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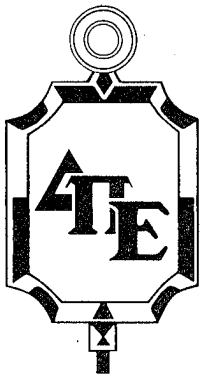

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BUILDING AND USING A PERSONAL/ PROFESSIONAL LEARNING NETWORK WITH SOCIAL MEDIA

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Abstract

"To have thousands of fellow minds in your pocket via a mobile device is to have an immensely unfair advantage over humans who think alone" (K. Honeycutt, personal communication, August 26, 2012). A strong personal/professional learning network (PLN) provides an advantage for learners and educators not available to those who work alone. Using a mixed-methods, cross-sectional survey research method, this study was designed to be the first in a series of research projects to investigate how educators are using the framework of a PLN to support and enhance classrooms to meet the needs of the learners. Specifically, this study addresses the definition of a PLN, positions social media as one avenue in building a PLN, and describes how educators are using a PLN in the educational environment. A PLN is a self-selected network of professionals from various occupational fields whose members hold common interests with the intent of sharing ideas and resources, collaborating, and providing support with the purpose of enhancing personal and professional learning. Educators use a variety of social media platforms as part of a PLN and a larger Personal Learning Environment (PLE). The most common theme was the use of the PLN to enhance individual educator knowledge through asking questions and seeking new resources for classroom use. Educators report the use of the PLN to seek professional development that is relevant to their individual classrooms and situations. Understanding how a PLN within a larger PLE can enhance the classroom experience for both teachers and students is important.

"To have thousands of fellow minds in your pocket via a mobile device is to have an immensely unfair advantage over humans who think alone" (K. Honeycutt, personal communication, August 26, 2012). A strong personal/professional learning network (PLN) provides an advantage for learners and educators not available to those who work alone.

Introduction

The reality of a PLN is not new; however, the conceptualization of using a PLN as part of a larger personal learning environment (PLE) is more recent (Kompen, Edirishingha, & Mobbs, 2008). Students have sought to learn from those they consider to be knowledgeable for centuries. Davis (2006) stated, "In Biblical times, the faithful gathered to hear the words of Jesus as he traveled. The same is true of Plato, Socrates, and their students, and of Mohammed and his followers" (p. 1). The desire to learn is a process through time (Wynn, 2002), and Vygotsky (1978) characterizes learning as a social and active process in his

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Social Constructivist Theory of Learning. The concept of a PLN incorporates seeking knowledge, learning through time, and learning as a social and active process. As students and teachers build a knowledge base, the individual PLN grows and strengthens, becoming a self-perpetuating learning network. Warlick (2009) writes, "Technology has inspired a shift from a hunting-and-gathering information economy to the domestication of the information landscape" (p. 13). He continues to explain that using a PLN within a PLE allows the student or educator "to capture and tame the resulting information overload" (p. 13). Kompen, Edirishingha, and Mobbs (2008) add,

> A PLE has the potential to not only support lifelong learning, but to bring together all forms of learning, including both formal and informal, occurring at a particular time. Learning takes place in different contexts and situations, and a PLE can enable the learner to organize his or her own learning. (p. 3)

As teachers encourage learners to create a PLN within a PLE, awareness of how educational technology will shift is important. The issues of providing technology, data security, and student safety must be addressed (Pontydysgu, 2007).

Mintzberg (1989), describing contingency theory, indicates that if the structure fits, it is an effective means of organization. Van der Krogt (1998) describes an essential element of a learning network as being three-dimensional and loosely coupled. Van der Krogt uses the term *loosely coupled* to mean "the freedom in the learning system for people to organize their learning and learning programs themselves. They describe what they learn, they create their own learning programs, and they mobilize their own support network of people and organizations to help them" (p. 166).

Purpose

According to Siemens (2008), "Networks have altered much of society, enabling access to content, experts, and global connections with fellow learners" (p. 19). Today's students use a variety of tools to learn. As teachers, adaptation to these tools is important. Oblinger and Oblinger (2004) advocate using the tools preferred by today's net generation of learners. The appeal of a PLN may be that "Professional Learning Networks help people learn from each other in a self-directed and communal way. Educators typically use PLN tools to ask for help, feedback, and ideas" (Trust, 2012, "Why PLNs?", para. 1). This study was designed to be the first in a series of research projects to investigate how educators are using the framework of a PLN to support and enhance classrooms to meet the needs of the learners who are digital natives (Prensky, 2001). As a first step, this paper will define a PLN, position social media as one avenue in building a PLN, and describe how educators are using a PLN in the educational environment.

Methodology

The study employed a cross-sectional survey method where participants were invited to respond to a set of questions developed specifically for the research project. The survey was created using design principles described by Hutchinson (2004) and followed the process of question construction, pilot study, deployment, and analysis. Additionally, the survey was designed to elicit further information that will be used to conduct additional studies in the area of PLNs and their use in the classroom. The researcher's institution approved the study. Informed consent was obtained from all participants.

Created using Qualtrics software, the survey was deployed through the author's PLN utilizing the social media sites of Plurk (http://www.plurk.com), Facebook (http://www.facebook.com), Twitter (http://www.twitter.com), LinkedIn (http://wwwlinkedin.com), and multiple listservs. The author's PLN has been created over approximately five years and includes both professional and personal contacts from 20 countries. Approximately 750 unique individuals comprised the original population. The types of individuals who were originally invited to participate in the survey included all contacts, friends, and connections within each social media site of the author's PLN. A more detailed description of the members of the author's PLN contacts is virtually impossible due to the dynamic nature of social media contact lists. In general, the population spanned from 18 – 90 years of age, all levels of education, socio-economic status, ethnicities, and professions. Only minors were excluded from completing the survey.

Distribution of the survey was different for each social media site. In Plurk, the link to the survey was posted on the author's timeline along with a request for the post to be rePlurked. In Facebook, the author posted a status update on the timeline within her own Facebook account and on each of the various educational pages to which she subscribes along with a request for the status update to be shared. The author posted a tweet via her Twitter account with the link to the survey, asking followers to retweet the post. Using LinkedIn, the author sent a message to all LinkedIn connections with a link to the survey. The message asked the author's connections to forward the message to his/her connections. Once a post, status update, tweet, or message is forwarded by a recipient, the item becomes viral, meaning that the author may or may not be aware of the number of people who continue to share the item on their own timelines or with additional connections. To deploy the survey via listservs, the author sent an e-mail message to the listserv administrators asking for the message to be distributed based upon the guidelines of the individual listserv. Because listservs are e-mail based, the message could be forwarded to an infinite number of people.

Data Collection and Analysis

The research design of cross-sectional survey methods was selected based upon the number of potential respondents. It was a convenience sample in that the

deployment was through the author's own PLN for the initial pool of recipients. It is unknown how many of the original recipients forwarded the original post to their own personal networks. The data collected included quantitative and qualitative data in response to the survey questions (Appendix). Descriptive statistics calculated in the Qualtrics software were used to analyze the quantitative data. Qualitative data was analyzed through manual thematic coding techniques.

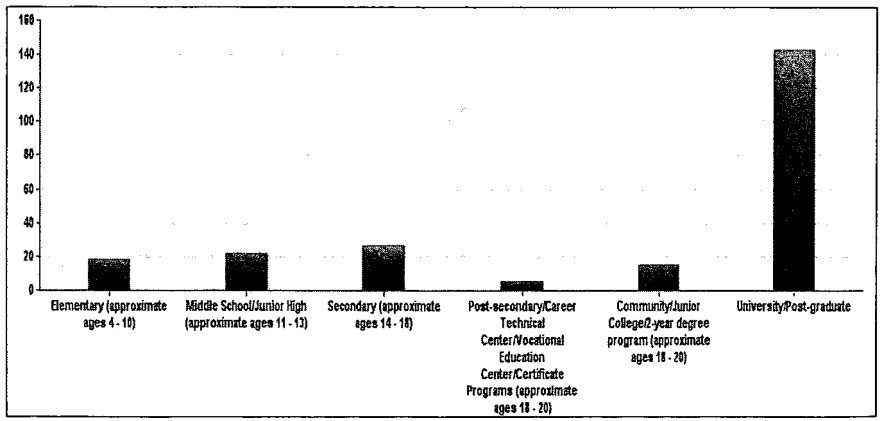
Approximately 125 responses were received in the first week of the survey deployment and 343 responses have been received as of the writing of this paper. Of the respondents 238 indicated that they were teachers or educators. The survey will continue to be active and disseminated over a variety of listservs to continue to gather additional data to be used in future studies.

Demographics of the Respondents

Demographic data for the 238 teachers responding to the survey indicates that the respondents are varied in age, education, subject area taught, grade/age level taught, and experience. Ages ranged from 23 to 70. Teaching experience ranged from first year teachers to teachers with 39+ years in the classroom. The average number of years of experience equaled 18.66 years with a standard deviation of 10.55. As shown in Table 1, teaching assignments were distributed between K-12 (30%) and college/university (69%) with some differences in the breakdown by teaching level.

Table 1

What level of students do you teach?



The teacher respondents live in nine countries, with the United States of America being the dominant locale with 95% of the respondents. The others reported living in the United Kingdom, Sweden, Iceland, Finland, England, the Faroe Islands, Bahrain, and Australia. Of the respondents, 72% were female and 28% were male. The respondents were primarily educated at the graduate level. Of those reporting education level, 90% had completed some graduate work while 43% of the respondents had completed a doctoral level degree. Only 10% reported an educational level of bachelor's degree or lower. Business education/business subjects were the most popular with 27% of the respondents indicating this as the teaching field, followed by 10% of respondents teaching English, languages, or non-business communication classes, and 9% who indicated that they were technology/computer teachers. Only 8% of the respondents reported teaching in the social sciences, 7% in teacher education/preparation fields, and 6% taught in the health sciences. Various other fields such as the arts, sciences, and special education were also subject areas of the respondents.

Findings

Defining a PLN

Mintzberg's (1989) theory can be applied to a PLN of today. Teachers and learners are increasingly using the various social media tools available to build a PLN to enhance today's classrooms and learning environments. A PLN means different things to different people. From the 238 analyzed survey responses, common themes emerged. A PLN:

- is a group or network;
- provides connections;
- shares common interests;
- is global;
- is personal and self-selected; and
- allows for collaborations.

Utilizing the responses of the survey and a review of the literature available, the following is offered as a definition of a Personal/Professional Learning Network. A PLN is a self-selected network of professionals from various occupational fields whose members hold common interests with the intent of sharing ideas and resources, collaborating, and providing support with the purpose of enhancing personal and professional learning.

Although, many, if not most, institutions offer a learning management system (LMS) to enhance the classroom environment, the LMS does not qualify as a PLN based upon the provided definition. Examples of LMS environments include Blackboard®, WebCT®, Sakai®, Moodle®, Edmodo®, etc. Built into a LMS are the social connection and social media tools, and the LMS can be part of a larger

Personal Learning Environment (PLE); however, the tools are restricted within the closed environment of the LMS. A PLN within a PLE offers students and educators a platform for collaborating and sharing.

> I think it's important to embrace social media as it is the primary way that young people communicate, alongside text messaging and instant messaging. Much of the time we force students down the route of email. Do we do that because it is easier for us? In my experience of using Facebook groups with students they pick up communications far quicker than email. (Britland, 2012, para. 17)

One of the major advantages of a PLN over a LMS is that it is a perpetual network; whereas, the LMS disappears at the end of the semester or school year. Additionally, users of the PLN already know and understand how to use the Web 2.0 and social media technologies, eliminating the need to learn how to use a LMS that may have a steep learning curve. A LMS "aids and abets the teaching-as-knowledge-transfer paradigm" (Mott, 2010, The PLE and Personal Learning Networks, para. 1). Mott (2010) continues by stating, "The PLE is a looser, non-institutional collection of tools aggregated by individuals to support their own learning activities" (Mott, 2010, Bridging the Gap, para. 1). The primary benefit of a PLN is the personalization of the network , and a PLN is comprised of the tools that are the most comfortable for the user.

A PLN allows learners and teachers to connect with others. Siemens (2005) offers a learning theory of connectivism. He states, "connections between disparate ideas and fields can create new innovations" ("Networks", para. 3). When an individual becomes part of a learning network, the potential for growth in learning is unlimited. "Personal knowledge is comprised of a network, which feeds into organizations and institutions, which in turn feed back into the network and then continue to provide learning to the individual" (Siemens, 2005, Principles of Connectivism, para. 4). Connectivism is a valuable and necessary skill in the digital age.

Social Media's Role in Building a PLN

Educators use a variety of social media platforms as part of a PLN and a larger PLE. When asked to indicate the top three social media sites used, the respondents listed Facebook (65%), blogs (48%), and LinkedIn (45%) most frequently. Also mentioned were Skype (35%), Twitter (34%), Google+ (34%), and wikis (33%). When asked about the most important features of a PLN, common themes emerged once again:

- being connected and able to interact with multiple people;
- 24/7 availability to the network;
- diversity of the people in the network;
- currency of the people in the network;

- the supportive atmosphere of the network;
- the ease of use/simplicity of the tool;

One comment provided explains the overarching theme best, "I can count on my PLN to provide multiple responses to any question, about any subject, at any time. Someone is always online and ready to help."

How Educators are using a PLN and Social Media in the Educational Environment

Most of the responses involved using the resources of their PLN to enhance their own knowledge to prepare for teaching. By far, the most common theme was the use of the PLN to enhance individual educator knowledge through asking questions and seeking new resources for classroom use. Educators reported the use of the PLN to seek professional development that is relevant to their individual classrooms and situations. Quoting one respondent, "I get ideas from others and different ways to implement/improve on my own ideas. I've made invaluable connections that have allowed my students to Skype and otherwise communicate with a variety of teachers and professionals from around the globe." One interesting use of the PLN involved educators seeking emotional support from their peers. The educators indicated that they used the PLN to build a network of peers that could provide insight, support, and information into a variety of classroom issues. The teachers reported using the PLN to create collaborations with educators around the globe. Additionally, respondents mentioned using the PLN as a way to seek advice and ask for emotional support for frustrating classroom experiences or to deal with difficult students and/or parents, and to build relationships with other educators. Approximately 3% of the respondents specifically mentioned using the members of the PLN to act as guest speakers in the classroom. Through the use of a video conferencing tool, such as Skype, the teacher can invite experts from around the globe to share ideas and information with the students.

Teachers were creative in using their PLNs, many respondents mentioned using the PLN to share their own best practices, conduct research, and communicate with students outside the classroom setting. A few specific responses included using a PLN to find podcasts to show in class to teach specific lessons or to act as teaching prompts. The educator would ask the PLN to make recommendations for teaching resources on a specific topic, reducing research time to find new resources. One educator uses Facebook to teach language. This educator posts status updates in German and requires students to respond to the status in German. Others use the tools to provide individualized lessons to the students. One university class uses Facebook as the Learning Management System. Student lessons are provided via Facebook where discussion and collaboration occur. Questions are handled via e-mail in this situation.

An additional idea for using a PLN and social media tools in the classroom includes using the tools as a way to share information that would not be disseminated in any other way. For example, a student can learn computer video game programming "by participating in collective knowledge building opportunities by adding their own snippet of code to a larger project or sharing hacks for a video game" (Trust, 2012, "PLNs and Students," para. 1). Multiple sites and discussion forums are devoted to video game programming development.

A popular use of social media tools involves class discussions. Students can participate with other students in multiple countries by commenting in educational discussion boards on various subjects. Collaborative projects can be developed between educators for the students to meet specific instructional objectives.

Nielsen (2011) wrote, "In the 21st Century teachers are no longer the sole imparters of information. Instead their role shifts to empowering students to learn independently in part by developing personal learning networks in areas of passions, talents, and interests" (para. 1). Educators can utilize a PLN in the classroom through a variety of resources and techniques. Students can utilize a teacher's PLN or their own PLN to learn topics not covered in the school.

Using social media in the classroom does have limitations and concerns. Britland (2012) shares various ways to use social media. Facebook can be used to post information about a class, program, or school. The Facebook page can be set to push information only, or to allow for groups where collaborative projects can be conducted in an environment that the teacher can monitor and control. Facebook groups do not require group members to be "friends" with each other in Facebook. Twitter accounts can also be used to push information to students or parents. The teacher creates a class account and those who utilize Twitter can follow the account to receive up-to-date information about assignments, activities, or class information. One concern is that many schools filter social media sites. "However, many students are using smartphones to check their favorite network so filtering them in school makes little difference. In fact, by filtering we have even less opportunity to monitor whether they are being used appropriately" (Britland, 2012, para. 23).

Limitations

Limitations do exist with a study of this nature. The survey was deployed through the researcher's own PLN, limiting the scope of the potential pool of respondents; however, the survey was forwarded by members of the researcher's PLN to the PLN of some of the respondents, increasing the potential pool of respondents. Due to the nature of survey deployment, a description of the population is difficult to provide. Additionally, as with any survey research, the responses are the opinions of those replying to the survey. There may be response bias built into the data collected.

Conclusion

Dalsgaard (2006) offered a definition of a social network as a connection between people "engaged in different kinds of communication" (E-learning using social software, para. 6). He also indicated that the network should include connections to resources such as web pages. This approach supports independent learning of students while maintaining some connection to the teacher. Dalsgaard concluded that "Using social software also equips students with valuable tools for using the web as a resource in order to develop their understanding and solve problems—whether in school, at work or in their personal lives" (Conclusion, para. 3). In the networked community of learning, not only students seek connections; educators are also seeking connections and support. Both groups utilize various tools to network with their peers around the world. Understanding how a PLN within a larger PLE can enhance the classroom experience for both teachers and students is important. Social media is one avenue to build a PLN and utilize the anywhere at any time philosophy of learning. As educators, it is important to not only be aware of the tools being used, but also build and use a PLN to continually learn the newest technologies. Teaching today's students to be wise consumers of social media is an important lifelong learning skill.

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Appendix

PLN Survey

1. What is your year of birth? (branch to exit page if answer is => 1994)
   a. Drop-down list of years
2. In your own words, define Personal Learning Network (PLN).
3. Are you currently a student? (branch to question 5 if No)
   a. Yes
   b. No
4. What is your major or job goal?
5. Are you a teacher? (branch to question 11 if No)
   a. Yes
   b. No
6. A teacher—What is your primary subject area?
7. How many years of teaching experience do you have?
8. Where do you teach?
   a. Elementary
   b. Middle School/Junior High
   c. Secondary
   d. Post-Secondary/Career Technical Center
   e. Community or Junior College
   f. University
9. How do you use the PLN to enhance your classroom teaching?
10. Do you "friend" students? (branch to question 12 for all answers)
    a. Yes
    b. No
    c. After they graduate
    d. In some sites that are for classroom use only
11. Not a teacher--What is your profession?
12. What social media sites do you use as part of your PLN? Select all that apply.
    a. Blogs
    b. Delicious
    c. Diigo
    d. Facebook
    e. Google +
    f. Google Hangouts
    g. LinkedIn
    h. MySpace
    i. Ning
    j. Plurk
    k. Professional ListServs
    l. Skype
    m. Twitter

n. Wikis
o. Work-Sponsored Sites
p. Other

13. Of the social media sites you use, what are the top 3 you prefer to use as part of your PLN?
    a. Blogs
    b. Delicious
    c. Diigo
    d. Facebook
    e. Google +
    f. Google Hangouts
    g. LinkedIn
    h. MySpace
    i. Ning
    j. Plurk
    k. Professional ListServs
    l. Skype
    m. Twitter
    n. Wikis
    o. Work-Sponsored Sites
    p. Other
14. How do you use your PLN?
15. What is the most important feature of your PLN?
16. What is the least important feature of your PLN?
17. What do you find to be the most frustrating part of using a PLN or social media site?
18. If you could design the platform, what would you include in a site?
19. Do you live in the USA? (branch to question 21 if No)
    a. Yes
    b. No
20. In the US—State?
    a. Drop-down list of all states
21. Not in the US—Country?
    a. Drop-down list of all countries
22. Gender
    a. Male
    b. Female
23. Level of Education
    a. Less than a H.S. Diploma
    b. High School Diploma
    c. Certificate Program
    d. Associate's/Applied Associate's Degree
    e. Bachelor's Degree

    f. Some graduate school
    g. Master's Degree
    h. Education Specialist
    i. Doctoral Degree
14. Are you willing to be part of a further study in this area? If so, please "Like" the PLN Project page on Facebook. Insert URL here.