

# Reflective Practices Among Language Arts Teachers: The Use of Weblogs

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## Abstract

Reflection is considered an important aspect of teacher practice. Researchers examined 21 teacher-created language arts blogs to determine whether randomly selected entries within the blogs demonstrated reflection on professional practice. In addition, entries were examined to determine the depth of reflective practice. The amount and depth of reflective practice was measured by a researcher-created rubric. Results indicated that all language arts teachers in the study used their blogs as reflective journals and that the depth of reflection occurring in the blogs varied from casual reflection (i.e., regarding the proceedings of the school day) to metareflective posts that could lead to changes in practice.

In their simplest form, Web logs (blogs) can be thought of as electronic journals (Huffaker, 2004; Kennedy, 2003). Blogs are “part web site, part journal, part free-form writing spaces [that] have the potential to enhance writing and literacy skills while offering a uniquely stylized form of expression” (Kennedy, 2003, ¶4). Blogs have distinct attributes setting them apart from other types of electronic communication. For example, while email is used to compose, send, and receive messages over electronic communication systems, authors of blogs post in reverse chronological order (Kajder & Bull, 2003), providing the reader with the most current entries. Unlike other threaded discussions, only the author of the blog controls the content and creates new topics, thus providing more cohesiveness to the discussion. With their simple user interface blogs are an effective medium for many educators, including those lacking computer skills.

The use of blogs among teachers, including language arts teachers, is relatively new. Only a handful of studies have been published supporting the effectiveness of blogs in educational settings (Tan, 2005). However, these papers do not address their efficacy when used by language arts teachers to reflect in writing about professional practice. In fact, it remains unclear how language arts and other teachers use blogs, even though many in the field are aware that the number of educational users continues to grow.

## Literature Review

### Reflection Defined

The recognition that reflection is an important aspect of developing practice can be traced back to John Dewey. Dewey (1933) defined reflection as the purposeful discovery of facts. For Dewey reflection was a way of knowing and using information. Dewey believed that reflection allowed one to learn something of meaning, meaning that can then be carried across time, even as new information or perceptions shape one's understanding of what is known. Bruner (1960) further clarified the meaning of reflection, arguing that reflection "is central to all learning" (p. 13). Schon (1983) elaborated on the meaning of reflection, stating that it involves thinking carefully about professional practice. Reed and Bergemann (2001) recognized the importance of teachers actively engaging in reflection, for they stated that preservice and in-service teachers who are able to reflect on their experiences are more successful than those who do not engage in reflection activities.

The range of reflection varies from simple to complex. Reflection can be as simple as asking questions such as, "What just happened?" or as metacognitive as, "What would I do differently if I were to do this again?" Dewey (1933) believed that through the process of reflection teachers are freed from the burden of impulsive or routine behavior. Likewise, Schon (1983) believed that professionals engage in consistent, systematic reflective activities. He felt that reflection involves more than just thinking on one's feet. It also involves meaningful consideration that allows educators to recognize and understand teaching and learning events.

A practitioner's reflection involves thinking about the curriculum, the school community, the educational context, and the ends of education. As educators reflect, they engage in a process that assists them in avoiding unexpected events or results, mistakes, or unresolvable issues with the potential to impact learning (Schon, 1983).

Posner (1993) added to the discussion, stating that reflection allows teachers "to act in deliberate and intentional ways, to devise new ways of teaching rather than being a slave to tradition, and to interpret new experiences from a fresh perspective" (p. 21). Therefore, the advantage of purposeful reflection is that it enables practitioners to be proactive rather than reactive when organizing learning environments.

Further elaboration on reflection and its role in promoting professional practice is provided by Osterman and Kottkamp (1993). The authors viewed reflection as integral to practice. For them, reflective practice functions as a means for developing greater self-awareness about the nature of the teaching and learning process. Reed and Bergemann (2001) wrote that teachers "who reflect on their actions and performances are more successful than those who merely react...frequently...writ[ing] down what they have observed, as a way of processing their thoughts" (p. 9) and informing their future practice. This assertion is supported by the work of Osterman and Kottkamp (1993) who viewed reflective practice as meditative, collaborative, and necessary. Whether simple or complex, reflection is about moving teachers toward an awareness of factors impacting professional practice (Posner, 1993).

Khourey-Bowen (2005) stated, "Practitioners become more accomplished professionals when they are able to remove themselves from the immediacy of the situation, and interpret it using new perspectives, refining their beliefs and future courses of action" (p. 85). However, reflection alone is not meaningful in itself. Hoffman-Kipp, Artiles, and Lopez-Torres (2003) considered the link between reflection and practice. They posited

that reflection is most meaningful when it leads to positive changes in practice. Although theorists agree that reflection is an important aspect of developing teaching practice, little is known about how teachers beyond the preservice years engage that process.

### **Reflection in Electronic Environments**

Written reflection has been noted in the literature as an effective method of thinking about practice (Calderhead, 1996; Palmer, 1998). Reflective writing involves serious contemplation about self-growth and learning (Cole, Ryan, Kick, & Mathies, 2000). At issue is whether blogs are used by teachers to support their written reflection. This concept has only recently been considered (Ray & Hocutt, 2006a). However, some limited research on the efficacy of reflection in electronic environments supports teachers' use of blogs as a means of authentic and public reflection on practice (Bonk, Cummings, Hara, Fischler, & Lee, 2000; Bonk, Malikowski, Angeli, & East, 1998; Khourey-Bower, 2005).

According to Kennedy (2003), "Blogs combine the best elements of [technology, where] work is collected, edited, and assessed, with the immediacy of publishing for a virtual audience" (§17). Blogs are "especially effective at supporting...reflection...more so than other technologies would be" (West, Wright, & Graham, 2005, p. 1656).

A few other limited studies suggest that blogs may promote reflective practice among educational users (Fiedler, 2003; Shoffner, 2005; Suzuki, 2004; West et al., 2005). In their 2006 study of middle school teacher bloggers, Ray and Hocutt found that "a majority of entries examined demonstrate some level of reflective writing" (2006b, ¶14). Ray and Hocutt further explained that all subjects engaged in reflective writing in their educational blogs. However, the depth of reflection as measured by a researcher-developed rubric varied markedly between and within individual blogs. In fact, less than 14% of entries examined demonstrated "a disposition for critically questioning what is going on in the classroom" (2006b, ¶16).

In another study focusing on K-12 teachers, Ray and Hocutt (2006a) found that blogs "functioned as reflective journals where teachers could write about and reflect on events occurring in their classrooms...Entries demonstrated a process of continuous reflection about...students and about [teachers'] knowledge and understanding of...issues impacting practice" (p. 25). Results also demonstrated that blogs promote collaboration and social interaction among educational users.

For many educators, teaching can be a solitary practice with few opportunities for collaboration or for reflective discourse with one's peers (Darlington-Hammond, 1996). Therefore, teachers must develop self-supporting practices, or they must find ways to make connections with colleagues who can support their professional practice (Darling-Hammond, 1996). Some teachers already have found that the need to share their reflective discourse with peers can be met via the use of electronic communications (Ray & Hocutt, 2006a), including blogs.

### **Purpose of the Study**

One potential way to investigate how in-service teachers engage in reflection is through an examination of their reflective writings. Technologies, including weblogs, provide a unique and authentic opportunity to glimpse the written reflective processes employed by practicing teachers (Darling-Hammond et al., 2005; Khourey-Bowers, 2005). Technology provides tools for teachers "to consider and analyze their personal practice and the

practice of others” (Darling-Hammond et al., 2005, p. 188). In the context of this research project, language arts teachers’ use of blogs as reflective devices gives the researchers an opportunity to observe authentic and public displays of reflective practice among a set of teachers who have embraced a particular technology, blogs, as a written and public communications tool.

This study was motivated by the need to understand the role and function of blogs in terms of language arts teachers’ reflective practices. Much can be learned that will inform future research on this topic. We studied reflection within the public and authentic setting of a variety of language arts teachers’ blogs. Our intent was to describe and measure what we observed. An additional purpose was to understand the depth and scope of the reflection contained within the blogs through a formalized research process. Therefore, the results of this study should prove useful in providing a foundation for and framing further research in this area.

### **Research Questions**

This study addresses language arts teachers’ use of blogs for written reflections about professional practice. Two research questions guided this study:

1. Do individual blog entries related to educational practice demonstrate written reflection?
2. If so, what depth of reflection is demonstrated by the entries?

### **Methodology**

#### **Participants**

We conducted a census to identify blogs created by teachers for their personal and professional use. The total population of bloggers is unknown; recent statistics published by the Pew Internet and American Life Project (2006) indicated that the blogger community exceeds 12 million bloggers in the United States alone. However, it is not known how many bloggers are K-12 educators.

Therefore, we sought to conduct a census of Internet blogger sites to identify teacher-created, teacher-centered blogs, including those created by language arts teachers. Identified blogs included only those created by K-12 in-service teachers in public schools in the United States. No effort was made to collect data on teacher-created, student-centered instructional blogs, or on preservice teachers’ blogs. The known population for the census period in early 2005 was 142 teacher-created, teacher-centered blogs. Out of that number 33 language arts teacher blogs were identified. However, by the time we began this project in fall 2006, that number had dropped to 11, resulting in a significant mortality rate (nearly 67%) for the group.

Knowing that many bloggers link to other blogs with like or similar interests (Pew Internet & American Life Project, 2006), we decided to follow links from the remaining 11 blogs with the expectation that this strategy would lead to other, newer language arts teacher blogs. This strategy was successful, resulting in six additional blogs. Finally, four additional blogs were identified using a variety of Internet search engines (i.e., Google™, Yahoo™, and Dogpile™) along with blog-specific search engines (i.e., Blogarama™). The 21 blogs examined here appeared across a variety of blog hosting sites, including Blogspot™ (11), Typepad™ (2), and JournalSpace™ (1). Demographic information for the identified research group is displayed in Table 1.

Using a random number table, five entries from each of the 21 blogs were randomly selected for analysis. Entries of a noneducational nature were excluded from the sample. When the random number table selected an entry that did not have educational content or that was personal, the entry was skipped and the next available entry meeting the criteria was selected. A total of 105 narrative posts were analyzed for evidence of reflective practice.

**Table 1**  
*Demographic Profile for the Population (n = 21)*

<b>Gender</b>	<b>Grade Level</b>
Female = 18	Middle school = 7
Male = 2	High school = 14
Unknown/Indeterminate = 1	

According to Anderson and Kanuka (2003), research involving public records and public spaces and of a nonintrusive nature does not require informed consent. We expanded the concept of the public space to include Internet public newsgroups, chat rooms, and other virtual communities, including blogs. Because these spaces are generally open to all, informed consent is not necessary when the researcher has “no interaction or intervention with the participants,” and there is “no disclosure of private information” (Anderson & Kanuka, p. 69). All narrative posts used in the research came from entries published to open access Internet blogs. Also, it should be noted that we made no effort to contact any blogger or to collect personal information.

*Instrumentation.* A researcher-developed rubric was used for data collection. Rubrics and other reflective measures developed by other researchers were used to guide rubric development (Cady, Distad, & Germundsen, 1998; Frank, 2003/2004; Reed & Bergemann, 2001; Tsangaridou & O’Sullivan, 1997). Although other rubrics were used as a basis for construction, we extended this work to include the theoretical underpinnings of influential leaders in the field, including Dewey (1933), Bruner (1960), Schon (1983), Beyer (1991), Posner (1993), Brown (1997), Reed and Bergman (2001), and Hoffman-Kipp et al. (2003).

In order to establish content validity for the instrument, two experts within the teacher education and instructional technology fields confirmed the legitimacy of the indicators and the link between the indicators and the research in the field of reflection and electronic environments. Both experts taught core teacher education courses containing standards-based reflective assignments in addition to teaching technology integration courses for preservice and in-service teachers.

The rubric provided a method of assessing the quantity and quality of reflection displayed in each subject’s writing sample. In addition to counting the number of reflective entries, we used the rubric to determine the depth of reflection for each of the individual entries. The rubric used a 5-point scoring system, where a rating of 4 (0.2) indicated evidence of metareflection, ratings of 3 (0.15), 2 (0.10), or 1 (0.05) indicated decreasing levels of reflection, and a rating of 0 indicated no evidence of reflection (see [Appendix A](#)). Adding the scores together for all five entries resulted in an overall reflective score for each subject. The highest possible reflective score any data set could receive was 1.

The following are descriptions of the levels and supporting citations from theorists that help differentiate the levels along this continuum of reflections. For this reason, the entries providing the evidence are verbose. However, we excerpted only the portion of each entry that best captured the essence of the quality of reflection.

*There is no evidence of reflective practice within the entry (0.0).* Posner (1993) suggested that experience with no reflection is shallow and at best leads to superficial knowledge. At this level, teachers did not provide evidence of reflection. It is important to emphasize that because evidence is lacking, there is no way to ascertain whether or not teachers engaged in a reflective process. It may be that teachers simply did not report upon their reflection for any of a multitude of unknown reasons. The following is an example of an entry that meets the criteria of a 0.0 entry: “One of the nicest girls in my class needs glasses, and today the nurse gave her a coupon for a free pair...”

The reflection is not upon any aspect of practice. The teacher thinks about the needs of the child, but does not put the needs into the context of her day-to-day teaching routine. For instance, the teacher might have said something about moving the student to the front of the class or enlarging fonts on handouts. This category, therefore, is one that does not show reflection on practice.

*The educational blogger reflects on his or her work and improvement but does not provide examples in the entry (0.05).* Dewey (1933) suggested that there is a continuum of reflection. The beginning of this continuum is exemplified through this first meaningful level of the rubric. Dewey’s lower levels on the reflective spectrum consist of purposeful discovery of facts. He recognized that even simple acts of reflection can have value. Likewise, Cole et al., (2001) reported upon the importance of this beginning level. Cole et al., felt that beginning reflections, while appearing narrow or even shallow, build a foundation for deeper insights over time. In this category, some elements of reflective thought are apparent, but the evidence of reflection is weak. This, again, does not mean that teachers did not actually engage in high quality reflection, only that they did not provide strong evidence in support of that process. The criteria for this category is demonstrated by the following entry. The teacher thinks about education, in general, but the entry lacks focus:

This is my seventh year of teaching. It has taken seven years to feel like I'm capable (well, at least some of the time instead of never)....Ultimately, I would like to be an advocate for educators. I think if more parents knew about the initiatives, and the ulterior motives related to the initiatives, there would be enough outrage to change the system.

*The educational blogger demonstrates an ability to reflect on his or her work, but examples provided are of a minimal quality (0.1).* Dewey said that reflection is a way of knowing and using information. The use of information in this category, however, is still relatively shallow and reflection upon decision making is not readily apparent. This type of entry still provides some evidence of meaning. It supports Dewey’s (1933) assertion that the range of reflection can be simple to complex. The example that follows shows minimal evidence of high quality reflection and little impact of that reflection upon action:

Just now I was reading the paragraphs written by students telling me "what I need to know so that I can teach you better." Here's the one that made me have to stop for a bit: "I learn by whatever you want to do it, I really don't care. Nothing going to make it any better for me." This is a quiet boy who sits by himself in the back of the room – during a class where every desk is filled. He always seems to be 'tuned in' to what is being said, but he doesn't take notes or begin to write unless I ask him to. I'll talk to his guidance counselor on Monday and share this paragraph.

The teacher reflected upon the student's work, but her decision as presented in the entry was shallow to the point of taking the problem to someone else instead of determining how to support the student within her class environment. Although the decision to take the student's problem to the counselor may have been appropriate, there was little evidence of thinking about how she could have had a positive impact upon the student. This entry typifies the type of entries expected in this category.

*The educational blogger demonstrates an ability to reflect on his or her work. A concrete example(s) is provided. There is some evidence of metacognition in the entry (0.15).* Schon (1983) provided an understanding of the need for systematic and consistent opportunities for reflection. Lindsay and Mason (2000), however, emphasized that reflection tends to focus on technical knowledge and seldom moves into the more complex personal understanding that leads to professional growth. Hints of metacognition can occur at this level, but the focus of reflection is still primarily on technical adequacy and is reactive rather than proactive. For example,

I have a master's in literacy, with coursework on working with English language learners, but none of it ever addressed helping a child who was at the very beginning of learning English....So on Friday, I went to see the ESL teacher, who is also the lead literacy teacher. I wanted to find out her schedule for working with S. She informed me that she was not working with S. because another teacher was supposed to work with him as part of a class of 20.... But S. needs a smaller group than that. He can't read in English at all, can't write sentences, has very limited vocabulary, even though Lead Teacher told me that he knows English. I don't consider 100 or so words "knowing English."

The evidence from this particular teacher suggests a reactive response to the situation instead of proactive thinking. Still, there is evidence to suggest that some limited metacognition may have occurred.

*The educational blogger demonstrates exemplary evidence of a range of metareflective practices and provides an example(s) within the entry (0.2).* Posner (1993) posited that reflection allows teachers to act deliberately and intentionally in order to devise new ways of teaching. Furthermore, reflection is most meaningful when it leads to positive changes in practice. According to Hoffman-Kipp et al. (2003), reflection is an integration of a variety of elements, beyond knowledge and skills, leading to analysis of cultural, historical, and political implications that govern the societal context of the classroom. Thus, teachers' practice is extended beyond rudimentary implementation toward intuitive, elegant approaches to classroom concerns. The following illustrates the complexity of thought common in this category:

Like most teachers, I agonize...over what to do, how to speed the learning curve so I can get more in. I had to ask myself, what do I want for them? Do I want my kids to do well on tests? Yes. Is the test more important than they are? Lord, no. What do they need to be more successful in life? They need the power that comes from knowledge, and that power comes from words....

Then later in the week, it hit me: I needed to find a way to make these words more real to them, something lasting, something where it would be more accessible to their writing—if you can explain it in writing, you know it.

I had students fold their papers in half both ways (hamburger and hotdog), draw lines on the folds, then pick four words, two adjectives, two verbs. I modeled on the board with a picture representing the word, the word above the picture, and a caption below, and/or, if they choose to, dialogue. I grabbed four comics from *The Far Side*, made a transparency, and showed them other examples.

Before a student was allowed to hand this assignment in, I had to approve it—I was not about to let them off the hook with sloppy effort, an incorrectly used word (kids were using fit-ful, as a word describing someone being in shape—they didn't look the word up), or missing the caption.

The work they generated was hilarious! Adults in my building who looked at these said, "I had no idea what this word meant, but after looking at this, now I know." Another cool part is that some kids who almost never have success in the classroom, their gifts and efforts more prominent in other areas, have a chance to shine in the classroom. And the kids who draw stick figures as poorly as I do, well...we still draw bad stick figures, but make it up with witty comments and dialogue.

I'm going to glue all of these to butcher paper and hang in the hallway so other people can see them. I want my kids to see this has value, and by displaying it in the hallways..., other kids will stop, read, laugh, and maybe seek that other kid out to tell them how good it was. Ah, the power of comics!

Although the differences between the levels may appear to be minimal, the evidence supporting the occurrence of reflection is apparent from one level to the next. These examples demonstrating the criteria for assessing the entries are further elaborated upon in the results section.

### **Scoring**

Using the rubric, all written materials were read and reread by the raters and scored to determine the depth of reflections. Both raters were former K-12 teachers with extensive technology integration experience. After scoring the data set independently the scores for each rater were compared.

Interrater agreement was established using the Pearson product moment correlation. Results ( $r = 0.889$ ) indicated a positive relationship between the scores for the two raters. This positive result was judged sufficient for the purposes of this study.



## Results

### Frequency of Reflective Writing

In examining the entries for evidence of reflection, the raters looked for the following broad types of reflective entries within the data set: reflection in action, reflection on action, reflection about content and pedagogical knowledge, reflection about the purpose of education, and reflection on learners' needs. In particular, the raters looked for posts that provided evidence of reflection and that also provided a public forum for dialogue with other educators. Data collected totaled 105 entries from 21 blogs.

Two raters analyzed each of the 105 entries, resulting in 210 individual scores. The total number of reflective entries reported by Rater 1 was 90 (mean = 0.114,  $SD = 0.069$ ), and the number for Rater 2 was 91 (mean = 0.106,  $SD = 0.066$ ) reflective entries. Since the results were considered significantly and positively related, choosing either rater was deemed appropriate, but because Rater 2 was a slightly more conservative rater, data analysis is based on the results reported by Rater 2.

Table 2 shows the frequencies and percentages of reflective entries for Rater 2. Of the 105 entries examined, 21 (i.e., 20%) scored 0.05 on the 4-point rubric indicating a low level of reflection. In addition, 32 entries (i.e., 30%) scored 0.10, while 14 entries (i.e., 13%) scored 0.15. A total of 24 entries (23%) had qualities of metareflection and scored a 0.2, the highest score possible on the rubric. However, 13% (14) demonstrated no evidence of reflection. Overall, a majority (87%) of individual entries demonstrated some evidence of reflective writing. Table 2 also shows the percent of quality for the 91 entries identified as having evidence of reflection.

**Table 2**  
*Percentages of Reflective Results*

Rubric Scores	Frequencies	Percent of Reflective Entries ( $n = 91$ )	Percent of Total Entries ( $n = 105$ )
0	14	--	13%
0.05	21	23%	20%
0.10	32	35%	30%
0.15	14	15%	13%
0.20	24	26%	23%

*Note:* Individual entry scores ranged from a low of 0, representing no reflection, to a high of 0.20, representing metareflection.

### Depth of Reflection

The raw scores for individual bloggers ranged from a low of 0.1 to a high of 0.8, with 1 being the highest possible score. The group mean of 0.106 ( $SD = 0.066$ ) for all of the entries suggests a low level of reflective practice occurring across the entries (see [Appendix B](#)).

Metareflection is a process of thinking about and understanding one's cognitive processes (Beyer, 1991; Brown, 1997; Flavell, 1976). Metareflective entries occurred within the dataset with some frequency (23%). The thoughtfulness at this level is illustrated by the following entry:

These are my grades for myself, based on my own expectations for myself – not comparing myself to other teachers, nor with how I coped with obstacles. Just what I did, regardless of what else was around me.

**Year 1: C-** (D- in the first semester, B- in the second when I figured out what in the hell I was doing.)

**Year 2: A-** (I rocked this year. I wrote the 9th grade curriculum, I finally got right the mixture of toughness and empathy that I tried in my first year, my lessons were a lot more effective the second time around. I'm close with a lot of the kids graduating right now because of it.)

**Year 3: B** (Had a pretty bad year personally... However, I still think I did pretty well teaching considering my student load doubled from 75 to 150...)

**Year 4: B-** (My student load was 170, and I struggled with the new prep of 11th grade. But I think I did a pretty great job with 9th grade Honors, challenging them and myself throughout the year.)

After outlining previous years, the teacher reflected on the current year:

**Year 5: C+** (Student load of 166. My worst year since my first. Floating from classroom to classroom has ripped apart a lot of my effectiveness. I still haven't learned the coping or organization strategies needed for it. I have to run down to the copy machine all the time during class because copies have absconded away. My drills—which I always wrote on the board, so I can't when I'm floating, especially with no working overheads—are ineffective and thus my lessons always seem to get off to a bad start. Visual things that I always used to keep myself organized—a homework chart, the word of the day poster, classroom stars—are not there anymore, and my teaching has suffered. In addition, I also don't really think I got close to kids like I have in other years. I feel like I'm just sort of there, assigning work. A lot of the kids I feel closest to this year are my most troubled students, and I don't know if anything I've done is going to keep them at the school. I guess there's still some time to end strong and push myself into the B range. I've started my long process of writing letters to all my students to give to them when they leave after their final, something I haven't done in a couple of years, since class load blew open.)

Metareflective entries demonstrated “deliberate and intentional...[thinking about]...new ways of teaching...[and] interpret[ing] new experiences from a fresh perspective” (Posner, 1993, p. 20). Metareflective entries, written by 16 of the teachers, consistently revealed a process of continuous reflection about issues impacting practice.

Reflection in reference to students, the curriculum, and classroom management occurred frequently across the data set. However, a majority of these entries (67) did not demonstrate metareflection. Instead, they demonstrated more one-dimensional or superficial attempts at reflection. The following entry demonstrates this more common, casual level of reflection found in many of these entries,

My year 8's have already taken the 'loudest class in the school' award. All of the other teachers are having problems with them, mainly due to their incapacity to shut up. I too struggle with this. I understand that it's good for them to be comfortable at school, and ask questions. I get that it's good that they can talk to their neighbors.

But seriously, I'm thinking of making up laminated cue cards to tell them they're being too loud because I'm sick of trying to get their attention. I've tried raising my hand in the air (to which they would be quiet and raise \*their\* hands in the air – works well in Drama), but it takes a good minute. I've tried to give praise to the kids who are listening. I've tried giving negative reinforcement to the kids that are not listening. I've had to just yell over them at least twice a week. Something needs to change.

It's not that they're bad kids. Seriously, there's only two students in the class that are constant problems. However, they have dependency issues, and when I'm busy helping someone else, they forget about their work and chat to the person next to them. 26 chatting 12 and 13 year olds can get very loud. And it gets very old when I have them for 4 periods in a row. (Double double, toil and trouble....)

She continued,

I've tried talking to them about it. I've told them about how the other teachers are getting concerned about them, and how I, as their main teacher am also concerned. Unfortunately, they can't come up with any solutions. It's the one time they are lost for words! So I'm going to try and give them some ideas, because it's not working right now. Getting instructions through to year 8's is hard enough as it is.

So I'm thinking about cue cards I can put in the room, with noise levels or something on it. But that's about all I've come up with. I'll have to think a bit more.

Postings such as this have the potential to allow teachers to seek advice from other educators. It appears that interlinked blogs can encourage teachers to create a community of practice to support one another's professional practice. This entry demonstrates that emerging potential.

However, not all entries of an educational nature demonstrated reflective practice. In fact, 13% of the entries demonstrated no evidence of reflection. For example,

One of the nicest girls in my class needs glasses, and today the nurse gave her a coupon for a free pair. Amazing that she made it to eighth grade with 20/200 vision (according to the nurse that was her test result), and no one saw to it that she got glasses until now. Bravo for me, who sent her to the nurse for the exam ((pat on the back)), and followed up to make sure she got the free coupon.

As Posner (1993) reported, "Experience with no reflection is shallow and at best leads to superficial knowledge" (p. 21). Despite a lack of reflection within these posts (13%), entries of this type appear to have served a useful purpose for the teachers. Occasionally these entries were statements of frustrations that a teacher simply needed to express. At other times they served as an opportunity for the teacher to acknowledge a moment of personal success.

## **Discussion**

The purpose of the study was to determine whether language arts teachers were using their blogs for reflection on practice. Another research purpose involved determining the depth of reflection occurring within the entries. However, before discussing results, limitations of the study must be examined.

### **Limitations**

There is a major limitation based upon the instrument, especially at the lower levels of reflection. It is important to note that the rubric used in this study assessed only the evidence shared by the teachers through their blogs and not their actual thinking. Entries at the lower levels of reflection may or may not accurately reflect the depth or quality of reflection that actually occurred. For example, an entry demonstrating only limited written documentation may not accurately reflect a teacher's actual cognitive processes. We cannot know whether teachers returned to the issues and engaged in more reflection either off-line or in entries not selected for inclusion in this study. We are making assumptions about the depth of reflection based only on the evidence shared through the entries examined.

Another limitation is that the findings are based upon a small sample size. This is a discreet group of individuals who were comfortable writing in a digital environment. Additionally, these blogs were not intended primarily as reflective journals; rather, they were general comments regarding the lives of the individual bloggers. For instance, the blogs contained entries about travel, shoes, movies, books, and other personal information along with entries commenting on educational concerns. Therefore, it is impressive that the teachers who were investigated in this study actually dedicated so much of their blogs to issues of education and reflection upon their practice. The professional lives of these people seemed to be utmost in their consciousness. That there was even a modest level of reflection occurring across the data set is encouraging.

### **Blogs and Reflection**

All participants engaged in some level of reflective writing, with entries ranging from casual to metareflective. Each of the 21 teachers had at least two entries that scored reflective. However, of the 91 entries demonstrating evidence of reflective practice, a majority ( $n = 67$ ) did not support higher levels of reflective practice. Only 24 of the 105 entries (23%) scored 0.20 (metareflective) on the rubric (see Table 2).

A majority of the teachers (16) demonstrated a disposition for critically questioning what was going on in their classrooms in at least one entry. As Rodger (2002) argued, this particular disposition is critical if teachers are to integrate theory into practice successfully. And though not all of the entries were metareflective, in that the quality of the entries varied in depth regarding practice, all of the teachers used their blogs in some manner to think about their teaching. Specifically, out of the 21 blogs containing a total of 105 entries, 24 of those entries across 16 bloggers showed metareflection (e.g., 76% of bloggers). Even without the metareflective element, many entries allowed authors an opportunity to consider their identities as teachers, to take a stand on a classroom or school issue or concern, and more importantly, to begin the process of questioning common practice (Posner, 1993). As Cole et al. (2001) reported, even when beginning reflections “appear narrow or even shallow, continued reflection [is promoted and] will lead to deeper insights” (p. 16) over time.

In addition, of those 16 bloggers who showed metareflection, seven bloggers had multiple metareflective entries supporting Posner's (1993) assertion that metareflection is a result of persistent effort and that it is supported via regular use of "daily or weekly logs, journals, or some other method [e.g. blogs] for recording events and personal reactions" (p. 24). Written logs, including the blogs examined in this study, "provide a unique opportunity to keep track of events and to...reflect on the personal and public meaning of those events" (p. 24).

### **Implications for Preservice Education**

Numerous strategies have been used to encourage and prepare both preservice and in-service teachers to engage in reflective practice (Frank, 2003/2004; Zeichner, 1987). Examples include journaling, small and large group discussion, case studies (Davis & Yeager, 2005; Frank, 2003/2004), and technology (Bonk et al., 1998; Mott & Klomes, 2001). Whether blogs have the potential to function as an effective medium for professional reflective practice remains to be known.

However, this study demonstrates that the potential exists for in-service teachers to use blogs for metareflective activities. Therefore, it may follow that blogs are useful devices for preservice teachers to use in order to develop high quality reflective thinking. Blogs are authentic and meaningful technology tools that provide preservice teachers an opportunity to use real-world, real-time resources to think, communicate, and write about issues impacting their emerging professional practice (Richardson, 2006).

Therefore, use of blogs may promote inquiry about meaningful topics and problems, even as it provides preservice teachers the opportunity to discuss issues with their peers, mentoring teachers, and university supervisors. Like metareflection, blogs can promote self-directed thinking and decision making among users (Richardson, 2006). This electronic learning environment encourages thinking and collaboration and can be a place where a disposition for metareflection can be developed and nurtured among preservice teachers.

The use of reflection through blogs does not happen magically, however. As with any knowledge, skill, or disposition preservice teachers must acquire, reflective blogging must be promoted. Purposeful steps must be taken to encourage preservice teachers to develop the habit of engaging in this activity if it is ever to become generalized into their in-service professional lives. Introducing preservice teachers to the reflective blogging process is no different than introducing them to other means of reflective practice. For example, the importance of reflection, attributes of reflection, and outcomes of reflection should continue to be addressed.

Once the case for reflection is made, students should be encouraged to engage in reflective blogging within their college preservice community of learning. Reflection can be taught and expressed through blogs and reflective assignments that are standards based. The more preservice teachers blog and think about blogging, the more natural the act of blogging will become and the more likely they are to carry the habit with them into their professional lives. In addition, the feedback that happens when others respond to the blogs is a natural reinforcer that emphasizes, extends and encourages reflection on the part of the teacher blogger.

Another advantage for blogs involves the interactive medium in which they exist. Although traditional reflective journals commonly mandated in preservice courses are personal and private reflective tools, they are also two-dimensional and static products.

Reflective blogs, on the other hand, are dynamic, social, and collaborative journals that allow for public discourse between the author, peers, and teacher education professionals. By their very social and collaborative nature, blogs promote the extension of reflective thinking and further discourse on topics or issues of concern.

One way to begin teaching preservice teachers how to blog and the benefits of blogging could be through teaching blogging through mini-case studies, narrative descriptions of issues, problems, or concerns faced by teachers (Sykes & Bird, 1992). As Darling-Hammond et al. (2005) noted, technology provides tools for teachers “to consider and analyze their personal practice *and* the practice of others” (p. 188). Research conducted by Bonk et al. (1998) supports the use of electronic, Web-based environments to foster preservice teachers’ development and consideration of cases experienced and written by preservice teachers during the field placements. Sykes and Bird (1992) promoted this practice as well.

The open and public format of a blog allows preservice teachers, mentoring teachers, and university supervisors to turn any entry into a mini-case that all students can analyze and reflect upon. Even as the case’s author is provided the “opportunity to think and reflect upon their own learning experience” (Darling-Hammond & Bransford, 2005, p. 84), readers are “drawn into the situations, problems, and roles” (Sykes & Bird, 1992, p. 457) presented in the case.

Additionally, students can analyze their own reflective entries as well as those of their peers “to identify key characteristics of good learning experiences as well as poor ones” (Darling-Hammond & Bransford, 2005, p. 85), and the more preservice teachers think about and reflect on their and others’ experiences and provide feedback to their peers, the more prepared they are to make sense of the preservice experience. Use of authentic, relevant, and real-time cases such as those assembled in preservice teachers’ blogs has the potential to allow preservice teachers to identify examples of successful practice within the local setting even as they allow for collaborative consideration of how to improve a real teaching situation (Davis & Yeager, 2005). Incidents emerging from preservice teachers’ own classroom experiences can assist preservice teachers in identifying common issues shared with their peers.

The weblog may assist with this process by allowing preservice teachers a format where they can begin the process of integrating experience and understanding into their own knowledge base and giving them immediate feedback from a variety of sources when they apply this understanding to new or unique classroom settings. It may also provide an opportunity for teacher educators to educate preservice teachers regarding issues of confidentiality and anonymity, as these considerations must be dealt with if blogs are to be successfully integrated into the preservice experience.

Finally, our findings suggest that blogs functioned as effective reflective devices for teachers in this study. This finding is supported by Harasim’s (1990) assertion that text-based communication, including electronic text-based communication, often is more reflective than verbal communication. Whether blogs can function as successful reflective devices for other educators will require more research. In particular research examining whether reflective blogging activities can result in a positive impact on practice is recommended.

## Conclusions

Like the work of Frank (2003/2004) before it, this study suggests a continuing need “to determine the current state [of] teacher reflection: the aspect of teaching they value or why they reflect on certain aspects of teaching” (p. 88). Much is known about the need for reflective practice among preservice teachers (Darling-Hammond et al., 2005), and numerous opportunities are provided for that group, but opportunities for in-service teachers to participate in reflective activities can be rare. Web logs appear to be a spontaneous and authentic example of how teachers are using technology to communicate with one another and to reflect on practice.

Teachers would benefit from combining the skills of technology and reflection to carry forward collaboration and even mentoring opportunities that extend beyond the walls of the classroom. Technologies, including blogs, provide “tools that aid in reflection and improvement (Darling-Hammond et al., 2005, p. 188). According to the authors these kinds of public technologies provide a way for teachers not only to analyze their own practice, but also to share their reflections with others. Additionally, blogs have the power to assist teachers in creating authentic communities of practice extending far beyond any individual teacher’s classroom or experience. Such communities offer participants insight and guidance in an open and friendly environment.

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**Appendix A**

**Reflection Assessment**

Blog/Blogger Research ID:

Grade Level:

Content Area: **Language Arts**

<b>Reflective Practice</b>	<b>0</b>	<b>0.05</b>	<b>0.1</b>	<b>0.15</b>	<b>0.2</b>
<b>The educational blogger demonstrates elements of reflective practice within the selected entry.</b>	There is no evidence of reflective practice within the entry.	The educational blogger reflects on his/her work and improvement but does not provide examples within the entry.	The educational blogger demonstrates an ability to reflect on his/her work but example(s) provided are of a minimal quality.	The educational blogger demonstrates an ability to reflect on his/her work. Concrete example(s) are provided. There is some evidence of metacognition within the entry.	The educational blogger demonstrates exemplary evidence of a range of metareflective practices and provides example(s) within the entry.
<b>SCORE</b> ___/1					
<b>Scorer</b> _____					

**Appendix B**

**Data Chart**

<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>
<b>1</b>	<b>1</b>	0.1	<b>2</b>	<b>1</b>	0	<b>3</b>	<b>1</b>	0.1
	<b>2</b>	0.15		<b>2</b>	0.1		<b>2</b>	0.2
	<b>3</b>	0.15		<b>3</b>	0.2		<b>3</b>	0.1
	<b>4</b>	0		<b>4</b>	0.05		<b>4</b>	0.15
	<b>5</b>	0.05		<b>5</b>	0.15		<b>5</b>	0
	<b>Score Mean</b>	0.45		<b>Score Mean</b>	0.5		<b>Score Mean</b>	0.55
	<b>SD</b>	0.09		<b>SD</b>	0.1		<b>SD</b>	0.1
		0.65			0.079			0.074
<b>4</b>	<b>1</b>	0.1	<b>5</b>	<b>1</b>	0.05	<b>6</b>	<b>1</b>	0.2
	<b>2</b>	0.15		<b>2</b>	0		<b>2</b>	0.1
	<b>3</b>	0.1		<b>3</b>	0		<b>3</b>	0.05
	<b>4</b>	0.1		<b>4</b>	0.05		<b>4</b>	0.2
	<b>5</b>	0.15		<b>5</b>	0		<b>5</b>	0.2
	<b>Score Mean</b>	0.6		<b>Score Mean</b>	0.1		<b>Score Mean</b>	0.7
	<b>SD</b>	0.12		<b>SD</b>	0.02		<b>SD</b>	0.1
		0.027			0.027			0.07
<b>7</b>	<b>1</b>	0.1	<b>8</b>	<b>1</b>	0.2	<b>9</b>	<b>1</b>	0.1
	<b>2</b>	0.1		<b>2</b>	0		<b>2</b>	0.1
	<b>3</b>	0.1		<b>3</b>	0		<b>3</b>	0.1
	<b>4</b>	0		<b>4</b>	0.1		<b>4</b>	0.1
	<b>5</b>	0.2		<b>5</b>	0.1		<b>5</b>	0.2
	<b>Score Mean</b>	0.5		<b>Score Mean</b>	0.4		<b>Score Mean</b>	0.6
	<b>SD</b>	0.1		<b>SD</b>	0.08		<b>SD</b>	0.12
		0.07			0.08			0.04

<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>
<b>10</b>	<b>1</b>	0.05	<b>11</b>	<b>1</b>	0.05	<b>12</b>	<b>1</b>	0.1
	<b>2</b>	0.2		<b>2</b>	0.1		<b>2</b>	0.2
	<b>3</b>	0.1		<b>3</b>	0.05		<b>3</b>	0.05
	<b>4</b>	0.2		<b>4</b>	0.1		<b>4</b>	0.1
	<b>5</b>	0.1		<b>5</b>	0.2		<b>5</b>	0.2
	<b>Score Mean</b>	0.65		<b>Score Mean</b>	0.5		<b>Score Mean</b>	0.65
	<b>SD</b>	0.13		<b>SD</b>	0.1		<b>SD</b>	0.13
		0.067			0.06			0.067
<b>13</b>	<b>1</b>	0.05	<b>14</b>	<b>1</b>	0.2	<b>15</b>	<b>1</b>	0.2
	<b>2</b>	0.2		<b>2</b>	0.15		<b>2</b>	0.15
	<b>3</b>	0.2		<b>3</b>	0.2		<b>3</b>	0.2
	<b>4</b>	0.05		<b>4</b>	0.1		<b>4</b>	0.15
	<b>5</b>	0.15		<b>5</b>	0.15		<b>5</b>	0.05
	<b>Score Mean</b>	0.65		<b>Score Mean</b>	0.8		<b>Score Mean</b>	0.75
	<b>SD</b>	0.13		<b>SD</b>	0.16		<b>SD</b>	0.15
		0.076			0.042			0.06
<b>16</b>	<b>1</b>	0.15	<b>17</b>	<b>1</b>	0	<b>18</b>	<b>1</b>	0.2

	<b>2</b>	0.05		<b>2</b>	0.05		<b>2</b>	0.1
	<b>3</b>	0.05		<b>3</b>	0.05		<b>3</b>	0.1
	<b>4</b>	0		<b>4</b>	0.2		<b>4</b>	0.1
	<b>5</b>	0.2		<b>5</b>	0.15		<b>5</b>	0.1
	<b>Score Mean</b>	0.45		<b>Score Mean</b>	0.45		<b>Score Mean</b>	0.6
	<b>SD</b>	0.09		<b>SD</b>	0.09		<b>SD</b>	0.12
		0.08			0.08			0.045

<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>	<b>Blogger</b>	<b>Entry</b>	<b>Score (x/1)</b>
<b>19</b>	<b>1</b>	0	<b>20</b>	<b>1</b>	0.05	<b>21</b>	<b>1</b>	0
	<b>2</b>	0.05		<b>2</b>	0.1		<b>2</b>	0.05
	<b>3</b>	0.1		<b>3</b>	0.1		<b>3</b>	0.15
	<b>4</b>	0.05		<b>4</b>	0.1		<b>4</b>	0.2
	<b>5</b>	0.05		<b>5</b>	0		<b>5</b>	0.2
	<b>Score Mean</b>	0.25		<b>Score Mean</b>	0.35		<b>Score Mean</b>	0.6
	<b>SD</b>	0.05		<b>SD</b>	0.07		<b>SD</b>	0.12
		0.035			0.44			0.09

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