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Teacher Reflection Through Video-Recording Analysis

Abstract

The purpose of this research study was to examine the utility of video-recording self-analysis as an effective means of reflective practice for teachers. Participants were enrolled in a graduate-level education specialist program for practicing teachers based, in part, on the National Board for Professional Teaching standards—one of which explicitly focuses on reflective practice for teachers. Participants employed a formal observation instrument to guide them in this reflective activity. All participants recorded and analyzed their teaching using the observation instrument, and subsequently participated in a think-aloud session during which they discussed the activity as a reflective practice. Participants articulated that engaging in this guided reflective activity brought a heightened awareness of teaching strengths and weaknesses. Specifically, participants noted that employing the observation instrument, coupled with the formalized act of video-recording analysis, allowed them to focus on details of teaching often overlooked in less formal reflective practice or formal evaluation.

Keywords

Teacher reflection, Video-recording, Self-analysis, Education specialist program

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TEACHER REFLECTION THROUGH VIDEO-RECORDING ANALYSIS

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Abstract: The purpose of this research study was to examine the utility of video-recording self-analysis as an effective means of reflective practice for teachers. Participants were enrolled in a graduate-level education specialist program for practicing teachers based, in part, on the National Board for Professional Teaching standards—one of which explicitly focuses on reflective practice for teachers. Participants employed a formal observation instrument to guide them in this reflective activity. All participants recorded and analyzed their teaching using the observation instrument, and subsequently participated in a think-aloud session during which they discussed the activity as a reflective practice. Participants articulated that engaging in this guided reflective activity brought a heightened awareness of teaching strengths and weaknesses. Specifically, participants noted that employing the observation instrument, coupled with the formalized act of video-recording analysis, allowed them to focus on details of teaching often overlooked in less formal reflective practice or formal evaluation.

Keywords: teacher reflection, video analysis

Introduction

Becoming an effective teacher involves reflection: a deliberate and consistent examination of teaching practices in an effort to improve instructional practice and foster an environment in which students become engaged learners (Jay, 2003; Lester, 1988). Deciding what to teach and how to teach it are essential questions upon which teachers reflect (Parsons & Brown, 2002). Whether teachers formally reflect on their practice through instructive comments dutifully logged in a dedicated notebook, group meetings during which teachers cooperatively review student achievement, lessons and delivery, or just through thoughtful consideration of the school day during a planning period or commute home, reflection is integral to exemplary teaching (Ayers, 2003; Valli, 1997). Yet reflective practice is far from consistent in the manner in which it is undertaken.

So, how do teachers best reflect? Is one method of reflection more effective than another to improve practice and positively impact student learning? If so, what reflective strategies are useful, when, and with whom? To begin, we must acknowledge that, although in the paragraph above we operationalized reflection, the act of reflection itself is nebulous and often ill-defined (Hatton & Smith, 1995; Parsons & Brown, 2002). Definition of reflective practice has included a typology of reflection (Valli, 1997) and notions that teacher reflection involving thinking about one's practice and seeing it in

new ways (Grimmitt & MacKinon, 1992; McAlpine, Weston Beauchamp, Wiseman & Beauchamp, 1999). Others, such as Sharp (2003), have maintained that due to the intensely personal nature of addressing one's teaching and learning processes, reflection comes from self-awareness and is, therefore, not generalizable. Dewey (1933) and Greene (1986) have specifically addressed the nebulous concept of teacher reflection, rejecting the idea that it can come with a set of instructions at all. Accordingly, reflection, while a worthwhile endeavor for a teaching professional, is personal in nature and, while one method might work best for one teacher, it might prove less useful to a colleague. As teachers explore effective means to reflective practice, it is worthwhile to examine the degree to which a specific type of reflection, such as detailed analysis of a video recording, affected the reflective practice of experienced teachers involved in a graduate program for exemplary teaching. From this modest exercise, we hope to contribute to the body of knowledge regarding teacher reflection.

Literature Review

As is often the case in the field of education, reflection as educational practice can be traced back to Dewey and from within the framework of self-awareness. In *How We Think*, Dewey (1933) expressed the importance of reflection as a holistic methodology for problem solving. He viewed reflection as action necessary for better practice and an innovative consideration of addressing teaching challenges and student learning. Well before Dewey, others, including Socrates in his *Apology*, broadly addressed reflection as important to the progress of reason (Stewart & Blocker, 2006). Further, Enlightenment philosopher Descartes espoused that self-awareness leads to virtue (Fendler, 2003). As Dewey (1933) declared, effective reflection of educational practice must come from within a paradigm of self-awareness. Without that characteristic, any examination of teaching is far less potent as reflective enterprise and more akin to teacher evaluation processes, often void of context. To that point, Lieberman (2003) indicated that such self-knowledge is critical to teaching in that it "helps us understand what we need to know, where we can find support to help us, and how we go about solving teaching problems that we will inevitably face" (p. xvi). Palmer (2003) contributed personal experience to this line of thought by acknowledging that:

My ability to connect with my students and to connect them with the subject depends less on the methods I use than the degree to which I know and trust my selfhood-and am willing to make it available and vulnerable in the service of learning. (p. 4)

The extent of one's self-knowledge as a pre-condition for effective reflective action becomes part of the variability scholars note in examination of valuable reflective practice, and instead, produces more prominent focus on reflective classifications and approaches, which allow practitioners to foster reflection to varying degrees (Fendler, 2003).

As part of reflective methodology, Valli (1997) presented a typology of reflection that included five categories which teachers employ: technical, reflection in and on action,

deliberative, personalistic, and critical reflection. Each of these reflective practices focused on varying aspects of teaching while maintaining teacher improvement as its core objective. According to Valli (1997), technical reflection referred to examination of specific actions often assessed in terms of prescribed criteria. Reflection in and on action allowed teachers to consider actions during and after episodes as a means for professional growth. These types of reflection might focus, for example, on the effectiveness of a class activity or student-teacher interaction. Using deliberative reflection, educators evaluated various viewpoints and research against pedagogical practices, while personalistic reflection involved internal guidance from one's own perspectives. And finally, Valli's (1997) concept of critical reflection suggested that teachers reflect on and assess practice based on social justice and moral concerns as manifested in the classroom. These typologies represent an effort to categorize reflection as a means for more systematic and recognizable teacher engagement.

Hatton and Smith (1993) addressed reflective practice as “an active and deliberative cognitive process, involving sequences of interconnected ideas which take account of underlying beliefs and knowledge” (p. 2) of the teacher. Zeichner and Liston (1996) asserted that reflection must include components of examination of thoughts, actions, and understandings that we bring to our classrooms. Studies involving pre-service teachers in the classroom have found that reflection is instrumental in encouraging the development of teaching and learning skills (Minott, 2008; Orlova, 2009; Schön, 1983). As Valli (1997) illustrated, reflection can come in the form of deliberative reflection. Minott (2008) asserted that such reflection:

involves thinking about a whole range of teaching concerns, including students, the curriculum, instructional strategies and the rules and organization of the classroom. This type of reflection emphasizes decision making based on teachers' personal beliefs, values, research, experience and the advice of other teachers. (p. 56)

As such, intellectual and physical tools needed to nurture one's reflective skills must include attention to self-awareness, and specific processes reflective practitioners undertake as they contemplate their instructional practice.

Rich and Hannafin (2009) found that specific, ubiquitous, and easy to use, tools such as video-recording and analysis used for reflection could encourage such deliberative reflective behavior. The permanence and objectivity potential of video can allow educators to repeatedly and closely examine classroom practice (Orlova, 2009) and sustain professional development (Hennessey & Deaney, 2009). Goodlad (1984) further asserted that with “the availability of resources for videotaping lessons for purposes of self-examination, teachers can engage successfully in a considerable amount of self-improvement” (p. 127). While some may consider establishing guidelines for reflection antithetical to the notion of developing self-awareness, providing methods with which to foster a reflective experience can encourage such behavior (Jay, 2003). Ayers (2003) noted that teachers must be self-critical lest they lose capacity for professional growth. He also warned, however, that becoming too critical manifests in practitioners who are

powerless to take the necessary risks to improve their teaching. As Ayers (2003) stated, “the tension is to end each day with a strong understanding of what could be improved, and to begin the next with forgiveness and hope” (p. 29). Reflection as a tool for practitioners to develop pedagogical skills then, comes from general self-awareness and, in the case of deliberative reflection, the consideration of teaching, mindful of the myriad influences on teacher behavior.

While Zeichner and Liston (1996) claimed that all teachers reflect to some degree, this is not to say, however, that reflection necessarily translates into better teaching and improved student achievement. Furthermore, it is not to say that teacher reflection in any form will result in a more complete view of the nature and purpose of education. Fendler (2003) noted that reflective practices may simply “reinforce existing beliefs rather than challenge assumptions” (p. 16). Critics also argue that an instrumental approach to reflection may serve only the very few. In Zeichner and Liston’s (1996) illustrative model, the *Practice Triangle*, reflection comes as a result of action, but it is the moral and ethical consideration of teaching that should be the goal of practitioners. This criticism comes from the viewpoint that reflection in practice is often not contextual and can become prescriptively reductionist, in that a prescribed format may not be effective for all teachers and all practice. But such criticism of teacher reflection practices does not seek to mitigate reflective practice; rather, these findings should be considered a call to examine reflective practice in such a way to discern effective means for improved practice.

Research in the field of teacher reflection has continued in the face of such criticism. In an effort to promote student achievement, reflection can be a central ingredient of action research (Parsons & Brown, 2002). Reflection can also become a way for a teacher to model teacher leadership behavior. Pre-service teachers for example, may grow from the experience of teacher reflection (Minott, 2008; Orlova, 2009; Rich & Hannafin, 2009). Furthermore, a student who sees his or her teacher engaging in a reflective exercise may be more inclined to participate in such behavior himself or herself, especially if the reflection leads to more engaging lessons (Jay, 2003). Moreover, teachers who partake in the act of reflection may feel empowered about their teaching practices (Hawley & Valli, 1999).

Such is the impetus of the current research - to determine if deliberative reflective practice of instruction, coupled with instructive analysis and follow-up communication in the form of a think-aloud session, is an effective method for reflection with experienced teachers. This research design is modeled on the Inquiry Model of staff development outlined by Hawley and Valli (1999) in which teachers identified an area of interest in their teaching, collected data, and adjusted teaching analysis and methods accordingly. The specific area of interest may or may not coincide with areas targeted as a school-wide improvement initiative, but serves as a target of deliberative reflective practice designed to improve teaching as part of an effort to positively affect student achievement.

Method

The design of this study was based, in part, on the pragmatic research tradition of utilization-focused evaluation (Patton, 2002). Participants were presented a framework and strategy to examine and evaluate their teaching with the intention that their exploration would impact classroom practice. As part of an effort to encourage participant use of the data collected, researchers content analyzed various data sources, including a pre-study informational survey and a formal observation instrument. A subsequent think-aloud session was designed to allow participants opportunities to share observational experiences and coalesce around processes for effective reflection. Transcripts from the think-aloud session served as a final data source.

Participants were students enrolled in a graduate program for practicing teachers at a regional university in the southeastern United States. The program of study in which each participant was enrolled was developed around the five propositions of the National Board for Professional Teaching [NBPTS] (2010) and was designed to enmesh teachers in reflective practice and action research. The class chosen for this research was designed to introduce students to both of those objectives.

The participants were asked to take part in a reflective exercise in which they video-recorded and, subsequently, analyzed their teaching with the intent of using the data to improve practice. All students in the seminar class participated, although it was made clear by instructors and in consent forms that lack of participation would not adversely affect course grades. Five participants each recorded at least one entire lesson, reviewed the content, and discussed the results in a group think-aloud session.

Participants

At the beginning of the term, each individual provided some detail about his or her professional experience, including years of experience, grade-level(s) taught, teacher training and experience with formal teacher reflection and action research. Participants in this project were teachers in varying fields and levels of education, including elementary exceptional student education, general elementary education, secondary mathematics education, and middle-level language arts education. Teaching experience for participants ranged from 5-21 years. Pseudonyms were used with all participants. “Linda” had the most experience as a teacher. She had been teaching for 21 years in elementary schools. Her experience with reflective practice had largely been limited to administrative evaluation. “Erin” came to this project with 14 years of experience teaching elementary school. During this time, she worked exclusively with special education students at certain points of her career. At this point, she had very little experience with self-reflection. “Brian” was the only participant working in secondary education, teaching high school mathematics for seven years. Based on the class discussion and the think-aloud session in which he participated, he was intrigued with the idea of reflective practice. His experience included common lesson planning for content teachers during which time he and his colleagues would take time to reflect on curriculum and the delivery thereof. Brian recognized that during this time, he also engaged in personal

reflection, but admitted to having little experience reflecting on his own. “Amy” was an elementary special education teacher with nine years of experience. She confessed that time was a hindrance and, thus, also had little experience with self-reflection. “Carrie” was the only participant representing middle school. With five years of experience, she wanted to use this activity and think-aloud session as a way to find out more about classroom techniques from more experienced professionals. Similar to the others, based on the in class discussion and the formal think-aloud session, she reported engaging in little self-reflection in the past.

Analysis/Instrument

To systematically analyze the recordings, participants were provided with an observation instrument (see Appendix A). This instrument was originally developed as part of a coordinated effort between the state university system and the state department of education charged with developing a universal instrument that included visually observable elements of accomplished practices based upon the National Board of Professional Teaching Standards (2010). Although not purposefully an instrument to measure or even facilitate reflection, it did include explicit and implicit components of reflection and served as a means to focus reflective activity on measurable indicators. Indicator VI-D, for example, focused specifically on reflection, while other indicators, such as I-D (Content Connections) and II-C (Student Development), were employed by our participants as part of their reflective activities. Overall, thirteen objectives were outlined within the instrument. Beneath each objective were various observable elements upon which the teacher is measured on a scale from one to five. A score of one indicated that none of the elements were met, while a five indicated that all were met consistently. Next to each objective was a comment section where specific evidence of each factor was written. None of the participants had previous experience with the instrument.

To facilitate the effective use of this instrument, all participants were trained in its use. A faculty member, integral in development of the instrument, facilitated the training. With her expertise, participants were shown a series of video-recorded lessons and asked to analyze the instruction using the instrument. Participants then shared their observations from these practice sessions with each other to compare observations and establish reliability. The facilitator then reviewed each observation point with the participants. This practice would serve as valuable training for the self-analysis done in the current research project. For the purposes of this project, participants completed the entire instrument as part of their analysis. The think-aloud session focused on instrument sections specifically addressing reflection and other sections, which emerged as implicitly including practice on which teachers reflected (see Appendix B).

Choosing a Class to Record

As the reflection activity was proposed to the participants, they followed the pattern outlined by Hawley and Valli (1999) and perceived it as an opportunity to focus on an area of teaching in which they felt most challenged. Challenges included classroom management, lesson differentiation, and student engagement. Instructed to avoid the idea

of choosing a class or lesson anticipated to be exemplary, some chose a class and lesson that was not exceptional in any way, but chose instead to focus their reflection on specific challenges. Some participants chose areas such as student-teacher relationships, questioning techniques, classroom environment, and classroom management on which to focus. One participant, Erin, commented that she considered areas on which to focus for some time before engaging in the video-recording process; “I knew from previous informal reflection that lesson differentiation as not an area that was strong for me. I wanted my reflection analysis to focus on that and the students’ engagement in my lessons” (think-aloud session, April 14, 2009). Amy, another participant, noted her choice to focus on areas of classroom management; “I took it as a challenge to look at the class as an outside observer. I could see so much more of the students’ reactions through the video” (think-aloud session, April 14, 2009). She further commented that what she saw included differences in student behavior during different activities.

Others took a more broad view and examined the lesson and students as a whole. These participants typically allowed the observation instrument to dictate the purpose of their reflection. As novice reflective practitioners, these participants reported in the think-aloud session that they found it helpful to use questions posed within the observation instrument to guide their observations. The elements on which they focused would then become areas upon which they could most thoroughly reflect since documentation of those elements was explicitly stated within the instrument.

Data Collection

Participants took their acquired knowledge of the observation instrument and returned to their schools to develop a plan for video-recording. They were asked to record a lesson that was not specially prepared for “show” or was expected to be exemplary. That is, participants were to record a lesson with no special pedagogical strategies or methods added for the camera. Upon completion of the video-recording, they viewed their videos and completed the observation instrument as instructed, assigning a numeric 1-5 scale score for each of the 13 indicators, and providing written narrative evidence justifying and supporting each score.

Upon completion of the video-recording and analysis, participants were gathered to participate in a group think-aloud session. General focus group topics were developed as a guide for participant discussion. The session was a semi-structured one-hour event in which the researchers introduced topics related to the project, including questions related to the reflection activity experience and, specifically, the impact on the participants’ teaching. Discussion began with general overviews of the reflective experience. What followed were questions to discern thoughts related to more specific elements of their reflection. Finally, the think-aloud session moved toward findings that came from the activity. As the topics were introduced, participants responded with their experiences in this reflective activity in a conversational manner rather than a round-robin or some other structured exchange. The think-aloud session was recorded using a digital audio recorder and later transcribed in its entirety.

Data Analysis

Upon completion of the group think-aloud session, data analysis began with an iterative process of reading and rereading the data set, looking for emergent patterns and themes. The think-aloud session was transcribed, coded, highlighted and content analyzed (Patton, 2002). Each researcher also reviewed respondent scores and narrative comments from the observation instrument. Data were reviewed separately and findings were compared to establish analytic consistency of each of the data sources. Emergent themes were organized into topics for manuscript development.

Results

The results gathered in this research project showed that reflection activities can have an impact on instruction, teachers' feelings of empowerment, and beliefs regarding the purpose of education. Findings indicated that participants felt strongly about the idea of self-reflection and its impact on teaching practices. Comments from the observation instrument and think-aloud session concurred with these findings and revealed further detail about the participants' reflective experiences. Participants agreed that this reflective opportunity caused them to become more aware of student attention, student behavior, and the dynamic nature of a class with regards to the lesson. One participant, Brian, who came to teaching after years as a business executive, specifically described his feeling that the reflection exercise allowed him to more formally recognize the importance of affecting students' sense of self-esteem. After reviewing the recording and looking at students' reactions, Brian expressed, "I noticed that they were more enthusiastic than I thought they were. After I worked with them individually and we worked through a [mathematics] problem, I saw a look of pride. Reflecting on that gave me a better picture of what I'm doing with my students and why" (think-aloud session, April 14, 2009).

Evident from the observation instrument and think-aloud session was the presence of self-criticism among the participants. Perhaps a natural effect of self-examination is to be hypercritical of one's teaching, focusing on the minutia of the environment, student reactions, and communication skills. Four of the five participants told us how they were often very critical of themselves, but found good teaching in their review. When asked about her overall image of the recording, both prior to and after the analysis, one participant, Carrie, commented:

I went in...I'm very critical of myself so I went in thinking it would be horrible, but it wasn't as bad as I thought it would be actually. I mean I was surprised. I'm very critical of myself and I was particularly surprised at how the boys were well behaved during the lesson and truly they weren't any better behaved then they usually were. So it gave me the feeling that they enjoyed coming (to class) and were into what we were doing. And that has been very motivating for me. (think-aloud session, April 14, 2009)

Awareness of one's teaching was also evident from another participant, Brian, who commented on his work with one student:

I had a similar thing, but mine was with one particular student. I went to that one particular student more than others. I was...I knew that I probably went to that student more than others, she's just a needy student, but what I did was I counted, I put tally marks [in my observation] by how many times I went to see each student and I was amazed at how many more times I went to her than the others. So that made me aware of it so since then I've just tried to let her figure things out on her own more. She seemed to be using me as a crutch and she could figure it out if she put some more effort into it, but it's just a lot easier to just ask. So seeing that has helped me to deal with her in that way. And my reflection took me to think of how much better off she'd be by being able to solve problems on her own rather than relying on her teacher all the time. (think-aloud session, April 14, 2009)

Researcher (R): Did you notice any interactions with your other students while you were dealing with her?

Brian: Well another thing I noticed was that the students were more enthusiastic than I realized. They would get excited when they got a problem right and they would help each other out a lot. I knew they worked together pretty well, but it was better than I realized. They actually do help each other and work together. So all that noise I'm hearing is...not all of it is talking about what they did last night. Some of it is actually learning taking place. So that was a good thing to see. (think-aloud session, April 14, 2009)

An important and related finding was the degree to which the participants noted the positive aspects of their teaching in addition to the challenges they expected. Four of the five of participants strongly agreed that their lesson analysis made significant positive aspects of their teaching. Amy expressed her surprise at the high level of student engagement during an introduction to an activity during which she related a personal story to segue into the activity when she said, "The story was really just about my experience in a store, but the kids seemed to really be listening while I told it. I guess they like hearing about us on a personal level. I can use those types of experiences more to introduce activities" (think-aloud session, April 14, 2009). Another participant, Linda, expressed that she had not ever thought about teacher reflection as a systematic act before and that "using the observation [instrument] was useful" (think-aloud session, April 14, 2009).

Reflection, while not uniformly defined (Hatton & Smith, 1993; Parsons & Brown, 2002), is an important means for teachers to improve practice. To do so effectively, one needs self-awareness and a sense that student achievement is the guiding purpose for teaching (Ayers, 2003). This research was designed to explore a protocol for reflection to

the participants. As such, the teacher participants video-recorded their teaching and engaged in a systematic reflective activity. Subsequently, these participants came together to respond to questions posed by the researchers to evaluate the efficacy of this design. The general question posed by this research design was to discover if engagement in this formally structured reflective activity was an effective design to foster reflection in the participants.

All participants agreed that the added structure encouraged their engagement in reflection and, while video-recording teaching and detailed reflective evaluation was a cumbersome activity to do often, it was worthwhile to supplement less formal reflection. Further, the formality of this reflection seemed to bring insights into their teaching that could benefit less formal reflection. When one participant, Brian, noted the positive reactions of his students when they successfully solved problems, he conveyed that he would likely be inclined to consider this aspect as he reflects on his teaching with the other mathematics teachers at his school.

The combination of the systematic process of teacher reflection coupled with the peer-to-peer discussion session proved to be an effective way to allow the participants to articulate what they saw in their analysis. Throughout the think-aloud session, participants encouraged each other to share even minor teaching successes noted in their reflective analysis. Such examination of less conspicuous teaching activities was effectively illustrated through video recording and considered essential by the participants to becoming a reflective practitioner.

Zeichner and Liston (1996) stated that although there is much discussed about encouraging teacher reflection in schools, little has been done to make it a practical reality. Moreover, encouragement of reflection that comes with the assumption that reflection is somehow intuitive hinders effective self-analysis of one's practice (Hennessey & Deaney, 2009). The following related exchange came from the think-aloud session:

R: Here you are in this program and, hopefully, within your classes, you're thinking about your teaching and how you impact student achievement, and we're just curious as to how this is playing in the schools themselves. Is this something happening at schools or talked about in your schools or is this reflection on your teaching done for your classes and not otherwise?

Amy: I think it's talked about a lot. Talked about how it's important but I don't know about specific mechanisms set up to get teachers to do it.
(think-aloud session, April 14, 2009)

R: Are there hindrances in place?

Brian: I don't think so, I think we, or at least the teachers I'm around, I think we do it. We have common planning time, which is great, and it's not something we've had in the past. I think it's great and having that time

where you and the people who teach what you teach get together, that's the time that I think we do the most reflection. Because we teach the same subject and maybe we've taught a similar lesson so we reflect with each other the best way to teach that concept and what you can do to make it better. So having that common planning time helps us to do that, but there's nobody saying you have to do that, (and) here's this form to prove that you do it. There are a lot of teachers who do it anyway, but I'm sure there are many who don't. (think-aloud session, April 14, 2009)

Amy: Most of time for us is at lunch where we talk about what worked and what didn't work, we do that as a group so it's more informal. It's not something we've been mandated to do. (think-aloud session, April 14, 2009)

Although a defined or mandated culture of reflection may not exist in these participants' schools, reflection is taking place informally by these participants. Informational data collection and subsequent discussion, however, revealed that these informal reflective activities may not always be constructive and can devolve into a time for complaints or a time during which dominant personalities drive the conversation away from serious reflective thinking.

Erin: I've noticed that since this [reflection] activity, I've been more focused on what I can do to get better and what I do now that works. Our school is like yours [Amy] where we talk at lunch, but now I recognize that those talks weren't structured enough for me. I guess I need to have a plan for my reflection. (think-aloud session, April 14, 2009)

Both Amy and Linda concurred with this notion, indicating that the structure established in the current study had promoted a level of self-awareness not achieved before by these teachers. Reflection as designed in this research project has encouraged more effective reflective thought, which has, in turn, translated to more effective teaching as viewed by these participants.

Although, by and large, positive comments came from participants, other comments focused solely on negative elements noticed during observation. Perhaps the participants' trepidation toward self-praise came from past formal evaluations, which tended to focus on problems faced in the classroom rather than quality teaching. In this case, we discouraged evaluation of lessons, activities, and delivery in favor of careful consideration of the classroom environment in an effort to affect change. Thus, the focus was intended to be on reflection rather than evaluation. "I've been so used to administration coming into my room for about five minutes to observe me, then call me down to his office and tell me what I need to improve on in about thirty seconds," commented Linda. "It's hard to get over that idea of reflection," she continued. Typically, teachers receive feedback from administrators in the form of a once per year evaluation following a very brief "drop-in" (think-aloud session, April 14, 2009). These often result in a series of Likert scale data indicating "doing well" or "needs improvement" with the resulting evaluation review conference often focusing on areas on which to improve.

Such evaluation based on a snapshot observation ought not to be confused with encouraging reflection. Participants in this study noted this distinction and indicated they benefitted from their own detailed analysis during which they felt freer to examine their teaching:

Linda: I think being observed [by an administrator] before it seems like they'd say, "oh, your students were engaged" on every observation. So all I ever focus on is the one who is not paying attention. But to look at the tape, I noticed that sometimes these students, who I thought were disengaged, were paying attention. They might be sitting on top of their desk, but they were paying attention. But, if you ask them a question and they know exactly what's going on and can answer any question, so that's made me feel better, really, about silliness, but it's important to know that. (think-aloud session, April 14, 2009)

Discussion

As stated, administrator evaluations often center on classroom management and student behavior issues rather than providing a holistic overview of the profession of teaching, and a supportive environment to facilitate instructional improvement based on teacher reflection. Building supervisors often feel a duty to maintain an orderly school climate where, on the surface, it appears more learning is likely to take place. Therefore, a quiet school or classroom may seem like an effective learning environment, but it is not necessarily one where reflection is encouraged. Administrators may neither have the time, inclination, nor expertise in reflective practices to encourage such behavior (Jay, 2003). This research ideally brings to the fore the notion that teacher reflection, implemented well, can allow teachers the opportunity to improve their practice based on prescribed processes, grounded in the elemental characteristics of self-awareness and exploration.

The design of this study was not without limitations, however. One significant limitation was the instrument we employed for this research. The intention of using such an instrument was to illustrate the dual effectiveness of specific reflective criteria and video recording a means to purposefully reflect. This instrument, while inclusive of both explicit and implicit components on which to reflect, was not designed for that sole purpose. Additionally, the small sample size, which may not be reflective of a larger set of teachers or teachers from a different geographical area with varying levels of experience, served as a limitation. Further, the results found from these participants may not mirror teachers at large, since these were teachers involved in attaining an advanced degree; a situation perhaps more open to reflective exercise. Another limitation lies with the dual responsibility of the researchers, who were also faculty teaching the class in which this research was conducted. As such, the researchers may have unintentionally influenced participant responses even though course assessment was explicitly separated from this reflective activity. Finally, within the think-aloud session, more discussion was needed as to the reflective experiences of the participants. While some participants, such as Linda, expressed past experiences with administrative evaluations, this thread of

discussion was probably truncated unnecessarily, even though it yielded an interesting line of thought.

Conclusion

As noted by the participants in this study, teachers are engaging in reflection often. Most of this reflection is informal and not overtly encouraged by school administration. The informal nature of the reflection noted explicitly by all of the participants is often ineffective. A lunch meeting or a few moments spent between classes thinking about positive and negative aspects of the previous lesson may be the only reflection taking place for some teachers. More formal opportunities for reflection often come from administrator evaluations, which participants claimed became less about reflection and more about classroom management or brief episodic teaching assessment. From this research, participants expressed that they benefitted from the structure enacted for reflection, supporting the notion that even with experienced teachers, reflection is neither intuitive nor effective without appropriate mechanisms of support (Jay, 2003; Valli, 1997). The video-recording enabled them to focus on specific characteristics of their teaching and conduct a thorough examination using a detailed, if imperfect, instrument. The think-aloud session allowed participants to communicate their experiences as they related to reflection with a sense of self-awareness necessary for effective reflection (Ayers, 2003; Palmer, 2003). Our findings suggest that implementing a structured process of self-reflection can lead teachers to a greater awareness of their strengths and weaknesses in the classroom and, ultimately, improved practice.

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Appendix A

Observation Instrument

Directions: (a) Under each indicator, underline the professional practices that are observed, (b) list specific evidence observed for the indicator, (c) in the # column, circle the numeral that reflects the practices observed for each indicator. Use the directions in the *COE Observation Instrument: Instructions for Use* manual to determine ratings.

Note: Level 1 = Indicator Not Demonstrated
 Level 2 = Indicator Partially Demonstrated
 Level 3 = Indicator Adequately Demonstrated
 Level 4 = Indicator Effectively Demonstrated
Level 5 = Indicator Exceptionally Demonstrated (Reserved for induction level and experienced teachers who are consistently exemplary over time; therefore, Level 5 should not be used to evaluate teacher candidates during practica or student teaching.)

I. CONTENT AND CURRICULUM: Teachers demonstrate a strong knowledge of content area(s) appropriate for their certification levels.		
Indicators/Professional Practices	#	Evidence/Comments
I-A. Subject-Specific Content/Concepts		
1-2. Uncorrected teacher content/concept errors; uncorrected student errors	1 2	
3-4. Shows knowledge of content/concepts; corrects teacher and student errors	3 4	
5. Accurate content/concept knowledge; consistently helps students recognize and correct errors	5	
Not Able To Rate	NATR	
I-B. Pedagogical Content (Instructional Methods)		
1-2. Uses inappropriate instructional method; little evidence of making content appropriate for diverse learners; lacks connections to students' prior knowledge	1 2	
3-4. Uses appropriate instructional methods; makes content appropriate for diverse learners; connects learning to students' prior knowledge	3 4	
5. Consistently uses a variety of appropriate instructional methods; consistently makes content appropriate for diverse learners; consistently connects learning to students' prior knowledge	5	
Not Able To Rate	NATR	
I-D. Content Connections		
1-2. Little or no evidence of making connections to other subject areas; little or no evidence of making content relevant to students' everyday lives	1 2	
3-4. Connects content to other subject areas; makes content relevant to students' everyday lives;	3 4	
5. Consistently connects content to other subject areas; consistently makes content relevant to students' everyday lives; affords students opportunities to make their own connections	5	
Not Able To Rate	NATR	

II. KNOWLEDGE OF STUDENTS AND THEIR LEARNING: Teachers support the intellectual, social, physical, and personal development of all students.		
Indicators/Professional Practices		Evidence/Comments
II-C. Students' Development		
1-2. Not responsive to the intellectual, social, physical, and personal developmental needs of all students	1 2	
3-4. Responsive to the intellectual, social, physical, and personal developmental needs of all students	3 4	
5. Consistently sensitive, alert, and responsive to the specific intellectual, social, physical, and personal developmental needs of all students	5	
Not Able To Rate	NATR	
III. LEARNING ENVIRONMENTS: Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.		
Indicators/Professional Practices		Evidence/Comments
III-B. Classroom Environment		
1-2. Inefficient management of time, space, and learning resources for diverse students' learning; students not productively engaged	1 2	
3-4. Appropriate management of time, space, and learning resources for diverse students' learning; students actively engaged	3 4	
5. Consistent and appropriate management of time, space, and learning resources for diverse students' learning; active/equitable engagement of students	5	
Not Able To Rate	NATR	
III-C. Classroom Management		
1-2. Little or no evidence of a management plan; reactive classroom management style; behavior not monitored ; inconsistent/inappropriate responses to student behavior	1 2	
3-4. Follows classroom management plan; aware of student behavior; appropriate responses to student behavior; corrects misbehavior with minimal loss of instructional time	3 4	
5. Consistently follows classroom management plan; proactive classroom management style; subtle/preventative monitoring; fair, respectful responses to student behavior; students monitor/adjust own behavior when appropriate	5	
Not Able To Rate	NATR	
III-Ga. Communication		
1-2. Errors in spoken/written language	1 2	
3-4. Error free spoken/written language	3 4	
5. Consistently uses enriched/appropriate spoken/written language	5	
Not Able To Rate	NATR	

III-Gb. Communication		
1-2. Ineffective nonverbal communication; unclear directions; does not use effective questioning skills	1 2	
3-4. Effective nonverbal communication; directions are clear or quickly clarified after initial student confusion; effective questioning and discussion strategies	3 4	
5. Effective nonverbal communication; effective questioning stimulates discussion in various ways	5	
Not Able To Rate	NATR	
IV. ASSESSMENT: Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.		
Indicators/Professional Practices		Evidence/Comments
IV-C Assessment		
1-2. Inappropriate or no assessment of instructional objectives/outcomes/essential questions; assessments do not align with the instructional objectives/outcomes/essential questions and lesson procedures.	1 2	
3-4. Uses appropriate assessments that align with the instructional objectives/outcomes/essential questions and lesson procedures	3 4	
5. Consistently uses a variety of authentic and traditional assessments that align with instructional objectives/outcomes/essential questions and lesson procedures; assessments are used to modify learning goals for individuals and groups	5 NATR	
Not Able To Rate		
V. PLANNING AND INSTRUCTION: Teachers design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessments.		
Indicators/Professional Practices		Evidence/Comments
V-B. Lesson Plan and Instruction		
1-2. Lesson plan and instruction lack clear organization and sequence; inefficient pacing of lesson; instruction does not extend most students' understanding of concepts and/or content; components of the lesson plan are not aligned	1 2	
3-4. Lesson plan and instruction are logically organized and sequenced; pacing appropriate; instruction extends students' understanding of concepts and/or content; all components of the lesson plan are aligned	3 4	
5. Lesson plan and instruction consistently reflect findings from scientifically based research; appropriate organization and sequencing; appropriate pacing	5 NATR	
Not Able To Rate		
V-C. Instructional Strategies		
1-2. Inappropriate or no instructional strategies are used to engage and support learning; strategies inappropriately matched to subject matter; strategies used inappropriately	1 2	
3-4. Plans for and uses appropriate strategies that engage and support student learning; strategies appropriately matched to subject matter; strategies used appropriately	3 4	
5. Consistently plans for and uses various strategies that engage and support diverse learners; provides multiple perspectives on key concepts, problems, and areas of knowledge	5 NATR	
Not Able To Rate		

V-D. Monitoring and Adjustments		
1-2. Does not monitor lesson or monitors lesson but adheres firmly to instructional plan; no adjustment for students who do not understand or who have already mastered the content	1 2	
3-4. Monitors lesson; makes appropriate modifications to instructional plans during the lesson to address students' needs; probes for understanding; uses students' questions to direct instruction	3 4	
5. Consistently monitors lesson and provides constructive and ongoing feedback; consistently and successfully makes modifications before and during the lesson to address student needs	5	
Not Able To Rate	NATR	
V-F. Resources		
1-2. Little evidence of using resources and materials other than assigned textbook and/or worksheets; technology is used superficially and does not enhance instruction	1 2	
3-4. Uses a variety of appropriate materials and resources; resources enhance instruction for diverse learners; uses technology effectively where appropriate	3 4	
5. Consistently uses and monitors the effectiveness of a variety of appropriate materials and resources; resources consistently enhance instruction for diverse learners; students utilize resources, materials, and technology in their learning	5	
Not Able To Rate	NATR	
POST CONFERENCE		
VI. PROFESSIONALISM: Teachers recognize, participate in, and contribute to teaching as a profession.		
Indicators/Professional Practices		Evidence/Comments
VI-D. Reflection		
1-2. Does not examine his/her teaching; does not suggest modifications to improve teaching practices and student achievement	1 2	
3-4. Examines own teaching; suggests modifications that would lead to improved teaching practices and student achievement	3 4	
5. Consistently examines own performance in the classroom; provides evidence of modifying teaching practices to increase student achievement	5	
Not Able To Rate	NATR	
Comments:		

Appendix B

Think-Aloud Questions

Although the questions will emerge as the session develops, both researchers have spent some time considering some general themes we would like to cover during the session. Those themes are as follows:

- The effect of the observation instrument on the analysis
- The experience as teacher observer as related to the perceived role of teacher leader
- The prevalence of reflective practice in teaching
- Self-evaluation as part of personal/professional development plan
- The impact of reflection as translated to empowerment of other teachers