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# Professional Learning Networks Designed for Teacher Learning

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## Abstract

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*In the information age, students must learn to navigate and evaluate an expanding network of information. Highly effective teachers model this process of information analysis and knowledge acquisition by continually learning through collaboration, professional development, and studying pedagogical techniques and best practices. Many teachers have extended their learning by developing online professional learning networks (PLNs). PLNs connect teachers to other individuals worldwide who can offer support, advice, feedback, and collaboration opportunities. PLNs also allow teachers to collect information from various Web sites and access it in one organized area so they can efficiently stay up to date on the latest teaching techniques, pedagogies, and changes in the field of education. This paper reviews three popular PLNs created for educators—Edmodo, Classroom 2.0, and The Educator's PLN—and provides an analysis of how teachers use the PLNs for learning, sharing, and communicating. (Keywords: professional learning network, PLN, information aggregation, social media, Classroom 2.0, Edmodo, The Educator's PLN)*

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In the information age, students must learn to navigate and evaluate an expanding network of information. Highly effective teachers model this process of information analysis and knowledge acquisition by continually learning through collaboration, professional development, and studying pedagogical techniques and best practices (Commission on Effective Teachers and Teaching, 2011).

Many teachers are joining online communities of likeminded individuals and

subscribing to various blogs and Web sites to continue learning and improve their professional practice. More than 6.5 million teachers and students are using Edmodo, a social-networking tool for educators. Edmodo has 12 subject communities that provide a safe space for teachers to interact and connect with thousands of educators in the same subject field. Two of the popular online communities for teachers, Classroom 2.0 and The Educator's PLN, have more than 72,000 members combined. In addition, more than 2,000 teachers participate in a weekly online discussion about education through the Twitter hashtag #ed-chat. The number of teachers participating in online communities, discussions, and learning opportunities is expanding at a rapid pace as more teachers use the Internet to connect with others and improve their professional skills.

When a teacher joins an online community or subscribes to education blogs, podcasts, and news feeds, the teacher is building a professional learning network (PLN). PLNs provide instant access to information and connections to thousands of individuals with an array of expertise. PLNs are transforming professional development and learning opportunities for teachers.

### What Is a PLN?

A PLN is a system of interpersonal connections and resources that support informal learning. Flanigan (2011) describes PLNs as teacher-driven, global support networks that decrease isolation and promote independence. There are two types of PLNs: information aggregation and social media connections.

### Information Aggregation

The information aggregation type of PLN allows teachers to stay up to date

on new information by following multiple Web sites and news sources through RSS (Really Simple Syndication) feeds. RSS feeds allow material from one Web site (i.e., New York Times Education Column) to be read on other Web sites (i.e., Google Reader). RSS readers use RSS feeds to collect new posts, articles, and updates from Web sites that teachers identify as valuable and “push” this information to them via the RSS reader (see Figure 1, p. 134). RSS readers save teachers time because they do not have to visit each individual Web site and check for updates. Teachers can rapidly skim through hundreds of articles in RSS readers and then select the articles they would like to read in their entirety. Warlick (2009) describes how RSS feeds have tamed the acquisition of information, as individuals are no longer “hunting and gathering information” (p. 14).

Another form of information aggregation is e-mail subscriptions. Many Web sites include a “Follow Me” or “Subscribe” widget that allows viewers to input their e-mail addresses and receive e-mails anytime there is a new post or update on the Web site or blog. This turns the e-mail inbox into a RSS reader and allows teachers to gather information in their e-mail instead of visiting a RSS reader Web site.

### Social Media Connections

The social media connection type of PLN refers to teachers' use of social media tools to connect with various individuals around the world. These social media tools include social networking sites (Facebook, Twitter), affinity-based group sites (Ning, Wikispaces), and real-time interaction tools (online chat rooms, instant messaging, Skype, Second Life). Although Ning, Facebook, and Twitter have real-time interaction capabilities, teachers

generally use these sites for asynchronous learning, in that they post a question to a community discussion board or send a message to another individual and check back at a later time to find a response. These sites are less demanding on teachers' time because they can write or respond to posts whenever they have free time in their schedule. These sites also provide a space for collective knowledge building and sharing where teachers can find support from large groups of individuals that pool their answers to find the best solution to a problem.

Real-time interaction tools allow teachers to have conversations with others worldwide to receive feedback on new ideas, discuss lesson plans, ask for support, solve problems, and collaborate. Teachers can video chat through Skype, text chat with instant messaging tools, and even create an avatar and talk with someone in real time through the virtual world Second Life. Real-time interaction tools are useful for building relationships and seeking one-on-one support, such as through mentoring.

Typically a teacher will develop both types of PLNs; however, it can be overwhelming sorting through all of the information (see Figure 2), figuring out the social norms for the activity spaces, and learning to use the new tools (Flanigan, 2011). It is recommended that teachers start with one tool (i.e., Google Reader or Ning) and then gradually build their PLNs as they become more comfortable accessing information and navigating the online activity spaces.

Teachers who are able to manage the information overload of a PLN will gain instant access to support, new ideas, feedback, collaboration opportunities, and conversations focused on practical solutions. PLNs transform the paradigm of the isolated teacher who shows minimal professional growth into a lifelong learner who grows and shares expertise with others in his or her network. Teachers who develop and stay motivated to participate in PLNs are perpetual learners. They use RSS readers to stay up to date on new teaching techniques, best practices, and instructional models. They use social



Figure 1. Google Reader aggregates RSS feeds from various sources.

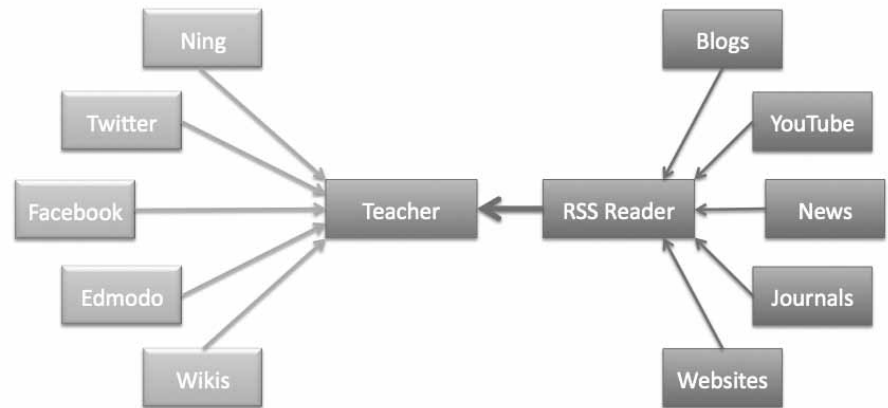


Figure 2. Professional learning network for a teacher.

media tools to converse with other educators. They model lifelong learning to students by continuing their education after school and at home.

### Review of Three Popular PLNs

Classroom 2.0, Edmodo, and The Educator's PLN are three popular PLNs for teachers that contain both information aggregation and social media tools. These Web sites make it easy for individual members to shape their own learning. These Web sites allow individual members to create a profile page, join interest groups, participate in discussions, share resources, and build

relationships with other members. However, each Web site is unique and adapted to the members in the community.

I will provide a brief overview of the three PLNs, followed by an analysis of how teachers use these Web sites as activity spaces for learning, sharing, and communicating.

### Classroom 2.0

Classroom 2.0 (<http://www.classroom20.com>) is a PKN built on the Ning platform (a social networking tool). Ning (<http://www.ning.com>) is a pay-for-service Web site that allows individuals to create their own Ning.

Figure 3. Classroom 2.0 profile page.

com Web site for a monthly fee. Ning.com provides a fully developed social networking space with various tools and features, including chat rooms, discussion boards, profile pages for members, interest groups, video and photo upload capabilities, and widgets that allow individual members to customize their profile pages. Administrators can change the design, layout, and tools offered within their Web sites.

Classroom 2.0 has more than 61,000 members and receives around 2,500 views a day. There are more than 8,100 forum discussions, 2,000 shared videos, and 741 groups. Classroom 2.0 also has a wiki, Twitter feed, Facebook page, and Diigo account for sharing bookmarked Web sites.

Classroom 2.0 is unique in that it offers “Classroom 2.0 LIVE,” a real-time weekly webcast. The webcast is hosted by one or more of the Classroom 2.0 “hosts” or by a special guest speaker. The hour-long webcasts range in participant numbers. The webcast about using the online resource Easybib had 34 viewers and included interactive polls and discussions using the chat feature (Somashekar & Taparia, 2011). Some of the topics for the weekly webcast include Arizona Technology Integration Matrix, Other Worlds Language Resources, and iAuthor an iBook (Classroom 2.0, 2011). These webcasts are archived on the “Archives and Resources” page, which also contains all of the links presented in the webcasts.

Every Classroom 2.0 member can create a profile page with an image, background information, and share updates and resources on his or her wall. Each profile page highlights the member’s groups and discussions. The profile page also allows the members to add RSS feeds from different Web sites, similar to an RSS reader (see Figure 3).

### **The Educator’s PLN**

The Educator’s PLN (<http://edupln.ning.com>) is also a social networking site created on the Ning platform. The Educator’s PLN has more than 11,000 members, 900 blog posts, 730 videos, 100 groups, and 430 forum discussions. The largest groups in The Educator’s PLN are Edchat (450+ members) and EDTech (500+ members).

The Educator’s PLN and Classroom 2.0 share many similar features. However, The Educator’s PLN Web site is more member-focused because its main page features uploads and posts from members. Classroom 2.0’s main page features Classroom 2.0 LIVE and other administrator-driven content. The Educator’s PLN also contains a list of upcoming events and a chat page that allows members to chat instantly with any other members currently viewing the Web site (see Figure 4, p. 136).

### **Edmodo**

Edmodo (<http://www.edmodo.com>) is a social networking site with a layout and design very similar to Facebook. Edmodo has more than 6.5 million users and hosts online conferences called EdmodoCon with thousands of attendees (Flanigan, 2011). Every member has a profile page that displays groups, communities, and latest posts. Members can also upload a profile picture and share links and videos. Each member has a personal library and can add resources shared from other members. Members can view their libraries from anywhere (home, school, while traveling) through the Edmodo Web site, which allows members to stay connected 24/7 to the resources they have identified as useful.

Edmodo also features subject and publisher communities. Publisher

communities (such as ISTE or Discovery Education) are sponsored communities that promote their products. Subject communities include Math, Science, Language Arts, Social Studies, Health and PE, World Languages, Computer Technology, Career and Tech Ed, College Readiness, Creative Arts, Special Education, and Professional Development. The subject communities range in the number of members from 1,000 (College Readiness) to 10,000 (Language Arts). In subject communities, members can share resources, ask questions, and solicit ideas on the community wall. When a member joins a community, all of the posts from that community are sent via RSS feed directly to the member's personal profile page so they can keep up to date on all of the community posts without ever leaving the profile page (see Figure 5).

One of the unique and beneficial features of Edmodo is that it allows teachers to create groups for their classes. After teachers create a group page, they receive a special code that they share with their students. The students use this code to join the group. Teachers can post notes, alerts, assignments, quizzes, polls, and grades on the group page.

### PLNs: Design, Motivation, and Learning

#### **Design Elements that Facilitate Communication, Sharing, and Learning**

Classroom 2.0 and The Educator's PLN have similar layouts and features that promote communication, sharing, and learning. They both have a chat feature that allows Web site visitors to chat instantly with other individuals visiting the Web site at the same time. They also have blogs that allow individual members to create their own posts to share success stories, information, and resources. Both PLNs have one main discussion forum for the entire Web site and discussion forums for each special interest group. The special interest group discussion forum posts are more specific and geared toward the group members, whereas the main Web site discussion forum has an assortment of random posts.



Figure 4. The Educator's PLN main page.

Edmodo is the most widely used PLN when compared to Classroom 2.0 and The Educator's PLN. Although the activity level of participation may be accounted for by the fact that Edmodo has more than 6.5 million users (compared to Classroom 2.0's 60,000 members and The Educator's PLN's 11,000 members), Edmodo also has a very clean, easy-to-navigate layout that promotes sharing and learning. Every member's profile page includes an RSS feed to all of the learning communities the member joins so the member does not have to visit each learning community to read

the newest posts and discussions. The member can also respond to the posts in his or her RSS feed directly from the profile page.

Edmodo is not overpopulated with hundreds of special interest groups. The site has only 12 subject communities where members can share resources and ask for feedback from other members within the same subject area. The multitude of special interest groups in Classroom 2.0 and The Educator's PLN pull members away into silos, where they communicate only with the other 50–1,000 members

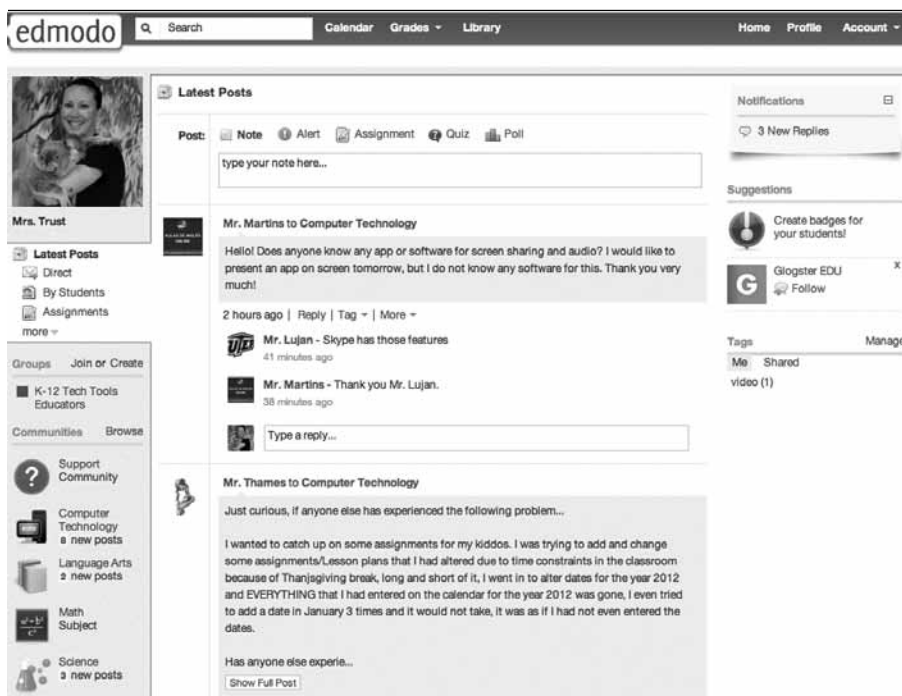


Figure 5. Edmodo profile page.

in the group. Edmodo's groups range from 1,000 to 10,000 members, so when an individual posts, she or he receives many more responses than a typical post in one of the special interest group discussion forums in Classroom 2.0 or The Educator's PLN. Unlike Classroom 2.0 and The Educator's PLN, the majority of the posts in subject communities in Edmodo have multiple responses (usually responses within the same day).

Edmodo also facilitates sharing and communication with the library feature and notifications tool. The library feature allows members to upload and collect resources and view them on any computer. If a member likes a resource that another member shares, the member can click a button that instantly puts the resource in the member's library. Edmodo also has a notification tool that allows members to receive e-mails anytime there is a response or follow-up to their post. Members can join discussions and will receive e-mails every time another member adds to the discussion. This pushes the information from Edmodo to the member's e-mail box and makes it easier to stay involved with discussions and find resources.

### **Key Topics Teachers Are Discussing**

Teachers use PLNs to share information, connect with other members, find resources, solicit ideas, and obtain feedback or help. In Edmodo, members typically write short posts in each subject community, whereas in Classroom 2.0 and The Educator's PLN, members write a combination of short posts in the discussion forums and longer, academic posts in the blogs. Members use the blog features in Classroom 2.0 and The Educator's PLN to share thoughts about education articles or journal their classroom activities.

Teachers use the PLNs to connect with individuals interested in collaboration. Teachers write posts asking for teachers willing to Skype with their class, join their school on a project, or pair with their class for pen pals. Teachers also post requests to connect with members willing to collaborate on designing a new lesson or learning activity.

A popular topic discussed in PLNs is resources. Many teachers post links to resources for members to view. Teachers also ask other members for help finding specific resources. A science teacher asked for suggestions on solar system resources in the Science community on Edmodo, and within 2 days the teacher received seven responses from other

teachers and a large list of solar system links (Funchess, 2011).

Teachers also use PLNs to solicit ideas, feedback, and help. One teacher posted in Edmodo that she was having her students create podcasts and needed topic ideas for the podcasts. She received 10 responses ranging from "produce a copyright video on xtranormal" to "talk to your co-workers, and see if there are standards that could be addressed" (Legemaat, 2011). Another teacher posted to a discussion forum asking for ideas and resources for designing a summer course for gifted writers (Jurjovec, 2011). Many teachers ask for help and advice on PLNs. Some of the topics included how to deal with anti-technology teachers, how to design a computer science course for high school students, what iPad apps are popular for engaging students in learning, and how to set up an after-school media club.

### **What Motivates Teachers to Engage**

Teachers engage in PLNs to grow professionally, learn from others, and contribute to a community. Teachers are motivated to engage in PLNs because they can solicit help and support, demonstrate their knowledge by helping others, and converse with individuals about new information and feedback.

Edmodo is an engaging PLN because it provides teachers with a safe space for asking questions, sharing resources, and learning from other members. Edmodo is a very well used resource. The simple layout, variety of tools (library, class groups, webinars, badges, mobile gradebook), and subject communities draw teachers to participate. Also, the notification feature on Edmodo keeps teachers involved with discussions and posts via e-mail so they continue reading responses from members without logging in to Edmodo. Edmodo provides up-to-date insights about how often a resource shared from a member is added to other members' libraries. This motivates members to share helpful resources and build their own libraries.

Classroom 2.0 and The Educator's PLN also provide tools that engage members. Members can upload photos, participate in webinars (Classroom 2.0), create and RSVP to events, create blogs, write posts, and respond to discussions. The Educator's PLN has a "Leaderboards" page that features top content, members, and videos. Members that are frequently active in the PLN are featured on that page.

Motivation also stems from the idea that one can contribute to the collective knowledge and help others (National Research Council, 2000, p. 61). When teachers develop a PLN, they become part of the other members' networks. PLNs succeed and grow based on member input. Anyone can share their expertise in a PLN, and this collective knowledge from various experts is what helps PLNs grow. It is also one of the reasons teachers join PLNs—to learn from other individuals that have expertise in different areas while also sharing their own expertise.

### Conclusion: Teachers as Lifelong Learners

Teachers work in a challenging, ever-changing environment. The way individuals learn has shifted over time based on research and new theories, such as multiple intelligences, students as "blank slates," project-based learning, learner-centered environments, etc. Only the teachers who are continual learners that work to improve their practice, skills, and instructional strategies can successfully help others learn. According to the National Research Council (2000), "Teachers are key to enhancing learning in schools. In order to teach in a manner consistent with new theories of learning, extensive learning opportunities for teachers are required" (p. 203). Teachers need to be given the opportunity to learn and grow with their practice. The teachers that stay in their isolated classrooms and do not reach out for help typically teach the same way regardless of the new theories of learning or the

new challenges in their classroom because they do not have the support and knowledge to change. Successful teachers endure the vulnerability of being a learner and take risks to provide the most effective instruction to their students.

Many teachers have taken the initiative to continue learning by developing online PLNs. Teachers that participate in PLNs demonstrate what the National Research Council (2000) calls "adaptive expertise" (p. 48). Teachers that have adaptive expertise are willing to be flexible and grow with the changes they face. Adaptive experts use metacognitive strategies to examine their knowledge and continually seek to improve their expertise. Teachers perform self-assessments to see where they can improve and then use their PLN to find information and connect with others who will help them.

Edmodo, Classroom 2.0, and The Educator's PLN continue to grow in popularity because they provide online spaces where teachers can learn new information and connect with other individuals worldwide who can offer support, advice, feedback, and collaboration opportunities. Teachers are motivated to participate in these Web sites because they can learn from other members while also offering their own expertise to help other members. It is a cyclical learning process where teachers both receive help and provide advice. It is through this process of giving and receiving information and networking with likeminded individuals that teachers can thrive in a demanding and dynamic work environment.

### Author Note

Torrey Trust has an MA in educational technology from San Diego State University and is pursuing a PhD in education with a specialization in technology and society at the University of California, Santa Barbara. Her research focuses on the use of professional learning networks to improve teachers' confidence in using technology as a learning tool. Please address correspondence regarding this article to Torrey Trust, 6626 Picasso Rd., Apt. 46, Goleta, CA 93117. E-mail: [ttrust@education.ucsb.edu](mailto:ttrust@education.ucsb.edu)

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