online survey was made available for two months. Eighty-six members responded to the survey invitation. Fifty completed the survey.

Data Collection Strategy

The survey questionnaire included open-ended and multiple-choice questions. Using combinations of different question types, the survey addressed perceptions about participation time; knowledge and skills gained, and perceived changes in classroom implementation of Web 2.0 technologies and social media. Sets of survey questions addressed specific research questions to obtain information. Survey questions five, six,

eight and nine addressed research question one (What new personal learning has been reached from participation of this social media site?). Research question two data (What new collaborative networks or connections have been established as a result of participation in a social media site for educators?) was obtained from survey questions seven and 10. Research question three (What instructional practices have changed as a result of participation with the social media community?) was answered by survey questions 11 and 12 with questions 13 and 14 addressing research question four regarding participants' opinion about the features of the community. Demographic questions one to four were used in comparison throughout the analysis process. A copy of the survey questions is included in Appendix C.

A survey is used most often to gather information from a sample of individuals. This "sample" is usually just a fraction of the population being studied (Ferber, Sheatsley, Turner, & Waksberg, 2004). The targeted group represented a fraction of the population of educators interested in using Web 2.0 tools, modern technology, and social media in education.

Description of Online Survey and Rationale

Zoomerang (http://zoomerang.com), a hosted survey site, provided different levels of responses, numbers of responses, types of questions, data collection and analysis, depending on the plan purchased. A Web site address or uniform resource locator (URL) provided the location of the questionnaire and directions for responding. Information for completing each section and submitting the survey was included on the survey instrument.

The advantages to using an online survey for the targeted population included ease of responding, speed of data collection, and immediate online analysis. As the community of participants was only available online, using the survey method of obtaining information was an efficient manner for data collection (Sue & Ritter, 2007).

Development Process

A survey was developed by the researcher for this study to examine time spent within the social media community, levels of engagement in site activities, new knowledge about or skills relating to Web 2.0 technologies, hardware, software and perceptions about changes made in classrooms using Web 2.0, new technologies, and social media. Data regarding demographic information, employment status, educational level, learning in a social network community, and how participants felt about changes they had or had not made was gathered.

The survey link was posted within the social media community invitation and the community listserv. An introductory posting to the social community from the site manager introduced the survey and the researcher, included a link to the survey, and invited members to participate. Directions for completing the survey and timeline for completion were included. Participants had 2 months to complete the survey. A reminder notice was posted within the social community announcement area after one month to remind and encourage participants to complete the survey. The community posting informed participants about the survey, and gave assurances of permissions and security (see Appendix D). This posting assured community members that permission had been granted to study the site. In addition, the survey included similar instructions

with additional directions explaining how to complete each sub-section of the survey. Responses were automatically collected at the host survey site.

Validity

Questions for the survey were developed to obtain information concerning major areas of interest including participation within a community, collaboration within the community, knowledge and skills gained from participation in the community and the impact participation had on changes made in instruction. Upon development of the survey, the questionnaire was reviewed by qualified experts who verified the validity of the questions in regards to attitude, behavior, or impressions desired by the research objective (Sue & Ritter, 2007). This was an iterative process conducted via email conversations and suggestions. Expert advisors recommenced grouping similar items together, including detailed and specific questions as opposed to broad questions, and providing choices in responses with an option to add to or expand an answer. Responses and suggestions from experts were reviewed and the survey was revised as recommended, and then resubmitted to additional experts who had knowledge in using Web 2.0 tools and educational experience for final confirmation. With final verification the survey was built at Zoomerang and deployed.

Reliability of Survey

Before the survey was deployed for the complete study, a small pilot study was implemented. Pilot participants included volunteers from the community of like-minded educators representing educators who were interested in using technology in education. Several experts reviewed the pilot survey and provided additional feedback. This feedback was used to final study questions and survey format. These volunteers were

subsequently eliminated from the final survey. Once information from this group was gathered, reviewed, the survey was revised and was ready for the research study posting.

Human Subjects Considerations

According to university policy, all research must meet ethical and professional standards. It is the researcher's responsibility to protect the welfare of all human subjects participating in research. The proposed research was submitted to the University GPS-IRB and was determined to qualify as an Exempt study (see Appendix E).

This research was a descriptive study using an electronic survey method and did not directly observe or interview subjects. Participants of the study were members of an online community. The online survey approach was used because it was impractical to physically travel to over 1,000 members to interview or observe in respective classrooms. Additionally, as Bryman and Bell (2007) explained, web-based surveys can be designed with filtered questions so respondents are sent to the next question they should answer based on previous answers. The online survey was less time consuming for the researcher, had a faster response speed, and was less expensive than a mailed survey. Online surveys also have a higher rate of return than mailed ones. In one example offered, the response rate for online surveys was 44% while mailed response rates were 26% return.

With the survey methodology, limited risk of harm to participants exists. The survey was administered online on a voluntary basis. Members of the community were informed of the choice to respond or not within both the invitation instructions and the survey itself. With choice and acceptance, the participants understood any potential risks.

Full disclosure of the research was included in the online posting of the research with invitation to participate. All persons were informed that at any time they were free to withdraw from the research or refuse to participate. The subject population was considered to be educated, as well as financially qualified to maintain a computer and Internet service on a regular basis. Therefore, with written instructions of the research, participation was freely given (Hall & Feltner, 2005). Since the community was online and physically located across the globe, a waiver for signed consent (see Appendix E) was requested, assuming consent was given upon completion of the research survey. All data acquired through the research study was held in strictest confidentiality. All personal data was kept private and not disclosed.

Data Analysis

This descriptive study gathered data using an electronic survey. The data collected was used to answer research questions. The data analysis process involved frequency distributions for the scaled items and demographics. A topical analysis of the open-ended questions completed the data analysis. To ensure reliability of this analysis a second researcher reviewed the coding and any discrepancies were discussed and resolved.

Summary

This research collected information from an online community of learners who were members of the ADE community. ADE members were from all levels of education. Of the members responding, some were newly selected ADEs and others were from an assortment of ADE classes. They became members of the online community after an application process. This online community was a small group of educators, numbering slightly less than 2,000. The survey collection instrument collected data using a hosted

survey site. Participants received full disclosure about the study, and their involvement in the survey was the result of an invitation posted within the ADE community and the community list serv.

Chapter 4. Results

The purpose of this research study was to explore how teacher knowledge and practices are influenced when educators participate in an informal, online learning community designed based on principles of social networking and the ideas of a community of practice as a personal learning network. The research objective was to determine the impact that participation in a social media site designed for educators has on participants' knowledge and skills applied to classroom instruction, as perceived by participants. This chapter presents the results from the data collection process and the analysis of findings. The responses were analyzed in terms of the information they gave regarding each of the four research questions.

Targeted Social Media Site

Education-based social media communities pull from the population of all educators at all levels. The social communities designed for educators have common elements. These sites are designed specifically for educators and the teaching and learning of a content area in either the K-12 or higher education levels. These communities have a membership profile section, specific interest groups within the community, forums for broad discussions and in most communities a section for other resources. For example, *Classroom 2.0* (http://www.classroom20.com) is designed for any educator interested in using technology and Web 2.0 tools in education. *TeachAde* (http://www.teachade.com) targets educators in general by providing sample lesson plans and content area resources, forums, and groups. *English Companion Ning* (http://englishcompanion.ning.com/) reaches out to English teachers and the specifics of teaching English predominately at the high school level.

This study collected data from the Apple Distinguished Educators (ADE) Community. The ADE community (https://ade.apple.com/ade/home.php) continuously seeks educators successfully using Apple technology products in innovative and profound ways. The ADE community is available to a limited number of members who have been selected by Apple, Inc. as strong technology educators interested in using the technology tools that Apple offers within classroom instruction at all levels of education. Selection to this community is competitive. Educators who become members of the ADE community participate on a voluntary basis. No compensation accompanies the honor.

Special opportunities, posted within the community, are made available to ADE members but the level of participation is at the individual's choice. Each year Apple invites educators at specific levels to apply for this prestigious honor. Applications for this membership are extensive. A potential recipient must demonstrate how Apple technology and software is successfully used in an educational setting and how they further the incorporation of modern technology in education. Permission to use the ADE community for this research study was granted by Maxx Judd, Senior Manager of Education and Advocacy and the Global Program Manager of the ADE community, Apple, Inc.

Demographics

The ADE community is made up of men and women in education from kindergarten through the post secondary level. Of the 50 participants, 64% (n = 32) were male with 82% of these men work at the post-secondary level. Thirty-six percent (n = 18) of the participants were female with only 18% responding from the post secondary level. More males responded across all levels of education than did females. In considering the

total sample, the largest portion (34%, *n* = 17) was from the post-secondary level and the smallest (18%, *n* = 9) from the elementary levels, K-5. Others reported an equal distribution in grades 6-8 and 9-12. Figure 1 shows the demographics by gender and experience while Figure 2 shows the level of employment of the sample.

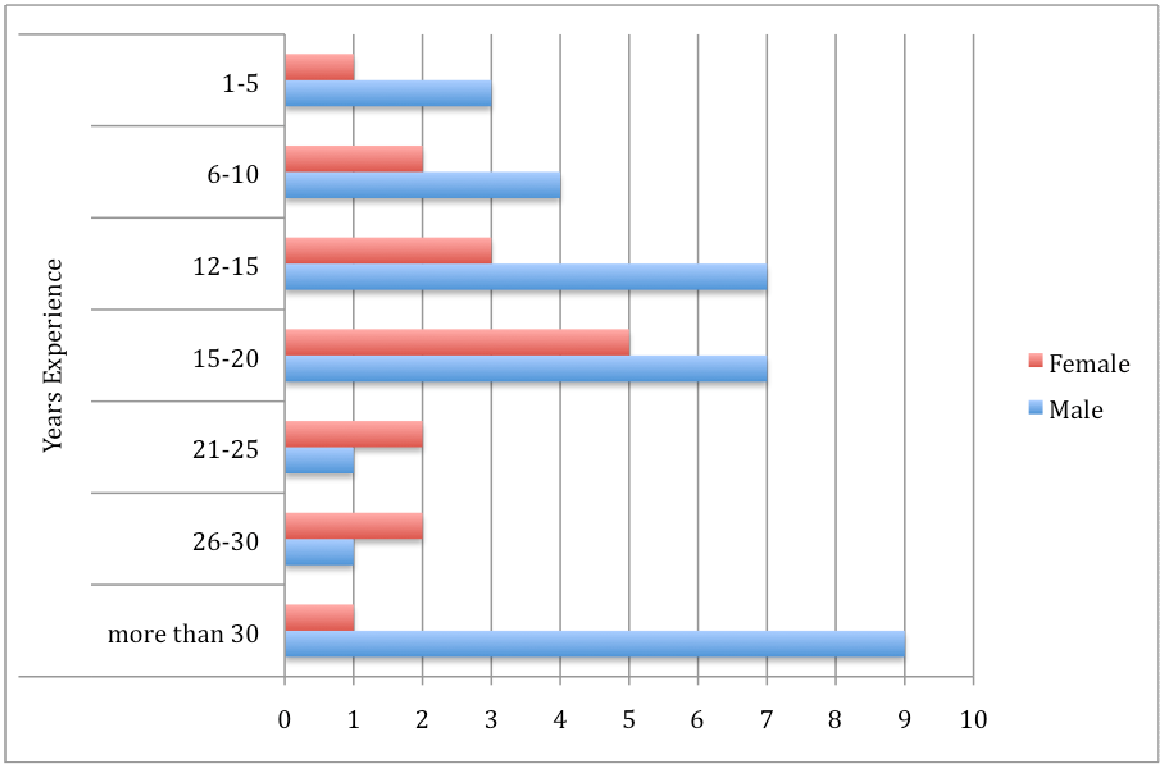

Figure 1. Demographic distribution of sample by gender and experience

Of the entire sample, 10% (*n* = 5) were under 30 years of age, 28% (*n* = 14) were 31 to 40 and 28% (*n* = 14) were 40 to 49. Ten percent (*n* = 5) of the participants were included in the 50-55 age group, and 24% (*n* = 12) were 56 or older. Twenty percent of respondents (*n* = 10) had more than 30 years in education, 6% (*n* = 3) had 26 to 30 years, and 24% (*n* = 12) had 15 to 20 years experience, making this age group the largest of the participants. Those with 1 to 5 years experience had the lowest response rate at 4% (*n* = 4). Those with 6 to 10 years of experience responded at 12% (*n* = 6). Nine males had 30

years or more experience. Four females had 21 to 25 years experience as educators. With 24% (n = 12), the largest group of participants had 15 to 20 years experience. See Table 3 for a detailed account of the sample.

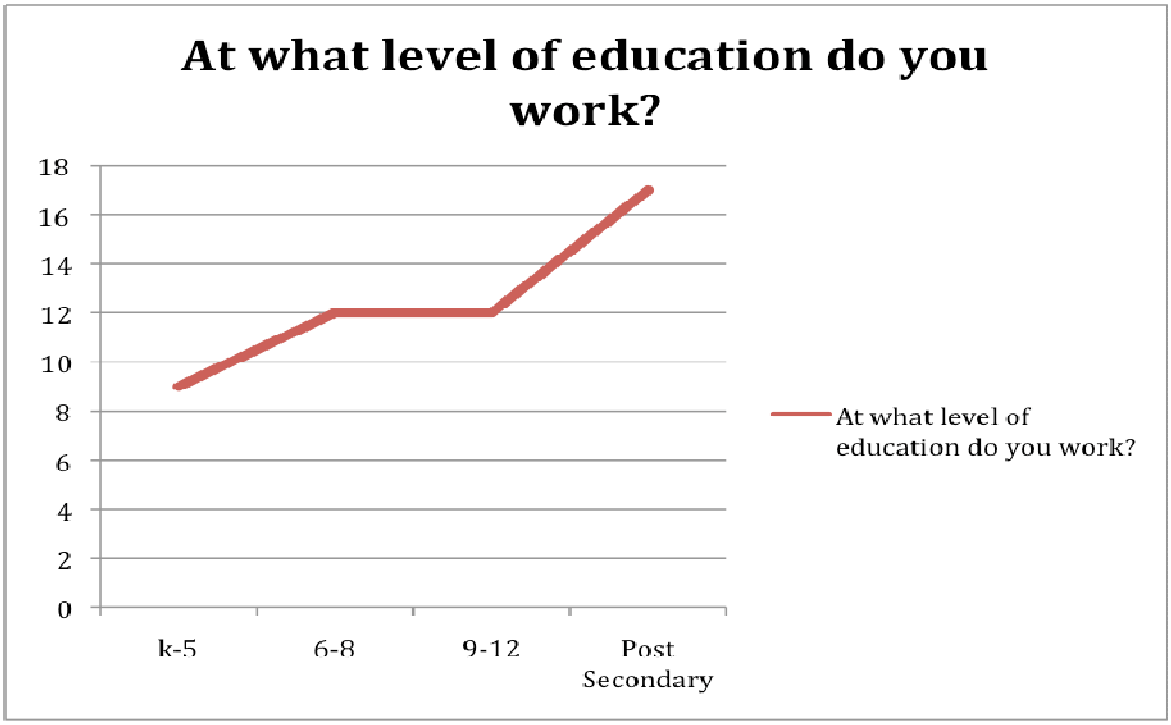

Figure 2. Demographic distribution of sample by employment

Table 3

Demographic Distribution of Sample

	Totals	By levels of educational assignment			
Years of experience					
1-5	4	0	2	1	1
	8.00%	0.00%	16.70%	8.30%	5.90%
6-10	6	1	2	2	1
	12.00%	11.10%	16.70%	16.70%	5.90%

(*table continues*)

	Totals	By levels of educational assignment			
Years of experience					
11-15	10	4	0	2	4
	20.00%	44.40%	0.00%	16.70%	23.50%
15-20	12	2	3	3	4
	24.00%	22.20%	25.00%	25.00%	23.50%
21-25	5	1	1	2	1
	10.00%	11.10%	8.30%	16.70%	5.90%
26-30	3	1	1	0	1
	6.00%	11.10%	8.30%	0.00%	5.90%
More than 30	10	0	3	2	5
	20.00%	0.00%	25.00%	16.70%	29.40%

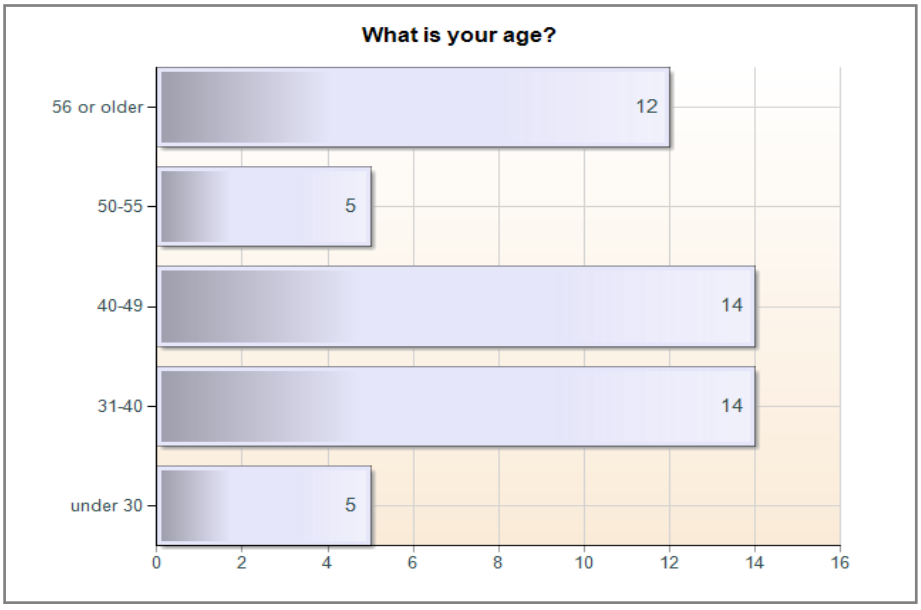

Figure 3. Demographic distribution of sample by age

Data Collection Method

Data collection was completed from July 2011 to September 2011 using an online survey hosted through Zoomerang after completion of a pilot study. The invitation to participate in this study was posted in the forums area in June 2011 within the ADE community and again appeared on the front page of the community in July 2011. The request for participation was additionally sent to the ADE listserv email notification system in August 2011. The invitation provided a detailed explanation and link to the online survey. Eighty-six ADE members responded to the invitation, with 50 eventually participating in and completing the survey.

Findings for Research Question One

Three survey questions were used to address research question one concerning personal learning acquired from participation in the ADE community. One survey question provided categories for personal learning gains including new technology skills, Web 2.0 tools, network connections, new collaborations, collaborative project participation, value of shared learning, importance of lifelong learning, knowledge of new software applications, and other (in which participants could list additional items). In each category listed, males were found to have a higher degree of personal learning than females. Tables 4 and 5 show the distribution of personal learning gains by gender.

Table 4

Personal Learning: Gains in Personal Learning for Males

Top Four Rated Gains in Personal Learning for Males (n = 32)
20 – Added collaboration on new projects
28 – Added learning new software
20 – Added importance of lifelong learning
28 – Added value of shared learning

Learning new technology skills reached 78% (*n* = 25) for males and for females 78% (*n* = 14). New collaborations ranked at 81% (*n* = 26) for men and 61% (*n* = 11) for women. New collaborations had the second highest responses for gaining new personal learning for men. Participating in new collaborative projects for males reached 63% (*n* = 20), as did the importance of lifelong learning. For females responding, acquiring new network connections scored the highest at 94% (*n* = 17) and males responded with 88% (*n* = 28). Learning specific Web 2.0 tools, the importance of lifelong learning, and collaborative project participation reached 67% (*n* = 12) for females.

Table 5

Personal Learning: Gains in Personal Learning for Females

Gains in Personal Learning for Females (*n* = 18)
12 – Added collaboration on new projects
16 – Added learning new software
12 – Added importance of lifelong learning
14 – Added learning new technology skills
14- Added making new network connections

One male spent 5 or more hours in the community each week and one female spent 3 to 4 hours a week connected within the community. The number of male and females connecting in the community from 4 to 5 hours per week was an even 50% (*n* = 1). Sixty-one percent (*n* = 22) of males and 39% (*n* = 14) of females spent less than 2 hours a week logged into the site. Of the entire population, 72% (*n* = 36) spent less than 2 hours a week in the site (see Table 6).

Table 6

Time Spent in ADE Community

Time spent in ADE Community (n = 50)	
Male	Female
One spent 5 or more hours per week in the community 66% spent less than 2 hours per week in the community	One spent from 3 to 4 hours per week in the community 39% spent less than 2 hours per week in the community
72% of the entire population spent less than 2 hours per week in the community	

Learning new software (64%, n = 28), the importance of lifelong learning (62%, n = 20), the value of shared learning (65%, n = 28) and collaboration on new projects (62%, n = 20) was rated similarly by males. New personal learning from female responses rated lower than males but close in ratings: new technology skills (36%, n = 14), network connections (38%, n = 17), collaborative project participation (38%, n = 12), the importance of lifelong learning (38%, n = 12), and learning new software applications (36%, n = 16). A significant difference (20%) in personal learning for males and females was found in new collaborations with males rating 81% (26) and female responses showing 61% (11).

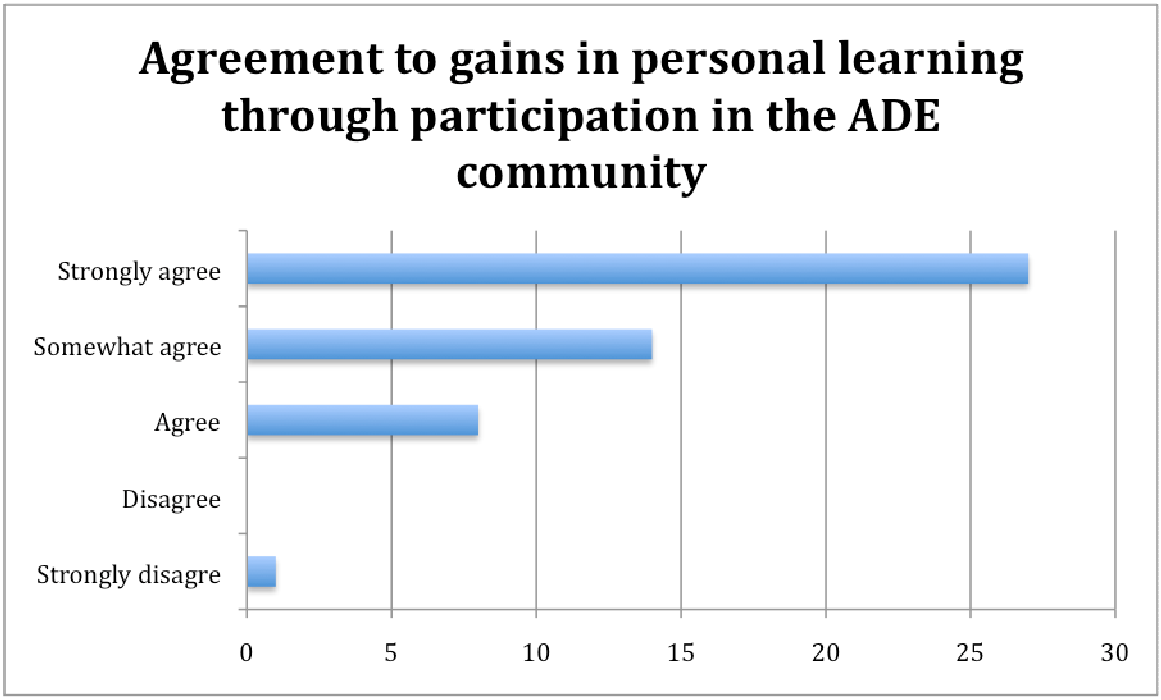

Figure 4. Agreement to gains in personal learning through participation in the ADE community.

Ninety percent (n = 45) of responses showed that network connections were a strong component to the ADE site. Additionally, a majority of participants felt that the community provided a support system, a method for learning from other ADE members, expanded their collaborative connections, offered professional growth, and increased knowledge of new pedagogies.

Overall, responses showed that 54% (n = 27) of members in the survey population strongly agreed that participation in the community added to an individual's personal learning. Of those strongly agreeing to the statement: "Through participation in the ADE community, learning new technologies in educational settings has added to my personal learning," 56% (n = 15) were from the male members of the community and females were 44% (n = 12).

Nineteen percent (n = 5) of members with 30 years experience or more rated strongly agree to this question, whereas 22% (n = 6) of those with 12-15 years selected the strongly agree option. Only 12% (n = 1) of the 12 to 15 years experience group selected agree. At the agree-level, 38% (n = 3) of those with 30 years of experience made this selection. Seventy-five percent (n = 3) of those with 5 years experience or less rated somewhat agree. No member responding selected disagree. Figure 4 shows the overall responses.

When comparing years of experience regarding this question, both the 1 to 10 and 11 to 20 years of experience groups selected agree equally. One female with 21 to 30 years experience strongly disagreed with the statement.

Members with 11 to 20 years experience placed learning about Web 2.0 technologies, new software, and collaborative project work above the other experience groups. Among the youngest grouping, 1 to 5 years experience, network connections rated the highest. Of the eight choices for personal learning resulting from ADE community participation, the 11 to 20 years of experience category selected all the choices closely, between one and three percentage points apart. Among all age groups the top three choices for personal learning from community participation included network connections, new collaborations, and the value of shared learning. Learning new technology skills ranked fourth.

Overall, 50% (n = 25) of all respondents felt that the member section of the ADE community provided the most assistance in their personal learning. Within the member section of the community, profiles list areas of expertise; years of experience, presentations and many include a video clip showing their expertise.

In the forum area, conversations address questions and ideas, provide specific technology troubleshooting topics, and offer opportunities for collaboration. The forum area of the community ranked second for personal learning.

Findings for Research Question Two

Sixty-four percent (*n* = 32) of educators have participated in a new collaborative project as a result of being a member of the ADE community. When asked to rate collaborative experiences as a strategy used in instruction, 65% (*n* = 30) of members responding selected online exchanges with content experts as the top rated item. Of the 30 responding, 19 were male, 17% (*n* = 5) had 30 or more years experience and 20% (*n* = 6) had 11 to 20 years experience.

Table 7

Collaborative Projects Found as a Result of Community Involvement

64% found new collaborative projects (*n* = 32)
78% elementary teachers
75% middle school teachers
63% post secondary
42% high school

As shown in Table 7, 78% (*n* = 7) of elementary teachers and 75% (*n* = 9) of middle school educators have found collaborative projects to participate in as a result of their ADE community connections. Sixty-three percent (*n* = 10) of university level educators made new connections for collaborative project work, whereas high school teachers rated lowest, 42% (*n* = 5). Eighty percent (*n* = 4) of those finding collaborative projects to participate in were 50 to 55 years of age, and 80% (*n* = 4) who did not were in

the under 30 years of age category and had only 1 to 5 years experience. Four with more than 30 years experience and eight with 21 to 25 years of experience also rated adding collaborative projects to learning. Adding collaborative projects across gender lines were closely matched with males at 63% (n = 20) and females at 65% (n = 11).

Two collaborative projects surfaced repeatedly. *Rock Our World*, a music collaboration using Garage Band software was begun by one of the ADE members. In this project students build a slice of music each week but only one part. They then send it on to the next classroom for the next part of music. The process repeats weekly across countries and classrooms. While the music travels, students connect using chat and video.

The second collaborative project that showed up in multiple areas of the survey was *Challenge Based Learning*, a program established by Apple. This collaborative project is listed in the Apple Learning Interchange or ALI (http://ali.apple.com/cbl/) and has basis in the *Apple Classroom of Tomorrow* report (Apple, Inc., 2008).

Other collaborative connections mentioned by participants included more connections through Facebook, Twitter and LinkedIn. Eighty-one percent (n = 26) of participants voted yes to using collaborative projects as a new personal learning experience in the ADE community. Those reporting no to using collaborative projects also stated that they were new to the community and would be attending the first ADE institute during the summer of 2011, or had not experienced anything formally yet and hoped to join a collaborative project group in the future.

Thirty-one members (84%) of those strongly agreeing to the ADE community adding to their personal learning had participated in a collaborative project. Adversely,

93% (*n* = 14) who participated in a collaborative group did not feel they learned new Web 2.0 tools in conjunction with a collaborative project. Four (67%) strongly agreed to participation in the ADE community adding to their personal learning and learning about Web 2.0 technologies (see Table 8).

Table 8

Collaborative Projects and Web 2.0 Tools

84%	Strongly agreeing to new learning, participated in collaborative projects (31)
94%	Who participated in a collaborative group, did not learn new Web 2.0 tools in conjunction with collaborative project (14)
67%	Who participated in a collaborative group, did learn new Web 2.0 tools in conjunction with collaborative project (4)

When adding new strategies to instruction, 87% (*n* = 40) rated new ways of using technology as an integral part of instruction as the highest selection. The second highest selected new strategy, 65% (*n* = 30), was online exchanges with content experts. Twenty-one responses (46%) cited that learning about Web 2.0 technologies added new strategies to instruction, and 57% (*n* = 26) added the use of online collaboration with other classrooms as a new strategy in their instruction. Table 9 shows the entire list of choices and responses received.

Table 9

Overall Strategies Added to Instructional Repertoire from Personal Learning (n = 50)

Strategies	Number of responses	Percentage of sample
Online collaboration with other classrooms	26	57%
Online collaboration with other countries	12	26%
Online exchanges with content experts	30	65%
Incorporation of Web 2.0 apps/tools for posting video	21	46%
Incorporation of Web 2.0 apps/tools for image editing	17	37%
News ways of using technology as integral part of instruction	40	87%
Addition of blog for content creation	20	43%
Addition of wiki for content creation	14	30%
Addition of class web site	17	37%
Other	6	13%

Findings for Research Question Three

Forty-six percent (*n* = 21) of responses selected using Web 2.0 tools for uploading video and editing images as a new strategy learned as a result of participation in the ADE community. Strategies listed in Table 3 included online collaboration with other classrooms, online collaboration in other countries, online exchanges with content experts, incorporation of Web 2.0 apps and tools for posting video, incorporation of Web 2.0 apps/tools for image editing, new ways of using technology as integral part of instruction, addition of blog for content creation, addition of wiki for content creation,

addition of a class web site, and other. Males responded strongly disagree to learning more about Web 2.0. The 26 to 30 age group rated somewhat agree to the addition of new knowledge about Web 2.0 to their personal learning.

The group with 30 years experience chose using Web 2.0 tools equally for video work or editing images, whereas the 11 to 20 years of experience rated both areas equally but slightly less than the more experienced group.

From the entire sample, the group with 11 to 25 years experience showed that learning in the ADE community provided them with new ways to incorporate technology into their instruction and added wikis and class websites as new strategies in their instruction (see Table 10). Educators with the least experience learned about using a blog as part of instruction. The 26 to 30+ years of experience grouping reported adding several strategies to instruction including using Web 2.0 applications for hosting video and editing images, online collaboration with other classrooms and other countries, and using blogs, wikis, and class websites as a result of participation in the ADE community.

Table 10

Adding New Instructional Strategies by Years of Experience

Years of Experience	New Strategy
Novice–less than 10 years	Added blogs as part of instruction
Seasoned–11 to 25 years	New ways to incorporate technology into instruction, adding wikis and class websites
Veterans–26 to 30+ years	Using Web 2.0 tools, hosting video, editing images, collaborative projects, class websites, and video editing

As members explained their successes, *Challenge Based Learning* appeared as a new strategy for several. A member said, "This pedagogy ensures that students are learning with both rigor and relevance."

Using video and podcasting together was another common theme. Participants were using video podcasts as a self-reflection tool on a daily basis. One member explained how students made a video of their learning each day and presented the semester of learning to the class later in the year. Another educator used student video reflections into two ways: once for students to express their learning, and second for the teacher to help improve instructional practices.

Collaboration in many forms was one strategy mentioned by many members. They explained that collaboration with other classrooms enriched the learning experience. Collaborating with other ADE members, considered experts in a field, was another technique commonly used by participants. One response explained that collaborating online with an ADE content expert helped the teacher integrate new tools and strategies with video content in the classroom. Another spoke about taking risks and the support for trying new things, along with the belief that students and teachers learn together. Collaboration and sharing was important for one of the university participants. One responsibility for this member was to share the learning upon returning to campus and then to advise other professors and graduate students.

Using mobile devices such as the iPad was a new technique for one. Through collaborating with other ADEs, this member learned about implementation of new tools and how to use Pages software for e-publishing with students. Collaborating with other

members who were experts in specific areas, collaboration with groups and other classrooms, and the use of hands on learning were common responses.

Integration of social media was another strategy used. Using *Twitter* and *Flickr* to share ideas, usually consisting of short bursts of information, helped lead to exploring new avenues of learning.

Many felt that the value of using podcasting was high and provided for self-reflection by students. One educator stated, "The collaboration with other classrooms near and far has been an amazing experience for our students." Responses about collaboration ranged across age groups and years of experience.

Findings for Research Question Four

Of the ADE members responding, 42%, (n = 21) felt that the online community was very effective in helping participants with personal learning. Those with the least experience rated the site as very effective. Five members in the 11 to 20 years of experience group felt the site was somewhat effective, and five felt the site was extremely effective for personal learning. Zero responses were received for not effective or less than effective.

Fifty percent (n = 25) of responding members felt that the member area of the community provided the greatest assistance. Of this group 32% (n = 8) had 15 to 20 years experience and 20% (n = 5) had 21 to 25 years of experience. The forum area rated as the next highest area to support personal learning. Members with one to 10 years of experience and those with 21 to 30 years of experience rated the forum equally. Those with some experience, 11 to 20 years, rated the forum higher than the other experience groups. One participant with 1 to 10 years experience felt that the blog area was most

helpful. The gallery section of the site received no responses. The gallery area provides online space for ADE members to post photos of their experiences.

Other Findings

When asked what new collaborative networks have been established as a result of participation in the ADE community, both males and females stressed three areas: learning new software applications; partnerships and collaboration; and connections in other network communities such as *Facebook, Twitter, LinkedIn, Challenge Based Learning*, and *Edmodo*. Both groups mentioned the ADE listserv as a means of connections and collaborations. Females also listed mentoring and new friendships while males referred to specifics such as presenting at conferences with other ADEs and taking advantage of ADE photography opportunities. Both groups made note of music collaborations, but males were more specific about software applications, such as Apple's *iLife* suite of tools including *iPhoto*, *iMovie*, and *Garage Band*. Males reported learning more about creating podcasts, using mobile devices, and video work.

Those with 1 to 10 years experience felt that connections to other educators locally and on other networks such as *Twitter* and the *Challenge Based Learning* community resulted from participation. The group with 11 to 20 years experience listed learning of podcasts, video work and music collaboration as useful results from their participation and other online connections, furthering their global connections, mentoring and presenting with other ADEs at national conferences as specific results of participation in the ADE community. Connecting with others, either face–to-face or in other online communities, showed up across all years of experience as a positive result of participation.

Table 11

Instructional Strategies Added with Types of Success

Instructional strategies added	Types of success with new techniques
Challenged based learning	Students are learning with both rigor and relevance from approach
Video podcasting	Self reflection for students and teacher
Collaboration	Enriched learning with other classrooms
Mobile devices	Successful implementation with iPads school wide
Integration of social media	Twitter and Flickr to share ideas with students and teachers

As shown in Table 11, community members offered several new strategies that they added to their instructional practice as a result of community participation including:

- Using iPads successfully in classrooms;
- Learning more about Google tools and Blackboard;
- Gaining new insights from other higher education ADEs;
- Creating content for podcasts; and
- Distributing of podcasts.

The highest rated strategy added to the instructional repertoire across all levels of education and age levels was news ways of using technology as an integral part of classroom instruction.

Summary

Educators who were members of the ADE community found new meaningful experiences in personal learning in the online community. They found it broadened their network connections in *Facebook* and *Twitter*. The members made new collaborative

groups and added new strategies to their instructional arsenal of tools. The educators understood the value of sharing learning and the power of collaborative learning as they chose their learning path. They met other educators with the same interests, learned from experts, and applied their learning either in their own classrooms or in the community as they shared their knowledge with new members.

Chapter 5 presents the researcher's interpretations of findings, conclusions, and offers recommendations for further study.

Chapter 5. Discussion

This descriptive study addressed social media sites as a space for personal learning within a community of practice. This study explored how informal learning within a social media community could impact instructional changes in schools and universities. The study surveyed members of an online group known as the Apple Distinguished Educator (ADE) community, prominent users of educational technology.

This study is significant insomuch as it provides additional information to the body of knowledge concerning social media and informal learning. The study focused on collaboration, use of social media, new skills and knowledge gained, and changes made to instruction as a result of participation in the ADE community. This community of practitioners is an active group of educators familiar with Apple products, modern technology, and creative learning. The educators responding demonstrated a willingness to share their domain of knowledge, to collaborate in meaningful experiences, and to practice or apply new knowledge and skills with other members of the online community and in classrooms at all levels (Wenger et al., 2002). Members of a collaborative learning community have the potential to change how they learn and shift the same kind of learning to new situations (Bosworth & Hamilton, 1994, as cited by Tompkins et al., 1998). Regarding the addition of technology to a community of practice, as Wenger, White, and Smith (2009) explained, learning together depends on the quality of relationships of trust and mutual engagement that members develop with each other, a productive management of community boundaries, and the ability of some to take leadership and to play various roles in moving the inquiry forward.

Conceptual Foundation

Social media provides a rich environment for communities of practice to spread, flourish, and mature. These communities, whether social networks, personal learning networks, personal learning environments, virtual communities, or networked communities, join together for legitimate participation, and learn from one another (Lave & Wenger, 1991; Riel, 1996).

The ADE community provides an atmosphere for members where they can learn from experts, become experts themselves, and teach others as the community continues to grow. The ADE world supports the theory of a community of practice for these educators who have a passion for using technology in education, and, once within the umbrella of the ADE community, form a tribe of learners. Members involved in the ADE community have proven their knowledge of Apple technology hardware and software before entering the community. This pre-condition for membership establishes their common interest. They are committed to learning and using technology in education, in their personal lives and in sharing what they have learned with others.

According to a 2011 report from the U.S. Department of Education, Office of Educational Technology, "Online communities of practice can intersect with and extend these many varieties of professional learning" (p. 8). Educators using social media as an avenue for personal learning can meet students in the socially complex environment of learning in new ways with innovative tools. To accomplish this, educators must have a clear understanding of the social media landscape and its applications for teaching and learning using modern tools and approaches. Social communities will continue to develop, transform, and encourage the social aspect of learning.

The ADE community exhibits the components of a community of practice. The community domain is focused around educational technology; how to use it as a learning vehicle, how to apply tools in the educational environment, and how to share new knowledge with other members of the group or tribe, as Godkin (2008) and Wenger (2006) have referred to members of a learning community. Secondly, groups of people have joined together that have a passion for using and learning about educational technology. Green and Hannon (2006), Russo et al. (2009), and Wenger et al. (2002) have all included this aspect of collective or collaborative learning in their respective research and writings. The ADE community invites educators who are experts in educational technology from around the globe and from all levels of education to join this selective group to share knowledge and make connections. Finally, practice becomes key to the members of the ADE community, as evidenced in the open-ended responses to this survey, with the most common statement referring to learning directly from experts and collaborating with the experts as presenters and fellow instructors as new members join the community.

Learning is a social activity that deepens when shared with others, be it students, colleagues, or friends. Social media can be the vehicle for powerful self-directed learning for students, teachers and parents. Gunawardena et al., (2009) explained that social networking expands knowledge through the practice of making connections with individuals of interest. The ADE community provides social networking tools for its members. Within the community, members have options in discussion groups, in special offerings from Apple, and via the listserv to make connections with other educational technologists who are experts in Apple technology uses. They share their knowledge and

practice what they have learned. The connections make the community possible. Apple makes the social media site as user friendly as technology allows, thus providing a unique space for informal connections and new learning.

The social media landscape (Cavazza, 2011) includes seven families of social media: publish, share, games, discuss, commerce, location, and network. Each of the seven families provides limited examples, not exhaustive, of tools and services for accomplishing activities. Social media is about collaboration and relationships, not about which tool can do what. The tools simply allow the connections, learning, collaboration, and relationships to happen (see Appendix B for the 2011 Social Media Landscape chart).

Members of the ADE community experienced four of the seven families of social media. They shared, published, used social networks and other networking tools for online learning, and connected in face-to-face opportunities. Specifically, members discussed learning about podcasting (sharing) and then about distributing that information (publishing). Another highly rated topic noted through the survey was finding new connections and collaborative projects for classroom implementation (collaboration). Building strong connections (relationships) appeared as a strong component to involvement in the ADE community that then extended to other social media sites. Education can harness many of the components of this social media landscape to provide vibrant, compelling places to learn for both students and teachers. Each of the components Cavazza (2011) delineated provides specific, situated, authentic activities where collaboration and learning can blend together (Tu et al., 2008).

Methodology

This study used an electronic survey to collect information from the ADE community social media site. Information received was reviewed and analyzed using a frequency distribution of scaled items and a topical analysis process of the information obtained from open-ended responses. The survey used was developed by the researcher and validated by experts in the field. Data collection occurred for 2 months, from July to September of 2011.

Key Findings

Members of the ADE online community added to their personal learning as a result of participation. Participants had different learning experiences. Learning with others and from experts within the community was rated as extremely satisfying. Participants rated four items as the top results for adding to their personal learning: learning new technology skills, finding network connections, participation in collaborative projects, and discovering the value of shared learning. Some learned more about software and hardware while others found powerful adventures in collaboration. As a result of their participation, members in the ADE community added new instructional strategies and techniques to their repertoire.

Of the 50 community members responding, 45 felt that the greatest increase to their personal learning from the community was the addition of new network connections. Thirty-nine participants learned new technology skills, 32 found new collaborative projects, and 43 discovered the value of shared learning.

Not only did participants gain new knowledge and skills but 32 also participated in new collaborative projects as a result of participation in the ADE community and 26

said using collaborative projects was a direct result of participation in the ADE community. With these network connections, participants found classrooms across the globe to delve into collaborate projects. *Rock Our World*, the *Global Education Ning* project, Challenged-based Learning, Photo Safaris, and adding connections on *Facebook* and *Twitter* were mentioned repeatedly. Thirty-one of those strongly agreed that participating in some kind of collaborative project added to their personal learning. Learning with and from content experts found within the community and making face-to-face connections were strong positives to participation within the community. Results revealed that the males involved found learning more about video production and distribution as a strong component, while females developed strong relationships with other members and discovered the value of collaboration with other classrooms for project work.

The participants in the ADE community demonstrated new knowledge and skills in their practice. The top three new strategies added were developing online collaborations with other classrooms, providing online exchanges with content experts as part of classroom projects, and finding new ways to use technology. The last mentioned seems particularly important. Forty of the 50 stated that finding new ways to use technology as an integral part of their instruction was gained from participation in the ADE community. Thirty now use online exchanges with content experts as part of instructional practice, 26 added online collaboration with other classrooms as a new strategy, and 21 cited the addition of Web 2.0 technologies to instruction. In addition, some members stated that setting up a successful iPod podcasting program was learned from the ADE community along with creating and distributing podcasts. Each area

demonstrates the strength of learning with a community of like-minded individuals, a community of practitioners.

Conclusions and Recommendations

With these findings and the strong agreement by 27, the 14 who agreed somewhat, and 8 who agreed giving an agreement of 49 out of 50, my first conclusion is that participation in a social media community such as the ADE community provides an environment for personal learning. Social media can be a vehicle for powerful self-directed learning for teachers and students. I recommend further study of other social media sites designed for educators to determine if similar results in personal learning exist.

As revealed in the study survey, members of the ADE community found new ways of learning. The ADE community provided an atmosphere where members learned from experts, became experts, and taught others as the community grew. This online social community was a community of practice. The ADE members, a group with a common interest, had a passion for educational technology, their domain, which they willingly shared with other members, practice, as they built relationships, trust and partnerships in what was, as Wenger, White, and Smith (2009) described it, the digital habitat. The actual technological tools will change over time but the relationships built in the community and the trust earned provides a strong foundation for continuous learning for community members.

Green and Hannon (2006) demonstrated that there were four components to learning: finding information, learning new trends, developing relationships that support one another, and joining together to share. These traits are interwoven in the ADE

community. They come together to share technology news and skills, learn the newest technologies available, and begin relationships that for some are life changing. Allan and Lewis (2006) reminded us that learning is a social activity, and that as humans we are social beings and that is central to community learning.

Additional knowledge, skills, and new collaborations can result from participation in a community of practice based within a social network. The cycle of learning becomes iterative in a community of practice where legitimate peripheral participation (Lave & Wenger, 1991) exists. First, the newcomer learns by observation, by different levels of participation, and by real world experiences. Then the newcomer eventually becomes the master and begins the process anew. Thomas and Brown (2011) perceived this social participation as a *learning collective*. They stated that, in a learning collective, "people learn through their interaction and participation with one another in fluid relationships that are the result of shared interests and opportunity" (p. 50). With the research findings, my next conclusion is that new knowledge, skills, and collaborations can result from participation in a social media community. I recommend the study of other social media sites to discover if collaboration is as strong a component to the personal learning experience as evident in the ADE community.

The highest-rated change to instruction reported by the members of the ADE community was that of adding the use of technology as integral to instruction. Multiple respondents stated that incorporating collaborative projects in their specific content area was attained through learning in the social community. Applying fresh ideas required change on the part of the community members. Change, as Pink (2009) described, is complex. Change requires effort and purpose along with motivation. The responses

clearly showed that motivation for creating innovative and challenging work based on collaboration and the addition of technology as an important instructional tool were two high-ranking selections. The possibilities are endless. Lighting a spark of motivation, enthusiasm, or new learning involves enrollment, being in the moment completely and fully, accepting the new and sharing it again (Zander, 2002).

With the research findings my final conclusion is that acquiring new ideas, concepts and skills learned in a social media site can impact changes in instructional practice. Additional research on other social media sites could add to this study by finding similar issues in other communities designed for educators. I recommend the further study of other social media sites designed for educators to determine the possibilities of learning and making changes to instructional techniques. Many of these sites contain a larger membership and might result in a higher return rate, thus providing support to the findings of this study.

Limitations

This study reviewed only one social media site with a limited population. The social media community included individuals who have been identified as Apple Distinguished Educators. This select group may participate in any portion of the ADE community, either online or face-to-face, as it meets their needs. Responses from the online community were extremely low, as a percentage of the total membership, and may or may not be representative of the entire ADE community. Data collection was conducted during summer months, which may have adversely affected return rates. Therefore, my final recommendation to other researchers is to consider the calendar year

of the K-12 population in conducting further research as the summer months may not yield as high a result as desired.

Closing and Summary

Social media has become ubiquitous. The ecology of social media continuously evolves as technological improvement permits and innovation occurs. Members of one social media site, the ADE community, showed that informal learning had a positive impact on an individual's gaining of personal knowledge. Working and learning with others out of choice created an atmosphere where risk taking led to new approaches in educators' instructional expertise. The environment of social media made possible connections in all parts of the world for conversation, collaborative learning, and engagement in profoundly inventive ways.

REFERENCES

Allan, B., & Lewis, D. (2006). The impact of membership of a virtual learning community on individual learning careers and professional identity. *British Journal of Education Technology, 37*(6), 841-852. doi:10.1111/j.1467 8535.2006.000661.x

Allen, M. (2008). Designing outside the box: Designers who address the three learning phases will find e-learning success. *Technology + Development, 62*(4), 30-33. Retrieved from http://www.astd.org/TD/

Apple, Inc. (2008). *Apple classroom of tomorrow–today: Learning in the 21st century.* Cupertino, CA: Apple, Inc. Retrieved from http://ali.apple.com/acot2/global/files/ACOT2_Background.pdf

Apple, Inc. (2011). Apple distinguished educators. Retrieved from http://www.apple.com/education/apple-distinguished-educator/

Bacon, J. (2009). *The art of community.* Sebastopol, CA: O'Reilly.

Barab, S. A., & Duffy, T. (1998). *From practice fields to communities of practice. CRLT Technical Report No. 1-98*. Bloomington, IN: Indiana University.

Barab, S. A., Thomas, M. K., & Merill, H. (2001). Online learning: From information dissemination to building a shared sense of community. *Journal of Interactive Learning Research*, Vol. 12(1), 105- 143. Retrieved from http://www.aace.org/

Bransford, J., Brown, A. L., & Cocking, R. R. (Eds.); with additional material from Dovovan, M. S., Bransford, J. D., & Pellegrino, J. W. (Eds.). (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). Washington, D.C.: National Academy Press.

Bress, P. (2000). Gender differences in teaching styles. *English Teaching Forum, 3*(4). Retrieved from http://eca.state.gov/forum/vols/vol38/no4/p26.htm

Brown, J. S., & Adler, R. P. (2008). *Minds on fire: Open education, the long tail, and learning 2.0. EDUCAUSE Review, 43*(1), 16-32. Retrieved from http://net.educause.edu/ir/library/pdf/ERM0811.pdf

Brown, J. S., & Duguid, P. (2002). *The social life of information.* Boston, MA: Harvard Business School Press.

Bryman, A., & Bell, E. (2007). *Business research methods* (2nd ed.). Oxford, United Kingdom: Oxford University Press.

Capelle, A. (2008). Web 2.0 enhances learning. *Tech & Learning*. Retrieved from http://www.techlearning.com/article/web-20-enhances-learning/44856

Cavazza, F. (2008). Social media landscape. Retrieved from http://www.fredcavazza.net/2008/06/09/social-media-landscape/

Cavazza, F. (2011). Social media landscape. Retrieved from http://www.fredcavazza.net/2010/12/14/social-media-landscape-2011/

Cavey, J. A. (2010). Gender differences in the workplace. Retrieved from http://workforcedevelopment.edublogs.org/2010/07/26/gender-differences-in-the-workplace/

Dede, C. (1993). *Leadership without followers.* Englewood Cliffs, NJ: Educational Technology Publications.

Dede, C. (1996). Emerging technologies and distributed learning. *American Journal of Distance Education, 10(2),* 4-36. Retrieved from http://www.tandf.co.uk/journals/titles/08923647.asp

Dulworth, M. (2008). *The connect effect.* San Francisco, CA: Berrett-Koehler.

Drucker, P. (2002). *Management challenges for the 21st century.* Oxford, United Kingdom: Butterworth Heineman.

Dweck, C. (2009). Who will the 21st-century learners be? *Knowledge Quest, 38*(2), 8-10. Retrieved from http://www.ala.org/aasl/knowledgequest

Facebook. (2011). Statistics. Retrieved from http://www.facebook.com/press/info.php?statistics

Ferber, R., Sheatsley, P., Turner, A., & Waksberg, J. (2004). What is a survey? *American Statistical Association.* Retrieved from http://www.whatisasurvey.info/

Fox Network. (2009). American Idol. Retrieved from http://www.americanidol.com/

Garton, L., Haythornthwaite, C., & Wellman, B. (1997). Studying online social networks. *Journal of Computer Mediated Communication, 3*(1). Retrieved from https://lib.pepperdine.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,url,uid,cookie&db=eric&AN = EJ562378&loginpage=login.a sp?custid=s8480238&site=ehost-live&scope=site

Gendron, R. (Producer). (2011, March 2). Virtual conversation. Retrieved from http://www.classroom20.com/forum/topics/virtual-conversation

GO2Web20. (2008). Go2WEB20: Web applications index. Retrieved from http://www.go2web20.net/#tag:network

Goddard, M. (2003). What do we do with these computers? Reflections on technology in the classroom. *Journal of Research on Technology in Education, 35*(1), 19-26. Retrieved from http://www.iste.org/learn/publications/journals/jrte-old.aspx

Godkin, S. (2008). *Tribes: We need you to lead us.* New York, NY: Penguin Group.

Green, H., & Hannon, C. (2006). Their space: Education for a digital foundation. Retrieved from http://www.demos.uk.publications/their-space

Gunawardena, C. N., Hermans, M. B., Sanchez, D., Richmond, C., Bohley, M., & Tuttle, R. (2009). A theoretical framework for building online communities of practice with social networking tools. *Educational Media International, 46*(1), 3-16. Retrieved from http://www.tandf.co.uk/journals/routledge/09523987.html

Hahn, S., & Litwin, A. (1995). Women and men: Understanding and respecting gender differences in the workplace. Retrieved from http://www.annelitwin.com/publications/genderatwork.html

Hall, S., & Feltner, M. (2005). *Pepperdine University: Protection of human participants in research: Policies and procedures manual.* Retrieved from http://services.pepperdine.edu/irb/

Hargadon, S. (2007). A little help from my friends: Classroom 2.0 educators share their experiences. *School Library Journal.* Retrieved from http://www.schoollibraryjournal.com/article/CA6484336.html

Hargadon, S. (2008). Classroom 2.0. Retrieved from http://www.classroom20.com

Hargadon, S. (2009). Educational networking: The important role Web 2.0 will play in education. *Elluminate.* Retrieved from http://www.stevehargadon.com.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide.* New York, NY: NYU Press.

Johnson, L., Smith, R., Willis, H., Levine, A., & Haywood, K. (2007). *The 2007 Horizon report.* Austin, TX: The New Media Consortium.

Johnson, L., Smith, R., Willis, H., Levine, A., & Haywood, K. (2011). *The 2011 Horizon report.* Austin, TX: The New Media Consortium.

Katz, L., & Chard, S. (1989). *Engaging children's minds: The project approach.* Norwood, NJ: Ablex.

Knowles, M. S., Holton, E. F. I., & Swanson, R. A. (2005). *The adult learner* (6th ed.). Burlington, MA: Elsevier.

Kotter, J. (1996). *Leading change.* Boston, MA: Harvard Business School Press.

Lancaster, L., & Stillman, D. (2002). *When generations collide: Who they are. Whey they clash. How to solve the generational puzzle at work.* New York, NY: Harper Collins.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Boston, MA: Cambridge University Press.

LeFever, L. (2007). We're Common Craft and our product is explanation. *Common Craft.* Retrieved from http://www.commoncraft.com/

LeFever, L. (2008). Social media in plain English. *Common Craft.* Retrieved from http://www.commoncraft.com/

Lehigh, S. (2008, November 19). Teaching students 21st century skills. *Boston Globe*. Retrieved from http://www.boston.com/news/education/k_12/mcas/articles/2008/11/19/teaching_students_21st_century_skills/

Li, C., & Bernoff, J. (2008). *Groundswell: Winning in a world transformed by social technologies.* Boston, MA: Harvard Business Press.

Liu, X., Magjuka, R. J., Bonk, C. J., & Lee, S. (2007). Does sense of community matter? An examination of participants' perceptions of building learning communities in online courses. *Quarterly Review of Distance Learning*, *8*(1), 9-24. Retrieved from http://www.infoagepub.com/quarterly-review-of-distance-education.html

Long, C. (2009). Online social networking for educators. *NEA Today*. Retrieved from http://www.nea.org/home/20746.htm#

Martinez, S. (2008). Creating successful change [blog post]. Retrieved from http://blog.genyes.org/index.php/2008/02/19/creating-successful-change/

McLester, S. (2007). Web 2.0: A guide for educators. *Tech & Learning.* Retrieved from http://www.techlearning.com/article/web-20-a-guide-for-educators/44269

Minor, R. (2011). American Idol, Season 10. Hollywood, CA: Fox TV.

O'Reilly, T. (2005). What is Web 2.0? *O'Reilly Media.* Retrieved from http://oreilly.com/web2/archive/what-is-web-20.html

O'Reilly, T, & Battelle, J. (2009). Web squared: Web 2.0 five years on. *O'Reilly Media.* Retrieved from http://assets.en.oreilly.com/1/event/28/web2009_websquared-whitepaper.pdf

Pink, D. H. (2009). *Drive: The surprising truth about what motivates us.* New York, NY: Penguin Books, LTD.

Polin, L. (2007). Teaching the net generation. *Threshold*, 5(summer), 13-15, 18-19. Retrieved from http://www.ciconline.org/

Preece, J. (2000). *Online communities: Designing, usability, supporting sociability.* West Sussex, United Kingdom: Wiley.

Ranieri, K. L. (2004). Toward group problem solving guidelines for 21st century teams. *Performance Improvement Quarterly, 17*(3), 86-105. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291937-8327

Rheingold, H. (2002). *Smart mobs: The next social revolution.* Cambridge, MA: Perseus Publishing.

Rice-Lively, M. L. (1994). Wired warp and woof: An ethnographic study of a networking class. *Internet Research, 4*(4), 20-35. Retrieved from http://www.emeraldinsight.com/products/journals/journals.htm?id=intr

Richardson, W. (2010). *Blogs, wikis, podcasts, and other powerful tools for classrooms* (3rd ed.). Thousand Oaks, CA: Corwin Press.

Riel, M. (1996). The Internet: A land to settle rather than an ocean to surf and a new "place" for school reform through community development. Retrieved from http://www.gsn.org/gsh/teach/articles/netasplace.html

Robinson, K. (2001). *Out of our minds: Learning to be creative.* Chichester, Sussex, United Kingdom: Capstone Publishing.

Roker, A. (2007). Al Roker interviews Leonard Sax, "Why gender matters." *MSNBC.com*. Retrieved from http://youtu.be/eXqiJLZm-DI

Russo, A., Watkins, J., & Groundwater-Smith, S. (2009). The impact of social media on informal learning in museums. *Educational Media International, 46*(2), 13. doi: 10.1080/09523980902933532

Simmons, L. C. (2009). *Common sense, social networks and the workplace: The generational divide explored*, (Master's thesis), available from Dissertations & Theses. (Publication No. AAT 1470588)

Solomon, G., & Schrum, L. (2007). *Web 2.0: New tools, new schools.* Eugene, OR: International Society for Technology in Education.

Sue, V. M., & Ritter, L. A. (2007). *Conducting online surveys.* Los Angeles, CA: Sage Publications.

Tanase, S. (2010). When Web 2.0 sneezes...everyone gets sick. *Engineering & Technology, 5*(5), 28-29. Retireved from http://digital-library.theiet.org/

Thomas, D., & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change.* Seattle, WA: CreateSpace.

Tompkins, P., Perry, S., & Lippincott, J. K. (1998). New learning communities: Collaboration, networking, and information literacy. *Information Technology and Libraries, 17*(2), 100-106. Retrieved from http://www.ala.org/lita/ital/

Tu, C., Blocher, M., & Roberts, G. (2008). Constructs for Web 2.0 learning environments: A theatrical metaphor. *Educational Media International, 45*(4), 253-269. Retrieved from http://www.tandf.co.uk/journals/routledge/09523987.html

U.S. Department of Education. (2011). Connect and inspire: Online communities of practice. Washington, D.C.: U.S. Department of Education, Office of Educational Technology.

Webdesignerdepot. (2010). The history and evolution of social media. Retrieved from http://www.webdesignerdepot.com/2009/10/the-history- and-evolution-of-social-media/

Wellman, B. (2001). Computer networks as social networks. *Science, 293,* 2031-2034. Retrievied from http://www.sciencemag.org/

Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker, 9*(5). Retrieved from http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml

Wenger, E. (2006). Communities of practice: A brief introduction. Retrieved from http://www.ewenger.com/theory/

Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice: A guide to managing knowledge.* Boston, MA: Harvard Business School Press.

Wenger, E., White, N., & Smith, J. D. (2009). *Digital habitats: Stewarding technology for communities.* Portland, OR: CPsquare.

Zander, R. S. (2002). *The art of possibility: Transforming professional and personal life.* New York, NY: Penguin.

Zemke, R., Raines, C., Filipczak, B. (2000). *Generations at work: Managing the clash of veterans, boomers, xers, and nexters in your workplace.* New York, NY: Amacom.

APPENDIX A

2008 Social Media Landscape Chart

APPENDIX B

2011 Social Media Landscape Chart

APPENDIX C

Survey Questions

Research Survey Questionnaire

Demographics

1. Are you an employed educator?

Yes no

2. If yes, at what level of education do you currently work?

K-5 6-8 9-12 Post secondary

3. What is your age?

under 30 31-40 40-49 50-55 56 or older

4. What is your gender?

Male female

5. How many years experience do you have in the teaching field?

1-5 6-10 11-15 15-20 21-25 26-30 more than 30

6. What new personal learning has been reached from participation in the ADE community? Select all that apply:

new technology skills

specific Web 2.0 tools

network connections

new collaborations

collaborative project participation

value of shared learning

importance of lifelong learning

knowledge of new software applications

other, please specify_____

7. How much time do you spend in the ADE community during a week? Select only one.

more than 5 hours 4 - 5 hours 3-4 hours 2-3 hours less than 2 hours

8. Through participation in the ADE community, learning about Web 2.0 tools, software applications and new technologies in educational settings has added to my personal learning.

Strongly Agree Somewhat agree Agree Disagree Strongly disagree

9. What new collaborative networks have been established as a result participation in the ADE community?

10. What areas of the site have you been most active in seeking answers to questions?

11. Have you participated in a collaborative project through the connections made in this community? Yes No

If yes, explain the project and how the connections were made.

12. What kinds of strategies or activities have you added to your instructional repertoire as a result of your personal learning in the ADE community? Select all that apply.

online collaboration with other classrooms

online collaboration in other countries

online exchanges with content experts

incorporation of Web 2.0 apps/tools for posting video

incorporation of Web 2.0 apps/tools for image editing

new ways of using technology as integral part of instruction

addition of blog for content creation

addition of wiki for content creation

addition of class web site

other, please specify

13. Which new instructional technique has been the most successful in classroom application? Explain the success.

14. How effective do you feel the ADE community is for personal learning?

Extremely effective Very effective Somewhat effective

Less than effective Not effective

15. Which area of the ADE community has provided the most support for your learning?

Members Gallery Forums Blogs Groups

16. Which area of the ADE community do you use most often?

Members Gallery Forums Blogs Groups

APPENDIX D

Community Posting

Forum: Discuss and share thoughts and interests

ADE Conducting Research Study: Social Media as an avenue for personal learning.

July 2011

Dear Members of the ADE community:

My name is Linda Eller, and I am a student in educational technology at Pepperdine University, Graduate School of Education and Psychology. I am in the process of recruiting individuals for my study entitled, "Social Media as an avenue for personal learning for educators: Personal learning networks encouraging new application of knowledge." The professor supervising my work is Dr. Kay Davis. The study is designed to investigate how teacher knowledge and practices are influenced when teachers participate in an informal, online learning community that is designed based on principles of social networking, personal learning networks and the ideas of a community of practice. So I am inviting individuals who are members of the Apple Distinguished Educators (ADE) online community to participate in my study. Please understand that your participation in my study is strictly voluntary. The following is a description of what your study participation entails, the terms for participating in the study, and a discussion of your rights as a study participant. Please read this information carefully before deciding whether or not you wish to participate.

If you should decide to participate in the study, you will be asked to complete an online survey. It should take approximately 15- 20 minutes to complete the survey you have been asked to complete. Please complete the survey in a single setting.

Research Survey - Click Here to Participate

Although minimal, there are potential risks that you should consider before deciding to participate in this study. These risks include the use of your personal time. If you participate, you may drop out at any time if you feel you do not have the time to allot to the survey.

As a participant in the study, there are no direct benefits from your participation.

If you should decide to participate and find you are not interested in completing the survey in its entirely, you have the right to discontinue at any point without being questioned about your decision. You also do not have to answer any of the questions on the survey that you prefer not to answer--just leave such items blank. Surveys will be completed online and any additional communication for this study will be done electronically on the ADE site.

If the findings of the study are presented to professional audiences or published, no information that identifies you personally will be released. The data will be kept in a secure manner for at least three years at which time the data will be destroyed. No personal identification will link responses to members of the online community. All responses are anonymous.

If you have any questions regarding the information that I have provided above, please do not hesitate to contact me at the address and phone number provided below. If you have further questions or do not feel I have adequately addressed your concerns,

please contact Dr. Kay Davis. If you have questions about your rights as a research participant, contact Jean Kang, CIP, Chairperson of the Graduate and Professional Schools IRB, Pepperdine University, Graduate School of Education & Psychology, 6100 Center Drive 5th Floor, Los Angeles, CA 90045.

By completing the survey electronically, you are acknowledging that you have read and understand what your study participation entails, and are consenting to participate in the study.

Research Survey - Click Here to Participate

Linda Eller

Doctoral Candidate, Pepperdine University
Graduate School of Education and Psychology

APPENDIX E

Participant Waiver

Graduate & Professional Schools Institutional Review Board
6100 Center Drive, Los Angeles, California 90045
310-568-5600

June 29, 2011

Linda Eller

Protocol #: E0611D09

Project Title: Social Media as Avenue for Personal Learning for Educators: Personal Learning Networks Encouraging Application of New Knowledge and Skills

Dear Ms. Eller:

Thank you for submitting your application, Social Media as Avenue for Personal Learning for Educators: Personal Learning Networks Encouraging Application of New Knowledge and Skills, for exempt review to Pepperdine University's Graduate and Professional Schools Institutional Review Board (GPS IRB). The IRB appreciates the work you and your faculty advisor, Dr. Kay Davis, have done on the proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations (45 CFR 46 - http://www.nihtraining.com/ohsrsite/guidelines/45cfr46.html) that govern the protections of human subjects. Specifically, section 45 CFR 46.101(b)(2) states:

(b) Unless otherwise required by Department or Agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:

Category (2) of 45 CFR 46.101, research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: a) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

In addition, your application to waive documentation of consent, as indicated in your Application for Waiver or Alteration of Informed Consent Procedures form has been approved.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your

research protocol, please submit a Request for Modification Form to the GPS IRB. Because your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the GPS IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the GPS IRB as soon as possible. We will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the GPS IRB and the appropriate form to be used to report this information can be found in the Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual (see link to "policy material" at http://www.pepperdine.edu/irb/graduate/).

Please refer to the protocol number denoted above in all further communication or correspondence related to this approval. Should you have additional questions, please contact me. On behalf of the GPS IRB, I wish you success in this scholarly pursuit.

Sincerely,

Jean Kang, CIP
Manager, GPS IRB & Dissertation Support
Pepperdine University
Graduate School of Education & Psychology
6100 Center Dr. 5th Floor
Los Angeles, CA 90045

cc: Dr. Lee Kats, Associate Provost for Research & Assistant Dean of Research, Seaver College
Ms. Alexandra Roosa, Director Research and Sponsored Programs
Dr. Yuying Tsong, Interim Chair, Graduate and Professional Schools IRB
Ms. Jean Kang, Manager, Graduate and Professional Schools IRB
Dr. Kay Davis
Ms. Christie Dailo