

What Elementary Physical Education Student Teachers Observe and Reflect Upon to Assist Their Instruction

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Abstract

The purpose of this study was to examine how student teachers (STs) linked their observation and reflection skills to assist them in bridging the theory to practice gap during their elementary student teaching experience. Eight STs were videotaped on two different occasions during their elementary assignment. Immediately following the lesson, the student teacher (ST) and university supervisor viewed the videotape. An audio-recording was made as the student teacher reflected on their personal observations of the events occurring during the lesson. Data were categorized into three themes: (a) teacher behaviors, (b) student response to instruction, and (c) lesson goals and objectives.

Although the STs focused more on teacher behaviors, a close look at the reflections of the STs indicate that they evaluated whether what they did was effective in meeting the needs of students. Such responses would seem to indicate a concern for students and the opportunities that students had to learn under the student teacher's guidance.

Critical components to effective instruction include imparting information, observing how students respond to tasks and challenges, and deciding how to respond to the actions of students in the classroom. These components are essential to effective teaching whether the teacher is a pre-service teacher (PT), a first year teacher, or a twenty-year veteran. Unfortunately, while these components have been identified as crucial, teacher educators frequently focus attention

during teacher preparation classes on how PTs impart information to students. It is often assumed that PTs have the prerequisite skills to observe the actions of students in the classroom environment and determine what to do next. In reality, frequently PTs are unable to attend to the many situations that arise during the span of a class period without being overwhelmed (Fuller & Brown, 1975). Consequently, the novice may not pay close attention to how students respond to movement challenges or whether student learning occurs.

Early field experiences have been established in teacher preparation programs so that future professionals have the opportunity to observe teachers engaged with their students, practice their newly acquired teaching skills in a real world school setting, and begin to understand how schools function (Dodds, 1989). It is during these experiences that guided practice in the critical components of instruction should be facilitated. Guided practice enables PTs to increase their knowledge and demonstration of effective teaching behaviors, in addition to developing reflective practices that assist them in interpreting relationships between their instruction and the movement responses of their students (Graham, French, & Woods, 1993). However, unless teacher educators encourage PTs to communicate about their observations of student movement, it can not be assumed that effective behaviors are being internalized.

In an attempt to describe what PTs found to be critical incidents during lessons, previous researchers considered the amount of attention

PTs gave to student movement responses during early field experiences. PTs were found to attend more frequently to student movement responses with advancement through teacher training courses (Bell, Barrett, & Allison, 1985; Allison, 1987; Barrett, Allison, & Bell, 1987). Belka (1988) found PTs in years 3 and 4 focused on the process behaviors of the instructors they were assigned to observe, with less emphasis on lesson content or student responses. In an attempt to see whether secondary student teachers (STs) could transform theory into practice during the culminating teaching experience, McCallister and Napper-Owen (1999) investigated STs responses to what happened in their classes during the instructional time. STs commented most frequently about the students' responses to their instruction followed by comments on their own process behaviors, instructional techniques, and the established learning climate.

More recent research focused on PTs conceptions of effective instruction through structured reflection activities. PTs were found to reflect more often about their teaching effectiveness, as these behaviors were viewed as essential to the primary goal of student learning (Curtner-Smith, 1996; O'Sullivan & Tsangaridou, 1992; Sebren, 1995; Tsangaridou & O'Sullivan, 1994). Sebren (1995) also found PTs to conceptually link the content of their lesson plans to past and future activities as they continued their reflections and teaching experiences. Although reflection was found to help the PTs make connections with their knowledge structures, the reflection did not help them transform their knowledge into "knowledge in practice." The PTs found it difficult to make changes during the actual lesson in progress.

The ultimate goal of teacher education programs is to enable PTs to transform the theoretical knowledge obtained in the university setting into pedagogical content knowledge that promotes student learning. Dewey (1933) stated that part of the reflective process involves observing response actions and the environment in which

the response actions occur and then making a decision concerning what should occur next. The context of the elementary physical education setting may provide different issues in the ability to observe movement responses and respond to students. Time allotment for classes and fewer class periods during the course of the school week may create an environment in which PTs experience difficulty responding to students with decisions that promote student learning. The purpose of this study was to examine how STs linked their observation of what occurs in their class with their reflection skills to assist them in bridging the theory to practice gap during their elementary student teaching experience.

Procedures

Participants and Setting

The participants in this study were 8 student teachers (STs), 7 males and 1 female, ranging in age from 23 to 37 years. All participants were enrolled in a 16-week student teaching experience with the first eight week assignment in a secondary placement and the final eight weeks in an elementary placement. The student teaching semester was the final requirement in the preparation program. All procedures and expectations for this study were explained to the participants who subsequently gave their informed consent.

Preservice Preparation

All participants were trained in a field-based preparation program that included four pedagogy classes with a combined total of 100 hours of supervised field experiences in a public school setting. Once assigned to a school for a preservice field experience, the PT would observe and assist the cooperating teacher for a week before assuming teaching responsibilities the second week. The cooperating teacher provided feedback to the PT on a daily basis on the strengths and weaknesses of their instruction. The university supervisor (US) observed the PT at least twice during each field experience and held a post-lesson conference

with each individual following instruction. The cooperating teacher was often in attendance during the conference so that all feedback was shared and communicated with the cooperating teacher's knowledge of the expectations for the preservice teacher.

A critical requirement for each pedagogy course to be completed by the PT during the field experience was a video-recording of a lesson being taught. All PTs were video-recorded on four different occasions at the elementary, middle, and high school levels. These lessons were subsequently analyzed by the preservice teacher and the university faculty member using the Physical Education Teacher Assessment Instrument (PETAI) (Phillips, Carlisle, Steffen, & Stroot, 1992). This instrument records the amount of time teachers spend in instructional and management behaviors. Based on the results of the video-analysis, the PT wrote a reflection paper based on the strengths and weaknesses of their instruction, the impact on student learning, and their plans to improve their teaching. The faculty member in charge of the pedagogy class responded to the paper and provided support for the ideas presented in the paper or made suggestions to encourage further reflection by the PT.

Discussions in the pedagogy courses introduced students to content knowledge and pedagogical knowledge. Physical activity courses provided students the opportunity to observe movement as it occurred and to provide peer feedback to students performing the movement. Through the integration of theoretical knowledge with practical content knowledge, the faculty in the teacher preparation program sought to enable the preservice students to provide instruction to students that met the students' needs. Throughout all field experiences, it was hoped that the PTs would be able to think on their feet and respond to the needs of the students during the lessons rather than teaching to the lesson plan that was prepared for use.

Data Collection

Data for this study were collected during the second or third week of the elementary student teaching assignment and again during the seventh or eighth week. Each ST's classroom instruction was recorded on videotape for the 30 minute lesson taught during the US's visit. Immediately following the completion of the lesson, the ST and US viewed the lesson in order to capture the student teacher's reflection on audiotape. While viewing the videotape, the US asked the ST to discuss what was observed during the lesson and what prompted them to respond as they did to a situation as a result of their observation. The questions asked by the US were used to stimulate reflection, rather than influence the content of the reflection (See Appendix A). Follow-up questions were asked, when needed, to clarify the ST's observation or their response to what occurred during instruction.

At the conclusion of the videotape, the interview concluded. The US and ST discussed the lesson, and the US gave feedback to the ST. The sequence of watching the videotape and recording the interview was consistent with all STs so that the feedback from the US did not influence the responses of the ST.

Data Analysis

Interviews recorded on the audiotape were transcribed and examined for the accuracy of content. Both investigators individually read each transcript and organized data into units that contained similarities to one of three themes (Lincoln & Guba, 1985). The three themes were based on work of Bell et al. (1985) and McCallister and Napper-Owen (1999). The themes were familiar to the STs as discussions within pedagogy courses often prompted in-class reflection on these themes. The three themes were (a) student response to instruction, (b) teacher behaviors, and (c) lesson. A second, more specific interpretation of the data in the three themes was also made. The theme "student response to instruction" was categorized into

statements regarding (a) instructional tasks, (b) organizational tasks, and (c) student social interaction. The theme “teacher behaviors” was categorized into statements regarding (a) instructional techniques, (b) establishing the learning climate, and (C) teacher process behaviors. The lesson theme included statements regarding (a) the goals and objectives of the lesson and (b) the organizational structure of the lesson.

Reliability

Initial intercoder reliability coefficients were: student response to instruction, .97; teacher behaviors, .95; and lesson, .91. After arbitration between both researchers on the statements for the themes, agreement was reached on the statements.

Results

The purpose of this study was to examine how STs linked their observation of what occurred in their classroom with reflection skills to assist them in bridging the theory to practice gap during their elementary student teaching experiences. All eight STs made reflective comments that were consistent with the three theme areas (a) student response to instruction, (b) teacher behaviors, and (C) lesson. Of the 728 coded interview reflection items, 44% (N= 320) of the comments concerned teacher behaviors, 40% (N= 291) of the comments concerned student response to instruction, and 16% (N= 117) of the comments concerned the lesson goals and objectives or structure.

Teacher behaviors

The STs most frequently reflected on teacher behaviors as they were interviewed. Their comments focused on their process behaviors (N=237), instructional techniques (N=70), and establishing the learning climate (N=13).

The prevalence of reflection in this category demonstrates the student teachers’ familiarity with the impact they had on the learning environment and their concern for the technical aspects

of their instruction. While watching the videotape, one student teacher commented:

I wish I would have reminded them after they got in their lines to make sure that they stand on the side. It’s hard for me now to go along and help kids and know exactly what is going on. So I guess sometimes I need to step back and get a view of the class. (TJ)

One ST reflected about what was going through his mind as he presented the instructional focus of his lesson.

I tried not to dribble too much as I gave instructions, because I know they can’t hear me. So I dribbled a few times just to show them the right hand and left hand, and how I want them to go. (JW)

As students practiced in their stations, the ST reflected on his observation of one student who was modeling for another classmate. “I was telling him ‘good fingerpads’ and hoping she would see, because she’s a ‘spiker’ over there.” (JW)

The reflection comments in this category concerned various teaching techniques that the STs used in their physical education lessons. One ST extended the striking activity of his lesson to enable students to have more success. “If they could not hit it within the first two swings, I put it on the tee for them.” (SB) Unfortunately, this same ST did not recognize that the techniques he had planned for the overall goal of the lesson did not enable students to have maximum opportunities to learn. When asked how many students had received the opportunity to practice their striking skills in the lesson, the ST noted: “I would say half the class got a chance on Tuesday, and not quite the other half got a chance today.” (SB) The plan for his indoor striking lesson was to have half the class on one team batting, and the other team fielding the hit ball. In this situation, only after the ST reflected on what he observed did he then comment: “I need to break it down and do more skill work with them.” (SB)

The teaching style used for a lesson was a point of reflection for one ST. He hoped to engage his third grade students in guided discovery on the effect of power and angle on the trajectory of a tennis ball hit with a paddle. However, after reflecting on the success of the lesson, he found the techniques he used for the lesson were not as helpful as he had planned.

I worked more on the exploratory. Hit it and try to notice the different amounts of power you use to hit it. I wanted them to equate instead of hitting it up to the ceiling to hit it with a flatter trajectory. We probably need to do this again. (BB)

STs commented on the protocols that had been established for students to enter the classroom and get ready for instruction. Whether it was during entrance into the gymnasium, during warm-up activities, or through close proximity to students as they practiced, the STs worked to establish a safe, positive learning environment for children in their class.

You learn with each class. I use positive reinforcement as much as I can, especially with these little ones to help reinforce what they're supposed to do on my directions. (ML)

The reflection comments categorized as teacher behavior represented the STs' concerns for the technical aspects of teaching. Their comments also documented their observations regarding how the students were involved in establishing the learning environment in the classroom. The STs held children responsible for appropriate behavior as leaders and participants in classroom activities.

Student response to instruction

The student response to instruction category was the second most frequently utilized classification of comments. Forty percent of the total comments related to the student teachers' abilities to look beyond their own behaviors and concentrate on student movement and social interaction.

A total of 291 comments were classified in this group. The majority of comments (N=237) related to the quality of movement response demonstrated by students in response to an instructional task. Two additional categories had fewer comments in regards to student movement responses: student social interaction during instruction (N=33) and student involvement in organizational tasks (N=21).

The nature of responses made by the student teachers about movement were either general (N = 149) or specific (N=88). A typical general response is represented by the following comment: "Most of them do pretty good. A lot of them have a lot of difficulties using their non-dominant hand." (ML) Another example was: "A lot of them were doing really well with hitting the target. Many of them were able to hit the target and pass correctly." (JW)

Specific comments about movement responses were directed towards individual students. As TJ viewed her videotape, she observed a student attempting to bat a ball off of a tee. "She was getting ready to bat, and she went and stood right in front of the tee instead of to the side where she was supposed to." Similar comments from other STs demonstrated their knowledge of the critical elements of the skills they were teaching and whether students responded to the movement task in accordance with the ST's learning objective.

The STs reflected on the interaction of students during their opportunities to practice. Thirty-three of the 291 comments in this category were classified by social interaction. During a cooperative activity lesson, a ST noticed:

These classes have been doing a pretty good job taking turns. There's usually not one person that is running the whole show. They did a pretty good job of sharing and taking turns and using different people's ideas. (CL)

Often the observations and subsequent reflections were more negative than positive. Student teachers commented on situations during which

children were “out of control” and uncooperative. When a behavior problem caught the attention of a ST, the subsequent consequence for the behavior was a time-out for the students involved.

They were hitting on each other in the middle of the circle. I don’t know what the deal was. I gave them a look that said, “stop” and they stopped. But as soon as I looked away, it shifted back, and they were at it again. I turned around talking and caught Jimmy kicking the other boy.
(RM)

The STs reflected on organizational tasks performed by students least frequently. Twenty-one of the comments dealt with this classification. These comments tended to reflect how students made a transition between activities when directed by the ST. When the ST observed organizational problems, a follow-up response was an interaction between the ST and students. The follow-up response typically involved a clarification of how the children were to be grouped for activity or where children were to perform specific activities.

Lesson Organization and Objectives

The final category of reflective comments described the organized structure of the lesson and the outcomes and objectives of the lesson. Of the two sub-groupings, 69 comments concerned the organizational structure that was planned, and 48 comments focused on the outcomes and objectives of the lesson.

Comments focused on the decisions about organization and transition of activities that the ST made prior to the lesson implementation so students could successfully accomplish the lesson objectives.

There were to be three people per cone. One of those three had a bat, and they went out and hit the ball while the other two fielded the ball and threw it back to the batter. They hit five, and the others would take a turn to hit. (GB)

The transition of activities was not limited to those conducted within a lesson, but included transitions from one lesson to another. As the videotaped lesson was concluding, GB reflected on his goals for an upcoming lesson. “There were only a couple minutes left, and I just wanted to show them a few things about throwing.” He displayed his intention to link the current lesson to the following lesson.

Comments about the lesson objectives demonstrated that the student teachers had specific outcomes for students to accomplish, and they focused their activities and attention on the attainment of these outcomes throughout instruction time.

I was doing stations again; this is at the end of the basketball unit. My objective on the team passing was to use a variety of different passes to your partner. I also wanted, on the rebound, for the students to be able to catch it with two hands. On the throwing or passing, I wanted them to use the steps that we went over. I wanted them to use the steps correctly to get the ball to a partner while being guarded. I wanted them to have two hands on the ball and step and throw, then use the bounce pass or chest pass from their chest instead of from above their head.
(JW)

The comments categorized under this sub-theme indicated that STs were concerned with movement acquisition or movement refinement. As they prepared their lesson plans, they considered how the activities aligned with their stated objectives for the particular lesson. The statement above indicated that JW also reflected on how this lesson with its particular objectives fit into the scope of the basketball unit that he was finishing. As children reviewed the various skills at stations, the ST was concerned with the acquisition of critical elements of the skills that were appropriate to the developmental level of the children in his class.

Discussion

A goal of the teacher preparation program is to enable future professionals to transform the theory that they learn in the classroom into useful pedagogical content knowledge that promotes student learning. A critical aspect of effective teaching includes observing, analyzing, and responding to the actions of students in the classroom. Too often an assumption is made that preservice teachers are able to make the link between the theoretical content taught in their university classrooms and what happens in the classrooms of their field experiences. Unless teacher educators ask their future professionals to reflect and describe what they observe during instruction, these novices may not have the skills that enable them to respond to the ever-changing classroom environment.

The student teachers in this study reflected most often on their process behaviors. They focused their observations on what they were doing rather than on what the students were doing. This finding would support the literature on beginning teachers whose dominant concern is for their survival in the classroom (Fuller & Brown, 1975). However, a close look at the reflections of the student teachers would also indicate that they evaluated whether what they did was effective in meeting the needs of students. Such responses would seem to indicate growth beyond their survival concerns to a concern for students and the opportunities that they had to learn under the student teacher's guidance. The prevalence of these responses would demonstrate the strength of their training through systematic observation of their own videotapes and the follow-up reflections that were composed as a result of their self-assessments. They had been trained to evaluate their instructional and management behaviors and the impact of their process behaviors on the students' opportunities to learn. Therefore, they did reflect the predominant message of their teacher preparation program as was reported in other studies (McCallister & Napper-Owen, 1999; O'Sullivan & Tsangaridou,

1992; Tsangaridou & O'Sullivan, 1994). These comments would also indicate the continued growth toward becoming a reflective practitioner.

In regards to the category "student response to instruction," a majority of the comments indicate that the student teachers observed how the students in their classes were involved in instructional activities. Because the comments were more general than specific in nature, the comments may have reflected the "bigger picture" of how they saw an entire class of students moving rather than the quality of movement of individual students. The student teachers did provide specific comments during their observation, so opportunities to observe performance and provide feedback on performance in the professional activities courses was beneficial training.

The more general comments may have reflected a lack of knowledge of specific students in the elementary setting due to fewer opportunities to see students across the student teaching experience. Generally, the elementary students received physical education two or three times per week, which differed from the daily physical education in typical secondary student teaching experiences. Consequently, the STs were not as familiar with students in particular classrooms, and they may have looked at movement responses of the entire class in order to evaluate their own teaching effectiveness during the lesson.

Reflection on the overall picture may also have assisted in the planning process prior to instruction. The student teachers demonstrated through their comments about the lesson that goals and outcomes could be established for the stage of motor development of students. The student teachers clearly demonstrated that they could observe what occurred in the classroom and, through reflection, link that observation to behaviors that were essential for effective instruction.

Conclusions and Implications

Barrett, Allison, and Bell (1987) recommended that preservice students be interviewed immediately following classroom instruction in order to

stimulate reflection on what they observed during instruction. They believed such an interaction would enable teacher educators to understand more clearly how subject matter of teacher preparation courses affected what preservice students attend to during observation. The findings of the current study indicate that student teachers focused first on their process behaviors, then secondly on student movement responses.

We believe the ability of these student teachers to reflect on their own teaching performance is indicative of the emphasis placed on systematic observation and reflection throughout the teacher preparation program. These skills were not the result of one single course or teacher educator. It took a concerted effort by teacher educators in several courses across the longitudinal preparation to impact the development of skills in these preservice teachers. When preservice teachers receive training that links to shared goals of the faculty, there is a greater chance that these teachers will demonstrate the desired skills and behaviors when they reach the culminating experience of student teaching.

We believe preservice teachers should have the opportunity to view themselves in the role of teacher often throughout their training. When they have the opportunity to watch on videotape their interactions with students and how students respond to their instructions, they gain a broader perspective of the impact they have on students. Teacher educators may guide the development of reflection skills by viewing the videotapes with preservice teachers and asking questions about the lesson, teacher process behaviors, and student response to instruction. Across the teacher preparation program, preservice teachers may be weaned from the guided reflection so that, upon graduation, they may have acquired the observation and reflection skills needed to succeed in providing effective learning opportunities for their students. These skills will be valuable throughout their teaching career.

Future research may need to investigate whether preservice teachers are able to sustain

their ability to observe and analyze the “big picture” of the instructional process with students while being weaned from guided reflection from the university supervisor. In order for preservice students to be weaned from assistance by the university supervisor, they should be encouraged early and often to reflect on their actions in response to what students do during instruction. Early reflection efforts may focus on technical aspects of teaching. Later efforts may emphasize reflection on non-technical issues that occur in the classroom, such as acceptance of diversity or other ethical issues. As students mature in their professional development, teacher educators may need to relinquish control of guided reflection to the preservice teacher in order to determine if the product of their curriculum is a responsive, skillful teacher.

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APPENDIX A

Interview Guide

1. Please describe what you observed during the lesson.
2. Describe what prompted you to give feedback to this student.
3. Describe what prompted you to call the class back together for additional instruction.
4. Describe what prompted you to change your class activity.
5. Describe what prompted you to provide a demonstration of the skill at this time during the lesson.
6. Describe what you observed about the class environment at this time.

Other similar questions may emerge as the videotapes are being viewed.