International Journal for Professional Educators

The Delta Kappa Gamma Bulletin

Professional Development

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The *Bulletin*, the official journal of The Delta Kappa Gamma Society International, promotes professional and personal growth of members through publication of their writings.

The *Bulletin* invites materials appropriate to the Society's Purposes: position papers, applied and/or data-based research, and other articles on announced themes or other topics of interest to educators; letters to the editor; viewpoints; book reviews; annotated bibliographies; poetry; and graphic arts.

Prose manuscripts for the *Bulletin*, a refereed journal, are reviewed by the Editorial Board and the Society editorial staff. Selection is based on relevance of the topics addressed, accuracy and validity, contribution to the professional literature, originality, quality of writing, and adherence to Submission Guidelines (see page 55). Editorial Board members evaluate each submission's focus, organization, development, readability, and accessibility to the general audience of *Bulletin* readers. Due to the diversity of the *Bulletin* audience, material of a religious, political, or patriotic nature is not suitable for publication.

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*The Delta Kappa Gamma Society International
promotes professional and personal growth of women
educators and excellence in education.*

Call for Submissions

Members are encouraged to submit manuscripts for consideration by the *Bulletin* Editorial Board. *The Delta Kappa Gamma Bulletin* accepts Action Research, Qualitative Research, Quantitative Research, Annotated Bibliographies, Program Descriptions, Position Papers, Book Reviews, Viewpoints, Graphic Arts, Letters to the Editor, and Poetry for **print** issues (spring, fall) and **online** issues (summer, winter). Manuscripts should be focused, well organized, effectively developed, concise, and appropriate for *Bulletin* readers. The style should be direct, clear, readable, and free from gender, political, patriotic, or religious bias. For more detailed information, please refer to the Submission Guidelines on page 55 and the Submission Grid on page 56. Listed below are the suggested themes of upcoming issues.

Fall 2012 (79-1) International Learning (Print)
(deadline is June 1, 2012)

Schools for Africa ♦ International Partnerships ♦
Impact of World Fellowship-Sponsored Education ♦ Student/Faculty Exchange ♦
Global Standardization ♦ Language Learning ♦ Education Management ♦
Adult Education Retraining ♦ Language Development

Winter 2013 (79-2) Educational Research (Online)
(deadline is September 1, 2012)

Action Research ♦ Qualitative Research ♦ Quantitative Research ♦
Mixed-Methods Research

Spring 2013 (79-3) Civic Engagement (Print)
(deadline is December 1, 2012)

Social Issues in Schools ♦ National Challenges ♦ Green Education ♦
Partnerships with Business/Nonprofits ♦ Service Learning/Volunteerism ♦
The Politics of Education

Summer 2013 (79-4) Education Paradigm Shifts (On Line)
(deadline is March 1, 2013)

On-Line Certification ♦ Economics of Education ♦
Distance Learning ♦ Leadership ♦ Privatization of Education ♦
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From the Editor

The Delta Kappa Gamma Society International
promotes the professional and personal growth of women educators
and excellence in education.

The focus on **professional development** in this issue clearly aligns with the mission statement of our organization of more than 90,000 key women educators in 17 countries. Dedicated to excellence in education, DKG members understand that personal and professional growth are critical to developing and maintaining the knowledge, skills, and dispositions that characterize a quality educator who can help students learn at the highest levels. Through meaningful and ongoing professional development, one can increase content knowledge, develop ever-stronger pedagogical skills, and hone the ability to interact with and motivate learners. Professional development thus clearly contributes to the creation of schools where all are deeply engaged in learning and where excellence abounds.

Authors in this issue provide varied perspectives on professional development. Exploring the beliefs of instructional leaders, Lutrick and Szabo provide an excellent review of widely accepted standards for quality professional development. Linder explores the value of professional learning communities in ongoing growth, while Burkman considers the specific needs of early-career educators. Taking a slightly different slant on the theme, Manikowske and Sunderlin describe a preservice program that develops participants' professional knowledge, skills, and dispositions through real life, hands-on experiences in a service organization. Finally, editorial board member Shillingstad interviews educator Wendy Grojean to explore how she provides professional development with and about technology in an innovative setting.

The *Bulletin* is, of course, both a **means to** and a **source of** professional growth and development. Members grow personally and professionally by sharing their expertise and perspectives through their writing. Growth comes from framing and refining articles based on experience or research, as well as from interaction with the editorial board and editor in the process leading to publication. As one recent author noted regarding this process, "It has been an excellent learning experience for me, and I am grateful for the opportunity to publish in *The Delta Kappa Gamma Bulletin*."

In turn, the articles in the *Bulletin* are a great source of professional development for readers. For example, in this issue, general interest articles provide insight into brain-based pedagogy and online education. A review of a controversial book by noted educator Diane Ravitch about U.S. reform efforts provides considerable food for thought about high-stakes testing and business approaches to education. Reflect upon the articles in this issue as an individual…or share insights with others at a chapter meeting or study group. May the *Bulletin* be a constant source of professional inspiration and development for members and for educators everywhere.

Judith R. Merz, EdD

Editor

Instructional Leaders' Beliefs about Effective Professional Development

By Emily Lutrick and Susan Szabo

In this qualitative study, the beliefs of instructional leaders in an elementary school setting were compared with national standards and research on the topic of what characterizes effective professional development. The researchers interviewed two principals and three assistant principals to determine their beliefs about effective professional development and then compared those beliefs to the policy and research on the topic. The data suggested that principals' and assistant principals' beliefs about effective professional development were similar and that these leaders were aware of and utilized all of the effective professional development standards at their schools.

Professional development (PD) of teachers is considered the most effective way to improve the teaching process (Eun, 2008). Principals and assistant principals, as instructional leaders, are becoming more and more responsible not only for determining the topics of PD sessions on their campuses but also for delivering this PD. Therefore, it is essential these leaders have an understanding of what characterizes effective PD. The National Staff Development Council (NSDC; 2011) published a set of standards to help guide educational leaders when creating or implementing effective PD. The purpose of this small, phenomenological, qualitative study was to compare the beliefs of varied instructional leaders in an elementary school setting with the national standards and research on what characterizes effective PD. The following questions guided this study:

1. How are principals' and assistant principals' beliefs about effective PD different and similar?
2. How do these beliefs compare to what the research literature and PD standards describe as effective PD?

Professional Learning Standards Linked to Research

The NSDC (2011) has asserted that effective professional learning is necessary for everyone who works with children in a learning environment. NSDC leaders believe such learning is essential in "creating schools in which all students and staff members are learners who continually improve their performance" (NSCD, 2011, *Beliefs*, para. 1). The organization defines PD as "a comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement" (NSCD, 2011, *PD Definition*, para. 3).

Based on their research, NSDC leaders (2011) identified seven components that should be considered when planning for professional learning:

1. *Learning communities* should meet regularly to engage in inquiry, reflection, and evaluation in order to strengthen teaching practices (Croft, Coggshall, Dolan, Powers, & Killion, 2010) and increase student achievement (Joyce & Showers, 2002). These communities promote active engagement and collaborative learning (Guskey, 2003) using practical activities that are in each teacher's *zone of proximal development* (Vygotsky, 1978)—i.e., activities that can be done on his or her own or with scaffolding or modeling from a mentor so the teacher-learner does not become frustrated with the task at hand (Vygotsky, 1978; Yang & Liu, 2004). The social interactions that learning communities provide help teachers to internalize the new knowledge, which is important when a change in practice is the goal (Eun, 2008).

2. *Leadership* recognizes that effective professional learning is key to teacher and student learning, and leaders work collaboratively to create professional learning workshops based on educator and student data (Leithwood, Louis, Anderson, & Wahlstrom, 2004).

3. *Resources* such as human labor, money, materials, technology, and time must be allocated wisely. Thus, embedding professional learning into an educator's workday leads to job-embedded learning that enhances the importance of ongoing PD (Croft et al., 2010).

4. *Data* from multiple sources enrich decisions about professional learning. In addition, knowing students' learning needs can also guide decisions about teachers' professional learning (Griffith, Kimmel, & Biscoe, 2010).

5. *Learning design* integrates learning theories and research as a framework, using ideas such as "active engagement, modeling, reflection, metacognition, application, feedback, ongoing support, and formative assessment that support change in knowledge, skills, and practices" (NSDC, 2011, *Learning Design*, para. 3). The learning design should engage teachers in ongoing assessment, feedback and coaching, or scaffolding to improve their teaching skills (Croft et al., 2010).

6. *Implementation* results in long-term support through study groups, peer observations, coteaching in which coaches can provide scaffolding, or modeling. Providing continuous support and feedback is important because cognitive development is impossible without interaction among educators, which leads to internalization of new ideas by the individuals (Eun, 2008).

7. *Outcomes* for both student and teacher learning should be aligned with curriculum standards and professional learning standards (NSCD, 2011).

The Study

For this study, we chose a convenience sample of five participants from one suburban school district. The participants, all Caucasian females, included two elementary principals, one with 5 years and

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one with 2 years of experience in their current positions, and three elementary assistant principals with experience ranging from 1 to 4 years. The school district had an exemplary rating from the Texas Education Agency during the 2010-2011 school year.

This study was modeled after a study completed by Rogers et al. (2006). We conducted individual interviews using three predetermined questions (see Appendix) to begin the conversation about PD. The interviews lasted anywhere from 7 to 20 minutes and were transcribed verbatim. To analyze and code the data (Creswell, 2007; Lincoln & Guba, 1985), we read and reread the transcribed interviews to become familiar with the responses and to highlight key words to allow coding of the data into themes.

Findings

Several themes emerged from the data: *ongoing, collaboration*, *data-driven design, interest-driven design*, and *interactive*. Both principals and assistant principals agreed on the themes of *ongoing* and *collaboration*. Assistant principals agreed with principals that PD should be *data-driven* but added that it should also be *interest-driven*. Principals also believed that PD should be *interactive*.

Theme 1: Ongoing. Both principals and assistant principals believed *ongoing* is an essential characteristic of effective PD activities. Ongoing PD helps educators to form learning communities that can examine events that are continually happening and evolving. Such examination promotes active engagement, which in turn helps the teachers to mesh new knowledge with previous knowledge in order to promote change in their teaching practices. The following statements from the two principals support this finding:

- I think professional development is not an isolated event, as it is something that should happen all the time…. So, we try to set up and establish professional development as ongoing…every day, every minute you are engaged in the work you are doing.
- Good PD is meeting regularly… so teachers can talk about how things are going.
- And then ultimately there is some sort of follow up, as [teachers] go practice it [new learning] in their classroom and then bring back evidence that they did it.

Assistant principals also believed that ongoing PD is effective:

- I think revisiting is effective. Once you teach it, you can't expect teachers to be able to put it into practice. I feel like going back and modeling what they should be doing and having conversation is what has worked for our campus.

Theme 2: Collaboration. Both principals and assistant principals believed *collaboration* is an essential component in making PD activities effective. This key feature was described in many different ways, and evidence of its importance was found in the responses to every interview question. Based on the data from the interviews, collaboration centers around learning communities where conversations can occur in a nonthreatening environment. These conversations can be about what is working or not working in the classroom, student problems, or lesson-plan development, as suggested by the comments below:

- Assistant principal: It's that collaboration and visiting and saying *this is what worked for me, what worked for you?* [that] has made our professional development more effective.
- Principal: No matter if you are eating with colleagues and discussing your lesson, or talking about a student, or practicing a strategy you are using and getting feedback, or looking at student data to see how effective or ineffective your instruction is … this discussion leads to reflection and hopefully change.

- Principal: It is important that administrators have conversations, both orally or written, about what is happening in classrooms to help change occur. That is why we conduct classroom observations.

Theme 3: Data-driven design. Both principals and assistant principals believed that a *data-driven design* should be implemented. They asserted that PD topics should be chosen by looking at data from student scores and by walk-through assessments or simple observations:

- Principal: The campus has a global topic but then each grade level might have specific student needs they work on. For example, I met with a sixth grade team as our walk-through data showed that questions being asked in the classrooms were not very varied. So, we talked about how to develop different levels of questions and developed a plan of action. Now, we will collect more data. Thus, each team's data are used to determine what skills should be worked on each week.
- Assistant principal: To determine our PD topics, we use several approaches. First, we could use the information from the PDAS [professional development appraisal system]. This is a state-approved instrument that is used for appraising and identifying areas that teachers need to work on. Second, we use topics from research.

Theme 4: Interest-driven design. *Interest-driven design* was a theme that was only mentioned by assistant principals. As seen in the following statement, assistant principals looked for various ways to get the teachers involved in the learning process so they might internalize the new information:

- We also try and talk to our teachers and try to find things they are interested in learning so they will take the new knowledge back to their classroom.
- [It is important] that there is some sort of…[link] to something they are interested in or are having concerns about.

Theme 5: Interactive. A theme that emerged just within the principal population concerned the need for PD to be *interactive*. Rather than describing the collaboration necessary for effective PD, this component describes the actual learning environment. One principal explained the need to organize for interaction with the content and with others:

- [What's important is] making sure that the staff development is organized in such a way that it is conducive to whatever the content is about and also looking at … different groupings or the methodology or something about [the PD session] to make sure that you are setting your teachers up for getting new information.

Comparison of the Findings to the Standards

We compared the beliefs of the principals and assistant principals with both the PD research and the national professional learning standards (see Table). As is evident, the professional learning standards and statements from the literature review overlapped and intertwined with the comments of the school leaders, indicating that these principals and assistant principals did know about and use the professional learning standards when creating PD activities for their teachers.

Table

Comparison of Sampled Participant's Beliefs to Research-Supported PD Standards

Beliefs of Participants	Statement from Literature Review	Professional Learning Standards
Theme 1: Ongoing "It has to be ongoing. And, I think it has to be something that doesn't get put…on the wayside or on the backburner. It has to be ongoing."	"The majority of participants who do take part in longer-term professional development do change one or more aspects of their teaching practice" (Boyle, While, & Boyle, 2004, p. X).	• Implementation • Resources
Theme 2: Collaboration "It gets to be easy to be isolated, but we have learned that if we can talk and collaborate, then we can throw out ideas, and if it is a safe place, then our teachers have gained the most from that."	Guskey (2003) supported the importance of social interactions while constructing learning through an analysis of characteristics of effective professional development.	• Learning Communities • Resources • Implementation
Theme 3: Interest-driven "That there is some sort of…[link] to something they already know, so you can help them scaffold their learning to build on something they have some knowledge about so they feel some success about knowing something about what they are going to do."	Scaffolding within participants' ZPD is a method that can be utilized to increase the effectiveness of professional development (Yang & Liu, 2004; Vygotsky, 1978).	• Learning Communities • Learning Design
Theme 4: Data-driven "Well, first [it is important to establish] the purpose of professional development, which should be tailored around a need or some data—either that your students have ultimately or that your teachers need."	NSDC standards (NSDC, 2001) refer to data-driven professional development as a method for sustaining continuous improvement in education; and student progress monitoring improves instruction (Fleischman & Safer, 2005).	• Leadership • Data • Outcome • Implementation

Theme 5: Interactive
"Well, I have designed multiple types of professional development this year. … For instance, I have standing professional development days twice a month that we engage in either new or ongoing professional development. And those are built into the calendar and teachers know. Then I design times—four times during the week—for teachers to engage in grade-level or content-specific-like professional development and that takes two different plans."

To create a model of effective professional development that results in teacher implementation of practices and increased student achievement, it is essential to combine the most effective strategies from all models (Arbaugh, 2003).

- Leadership
- Resources
- Learning Design

Discussion

Developing effective PD is a much-researched topic (Yang & Liu, 2004; Guskey, 2000; Eun, 2008). However, there is some dissonance between what is seen as effective and what is being done in practice (Gusky, 2003; Loucks-Horsley, Love, Stiles, Mundry, & Hewson, 2003; Rogers et al., 2006; Thompson & Zeuli, 1999). Thus, in this study, we compared the beliefs held by principals and assistant principals to the PD research as well as the professional learning standards.

Limitations to this study should be kept in mind. First, this was a very small study, as there were only five participants. Second, the data were collected in the same school district; even though several school settings were involved, the same goals and mission drive the events within the district. Third, these principals and assistant principals worked in schools with highly exemplary and recognized ratings from the state. Future research needs to expand this study by involving more participants from a wider range of educational settings. Because this study included only female administrators, an expanded study should include male administrators to determine if gender impacts beliefs about PD.

The data suggested that these principals and assistant principals believed effective PD should be ongoing, collaborative, and data- or interest-driven. However, the data also suggested one clear difference in the thinking of participants, as principals believed PD should be interactive—a characteristic not mentioned by vice principals. The principals' thinking was more in line with professional learning standards, as a defining characteristic of effective PD is interaction among participants (Guskey, 2003). When combined with activities that are within a teacher's zone of proximal development (Vygotsky, 1978), furthermore, such interaction increases the value of the PD experience (Yang & Liu, 2004).

As an outcome of this limited research, instructional leaders should increase their understanding of what current research and standards state about effective PD. Additionally, researchers and national organizations should continue to reevaluate, refine, and expand thinking about what components contribute to PD that is effective in a variety of settings.

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Appendix
Interview Protocol

1. From your experiences, what makes professional development effective?

2. What types of professional development do you design?

3. How do you choose the topics of professional development on your campus?

Professional Learning Communities: Practices for Successful Implementation

By Roberta A. Linder, Gina Post, and Kathryn Calabrese

Professional Learning Communities (PLCs) involve teachers in site-based, ongoing, collaborative professional development. Three education department faculty members, interested in developing university-school partnerships, undertook this study in order to identify the factors that led to the successful establishment of PLCs with community schools, to determine how university faculty can facilitate the formation of the PLCs, and to understand how PLCs can help develop positive relationships between university and school personnel. Three PLCs were formed around the topics of formative assessment, developing math sense, and the effects of poverty on teaching and learning. The participants provided feedback related to the elements of the PLCs that they valued most highly, and the researchers identified factors that supported and challenged the implementation of PLCs, as well as the ways positive relationships could be developed.

The Professional Learning Community (PLC) is gaining recognition as an effective strategy for promoting long-term professional development for educators (Dallas, 2006; Schmoker, 2005; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). In contrast to the traditional paradigm of professional development in which teachers attend off-site workshops and conferences that may or may not inspire them to change their thinking or instruction, the PLC involves teachers in site-based, ongoing, collaborative professional development. According to DuFour (2005), PLCs are groups of educators working together with a shared vision, beliefs, or values. Little (2003) suggested that PLCs are groups in which new knowledge about instruction and content is constructed, but also places where existing beliefs and assumptions about education, community, teaching, and learning are challenged and critiqued. According to Hargreaves (1994), collaborative cultures are spontaneous, voluntary, and task- or development-oriented, whereas contrived collegiality is often regulated, compulsory, and used to implement system initiatives. PLCs should embody the characteristics of collaborative cultures.

During the 2010-2011 school year, as three members of the Education Department of a small, liberal arts college in the Midwest, we utilized funds from a Congressional Appropriations grant in order to initiate and guide the development of PLCs in three community schools. The goals for the establishment of the PLCs included (a) to develop relationships with local schools as learning communities, (b) to enhance collaboration within individual schools and between schools and the university, (c) to engage in reciprocal investigation and learning that lead to collective inquiry and reflection, (d) to

provide for site-based application of new learning, (e) to conduct research with teachers that would enable us to learn about the sustainability and growth of professional learning communities, and (f) to provide field placements for preservice teachers in which best practices are modeled.

In order to secure administrative support and attract interested teachers, we first invited area superintendents or representatives to a presentation about the PLCs. Those who attended the presentation received a packet of information including the form on which they could submit a proposal to Gina, the second author. Several groups of educators from area schools submitted proposals, and three were selected by members of the Education Department. The money from the grant was used to provide graduate course credits for the teachers, stipends for the teachers and the faculty members, and other materials and resources. In this article, we present literature that identifies theory and practice related to PLCs, describe the study as we investigated the formation of the PLCs, and identify the conclusions and future directions.

Related Research

The concept of PLCs is similar to the idea of team-based learning communities popularized in the book, *In Search of Excellence* (Peters & Waterman, 1982). Both of these team-based learning models align closely with principles of adult learning theory established, in part, by Knowles (1980) with andragogy, or adult learning theory, and by Mezirow (1990) with transformation theory (Merriam & Caffarella, 1999). Knowles' assumptions about adult learners stressed self-directed learning, life experiences that serve as a source of information, a focus on problem-centered learning, and an internal motivation to learn. Mezirow's transformational learning begins with critical reflection on one's assumptions,

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followed by discourse regarding the reflective process, and concluding with action.

In her review of the prominent adult-learning theories, Merriam (2008) concluded that the theories that are currently emerging acknowledge the influence of adults' sociocultural contexts, an element that was absent from earlier theories and models. Merriam recommended the use of reflection and dialogue with adult learners, as well as connecting their new learning to previous experiences. These assumptions, theories, and suggestions emerging from adult-learning theory are present in the structure of PLCs.

Recent research provides evidence that PLCs can produce positive effects on teachers and their instruction, which in turn can lead to improved student performance. Dallas (2006) investigated a PLC in an urban middle school and found that the sixth grade teachers in the group implemented changes in their classroom literacy instruction, the students' scores on a standardized reading test showed a modest gain (the first gain in 6 years), and all the members of the PLC returned to their teaching positions the following year. Borrero (2010) reported that the monthly professional development workshops led teachers to feel a sense of camaraderie with colleagues, connection to their schools, and ownership for the content of the workshops, although no data were available to analyze effects on the achievement of the English Language Learners who were the focus of their efforts. However, the teachers' monthly discussions about student performance began to rely more on results obtained from their own assessments rather than the scores from annual standardized tests. Thompson, Gregg, and Niska (2004) found that principals and teachers in three urban and three suburban middle schools identified themselves as PLCs because of their shared vision, emphasis on team learning, data-informed decision making, and the relationships and trust that had developed. The personnel at the middle schools also reported that achievement scores were showing steady improvement.

For our first year of involvement with the PLCs, we were guided by these questions:

1. What factors contribute to the successful formation of PLCs?
2. How can university faculty facilitate the formation of the PLCs and develop positive relationships with them?

Participants

We selected proposals that were aligned with our research interests and areas of expertise. Roberta, an instructor for courses related to literacy, assessment, and middle childhood, chose to work with a group of middle-school teachers who were interested in working on the topic of formative assessment. Gina, with her background in mathematics education, guided a group of third-through-fifth grade teachers as they sought to develop an understanding of what constitutes number sense and pedagogical strategies to enhance student development of number sense. Drawing on her expertise in early childhood education and experiences teaching in an urban school district, Kathy worked with a group of teachers who chose to focus on understanding the impact of poverty on their teaching and on children's learning in an urban school.

Formative assessment PLC. The formative assessment PLC met in the only middle school of a rural school district located in central Ohio. The middle school housed approximately 750 students, who were predominantly White, non-Hispanic (89.2%) and Hispanic (7.6%). More than 44% of the students were categorized as economically disadvantaged, and almost 15% were identified as students with disabilities. Results from 2010 state testing in reading indicated that Grades 6, 7, and 8 all exceeded the state requirement of 75% of the students scoring proficient or above (Ohio Department

of Education, 2010). The PLC consisted of four female teachers: three language arts teachers, one from each grade level, as well as an intervention specialist. The group wanted to learn more about using formative assessment to improve students' use of comprehension strategies, development of vocabulary and background knowledge, and writing skills.

Math PLC. The math PLC consisted of 12 general education teachers and intervention specialists from Grades 3 through 5, all teaching in the same elementary school housing Grades K-5. Nearly 91% of the 403 students who attended the rural school located in central Ohio were of White, non-Hispanic ethnicity, and 4% were Hispanic. School data indicated that 66% of the student population was economically disadvantaged, and 16% had identified learning disabilities. Although the school held a state rating of *excellent*, state mathematics testing results in Grades 3, 4, and 5 showed percentages below the state requirement of 75% for the 2009-2010 academic year. The group had labeled *number sense* as a pervasive area of difficulty for students. In the words of one teacher, "Our students cannot think mathematically; they are not flexible in their thinking or working with numbers. They can't estimate with numbers" (A.M., personal communication, October 2009). The group worked as a unit to define number sense and to find or create tasks that would enable students to construct their own number sense.

Effects of poverty PLC. The PLC researching the effects of poverty on teaching and learning was composed of 13 teachers, all teaching in the same K-6 building. Of the 366 students at the school, approximately 33% were White, non-Hispanic; 51% were Black, non-Hispanic; and 10% were multiracial. In addition, 95.6% were considered economically disadvantaged and received free lunch. The yearly mobility rate was 35%, and there were 10 families known to be homeless at the time of the study. The population of students identified with learning disabilities was 16.2%. Early in the project, the teachers worked together to identify critical questions. After several meetings of the whole, the teachers split into three separate groups, each with its own focus. The teachers agreed to hold separate meetings with their small groups so each could investigate its own research questions, but they all convened periodically to share their findings with the entire group. This allowed everyone to learn together across three different questions, each of which held relevance for the whole group.

Method

We employed a collective case study design (Stake, 1995) and sought to learn about each PLC of elementary and middle school teachers. Multiple sources of data were collected throughout the year, including notes from meetings, mathematics curriculum tasks for each grade level, reading logs, periodic written feedback, the PowerPoint presentations of the PLCs featuring the results of their investigations, and an end-of-year survey (see Appendix). In the end-of-year survey, participants provided quantitative ratings regarding the value of various components of the PLCs, included comments related to their ratings, and answered open-ended questions soliciting feedback for maintaining or improving the PLCs.

Documents representing meeting notes, curriculum tasks, written feedback, reading logs, final presentations, and responses to open-ended survey questions provided the qualitative data that were analyzed throughout the study using the constant comparative method (Glaser & Strauss, 1967). We sought to identify factors that supported or hindered the establishment of the PLCs as a form of university-school partnership. The quantitative data from the end-of-year survey ratings were used to calculate descriptive

statistics (i.e., mean, standard deviation) in order to identify the components of the PLCs that participants valued most highly. We compiled the components of the PLCs listed on the survey, which represented the various activities in which the PLCs were engaged throughout the year.

During the fall semester, each of the PLCs began meeting twice monthly to read and discuss journal articles, text chapters, and books related to their selected topics. Following their study of the literature, the members of the PLCs determined the focus of study for the spring semester. The formative-assessment PLC decided to implement and evaluate Chapter Keepers (Benjamin, 2008) as a new type of reader-response formative assessment, and they also began familiarizing themselves with the six traits of writing (Culham, 2010) due to the central role of formative assessment in this writing framework.

The math PLC developed a working definition for number sense and a structure for addressing number sense in their classrooms. As a group, they decided to dedicate 10 minutes a day to the development of number sense. Each grade-level group developed its own curriculum for the 10-minute number-sense time. The teachers focused their attention on student engagement, communication about and representation of numbers, and strategies used in problem solving. As a PLC, they were seeking to answer the question, "In what ways does student thinking change and develop by spending 10 minutes each day thinking about numbers in various ways?" Due to the importance placed on high-stakes testing, the teachers began the project hesitant to spend even 10 minutes using a new pedagogical practice when they were uncertain that this concentration on the development of more flexible thinking about numbers would help students on the state test. The grade-level groups met often to discuss classroom incidents and student learning. The PLC met as a whole group to write curriculum, share work and concerns, problem solve, and consult the research literature.

The PLC focused on poverty divided into groups, roughly related to grade levels, and each group decided to tackle a question related to its students and current practice. One group decided to focus on building community across K-3 levels as an alternative to looping. The second group, consisting of fourth and fifth grade teachers working with an intervention specialist, focused attention on the effects of video games on their students' performance in school. The third group, also consisting of fourth and fifth grade teachers and working with a curriculum coach, wanted to see if they could design curriculum to help students understand, design, and plan for realistic goals. The PLC met as a whole group several times to discuss the issues being examined in the small-group meetings. Later, they continued to meet as a large group while working in their smaller, micro-groups to design and implement their study, construct curriculum and activities, gather data, share information, and make plans for further study.

At the conclusion of the spring semester, all participants who attended the final meetings of their PLCs completed the end-of-year survey; 27 of 29 participants provided this feedback. As a culminating activity, all of the PLCs met on campus to make formal presentations of their work. The event was attended by all members of the PLCs, as well as by many building- and district-level administrators.

Results

As we engaged with the PLCs throughout the year, we sought to identify factors that supported the formation of the PLCs and ways we could facilitate the establishment of the PLCs and develop positive relationships with them. The following results are based on the

responses given by the 27 participants in the end-of-year survey (see Appendix).

Factors contributing to successful formation of PLCs. Results from the survey indicated that the participants highly valued all components of their PLCs, with the mean ratings ranging between 4.31 and 4.93 on a 5-point scale (see Table 1). The three most highly rated components of the PLCs were (a) studying a selected topic in depth; (b) having the assistance of a university faculty member; and (c) selecting, implementing, sharing, and discussing results of activities with each other.

Table 1
Results of End-of-Year Survey

Component of PLC	M	SD
Reading and discussing journal articles	4.31	0.62
Reading and discussing book chapters	4.42	0.65
Selecting/implementing/sharing/discussing results of activities	4.63	0.56
Selecting and receiving new materials related to the PLC's selected topic	4.59	0.50
Meeting on a regular basis	4.54	0.65
Being able to study a selected topic in depth	4.93	0.27
Having the assistance of a university faculty member	4.89	0.32

The most highly rated PLC component was being able to study topics in depth (M=4.93), and participants' responses revealed two reasons for their high ratings of this component. First, several PLC members commented on being given the opportunity to select their own topics rather than having to engage in externally imposed topics for professional development:

+ Nice having input to topics.
+ I'm so glad we could choose our topic—it was very interesting!!
+ This gave us a wonderful opportunity to study a topic of interest versus a pre-set topic.

Another set of comments pointed to the value of studying a topic in more depth:

+ As busy classroom teachers, we have 5+ subjects to train and not enough time to talk in depth. This was a great experience in *really* explaining a topic.
+ It was exciting to focus *strongly* on one topic rather than many.

The second most highly valued component for these PLCs was having the assistance of a university faculty member (M=4.89). The written responses identified a number of qualities that the participants valued in the faculty members assisting their PLCs: being knowledgeable, knowing how to work with adult students, and acting as a facilitator. Comments included:

+ [You provided] very inspiring leadership, and also I like your understanding of what was reasonable to expect from working students.
+ Good job keeping us focused.
+ [The facilitator was] full of knowledge; willing to listen to our needs; didn't push her agenda; let us find a meaningful way to help our students.

The next highly rated component of the PLCs was being able to select, implement,

share, and discuss results of activities with each other (M=4.63). Throughout the course of the semester, the members of the PLCs implemented new instructional techniques in their classrooms or conducted action research to investigate their chosen topics. Their responses indicated that these teachers were willing to disrupt their previous instructional routines, evaluate new classroom practices, and learn from each other. These results are consistent with Little (2003), who identified PLCs as places where teaching and learning can be challenged:

- Results and sharing were vital to the success of our group.
- Sharing and discussing the results of the activities led to evaluation of current practices and, in some cases, changes to current practices.
- Sometimes I get stuck in my ideas and the way I do something, so it is nice to hear other ideas.

Two components that were rated nearly as highly as the top three were selecting and receiving new materials related to the PLC's selected topic (M=4.59) and meeting on a regular basis (M=4.54).

Participants' responses to the open-ended questions provided additional support for the ratings and related comments. For example, the members of the PLCs reiterated their interest in having the opportunity to implement new instructional techniques and determine the effectiveness for their students. This practice allowed them to make and evaluate changes in their instruction. Comments again showed that participants valued the opportunity to meet on a regular basis with other educators, including their colleagues and the university faculty. Additionally, several participants responded that they would have preferred starting earlier in the school year because they felt distracted from the work of their PLCs during the second semester due to the demands of state testing in the spring. Finally, the teachers indicated that they would like to continue studying their topics during the next school year.

How university faculty can facilitate the formation of PLCs and develop positive relationships. Our own reflections were based on our field notes and conversations about our experiences, and those yielded insights that can assist faculty members wishing to establish PLCs as a means of developing partnerships with area schools. First, we determined that a key element in the development of PLCs was the commitment of the department and faculty members to engage with other professionals where there were common interests. We initially selected groups whose topics aligned with our areas of interest, thus ensuring that all the members of the groups shared an interest in a selected topic, supporting DuFour's (2005) description of PLCs as groups of educators working together with a mutual purpose. This process was in contrast to university-school relationships in which faculty members work with area schools to meet the needs of their education programs, transmitting their knowledge and expertise to the school personnel. We observed that our willingness to be learners, to give up some control and allow the teachers to take the steps they needed to take, and to recognize the wealth of knowledge the teachers brought to the group contributed to the development of collaborative and supportive groups of learners.

Second, we noted that the members of the PLCs developed a sense of autonomy as a result of their decision-making capabilities within the groups. For example, these teachers selected their own topics of inquiry, the manner in which they studied the topics, the activities they implemented and evaluated in their classrooms, meeting dates, and materials for purchase. Our decision to encourage PLC members to make choices concerning the actions of their groups is consistent with Knowles' (1980) concept of self-

directed learning related to andragogy, or adult learning theory (Merriam & Caffarella, 1999). Third, members of the PLCs appreciated our assistance, because we helped by setting up regular meeting times and by keeping the groups focused and moving along. Not only did regularly scheduled meetings make it easier for teachers to plan ahead, but these routine meeting times increased our presence in the schools and led to improved working relationships with the schools. Due to our relationships with PLC members, one teacher has been utilized for a field-experience placement and another has been recruited to teach an endorsement course for the department. Finally, an unexpected finding was the impact that the final presentation had on the members of the PLCs. As teachers prepared for the final, public presentation of their work, we observed that a noticeable shift occurred. The teachers displayed an ownership of their newly acquired knowledge and a sense of empowerment attained as a result of conducting their own research projects.

We noted some common challenges that were experienced during the implementation of the PLCs. For all of us, time was an issue. Some regularly scheduled meetings had to be cancelled due to weather-related school closings during the winter, and it was not always possible to find time to reschedule the meetings. Due to the whole-group and individual-group meetings of the PLC investigating the effects of poverty, the faculty member had to deal with increasing the amount of time spent with the PLC and dividing her time among the various groups. Another issue was the stress expressed by teachers as they neared the state-testing time in the spring. They expressed concern that they might be spending time on instructional practices that would not yield positive results as measured by the state tests. We also noted that some participants were challenged by the need to investigate and confront their beliefs about their students and their instructional practices, an element of PLCs identified by Little (2003). Members of these PLCs challenged and critiqued their notions about assessment of student learning, number sense in mathematics, and the effects of poverty.

Conclusions and Implications

Through our involvement in the formation of these PLCs, we increased our knowledge about establishing relationships with area schools. We learned about the importance of providing guidance to the groups, keeping them on task and focused…but not directing every action of the members. Allowing for autonomy was essential, with the teachers being responsible for making decisions and choosing their own paths for professional development. Building a sense of community was also critical to the success of the groups. As the PLCs met throughout the year on a regular basis and worked together on their final presentations, a sense of camaraderie developed, similar to the finding of Borrero (2010). This camaraderie energized the members of the PLCs as they met and discussed their common interests.

The results of this study offer a number of implications for classroom teachers, building- and district-level administrators, and university faculty considering the implementation of PLCs. First, classroom teachers should not hesitate to join together to investigate topics of common interest. These topics may relate to pedagogy, assessment, school culture, or family and community issues. PLCs enable teachers to customize and personalize their professional development, and they can develop a sense of ownership through self-directed learning. Once PLCs have been successfully established, the teachers can continue to move forward with their work.

Second, educational administrators should consider PLCs as a viable method of

professional development for their building and district personnel. Administrators should encourage and support PLCs as a form of professional development that allows teachers to direct the focus of their learning, and they should validate and celebrate the accomplishments of these groups. Teachers participating in PLCs appreciate administrators who support them with time and space for meeting, materials for studying chosen topics and implementing selected classroom techniques, people with expertise, or stipends for participation. As a result, administrators develop teachers who are collaborative, self-directed, inquiry-minded, and empowered by their work.

Third, university faculty can help establish and sustain PLCs by placing the major decision-making in the hands of the teachers, enabling them to develop a feeling of autonomy. Faculty can also supply professional literature that provides information for the teachers, and they can serve as resources for other materials that may be needed by the group. These actions can create a solid conceptual foundation for PLCs that connects members with current research and practice.

Following this successful implementation year, we plan to focus on ways we can continue developing professional relationships with the teachers and their schools. We are also looking forward to continuing the relationships that began with the formation of the PLCs.

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Appendix
End-of-Year Survey

Name _____ Group _____

In the table, indicate how much you valued the different components of your Professional Learning Community:
1 = low and **5 = high.** N/A would indicate that the component was not a part of your specific PLC. Please add comments that support your rating, also.

Component of PLC	Rating	Comment
Reading & discussing journal articles	1 2 3 4 5 N/A	
Reading and discussing book chapters	1 2 3 4 5 N/A	
Selecting/implementing/ sharing/discussing results of activities	1 2 3 4 5 N/A	
Selecting and receiving new materials related to the PLC's selected topic	1 2 3 4 5 N/A	
Meeting on a regular basis	1 2 3 4 5 N/A	
Being able to study a selected topic in depth	1 2 3 4 5 N/A	
Having the assistance of a university faculty member	1 2 3 4 5 N/A	

Additional Questions
What part(s) of the PLC were most beneficial to you?

What changes could be made to improve the PLC?

What do you see as the next steps for this PLC?

Are there other topics you would like to investigate?

Preparing Novice Teachers for Success in Elementary Classrooms through Professional Development

By Amy Burkman

In response to teacher attrition, many school districts have implemented induction programs that include mentoring, professional development, and special monitoring for a teacher's early years. Much literature exists discussing mentoring as one tool of the induction program, but little is provided about professional development specific to teachers new to the profession. The researcher surveyed all elementary teachers with less than 5 years of teaching experience in a large urban school district regarding the methods and delivery of professional development, as well as perceptions of general support through professional development based on their experiences in the induction program. A mismatch between high stress areas and appropriate professional development became evident. The author provides suggestions to administrators and school districts for improved professional development based on teacher needs identified in this study.

Each school year administrators at the campus level welcome new teachers into the classroom only to experience their permanent departure at the end of the year. According to Quinn (2005), the estimated attrition rate "hovers at 20-30%, and may approach 50% in urban school districts" (p. 225). No matter how well prepared a teacher may be, some aspects of teaching can only be learned on the job (Feiman-Nemser, 2001), and many teachers do not stay in teaching long enough to experience success. As a response to the attrition rate and teacher struggles, about half of the states in the United States have mandated mentoring and induction programs. Andrews and Quinn (2005) suggested that providing support to beginning teachers not only assists with teacher retention but also assists beginning teachers in becoming effective practitioners as soon as possible.

The purpose of this study was to identify challenges for novice teachers and to evaluate the availability of professional development for identified issues. Additionally, this study evaluated the preferences of novice teachers for delivery of professional development. For the purposes of this study, a *novice teacher* had less than 6 complete years of inservice experience as an educator. This term applied to teachers in all areas, including special services and enrichment courses.

Literature Review
Research regarding induction programs has focused on mentoring as a tool for decreasing novice-teacher attrition. The mentoring aspect of the induction program has gained in popularity; however, mentoring is only as strong as the mentors provided. According to

Brill and McCartney (2008), improvement of teachers' work environments and professional development is more influential in convincing teachers to remain than mentoring programs alone.

Professional development on a campus and district level is needed in conjunction with mentoring programs to provide a solid foundation of support for a new teacher. Educators and administrators must "create the structures and culture that enable all teachers to continue learning in and from practice as they address the complex challenges of public education" (Feiman-Nemser, 2001, p. 29). Mentoring alone cannot support new teachers.

Research indicates, furthermore, that a successful induction program must include a professional development support system tailored to teachers' needs, years of service, and experiences (Hahs-Vaughn & Scherrf, 2008; Kilgore, Griffin, Otis-Wilborn, & Winn, 2003). Developers of professional development programs must also take into consideration the responsibilities of novice teachers. "Although some programs have few requirements, others require novices to complete workshops (e.g., technology, discipline), create portfolios, take part in online discussions, and attend district-based meetings while trying to navigate their 1st year in the classroom" (Hahs-Vaughn & Scherrf, 2008, p. 25). Too much professional development can be just as ineffective as too little; a balanced professional development plan is crucial.

Identified areas of challenge. When evaluating a professional development program, one must understand the challenges faced in the classroom. The challenges faced by novice teachers have been discussed extensively in the last decade. Crucial areas for most beginning teachers include curricular planning (Andrews & Quinn, 2005; Brewster & Railsback, 2001), classroom management and discipline (Brewster & Railsback, 2001), instructional techniques (Brewster & Railsback, 2001; Lundeen, 2004), access to materials (Brewster & Railsback, 2001; Gratch, 2000; Whitaker, 2000), and dealing with parents (Gratch, 2000). Classroom management and discipline alone encompass a wide variety of issues that are difficult to address solely by mentoring. McCaughtry, Cothran, Kulinna, Martin, and Faust (2005) believed teaching is overwhelming to the novice teacher due to the complex and challenging demands placed on professional educators.

Although Smith and Ingersoll asserted that "only one percent of new teachers currently receive the training necessary for comprehensive induction" (as cited in Quinn, 2005, para. 6), little research has been done to consider the correlation between professional development support in high stress areas and teacher retention. The time has come to explore these areas to determine if a relationship exists. Accordingly, I developed the study to ascertain the relationship between teacher stressors and support provided through professional development.

Delivery of professional development. One of the most important aspects of professional development is delivery. The method of delivery can generate interest in a topic or can deter participation. The methods of delivery most available to teachers include non-grade-specific, cooperative learning; grade-specific, small groups; seminars; online classes; and peer support groups (Quinn, 2005). According to Mansvelt, Suddaby, and O'Hara (2008), informal professional development has a greater impact on teachers than does formal, because a much

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larger percentage of teachers choose to participate in informal development. Informal professional development is defined as a self-initiated or self-driven professional development; in contrast, formal development includes structured, assigned tasks with little or no input from the participant.

Morris, Chrispeels, and Burke (2003) found that professional development can be provided in two ways: through external teacher networks and through internal school-reform networks. These networks encompass all methods of delivery. Creating external networks for teachers yields high results by providing a large variety of topics to meet a greater audience and a larger group of mentors or confidantes to assist in informal novice teacher induction. Internal networks provide a strong support team inside the school while providing school-specific training sessions to meet the immediate needs of the novice. According to Guskey and Yoon (2009), the overriding opinion is that

> a lot of workshops are wasteful, especially the one-shot variety that offers no genuine follow-up or sustained support. But ironically, *all* of the studies that showed a positive relationship between professional development and improvements in student learning involved workshops or summer institutes. (p. 496)

The best way to address this apparent contradiction is to provide a variety of options in a workshop format, which is the most cost-effective method of providing professional development. The bottom line is that professionals should be the center of professional development programs that align the format and delivery to meet their needs (Papastamatis, Panitsidou, Giavrimis, & Papanis, 2009).

Purpose

The purpose of this study was to consider the following questions: What challenges do novice teachers face in creating an engaging learning environment that meets the needs of all students? Have teachers been provided adequate learning opportunities to meet these challenges? How can campus administrators and school districts assist these teachers in working through these challenges within the context of campus trainings?

Population

Approximately 142 novice elementary teachers in a school district serving almost 25,000 students were invited to participate in this study. I chose the district as a representative sample due to the wide variety of demographics represented at each campus, as well as the willingness of administrators and teachers to participate. Teachers from both grade-level classrooms and enrichment classes were asked to participate in the study, as long as they had less than 6 complete years of experience in teaching.

The 16 elementary schools in this district serve students in prekindergarten through Grade 4. At the time of the study, the district served the following demographic population: African-American, 25%; Hispanic, 15.5%; White, 52.3%; Asian, 6.5%; and Native American, 0.7%. Approximately 32.4% of the students were economically disadvantaged, and 10% were Limited English Proficient (Texas Education Agency, 2009).

Instrument

The first step in producing the questionnaire used in this study was creating an open-ended pilot survey. I used three questions to identify the struggles faced by teachers:

1. What are the biggest challenges you face as a teacher?
2. From the above challenges, rate your top five challenges.
3. When you are offered professional development, what methods of delivery are used?

Every teacher on two randomly-selected elementary campuses was given the pilot survey, and all surveys were returned. These teachers had experience ranging from 1 to 22 years. The range of experience was purposefully sought out to increase the validity of the questionnaire sent to novice teachers. The challenges identified by this initial group of teachers were compiled into a list of the 30 most important issues identified by teachers (see Appendix).

The 30 issues identified became the foundation of the questionnaire used in the study. Section 1 of the questionnaire included demographic questions about years of experience, age of teacher, and grades taught. After analyzing the data, I found that the majority of the participants had taught two or more elementary grade levels. This information was not considered in the analysis of the data because all of the teachers had taught only at the elementary level.

Section 2 listed the 30 challenges identified in the pilot survey and asked the participants to rate the challenges using five anchors with the following descriptors: 1= *Not a concern*, 2= *Minor concern*, 3= *Moderate concern*, 4= *Serious concern*, 5= *Overwhelming concern*. I deliberately did not include a choice of *neutral concern* because I wanted to force participants to choose some level of concern or no concern.

Following Section 2, participants were asked to identify which of the challenges had been addressed in trainings offered in-service. Participants were simply asked to mark the box beside each challenge if it was the topic of trainings. If the challenge had not been the topic of trainings, the participants were asked to leave the box blank.

Finally, the teachers were asked to rank nine types of training methods in order of interest. The ranking was to indicate the most effective methods used to encourage teachers to attend professional development. Varied methods were presented on the survey, including virtual opportunities. Also included were traditional presentations, self-paced, and reflective methods of learning.

The survey was posted online using Questionpro.com. This Web tool allowed teachers to access the survey by using a direct link. The link was e-mailed to all participants who volunteered to participate in the study. Only invited participants had access to the Web link. As teachers accessed the Web tool, a privacy notice was posted to ensure all participants of anonymity. The teachers could not be traced to a particular campus or district computer from the Questionpro.com survey site.

Procedures
After gaining permission from the associate superintendent of the district, I invited teachers via direct e-mail to access the survey. The online tool did not record names but assigned a nonsequential number to each participant. As the teachers completed the online survey, answers were recorded in a spreadsheet on the Web site. The participants were notified that they had 1 week to access the Web site and complete the survey. At that time, the link became inactive, and no other participants could join the study. The data were then examined thoroughly to verify each survey was completed in its entirety. The rate of response for accurately completed surveys was 70%.

Analysis of Data
To ascertain the top five challenges identified by the most teachers, I added together the percentage of responses rated with an answer of 4 or 5 to show levels of high concern. Ratings of 1, 2 and 3 were similarly compiled to show a lower level of concern.

Next, I compared the percentages of teachers offered training on each topic to the identified perceived needs in Section 1. For example, although 93% of participants believed that working with emotionally disturbed students was a challenge, only 27% had been offered professional development in this area. Finally, I listed the nine methods of delivery from most interesting to least interesting on Section 3 of the survey. Each method of delivery was ranked based on a tallying system in which each method of professional development received a tally for being ranked first, second, or third. The percentage of teachers marking each area in the top three was calculated to create a list to show preference.

Results

Of the 70% of participants who completed the survey correctly, demographic questions showed teaching experience, counting the current year, yielded an inverted Bell Curve. The range of participants' age was 22-49, with a mean age of 28.7 and a median age of 27. The population had a normal distribution.

I then analyzed the data to discern the top five challenges in the classroom as identified by the study participants. The questionnaire yielded five significant areas of concern for the novice teachers, as shown in Table 1. Two areas require definition: *Emotionally disturbed* students are students who are identified as having an emotional or behavioral problem that results in a difficulty in learning as identified by school diagnosticians or other specialized personnel. *Students with psychological disorders* have been assessed by trained and licensed personnel outside of the school environment and diagnosed with an illness recognized by the medical or psychiatric community; these students may or may not have difficulty learning. Both types of student can cause behavioral disruptions in a class, resulting in reduced learning for self and others.

Table 1
Top Five Teacher-Identified Challenges

Area of Concern	% Identifying the Area as a Concern	% with Training in Area
Working with emotionally disturbed students	93	27
Working with students who have psychological disorders	83	23
Dealing with overactive children (including ADHD)	81	27
Stress management	81	30
Teaching special education students in an inclusion format	77	20

A significant disparity emerged between the percentage of teachers facing each challenge and the percentage of teachers who had received professional development in the challenge area. The disparity is evident in the Figure, where the top five issues identified (labeled 1-5) are shown in comparison to the amount of professional
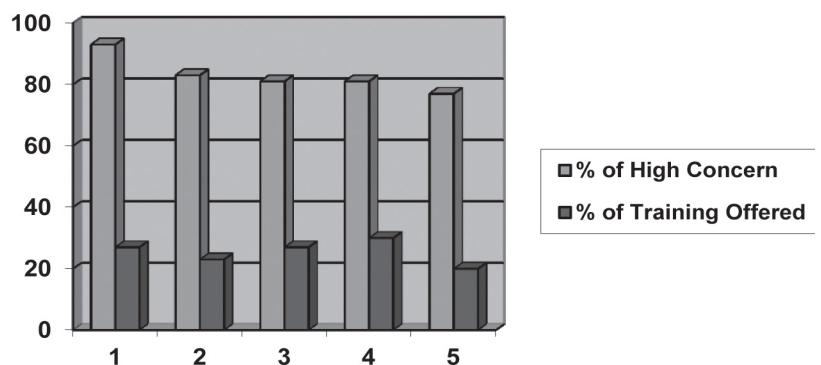

Figure. Comparison of level of concern and professional development offered.

development offered in each area.

The final area in the survey was designed to identify methods of presentation that would be most meaningful or appealing to the novice teachers. When asked to rank the nine listed methods of presentation, the participants in the study provided the data in Table 2. The nine types of training were ranked based on the percentage of teachers who ranked each as one of the top three types of training preferred. The ranking of the nine types of training showed two areas above 70% interest, four areas with 60-63% interest, and three with less than 50% interest. Fewer than 40% of participants indicated interest in a book study. This information, coupled with the top five challenges identified in Sections 1 and 2 of the survey, provided valuable insights to assist in providing meaningful support to novice teachers.

Table 2
Types of Trainings Most Appealing To Novice Teachers

Types of Training	% Identifying the Training as One of Top Three Types Preferred
Interactive/Cooperative Learning	83
Lesson/Group Planning (Grade Specific)	70
Seminar	63
Online	63
Small Group	63
Peer Support Group	60
Television/Video	43
Observation/Reflection/Debriefing	40
Book Study	33

Challenges to Novice Teachers

Emotionally disturbed students. An overwhelming 93% of survey participants found emotionally disturbed students to be a challenge to providing adequate learning opportunities in the classroom. This supported closely Watzke's (2003) study that found that classroom management problems initially overshadow novices' instructional focus. The novice teachers in this study did not feel capable of providing quality education when the majority of classroom time was spent dealing with emotionally disturbed students. "Among teachers of students who experience emotional or behavioral difficulties, professional attrition has reached crisis proportions" (Mitchell & Arnold, 2004, p. 215).

Although the majority of participants mirrored the concerns discussed by Mitchell and Arnold (2004), only 27% of respondents had been offered any professional development on dealing with emotionally disturbed students. Such lack of training can negatively impact teachers who strive to learn behavior management techniques without guidance from experienced educators. Professional development could be used to provide a foundation of information for dealing with an emotionally disturbed student. Without research-proven methods to increase positive interactions with disturbed students, novice teachers can flounder and may give up.

Students with psychological disorders. The results of the study indicated that 83% of the participants were concerned about students with psychological disorders. Mitchell and

Arnold (2004) reported that teachers "were more fearful of physical and verbal abuse, were troubled by loud and noisy students, and were concerned about student discipline" (p. 215) when psychologically impaired students were placed in their classes. Of participants in this study, only 23% had been offered professional development on how to deal with students who have psychological disorders. These findings duplicated the findings reported by Mitchell and Arnold (2004). This study reflected the same need for training as the study by Wehby, Lane, and Falk (2003) that showed "there [was] an increasingly obvious need for…training of direct service providers in state-of-the-art, research-based practices that improve outcomes" (p.196) for emotionally and behaviorally disturbed students. Without the proper training, teachers cannot be expected to cope with increasingly challenging behavior in addition to the already demanding job of educating a room full of students.

Overactive children. Children who are diagnosed as Attention Deficit Disordered or Attention Deficit Hyperactivity Disordered (ADD/ADHD) and students who exhibit characteristics of ADD/ADHD present a unique challenge to the elementary classroom teacher. According to Greene, Beszterczey, Katzenstein, Park, and Goring (2002), "Students with ADHD are rated as significantly more stressful to teach (across multiple domains) as compared to their classmates without ADHD" (p. 87). Study participants agreed with Greene et al., as 81% admitted to being challenged by overactive children. Nevertheless, only 27% had been offered professional development on dealing with this issue. The number of students identified as overactive increases yearly, but professional development opportunities do not increase at the same rate. "Teachers and districts working to better meet the needs of students with ADHD might try a model of collaboration" (Reis, 2002, p. 177) to educate teachers on dealing with ADD/ADHD students in addition to offering traditional professional development opportunities.

Stress management. With the amount of stress involved in teaching, it is not surprising that 81% of participants found stress challenging. What is surprising is that only 30% of the participants had been offered professional development in stress management. Yoon and Gilchrist (2003) agreed that "administrative support should be extended to include training…for managing professional stress" (p. 565). Environmental demands and pressures overwhelm novice teachers.

According to Austin, Shah, and Muncer (2005), educators tend to use escape and avoidance to deal with stress and "teachers who employ escape avoidance techniques to cope with stressors may be prone to the three aspects of burnout: emotional exhaustion, depersonalization, and a lack of personal achievement" (p. 75). These aspects of burnout lead to high rates of teacher attrition. Teachers need to learn appropriate stress relief techniques to combat burnout and to increase professional growth and interest.

Special education students in general education classrooms. Special education students in the general education classroom present academic, social, and behavioral challenges to teachers. With 77% of participants struggling with special needs students, the lack of professional support and development revealed in this study was staggering. According to Wischnowski, Salmon, and Eaton (2004),

> high frequency rule infraction could divert the attention of both teacher and student from learning. Thus, behavioral issues do have an impact on the success for an inclusion program. Often teachers are more concerned about how they will deal with behavioral issues than the academic strategies needed for special education students. (p. 342)

The three added stressors of academic, social, and behavioral challenges reduce the amount

of time a teacher has to implement curriculum and increase teacher burnout.

Accommodations and the extra support needed for special education students increase teachers' frustration, especially when there has not been any training on how to manage the additional work involved. Additional support from special education teachers could help, if general education teachers knew what questions they needed to ask to get help. "Professional development has been described as an integral component to promote the success of collaboration between *general* and *special education* teachers" (Wischnowski, Salmon, & Eaton, 2004, p. 8). Unfortunately, only 20% of the study participants had ever been offered training on how to implement inclusion. In the absence of support to teachers who work with special education students, both the teachers and students are set up for failure.

Data Discrepancies

The researcher determined a clear discrepancy between the areas of challenge and the professional development opportunities offered to teachers. At least 70% of the participants had never been offered training on each of the challenges identified. According to these data, novice teachers are being left to survive on their own. Without appropriate professional development or support, a novice teacher might quit when faced with a classroom full of students, each needing work adapted to his or her academic needs, and several needing behavioral modifications as well.

Professional Development

Professional development should be partnered with mentoring and induction programs to create a solid foundation of learning for the novice. To this point, the emphasis in teacher induction has been placed on mentoring programs, but mentors cannot be the sole support because they are also struggling to work with these issues. Lundeen (2004) believed that "professional development initiatives for new teachers…might include intense mentoring…and meaningful professional development" (p. 560). Research has shown that the mentoring programs are available and moderately successful. This study indicated that the time has come to examine professional development programs and how they can benefit the entire district, especially the novice teacher.

Online professional development is a new practice that has grown in popularity as users develop a higher level of comfort with technology. Novice teachers in particular have the benefit of being educated in a technologically advanced society. In online programs, teachers can work at an individual pace and choose topics that interest them without interfering with the needs of other novice teachers. Bush (2005) found that "maintaining motivation and interest were major challenges for the online training efforts [even though] many teachers now consider online learning a viable option" (p. 17). A majority of participants in this study ranked online professional development in the top three types of potential training opportunities.

The least preferred methods of professional development were reflective. Fewer than 50% of the study's participants ranked observations and book studies in the top three types of preferred professional development. Although a variety of professional development strategies should be used, such reflective strategies would be less cost-effective if fewer than 50% of participants consider them a priority when choosing a method of professional development.

Limitations of the Study

This initial research lays a foundation for a future study to explore the possibility of a relationship between teacher retention and an effectively aligned professional development program. The limitations of this study included a small sample size and use of participants from only one school district. Increasing the size of the sample in future studies will be critical to addressing the need for producing more effective professional development programs.

Conclusion

Professional development on a campus level and administrative support on a school level are needed in conjunction with mentoring programs to increase teacher retention and teacher competence. I found that professional development was not provided in the areas identified as most challenging to novice teachers in this study. Because the review of literature also indicated that novice educators may leave teaching because they do not receive support to combat classroom challenges, administrators should consider shaping professional development opportunities to supplement mentoring programs, which cannot provide the sweeping support needed. Shaping such professional development "presents tremendous challenges to the administrators because this requires a more systematic approach in identifying the needs of teachers and delivering the appropriate support within the specific organizational perspective" (Yoon & Gilchrist, 2003, p. 564).

Research has largely ignored offering professional development options as an important component of success in an authentic support system. The time has come to expand research to include the examination of professional development, presentation styles, teacher input for professional development selection, and evaluation of knowledge gained from professional development. Together, researchers, educators, and administrators can provide the best opportunities for teacher and student success through the appropriate support of novice teachers.

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Appendix
List of Challenges Identified in Pilot Survey

Teaching Special Education children in general education
Discipline methods to use with Special Education students
Working with emotional disturbed students
Working with students that have psychological disorders
Classroom management techniques/plans
Time management
Teaching Gifted and Talented students
How to create "Real World" learning activities
Working with difficult parents
Parent/Teacher conferences
Teaching test taking skills
Reporting information to CPS (Child Protective Services)
Working with families under investigation by CPS
Dealing with persistently disruptive students
How to increase parental support
How to use small group instruction while managing a class of 20+
How to individualize instruction
Working with ESL (English as a Second Language) students
Lesson planning
Curriculum alignment
Stress management
Strategies for teaching Science
Strategies for teaching Math
Strategies for teaching Language Arts
Strategies for teaching Social Studies
Balancing discipline and learning
Dealing with overactive children (including ADD and ADHD)
Conflict resolution
Administrative Expectations
TAKS (Texas Assessment of Knowledge and Skills)

The Salvation Army Store Project: Professionals Who Make a Difference

By Linda Manikowske and Sara R. Sunderlin

Teachers in higher education are concerned that today's college students be given the tools to develop as professionals who are active leaders in their communities. The Social Change Model of Leadership Development focuses on developing in students a greater understanding of their talents, values, and interests, as well as their competence as professionals. The authors describe how this model was used to create a program that provided students with the opportunity to serve a community and make a difference in socially responsible ways.

All students are potential leaders, and service is a powerful tool for developing a student's leadership skills. Teachers in higher education today recognize the opportunity that service learning presents to promote personal growth, professional development, and civic responsibility among today's college students (Eyler & Giles, 1999; Washburn, Laskowitz-Weingart, & Summers, 2004). One goal of higher education is to prepare students for active participation in a democracy (Colby, Beaumont, Ehrlich, & Stephens, 2003). As globalization and diversity increase in importance at many universities, service learning gives students the chance to interact with other cultures and become engaged citizens of their community.

The history of service learning can be traced back to the writings of Dewey. In his work *Experience and Education* (1938, 1963), he cited the importance of social as well as intellectual development and the merit of action directed toward the good of others.

The jewelry counter gets special student attention.

Today, service learning is defined as the pedagogy that connects academics with the experience of community service (Chisholm, 2005). For the past 20 years, students and teachers alike have found that volunteer service can make learning more relevant as new and valuable skills are developed. Research findings from a large, longitudinal study in higher education provided support that service learning affects a student's development. Astin, Vogelgesang, Ikeda, and Yee (2000) found that participating in service contributed positively to self-esteem, leadership, academic performance, and a student's plans to continue service after college.

Service and Professional Development

A leader is someone who is "able to create positive change for the betterment of others, the community, and society" (Higher Education Research Institute, 1996, p. 16). The Social Change Model of Leadership Development (SCM) was created for college students who want to work with others to produce social change during their lifetimes. The SCM focuses on two primary goals: (a) to develop in students a greater understanding of their talents, values, and interests, along with their competence as leaders and professionals; and (b) to facilitate positive social change in the community (Komives & Wagner, 2007). As college professors, we, like the educators and scholars who developed the SCM, are concerned that college students need "to value collective action for social change and learn to work with others in socially responsible ways" (Komives & Wagner, 2007, p. xiv). We also acknowledge that we expect our graduates to be active leaders in their professions and in their communities. For this reason, we facilitated this service-learning opportunity to aid professional development while students are still working on their undergraduate college degrees. This is a different approach than the professional development they might receive once they begin a job upon graduation.

Students merchandise an accessory wall in the store.

The apparel, retail merchandising, and design program at our university has a student organization with the mission of providing members with leadership opportunities through community service and volunteer work. As advisors, we encourage the students to engage in service projects related to the apparel and retail industry in the community, particularly working with agencies that serve limited-resource audiences. Community experiences using a service-learning approach are a great place to learn firsthand about social problems and possible solutions. Non-course-based programs that include learning goals and a reflective component are also included in service learning (Eyler & Giles, 1999).

The Fashion, Apparel, and Business Organization, a student group at a Midwestern U.S. land-grant university, carried out a project that serves as a sample of a successful service-learning program and preservice professional development opportunity. The executive unit of this organization applied for a Target Campus Grant related to leadership and volunteerism. This grant program is part of an ongoing effort by the Target Corporation, a prominent U.S. retailer, to strengthen families and communities throughout the country. Target gives 5% of its income through community grants and programs—giving that today equals more than $3 million a week. We wrote a proposal for funding to work with visual merchandising and promotion for a

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new Salvation Army Family Store that had relocated in the community. Target awarded a $1000 grant to the student organization to purchase fixtures and other display materials and to provide support for a special event to be held at the store.

The Salvation Army Family Store is a retail outlet where gently-used household items and clothing are resold to the public. These sales generate income that is then used to provide services to those in need. The Salvation Army's mission is to serve the whole person with integrity and respect, using creative solutions to positively transform lives. One purpose of this project was to give students an opportunity to work with The Salvation Army to help them impact the lives of thousands of people in the community each year.

A second purpose of the project was to build communication, decision-making, leadership, and problem-solving skills through a real-world, volunteer experience. As professors, we knew students would utilize skills learned in their classes, including space planning, aesthetics, visual display design, cost analysis, and marketing. Using the grant dollars, the organization purchased grid wall, hanging fixtures, and body forms to merchandise the walls of the store. Several new counter fixtures were purchased to completely re-merchandise the jewelry display.

The Salvation Army store personnel wanted a special event to be held at the store. As faculty advisors, we suggested the students think about a live, gallery-type fashion show where they would model outfits from the store. The students decided to call the event *Spring Fling* and to hold it on a Friday afternoon. Students created flyers and posted them at retail businesses and service centers in the community and on the university campus. The Salvation Army Community Relations Director sent out a press release and posted information on the organization's Facebook page.

Students modeled outfits using store merchandise while they served refreshments at the reception for customers.

Two days before the event, the students met at the site to merchandise the store and create the displays. They dressed the forms and created outfits to model. During the event, the students provided refreshments and welcomed guests to the store, wearing the outfits they had assembled and nametags indicating the total cost of the outfit. Local media covered the event, successfully publicizing the new store and bringing in customers.

Outcomes and Implications

Encouraging personal reflection is an essential aspect of the SCM. According to Roberts (2007), profound learning in leadership is more likely to happen through personal reflection and experiential learning. Students wrote the following reflections about the experience:

- ✦ I like opportunities that allow me to stretch myself and apply skills that I have learned in my apparel classes.
- ✦ I had to be thrifty and creative to come up with ideas and outfits for the store.
- ✦ You don't always need money or labels to have a good merchandising experience. When you don't have as many resources, you are forced to be creative.
- ✦ I learned that putting the skills I have learned to help a good cause and people in need made me feel good about myself and about the difference our work made in the store.

We observed that students developed as professionals in many different ways as they planned and carried out this project. Their interest in social change and the possibility to make a difference actually developed their skills, such as leadership, communication, tolerance, and critical thinking. In addition, they learned how to live a more sustainable lifestyle as they purchased used clothing to add to their personal wardrobes.

These wall forms were the most versatile to meet the needs of the store.

We plan to continue using the SCM with the student organization in the future. Programs at meetings have focused on working together for a common purpose and the value of volunteerism for professional development. Students in the organization are continuing their service to The Salvation Army through distributing *Coats for Kids*, ringing bells for the *Red Kettle Campaign*, and working with displays at the thrift store. The rewarding outcome is seeing our students stay actively involved in the organization as they become socially responsible professionals working in the global community of the 21st century.

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Interview

Professional Development With and For Technology: An Interview with Wendy Grojean
By Saundra L. Shillingstad

*T*his interview continues a series initiated by members of the Bulletin's *Editorial Board. The goal of the series is to feature interviews conducted with Delta Kappa Gamma members or other educational leaders on a topic related to the theme of the issue. Here, Wendy Grojean, coordinator of a state-of-the-art learning center at the newly-renovated Roskens College of Education at the University of Nebraska at Omaha, explains how she delivers professional development with and for technology in this unique space.*

Students, faculty, and staff of the College of Education at the University of Nebraska at Omaha (UNO) began the 2011 fall term in a newly renovated, high-tech building that offers a variety of collaborative 21st-century technology workspaces. They were excited to see the new Roskens Hall and overjoyed to experience the new educational resource room that is now called the *Innovation, Design, Experiences, Activities, and Synergy* (IDEAS) room.

The IDEAS Room offers four unique collaborative spaces for students and faculty to work together:

- **LVS Rooms:** The IDEAS Room has two LVS (Learn-View-Study) rooms available for students and faculty to utilize for collaboration purposes. These technology-supported rooms, complete with an LCD screen and multiple plug-ins, can be reserved in advance for meetings or can be used by students and faculty at the site on a drop-in basis.
- **LCD Collaboration Centers:** The LCD Centers offer comfortable seating for small-group work. The LCDs in the room allow group members to project their computer screens for the whole group to see.
- **media:scape** (http://www.ideo.com/work/mediascape)**:** This 21st-century collaborative tool allows eight participants to collaborate, with two LCD screens visible at one time. The media:scape is a great way to collaborate and has plenty of workspace. It is also an effective tool for small-group instruction.
- **Large-Group Presentation Space:** This space has six tables that can easily be moved for group work or independent study, as well as a projector and a screen for presentations.

Interviewee **Wendy Grojean** currently serves the students, faculty, and staff as the IDEAS Room Coordinator. Wendy serves many roles in the IDEAS Room. She coordinates the calendar and events in the room, maintains a collection of educational

resource materials, manages a staff of three student workers and four graduate assistants, provides Blackboard support to faculty, teaches courses for the Library Science Department, as well as offers various technology-focused professional development opportunities.

Outline your current role and position relative to professional development in the IDEAS Room.

Innovation. Design. Experiences. Activities. Synergy. This is what the IDEAS Room is meant to provide for the students and faculty of the College of Education and the Omaha community as well. The IDEAS Room is a high-technology resource room that was developed by the College of Education's dean and faculty when they were planning the new building. I was hired as the coordinator to organize and facilitate the activities for this space.

Describe the IDEAS Room

When you enter the IDEAS Room, you will quickly notice that collaboration is its theme. There are various spaces for College of Education candidates to gather and work together. For example, there are comfortable chairs that are arranged in a circle with ample outlets for laptop plug-ins on the floor. There are collaboration spaces with LCD screens for candidates to plug in their devices and work together on a project. The LVS rooms (Learn, View, Study) are spaces where candidates can roll up their sleeves and work. One of the LVS rooms has an LCD screen and the other has a SMART board for students to create, practice, and demonstrate their SMART board lessons.

The most popular space in the IDEAS Room is around the media:scape table. This high-tech table is where most prefer to work. The media:scape table allows up to eight people to plug in their laptops at one time, and two different laptop screens can be projected on the two LCD screens at one time. This table increases the productivity of the participants who surround it. I use this table to train the candidates and faculty of the College of Education on various technology topics. A space as versatile as the IDEAS Room allows me to provide various professional development opportunities. The media:scape table is where the majority of these opportunities take place.

Wendy Grojean began her career in Bellevue, Nebraska, teaching high school English and serving as sponsor for the school literary magazine. She later worked as a librarian at both the elementary and secondary levels in Bellevue, ultimately becoming K-12 District Media Facilitator and teaching as an adjunct at University of Nebraska at Omaha (UNO). Currently IDEAS Room Coordinator at UNO, Grojean earned her bachelor's degree in Secondary Language Arts, as well as her master's degree in Educational Administration and endorsement in Library Science from the university, where she will begin to pursue an EdD in Educational Administration in fall 2012. wgrojean@unomaha.edu

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What types of professional development opportunities do you provide and to whom?
The professional development opportunities that I provide to the candidates and staff are on how to incorporate technology effectively in the classroom. There are so many Web tools that are available for education, and oftentimes faculty and candidates don't even know where to start.

What are the goals for the professional development opportunities you offer?
The goals for the professional development sessions that I offer are how to use these tools (skills), how to incorporate them into the classroom (pedagogy), and also how to decide which is the best tool to use and when (evaluation).

What is your preferred format for the professional development opportunities offered and why?
I prefer to offer professional development opportunities in small groups or individually. The media:scape table allows me to gather a small group of participants around the table. It makes the session seem less intimidating because I'm not standing in front of the participants—I'm sitting with them right there at the table. The table also lends itself to reciprocal learning in that anyone can share his or her screen at any time by projecting the screen on the LCD monitor.

I really enjoy professional development sessions where candidates and faculty gather around the media:scape table to learn about a new technology tool. It is a great way not only to teach a new tool but also to discuss the potential uses in the classroom from the varying perspectives of the faculty and candidates. It truly gives me goosebumps when we are all gathered around the table discussing technology in education from these various viewpoints.

Technology skills are so individualized—comfort levels and knowledge levels differ immensely. Oftentimes, it is difficult to differentiate professional development on technology so that it is meaningful for all participants. Some people are insecure about their lack of knowledge and won't even go to large-group sessions. This is why I also like to offer trainings individually as well. Ultimately, everyone has his or her own goal for wanting to learn a certain technology—so small groups and individual sessions seem to be the best way for me to help people meet their goals in an unintimidating environment.

What are the rewards in the professional development opportunities you provide? Are there any particular challenges?
Every month I offer a professional development session on the same topic for a week-long period for anyone who can attend: students, faculty, staff, and so forth. My graduate assistants and I plan these sessions together, and I teach them how to present the material so we can offer up to two sessions in one day. This semester our sessions were *Gaga for Google Docs*, *Gaga for Google Spreadsheets and Presentations*, and *Gaga for Google Sites*. We focused on the Google tools this semester because every student has access to Google tools through their student e-mail accounts. During each session, almost every participant was able to walk away from the table having learned something that he or she could use and share with students and colleagues to increase learning or simplify a process that has been painfully difficult for years. It is rewarding to me to teach something that can put a smile on someone's face or spark an idea to make learning more engaging. In these particular sessions, it was also rewarding to see candidates learn and collaborate with faculty at the

same table.

Incorporating technology in a classroom requires risk. A professional development participant has to be willing to take a risk on trying something new and changing what has been done in the past. Change is difficult. Unfortunately, I can't guarantee that, when they take this risk, it is going to work seamlessly in the classroom. When I offer professional development, I respect the caution with which technology is sometimes approached. Participants come to the table with a variety of experiences with technology, and they are not always good experiences. I meet this challenge of hesitance with patience and through developing relationships with participants in order to build trust. Once this trust is established, then the fear to change will slowly subside and we can work together on the technology.

What are you personal thoughts related to professional development?
Professional development is personal. In order to provide an effective professional development session, I need to understand and respect the personal needs and experiences of the participants. This is why it is important to establish trust with participants. If I am asking them to take a risk, then they need to trust that I will support them in taking this risk. My professional development sessions do not end after the hour of training. My office door is always open to help candidates and faculty with technology. I will support the participant in the planning and teaching of a new technology tool. Oftentimes, I go into the classroom and teach the tool to candidates for a faculty member. This way, I'm supporting the faculty member *and* his or her candidates in that the students see me as their support as well. My professional development sessions are the first step in a partnership with my participants and colleagues, and this is what I enjoy the most—working with wonderful candidates and faculty who are willing to take risks to improve instruction and education.

Brain-based Pedagogy in Today's Diverse Classrooms: A Perfect Fit—But Be Careful!

By Linda Ann H. McCall

*T*he purpose of this article is twofold: to advocate for brain-based teaching and learning and to offer cautions to consider before implementing this approach. Recent discoveries in cognitive neuroscience cause individuals to question seriously the long-held tenets of the dominance of objective thinking. Scientists now know that emotion and cognition are intricately interconnected. Before applying these ideas to the classroom, however, educators must consider several cautions. First, not much is known regarding the workings of the brain. Second, reports regarding neuroscientific findings are often sensational or distorted. Third, neuromyths abound. Fourth, educators need to become more knowledgeable regarding the physiology of the brain, and education research efforts and those in the field of neuroscience need to merge. With knowledge, educators can avoid impulsive decisions and are better able to determine the validity and applicability of each research effort examined.

Before moving into the university classroom, I taught in elementary schools for more than 35 years in a variety of settings (i.e., homogeneous classrooms, inclusive classrooms, open classrooms). I have taught many children, all beautiful in their own special ways, arriving from different contexts, with different talents and needs, and with different potentials for success. Some years ago, I found myself among the increasing numbers of educators around the world who are embracing an emerging pedagogical approach referred to as brain-based learning (Connell, 2009). Brain-based learning is an exciting idea that offers hope to those of us who search to find meaning and excellence in all spheres of education—for **all** learners. It is an idea that honors long-established cognitive and psychological research findings as well as the recent discoveries in neuroscience (i. e., the study of the brain and nervous system) that prove the interconnectivity of the body, mind, and brain (Caine & Caine, 1997; Gardner, 2007; Jensen, 2005; LeDoux, 1996, 2002; Ochsner & Phelps, 2007; Tokuhama-Espinosa, 2010).

As one example of important connections, neuroscientists Debiec and Altemus (2007), McEwen (2011), and Shonkoff (2011) found that environmental stressors increase anxiety and decrease the ability to learn. In order to lower stress and improve cognition, Sylwester (2003, 2010) recommended a nurturing, democratic classroom and integrated curricula that reflect the connectivity between the brain and the environment. Jensen (2008, 2010) suggested exercise, drama, and celebrations to decrease stress and increase learning. Learning through the arts (Goldberg, 2006), construction activities, metaphorical learning (Sylwester, 2003), memory enhancers such as graphic organizers (Mastropieri & Scruggs,

2010), and contextual experiences such as field trips that are presented as *connections* to the community are other examples of positive activities that reduce students' stress and enhance their learning.

Further, the brain-related ideas regarding *communion*, or dialogue and collaboration (Greene, 1988), and *patterning*, or the perception and creation of parts and wholes simultaneously in the brain (Caine & Caine, 1997; Dehaene, 2002), support some older and well-respected views. For example, according to John Dewey (1916), experience implies a connection between active and passive *doing*, and the curriculum is a vehicle for this experience. Dewey (1916) believed that integrative, experiential learning is more compatible with the natural inclination of the learner. This suggests the value, for example, of teaching via student-selected themes (Sylwester, 2003), group learning (Jensen, 2005), and an integrated approach to literacy learning (Tompkins, 2010; Wolf, 2007) wherein ideas from the social sciences and neuroscience are used to focus instruction (Tokuhama-Espinosa, 2010).

But Be Careful!

Brain-based learning remains clouded by many unanswered questions and widespread misinterpretation. Thus, before constructing a brain-based classroom, educators should consider several cautions. First, much remains to be discovered regarding the science of the brain (Granger, 2011; Shonkoff & Phillips, 2000). According to Jensen (2000) and Phillips (2005), much of the information offered today regarding brain-based learning has been around for many years and reflects cognitive and psychological research rather than neuroscience. Further, few neuroscientific studies of children have been conducted. Much of what we know about brain development is derived from experimental studies of animals (Shonkoff & Phillips, 2000; Tokuhama-Espinosa, 2010). For example, the recent discovery of *mirror neurons*, or those neurons throughout the brain that mirror the behavior of another and are responsible for feelings of empathy, resulted from experiments with monkeys (Ramachandran, 2000; Rizzolatti, Fogassi, & Gallese, 2006).

Second, educators should be careful about the claims supposedly based on brain research. Many of these may be false or misleading (Willis, 2007). For example, consider the classroom exercise program *Brain Gym* (Dennison & Dennison, 1994, 2010). According to neuroscientists Attwell (2011), Goldacre (2008), Hyatt (2007), and Watt (2011), children should certainly exercise often, but *Brain Gym* exercises are being presented with pseudoscientific assertions that contradict scientific concepts and may mislead children regarding the workings of their bodies.

Also, naïve acceptance of media reports regarding possible correlation between neuroscientific findings and the classroom by the public—and more specifically by educators—can be problematic. These reports are often sensational and distorted. For example, Wolfe (2003) described a news article about a researcher at the University of

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Virginia who found that glucose improves cognition. The participants in the study were elderly people, and those who drank glucose-sweetened lemonade understood and remembered twice as much information from a written passage as their counterparts who drank artificially sweetened lemonade. What the article failed to mention was that no research had been conducted with children. Yet, based on the report, teachers began offering candy to their students because "'research proves that candy improves memory.' Is it any wonder that some neuroscientists are beginning to accuse educators of engaging in pseudoscience or worse, becoming 'snake-oil salesmen' for products and programs that have no real scientific foundation?" (Wolfe, 2003, p. 3).

> " *Brain-based learning remains clouded by many unanswered questions and widespread misinterpretation. Thus, before constructing a brain-based classroom, educators should consider several cautions.* "

Third, educators need to avoid making simplistic applications of neuroscience findings (Atherton, 2011; Crawford, 2007). In doing so, the original meaning and intent are distorted. Unfortunately, *neuromyths* (Bruer, 1999) abound. Consider *brain laterality*, or the idea that the two hemispheres of the brain are discrete or work differently. According to Bruer (1999) and Jensen (2000), this is a gross oversimplification. Each side of the brain does indeed process information differently, but concept formation involves whole brain interaction (Caine & Caine, 2006; Dehaene, 2002).

Next, there is a notion of a *critical period*. According to this myth, there is a critical or sensitive period for brain development, typically from birth to age 3. It is popularly believed that during this time intellectual stimulation causes increased synaptogenesis (i.e., an increase in the number of synapses that connect neurons in the brain) and thus increases learning capacity. The commercial boom in so-called enriching products and environments for infants (e. g, listening to Mozart, yoga classes, infant learning centers) gives witness to this neuromyth. Neuroscientists have not found any evidence to support these claims (Jensen, 2000; Willis, 2007). In fact, according to Park (2007) and Wolfe (2006), the widely popular *Baby Einstein* (www.BabyEinstein.com) and *Brainy Baby* (www.thebrainystore.com) video series, and the use of workbooks and *educational* computer games are inappropriate. These materials may actually delay language growth and deprive children of the natural interaction with their world that is so important to development. This finding is controversial given the popularity of these materials, yet should be heeded by parents and educators alike, especially since the American Academy of Pediatrics has advised against screen time for children under age 2 (Zimmerman, Christakis, & Meltzoff, 2007). Further, according to Baars and Gage (2010), neurobiologist Goldman-Rakic (1997), and the Society for Neuroscience (2011), lifelong learning does occur. During adolescence, for example, the prefrontal cortex (the center of reasoning and impulse) is still "a work in progress" (PBS, 2007, para.1), and synaptogenesis occurs throughout life.

Another neuromyth involves the mistaken belief that stimulating environments for babies will preserve synapses and reduce the natural pruning that occurs in the brain. There is no neuroscientific evidence to support this claim (Bruer, 1999). Lastly, according to the Society for Neuroscience (2009), the following myths regarding the brain persist: (a)

Myth: We use only 10% of our brains. Fact: We use all of our brains. (b) Myth: Vaccines cause autism. Fact: Vaccines do not cause autism, and, to date, scientists have not identified causes for this disorder. (c) Myth: Brain damage is permanent. Fact: In many cases, neural plasticity allows the brain to create neural connections.

Fourth, educators are often guilty of what I like to call *bandwagonitis*—in this case, climbing impulsively in lemming-like fashion onto the brain-based wagon. Lack of a thorough knowledge of the brain-based approach (or any approach for that matter) before implementation leads to gross misapplication and hence developmentally inappropriate classroom practices. Before implementing brain-based learning in their classrooms, educators need to understand brain physiology (Brandt, 1999; Dubin, 2002; Wolfe, 2001). They need to peruse the literature in order to determine the validity of each research effort examined. Lastly, they need to merge and then synthesize education and neuroscience research efforts in order to judge their applicability to their classrooms (Gardner, 2007; Tokuhama-Espinosa, 2010).

Summary

During the past three decades, increasing attention has been paid to the idea of brain-based teaching and learning—an exciting approach that reflects the interrelatedness of the mind, brain, and body. In order to create a brain-based learning community successfully in today's diverse classrooms, teachers need to consider several cautions. First, there is still much to learn about the human brain. Second, research and media reports regarding the brain are oftentimes inaccurate or distorted. Third, neuromyths abound regarding brain laterality, critical periods, synapse preservation, brain capacity, the causes of autism, and the ability of the brain to *rewire* itself. Fourth, teachers need to stay current regarding the latest research findings and more knowledgeable regarding the physiology of the brain. Should today's diverse classrooms reflect a brain-based teaching and learning environment? YES—but be careful!

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Learning Everywhere, All the Time

By Vickie Cook

*L*earners of all ages and stages today engage in learning online. Students learn everywhere and may be connected to a learning source at any time. Teaching and learning online are about making the necessary connections between the teacher and the student; among students; and among the student, teacher, and content to allow learning to occur. This article will help teachers make those connections in ways that will engage students in a continuous learning process.

Learning online may consist of informal personal learning through independent research of a topic, i.e., how to purchase a car, how to handle a health issue, or how to save $10,000 in a year. Alternately, online learning may be a more professional approach for the purposes of earning credit toward a degree or certificate program. Learners of all ages and stages may be part of an information learning network through the use of blogs or social networking. On the other hand, they may participate in a formal classroom set inside a learning management system that is password protected and includes scheduled content release, quizzes or other assessment measures, and assignments.

Today there is a movement beyond the idea of learning *anytime and anywhere* to the concept of learning *all the time and everywhere*. This concept of a constant state of learning creates a new paradigm in how individuals think about online teaching and learning in a professional setting and how they evaluate what they are learning informally online. This article looks more closely at what the all-the-time-and-everywhere concepts mean to today's learner engaged in professional learning, activities, credited or noncredited.

Planning: Content and Technology

Creating a solid learning experience online takes time to plan and construct strong learning objectives. Intentionally teaching an online class well takes planning and creativity. Although a plethora of materials may be found about the procedures needed for strong instructional design, often teachers who are beginning to teach online, or who may have taught online for some time, struggle with helping students find ways to engage with the materials and with other students in the classroom.

A good online teacher will utilize the technologies available to build a class and then use the theories related to connectivism to conduct the class (Siemens, 2005). Using the theory of connectivism, which is based on the premise that knowledge exists in the world rather than in the mind of an individual, allows students to understand that knowledge can be obtained through valuing diversity of opinion because the connections between many sources can lead to new knowledge. Technology can be particularly helpful in connecting

information from a variety of fields and individuals, which is necessary to adding depth and breadth to one's knowledge base.

Self-directed learning is necessary for connectivism to occur. As the learner progresses through learning to use the techniques of connectivism, the questions leading toward knowledge may shift, thus creating the need for new knowledge to be learned. Moving toward new knowledge happens more efficiently and effectively when deeper connections between the teacher and students are a part of the classroom experience.

Making teacher-to-student and student-to student connections is vital to creating a solid learning environment in the online classroom. As teachers in the YouTube Video, *It Happens Online* (http://www.youtube.com/watch?v=i8c1oGwEKM&feature=player _embedded#at=236) explain, good online teachers know how to connect to their students, how to differentiate instruction, and how to design a course to meet the social, emotional, and learning needs of their students. Students are able to learn skills in thinking, in articulation, in writing, and in information literacy as they move through an online class that is developed with each student's learning needs in mind.

Learning should also take place continually outside of the classroom. This is true of all ages and stages of learners who are taking classes online. Real-world, experiential learning assists students as they work together to build learning in an online setting through the guided instruction of a professional teacher.

Garrison, Anderson, and Archer (2000) viewed learning online as a process and asserted that the effectiveness of online learning is dependent upon building a strong learning community. An online teacher striving toward effective and efficient learning will do the following:

- Establish and use *voice* effectively by prominently displaying a personality and assuming control of the classroom.
- Create a unique social presence by effective use of the discussion board, blogs, wikis, and other forums and technologies that will allow discourse to build and support learning through creating a sense of belonging.
- Use activities and technologies effectively to establish deep and meaningful learning experiences that engage the students with content, with fellow learners in the classroom, and with the teacher.
- TEACH throughout the course. Truly establishing a teaching presence in the course room will guide students to a learning experience that can be effective and efficient in learning new knowledge, developing competencies, and creating new thinking about constructs being taught.

The Figure is the model developed by Garrison, Anderson, and Archer (2000), showing each component of the online classroom and demonstrating that learning occurs at the intersection of the social, cognitive, and teaching presences inside the classroom.

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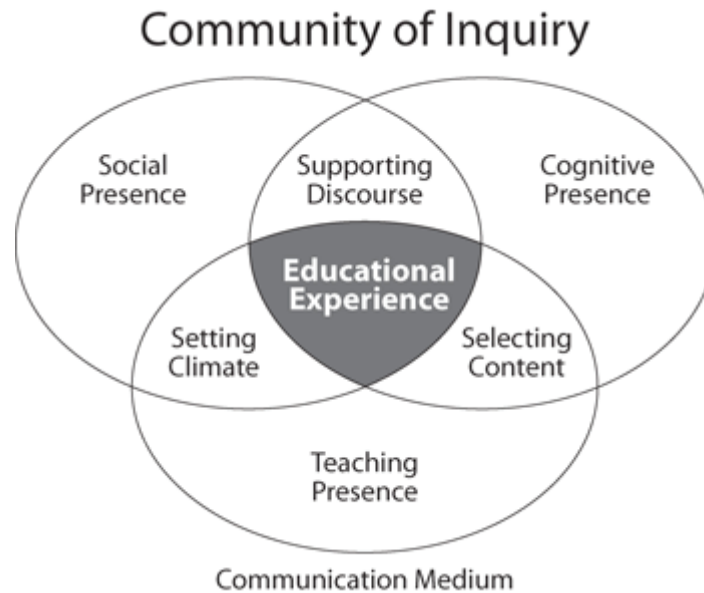
Community of Inquiry

Figure. Elements of an Educational Experience. Reprinted with permission from "Critical inquiry in a text-based environment: Computer Conferencing in Higher Education," by D. R. Garrison, T. Anderson, & W. Archer, 2000, *The Internet and Higher Education, 2*(2-3), p. 88.

Typically, teachers who are new to teaching online put extra effort into thinking about and developing online content. However, they would be wise to ask for the aid of an instructional designer who will be able to assist with thinking about the best ways to share concepts and help students understand theory and application in a variety of media. Such media may include video, PowerPoint, music, lectures, podcasts, calendars, work schedules, digitized handwritten comments, Web pages and quizzes, tests, and assignments, as well as synchronous activities to enhance the teaching and learning components in the online class. Static documents can become dated very quickly. Using current events occurring in the world and assignments that connect the student to new areas of thought and culture through videos, music, podcasts, blogs, wikis, and new mlearning [mobile learning] apps for tablets and smartphones that allow connectivity to occur with content in different ways will all be part of connecting content to the student. These practices assist the building of cognitive connections for the students.

Social Connections
Connecting socially is also a vital component to the Community of Inquiry model of learning (Garrison et al., 2000). This social extension of the learning process may be provided through connections to a professional community or to a blog that continues after the class is completed to explore a topic further. Social connection may be established through a Facebook community or by providing sessions using a synchronous tool such as Blackboard Collaborate (http://www.blackboard.com/Platforms/Collaborate/Overview. aspx), Adobe Connect (http://www.adobe.com/products/adobeconnect/elearning. html), or Skype (http://www.skype.com/intl/en-us/home/). Another way to extend social learning is to invite former students back into the online course room to engage with current students, especially if former students have completed degrees or are now working in the field.

Online instructors should also be alert to evolving technologies for connection. For

example, one newly introduced technology that is beginning to achieve a foothold is Google Plus (Young, 2011). The Google Plus product is promoted as an ideal way to share the same types of information often available via Facebook, but the program allows only small groups or subgroups of individuals to have access to the information. Users must receive an invitation to join a specific *circle* of users (Young, 2011). At the time of this writing, Google Plus is not widely available, but it has great potential for connecting online students as specific groups of learners.

Students may also engage fully through enrolling in a MOOC (Massive Open Online Class) that attempts to connect students to each other and to content. Building knowledge through engagement in a MOOC is a completely student-driven experience. A MOOC provides for many networks of students and professionals to create informal ways of learning about specific content. Because building an online network has become very familiar to students in personal settings, the experience of creating a social presence in an online class is a natural extension of their personal online connections. Bethany Brevard, Instructional Designer at New Mexico State University, spoke recently to a group of online educators engaged in a 2011 MOOC and provided a good summary of the medium: "It isn't about the technology. It is about connecting students with the faculty to assist them with learning through the use of technologies."

Conclusion

Connections are the lifeblood of an effective online class. Regardless of their age or stage, all students enrolled in a class want to feel connected to their teacher, as well as to the material they are learning. Real learning can occur when learning activities, course design, and course interactions are used purposefully in one's attempt to build a strong online learning community.

The concept that today's online learning is about learning all the time and everywhere brings an interesting dynamic and many challenges to educators and to learners at all ages and stages of life. Being prepared to teach and learn in a continuous model that engages the instructor, the students, and the content will change how educators use new technologies to encourage and sustain learning and eliminate boundaries that exist for students in teaching and learning.

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Rethinking Reform: A Review of *The Death and Life of the Great American School System: How Testing and Choice are Undermining Education* by Diane Ravitch

By Joanna Scott and Christie Bledsoe

Ravitch, D. (2010). *The death and life of the great American school system: How testing and choice are undermining education.* New York, NY: Basic Books.

Educational leader Diane Ravitch publically professes a change regarding her own beliefs about testing, accountability, choice, and educational models in U.S. schools. Ravitch's words provide insight to inherent problems in the United States that school reform simply has not remedied. Although Ravitch's change of perspective is somewhat controversial, she provides thoughtful insight for educational leaders, legislators, and parents in the recount of the negative impact of high-stakes testing.

As a professor at New York University, Diane Ravitch, PhD, has devoted her life to education and has written extensively in the field of education. Ravitch also served in the U.S. Department of Education during the George W. Bush administration, in which she supported accountability, choice, testing, and educational models. In *The Death and Life of the Great American School System*, Ravitch clearly describes the negative impact of these ideas and the evolution of her personal opinions on each topic using documented anecdotes.

Testing is not the Answer
Ravitch's support of accountability measures imposed by Bush's No Child Left Behind (NCLB) law of 2002 began to wane several years after the law was enacted. As an original supporter of NCLB, Ravitch helped found the Koret Task Force, an educational team at Stanford University and supporter of the tenets of NCLB. Ravitch comments, "I came to believe that accountability, as written into federal law, was not raising standards but dumbing down the schools as states and districts strived to meet unrealistic targets" (p. 13). In 2009, Ravitch resigned from the task force.

Ravitch once believed testing could ensure student proficiency in math and reading. She later delved into the outcomes of the testing movement and discovered a system rife with flaws. "Students had mastered the art of filling in the bubbles on multiple-choice tests, but they could not express themselves, particularly when a question required them to think about and explain what they had just read" (p. 108). Realizing the testing component of NCLB did not reflect curriculum but replaced it, Ravitch could no longer support testing as a method of improving the U.S. educational system. The narrowing of the curriculum did not benefit students, the teaching profession, or education.

High-stakes testing increases accountability for schools, but parents and families are also instrumental in a child's academic achievement. Ravitch refutes the claim that having three to five good teachers in a row can reduce the learning gap between races. She asserts that five good teachers in a row cannot eliminate malnourishment, poor health and hygiene, and the effects of drugs and abuse that often accompany families living in poverty. No measure of accountability, testing, or choice can improve life or raise scores for some children.

A Business Model and School Choice

Ravitch originally supported school choice. After learning more about charter schools, however, she became disheartened. In charter programs such as the Knowledge is Power Program, only the brightest, most motivated students succeeded. After discovering that students who eventually dropped out from public schools actually dropped out sooner in charter schools, Ravitch once again became "a friend and supporter of public education" (p. 13).

Ravitch also denounces the business model as a suitable prototype for education. After taking a closer look at NCLB, Ravitch realized "incentives and sanctions may be right for business organizations, where the bottom line—profit—is the highest priority, but they are not right for schools" (p. 102). Reflecting on a failed attempt to reform an already-productive school system in San Diego, California, Ravitch concludes, "You can't lead your troops if your troops do not trust you" (p. 65). Business leaders were ineffective in education with teachers and students.

Once an ally, advocate, and member of the U.S. Education Department, Ravitch proclaims, "It [NCLB] promoted a cramped, mechanistic, profoundly anti-intellectual definition of education. In the age of NCLB, knowledge was irrelevant" (p. 29). Ravitch's research into the U.S. education system included a thorough examination of the system and resulted in her abandoning supportive views on all components of NCLB. Ravitch's involvement in education fostered her belief that a

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strong curriculum and exposure to liberal arts disciplines would better educate America's students for the future.

Conclusion

Ravitch shows great courage in denouncing ideas she once promoted, but the conclusion of this book is disappointing. Ravitch lists universally desired qualities for U.S. students: good health, a strong character and good manners, significant social capital, and a strong historical sense of self. For the classroom, Ravitch suggests another list: a strong curriculum, inclusion of liberal arts disciplines, promotion of proper grammar, and a reading list of the classics. Although Ravitch's plan has promise, she does not include steps for implementation in the classroom.

Overall, Ravitch's *The Death and Life of the Great American School System* is well-written and supported with extensive examples and references. Ravitch addresses poignant topics in education as well as the consequences of a failed system. She boldly expresses a change of perspective as flaws in NCLB have surfaced in America's educational system. Her timely work will cause many to question the impact of high-stakes testing. There are no easy answers for improving the system, but educational leaders will reconsider the impact of NCLB and testing after reading this book.

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