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METHODOLOGY

Accomplished Teachers' Implementation of Quality Teaching Practices

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Abstract

The purpose of this study was to describe how accomplished teachers implement the quality of teaching practices in their daily lessons. The participants were four elementary physical education teachers (one male, three female). The data sources consisted of videotape of the teachers teaching 12 lessons, transcription of the taped lessons, descriptive written records, and formal interviews with the teachers. The data were analyzed using the constant comparison techniques. The findings indicated that the teachers provided coherently connected and meaningfully authentic learning tasks for each lesson. They presented the learning tasks using examples, images, and learning cues; organized the class using efficient routines and creative ways; and provided students with tailored instructional guidance.

Teaching practices reflect dynamic interactions among the teacher, students, and content in situated learning environments. Teaching practices directly shape what the students know, think, and are able to do (Ball & Forzani, 2009; Lampert & Graziani,

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2009). Providing students with quality teaching is critical to helping students achieve desired learning outcomes (National Association for Sport and Physical Education [NASPE], 2004). Quality teaching implies that learning tasks should be academically rigorous and progressively connected, task presentation should be relevant and meaningful to students, and the learning environment should be supportive and productive for students to actively build knowledge and apply what they have learned to solve problems in authentic settings (Fenstermacher & Richardson, 2005; Hill et al., 2008; Lampert & Graziani, 2009).

Over the past decades, researchers have identified four essential dimensions of teaching practices across subject areas (Ball & Forzani, 2009; Hill et al., 2008; Lampert & Graziani, 2009; Reynolds, 1992; Rink, 2006; Rovegno, 2003; Shulman, 2004). These consist of what content is designed, how to present the content, how to organize the students and teaching materials, and how to respond to students' ongoing learning. How well the teacher enacts the four essential dimensions of teaching practices collectively contributes to the quality of teaching practices (Lampert & Graziani, 2009; Shulman, 2004).

Researchers have posited that the choosing the learning tasks is an essential dimension of teaching practices for teachers (Lampert, 2010; Shulman, 2004). Rink (2006) stated, "The learning task describes how the teacher intends the learner to be involved with the content" (p. 93). Researchers have argued that the types and nature of the learning tasks designed and organized by the teacher primarily influence what the students are learning and thinking and how they are constructing meaning. To help students accomplish intended learning objectives, the teacher should provide students with learning tasks that are sequentially progressive, developmentally appropriate, and maximally and actively engaging (Ball & Forzani, 2009; Rink, 2003, 2006; Rovegno, 2003; Shulman, 2004). According to NASPE's (2009) appropriate instructional practice guidelines, sequential learning tasks provide students with progressive learning experiences from learning motor skills and movement concepts in isolation, in combination, to applying them in authentic game situations. Learning tasks that are developmentally appropriate for students are critical to ensuring students have successful yet challenging learning experiences. Learning tasks that are maximally and actively engaging provide students with ample learning opportunities and participation. These critical features of

the task are important functions of the quality of the learning task (Ball & Forzani, 2009; Hill et al., 2008; Rink, 2006; Rovegno, Chen, & Todorovich, 2003).

Researchers have agreed that how the teacher presents and explains learning tasks to students is an essential dimension of teaching practices (Charalambous, 2010; Hill et al., 2008; Lampert, 2010; Rink, 2006). Researchers have further notice that quality task presentation promotes a deeper understanding of new information, helps students connect between prior knowledge and new concepts, and facilitates students' critical and creative thinking (Rink, 2006; Rovegno, 2003; Shulman, 2004). Quality task presentations include the teacher (a) precisely and explicitly explaining the learning task while using appropriate examples, analogies, metaphors, and students' familiar language to help students understand new information; (b) demonstrating key aspects of a learning task one at a time and/or in sequence while presenting learning cues related to the nature of the task to help the students grasp the key features of the learning task; and (c) using contextual scenarios to explain why the information should be learned to help students find new information relevant (Lampert, 2010; Rovegno et al., 2003).

Researchers have emphasized that how the teacher organizes the students, equipment, space, and learning resources for the task enactment is an essential dimension of effective teaching practices (Lampert & Graziani, 2009; Rink, 2003, 2006; Shulman, 2004). Researchers have contended that the quality of class management depends on how efficiently and effectively the teacher groups students, distributes physical learning materials and equipment, arranges physical layouts, locates students into working areas, and reinforces class norms and rules (Ball & Forzani, 2009; Reynolds, 1992; Rink, 2003, 2006).

How the teacher responds to students' learning processes is an essential dimension of teaching practices (Ball & Forzani, 2009; Lampert & Graziani, 2009; Rink, 2006; Rovegno, 2003). The quality of instructional responses depends on how well the teacher closely observes and analyzes students' performance, modifies the task if needed, redirects the students' attention to the task, and provides tailored instructional guidance. Whether students have productive learning experiences and achieve lesson objectives relies heavily on how the teacher provides specific and flexible guidance on the classroom floor and how the teacher steers the directions of students'

task engagement (Ball & Forzani, 2009; Hill et al., 2008; Lampert & Graziani, 2009; Rink, 2006).

With an increasing call for the improvement of quality teaching (Ball & Forzani, 2009; Shulman, 2004), investigating how teachers implement the quality of teaching practices in their daily lessons based on the core framework would provide teachers with a targeted guidance for their self-reflection on their own teaching (Grossman & McDonald, 2008; Lampert, 2010). Such exploration would provide teachers with examples for focusing on learning and implementing each essential dimension of teaching practices. The "decomposition" of teaching (Grossman & McDonald, 2008) is a building block for successful implementation of all essential teaching practices. The purpose of this study, thus, was to describe how four accomplished teachers implemented the quality of teaching practices in their daily lessons. The four research questions guiding the investigation included the following: (1) What types of learning tasks did the teachers design? (2) How did the teacher present learning tasks? (3) How did the teachers organize the class? (4) How did the teachers respond to the students' ongoing learning?

Methods

Participants and Research Settings

The participants in this study were four accomplished elementary physical education (PE) teachers (one male, three female). The teachers were selected from the second year of the funded Carol M. White Physical Education Program (PEP) project because they demonstrated the highest level of quality teaching practices (Chen, Mason, Staniszewski, Upton, & Valley, 2011). Among the evaluation of 30 videotaped lessons that nine physical education teachers taught during the second PEP project year, 12 lessons the four teachers taught were coded as the "fully demonstrated" level of overall quality teaching using the Assessing Quality Teaching Rubrics (AQTR; Chen et al., 2011). The overall quality teaching of the AQTR consists of a sum score of the four essential dimensions such as task design, task presentation, class management, and instructional responses with a quantified 5-level of quality teaching (*fully demonstrated, mostly demonstrated, partially demonstrated, rarely demonstrated,* and *not demonstrated*; Chen et al., 2011). The detailed content of the 30 videotaped lessons was described in Chen et al.'s (2011) study. The teachers participated in the Child and

Adolescent Trial for Cardiovascular Health (CATCH) PE workshops during the first and second PEP project years. The teachers' years of teaching elementary physical education varied. Rebecca and John had 5 years of teaching experience, Sally had 26 years of teaching experience, and Betty had 33 years of teaching experience. All names in this study are pseudonyms.

The teachers were teaching PE to K–5 at four elementary schools in the same school district located in a suburban area of the Midwest in the United States. The school district housed nine elementary schools and served 4,000+ students in K–5. The student population was predominantly Caucasian (98%). K–2 students had one 30-min PE class and one 30-min wellness class per week, and students in Grades 3 to 5 had one 60-min PE class per week. The university institutional review board and the school district administrator granted permission for conducting this study. The teachers and the students' parents or guardians signed the informed consent forms to indicate their voluntary participation in this study.

Data Collection

Videotaping lessons. The four teachers teaching 12 lessons on a variety of content to different grade levels (see Table 1) were videotaped based on their preferred schedule. During the videotaping of a lesson, a camcorder was placed in an unobtrusive corner of the gymnasium to avoid interfering with the teaching. The teacher wore a wireless microphone throughout the lesson. The voice transmitter was attached to the digital camcorder to capture the teacher's and the students' voices. Videotaping began as the students entered the gym and stopped as the teacher dismissed the class. The camcorder's angle was constantly adjusted and zoomed in and out to make sure the teacher and the students were in view.

Table 1

Videotape of the Teachers Teaching Various Lesson Content

Teacher's Name	Grade Level	Lesson Content
Rebecca	Kindergarten	Dribbling lesson
	First grade	Integrated locomotor skills and nutrition lesson
	Third grade	Bowling lesson
	Fourth grade	Volleyball lesson

Table 1 (cont.)

Teacher's Name	Grade Level	Lesson Content
John	Fourth grade	Bowling lesson
	Fourth grade	Bowling lesson
	Fifth grade	Basketball lesson
	Fifth grade	Basketball lesson
Betty	Third grade	Skateboarding lesson
	Fourth grade	Floor hockey lesson
Sally	Third grade	Dribbling lesson
	Third grade	Dribbling lesson

Lesson transcripts and descriptive written records. To obtain qualitative data sources about how the teacher taught the lesson, the other three investigators transcribed and wrote descriptive records of the videotaped lessons. While watching the videotaped lesson, the second investigator was primarily responsible for typing whatever the teacher said and describing what the teacher did during a lesson agreed by the other two investigators. In addition, they helped provide missing information for the transcriber and were responsible for playing, stopping, rewinding, and replaying the taped lesson. The protocols for transcribing and writing descriptive records were (a) watching the taped lessons to transcribe the teacher's verbal instructions in terms of lesson introduction, task presentation, and instructional guidance and transcribing the students' verbal responses; (b) observing the teacher's teaching actions and the students' movement responses and behaviors; (c) describing how the teacher presented the task, organized the class, and interacted with the students; (d) describing a majority of the students', a group of students', and/or an individual student's learning responses including where they were working with whom, what task they were doing, and how they were engaging in the task; and (e) stopping the DVD anytime the transcriber did not capture what the teacher and the students said and how they actually did it and then rewinding to the DVD to the point the investigators needed to rewatch. After the transcribing and describing each taped lesson, the three investigators independently read through the lesson transcript to confirm whether it was adequate and correct. If each researcher noted needs for

adding, deleting, and/or revising the transcript, they discussed to reach agreement about how to fix it.

Interviews. We conducted a formal interview with each teacher using semistructured interview questions (Patton, 2002) at the conclusion of videotaping each teacher's teaching lessons. To gather information about the teacher's educational and teaching backgrounds, we asked two interview questions: (a) Tell me your educational background. (b) Tell me your teaching background. If needed, we probed with a question such as the following: Tell me more about that. To obtain information about the teacher's involvement in the professional development activities, we asked a question such as the following: What professional development activities were you primarily involved in the last 5 years? We followed with probing questions such as the following: (a) How often did you have staff development activities in your school district? (b) How often did you attend the State Convention? (c) Have you presented anything at the State Convention? To obtain information about the teachers' rationales for organizing the scope and sequence of their curriculums, we asked two questions: (a) Tell me the curriculum scope and sequence in your PE program. (b) Tell me your typical lesson structure. If needed, we probed with questions such as the following: (a) What do you usually teach in your PE lessons? Give me more examples. (b) What are your rationales for organizing your teaching in that way? Give me examples to describe your typical lesson. To collect information about the teachers' reflections on their own teaching, we asked a series of questions such as the following: (a) What lesson objectives did you expect your students to achieve in that lesson? (b) How did you help your students understand how to perform a skill correctly? (c) How did you organize your students to learn a variety of tasks? (d) How did you ensure the students maximum participation while keeping them safe? (e) How did you interact with your students during their practicing the tasks? If needed, we asked probing questions such as the following: (a) Give me more examples about that. (b) Tell me more about that. The interviews occurred either in a quiet conference room or the teacher's office. The duration of the interviews lasted between 60 and 90 min. The interviews were tape-recorded and transcribed.

Data Analysis

Each lesson transcript and its concurrent descriptive records were coded with different colors in terms of task design, task

presentation, class management, and instructional responses. Next, the color-coded lesson transcripts, descriptive records, and interview transcripts were analyzed by using the constant comparison technique (Patton, 2002). Two investigators independently read and reread the color-coded lesson transcripts, descriptive records, and interview transcripts. They identified similar information and labeled them with tentative assertions. Through comparing and contrasting the information, they grouped similar information into categories and identified negative cases. Finally, they independently read through the information associated with specific categories and the themes to confirm and/or disconfirm the identified categories and themes. They wrote down their own interpretations of the information associated with the categories and themes to see whether they confirmed or disconfirmed the identified categories and themes. They then discussed disagreements about the interpretation of the coding to reach agreements (Patton, 2002).

Data Trustworthiness

A cross-checking of multiple data sources was used to help triangulate what the participants did, said, and thought simultaneously to confirm or disconfirm the evidence of one data source. Multiple data sources included the lesson transcripts, descriptive records, and interview transcripts to study the teachers' teaching actions and the students' learning responses through different lenses. In addition, the draft of the manuscript was sent to the teachers for member checks (Patton, 2002). They were asked to provide their opinions of the data analysis and results and to correct them if needed. The teachers confirmed the categories, themes, and specific results of the manuscript.

Findings and Discussions

Four themes emerged from the data analysis describing how the four teachers implemented the quality of teaching practices while teaching content-specific lessons to specific grade levels: (a) coherently connected and meaningfully authentic learning tasks, (b) related and explicit task presentation, (c) creative and efficient management strategies, and (d) interactive and tailored instructional responses.

Coherently Connected and Meaningfully Authentic Learning Tasks

Analysis of the lesson transcripts and its concurrent descriptive records indicated that the learning tasks the teachers designed were progressively sequential and coherently connected to each other no matter what lesson content was taught to what grade level. As far as the meaningful and authentic feature of the learning task is concerned, when to situate the learning task in more applied and authentic settings varied depending on what specific content was taught to a particular grade level within the specific context of the length of the lesson and the order of the lesson in a unit.

Coherently connected learning tasks. Designing progressively sequential learning tasks is central to helping the students develop mature movement patterns and competency in various movement forms because motor skill development and learning is cumulative and sequential in nature (NASPE, 2009; Rink, 2003, 2006; Rovegno et al., 2003). The four teachers designed and organized learning tasks into a coherently connected sequence within a lesson. They intentionally broke down the skills into small parts and taught each key part of the skill as a small-step learning task. For example, in Rebecca's bowling lesson taught to a third grade class, the first learning task was to learn correct techniques of gripping the bowling ball. The second learning task focused on learning and practicing the four-step approach with holding an imaginary bowling ball. The third learning task centered on learning and practicing the skill execution and release with an imaginary bowling ball. Once the students practiced the key parts of the bowling skill execution with an imaginary bowling ball, the fifth learning task was to have each student take turns practicing the bowling skill with a bowling ball on the bowling lane to knock down the bowling pin within their own assigned lane with their group members. After observing the students were able to use the correct techniques of performing bowling, Rebecca had the students use what they had just learned to perform the bowling skill in more applied authentic settings. The sixth learning tasks was to have the students play the bingo–bowling game with their group members, followed by playing the spelling bee–bowling game. Consequently, our observations of students' skill performance during the last two learning tasks indicated that all students were able to use a four-step approach and that a few students

were able to use a running-step approach to execute bowling skill with a more fluid motion.

Similarly, in Betty's first skateboarding lesson taught to a third grade class, the first learning task had the students figure out which foot they chose to place in front and back on the skateboard to keep a comfortable position while standing on the board. The second learning task focused on helping students learn and practice scoots with one foot on the floor and another foot on the board. The third learning task was to have the students do double scoots and glide on the board down and back on the full-sized basketball court. The students practiced this learning task back and forth two times. Last, Betty asked the students to practice the skateboarding at their own pace in more applied settings in which whoever felt comfortable could do one scoot and glide, and the others still did double scoots and then glided on the board. As a result of the students engaging in the small-step and coherently connected learning tasks, we observed that except for two girls doing double scoots and then gliding for a short distance with a stiff body position, the rest of the students were able to scoot and glide for a certain distance with an easy-looking body position using speeds with which they were comfortable. Especially, several students seemed to glide fast with a good control of their directions.

The teachers used a series of sequential small-step learning tasks to help the students learn mature forms of the skill in a coherently connected manner. Each small-step sequential task served as a building block for students to have successful learning experiences when they worked on more applied learning tasks. The findings of this study were consistent with Rovegno et al.'s (2003) study in which the accomplished teachers who had a deep understanding of a specific subject matter designed progressively sequential learning tasks for their students to learn mature forms of dribbling skills. In review of effective instructions in physical education, Rink (2003) stated that providing students with well-designed and coherently connected learning tasks was conducive to helping students successfully perform the mature forms of a skill.

Meaningfully authentic learning tasks. Providing tasks that reinforce the use of the skill in changing environments and game-like conditions is crucial to bridging the gaps between skill learning and skill application (NASPE, 2009; Rink, 2003, 2006; Rovegno, et al., 2003). The teachers provided the students with meaningfully authentic learning tasks to help them apply what they learned from

the previous lessons and within the lesson in more authentic game settings. For example, in Rebecca's integrated locomotor skills and nutrition lesson taught to the first grade class in a 30-min lesson, the students initially practiced locomotor skills such as gallop, skip, run, jump, hop, and crab walk. Then, Rebecca had the students play an integrated locomotor and nutrition game. In this game, the students worked in groups to pick up one index card labeled a certain food from their grocery shopping bag and then traveled to deliver the food to the inside of a Hula-Hoop by using one locomotor skill at a time. These Hula-Hoops were designated as healthy food or unhealthy food areas. They traveled back to do the next delivery until they delivered all the food from the bag to the right place using different locomotor skills. After the game, the teacher gathered the students to check whether the food had been delivered to the right place. In this integrated learning task, the first graders had opportunities to use the locomotor skills and nutrition concepts they had learned previously to play the integrated game.

Similarly, in John's basketball lesson taught to two fifth grade classes, John used the first learning task, the dribble tag game, to have the students apply the dribbling skills they learned from the previous lesson to play the game. While playing this game, the students had adequate opportunities to practice dribbling while keeping their head up to constantly watch where to go, dribbling while changing directions and changing hands, dribbling while changing speeds to avoid being tagged in unpredicted changing environments. In addition, to go to the safety zone (inside of a Hula-Hoop), the students had to use either jump stop or one-two stop to get into the zone. During a debrief of the task, John asked questions to help the students reflect on tactical aspects of this game:

> John: What's really important in this game while you are dribbling? Ben?
>
> Ben: Control it.
>
> John: What about your eyes. You don't want them on the ball, right?
>
> Chris: Look up.
>
> John: When you change directions when you have someone guarding me, and I change directions (demonstrate the crossover dribbling), what do I need to do?

Peter: When you change directions, you want to change your speed.

John: Okay, here we go!

The tasks were meaningful for the students to learn when to use a specific dribbling skill with a specific tactical purpose depending on a particular situation. Similarly, Rovegno et al. (2003) reported that the accomplished teachers intentionally designed the learning tasks that connected the dribbling skill with the basic tactical concepts such as dribbling while changing directions and pathways to avoid defenders.

In the same lesson, after the students learned and practiced the corrected techniques of the bounce passing skill at varying distances, John had the students play a passing game to knock the guarded pin down. In this game, each of the four offensive players stood outside of the four square lines and one defensive player guarded the pin inside of the square. We observed that the ball carrier intentionally deceived the defensive player and that the other students moved along the outside of the line to be ready to receive the ball. As soon as one person received the ball, he or she tried to either quickly pass the ball to another person who had a better position or quickly pass to knock the pin down. As the game continued, we observed that the students tried to use faking movements, quick feet, and quick pass game strategies to play this game. Likewise, this game provided the students with more applied game situations to work on the bouncing pass while using the "give-and-go" tactical movement. The authentic tasks were meaningful for connecting the skill application with basic tactical movements and purposes (Rovegno et al., 2003).

Related and Explicit Task Presentation

Use of students' prior knowledge. Researchers posited that relating students' prior knowledge to learning new information and use of examples, metaphors, and images to help students connect abstract concepts and concrete actions are effective task presentation strategies (Charalambous, 2010; Chen & Rovegno, 2000; Hill et al., 2008; Rink, 2003, 2006). The four teachers drew on students' prior knowledge and life experiences to introduce new concepts. For example, when presenting the first task (figure out the foot position to stand on the skateboard), Betty used the students' previous

experiences to help the students understand the comfortable way to put one foot in front of another. She said,

> Remember when we did archery, some of you were right handed or left eyed. Same thing can happen with our skateboards. You can be right handed and left footed. That is called goofy footed. The first thing you are going to do is go to the skateboard and figure out which foot you want in front and which you want in back.

The teachers also used images familiar to students to present learning cues as they demonstrated the skill for students. For instance, when demonstrating how to correctly grip the bowling ball, Rebecca used "bunny ear" as the learning cues to have the students make that shape, and she then showed them how to put the thumb into one big hole, put the middle and ring fingers into the two adjacent holes, and keep pinky and index fingers outside as "bunny ear" to help balance the ball. The image learning cue vividly and accurately described the key features of the correct technique of the gripping. When demonstrating the correct technique of follow-through for bowling, Rebecca used the image of "answer the telephone" as the learning cue to emphasize the last phase of the hand position.

The teachers' presentation of the learning cues using the images and metaphors made the abstract keywords come alive. As with a snapshot, the image learning cues helped the students visualize a specific movement pattern. Chen and Rovegno (2000) reported that the expert physical education teachers used metaphors and examples to explain new information and tended to engage the students in the use of their prior knowledge and life experiences to present the learning task. Likewise, Rovegno et al. (2003) found that the accomplished teachers also used image words and metaphors as learning cues to describe key features of dribbling skill. Similarly, Hill et al. (2008) reported that in-service teachers with high mathematical knowledge for teaching used examples and scenarios that were directly linked to students' life experiences and prior knowledge to explain the mathematical concepts and procedures.

Explicit explanations with learning cues. Researchers argued that the teachers' use of partial and/or full demonstration accompanied with presenting learning cues was effective to helping the students understand the correct form of a skill. The teachers with strong subject expertise presented learning cues accurately and

organized the learning cues in a correct and sequential order (Chen & Rovegno, 2000; Rink, 2003, 2006; Rovegno et al., 2003). In this study, when demonstrating each specific part of a skill, teachers used a learning cue directly related to the critical feature of the task to help the students focus on one key part of a skill performance at a time. For example, in John's basketball lesson taught to fifth graders, he posted the learning cues of bounce passing skill on the white board. When demonstrating each phase of the bounce passing skill, he presented the learning cues that related to the key feature of each phase. He also asked questions to elicit the students to think about what the next learning cue should be and why they should do what the learning cue describes. The following lesson transcript shows how John presented the learning cues while demonstrating this skill:

John: We are working on bounce passing. Where do I want to keep the ball? (He held the ball at his chest.)

Student A: Up at your chest.

John: What's the next key? (He took a step forward.)

Student B: Step to your target.

John: I step toward my target and I do what?

Student C: Push the ball.

John: So before I do that, I want you to look at the diagram on the board. (Letter A and a letter B and in between it is the numbers 1, 2, 3, 4.) Where do you think I want to land the ball if I am doing a bounce pass?

Students: Number 3.

John: Think about it this way. (He walked three steps.) One, two, three. We are going to learn about fractions right now. What's next?

Student D: Follow through with your thumbs pointing down.

John: All right. So you snap with your wrist and you finish with thumbs pointing down. The cues are stand, step, push. Now so if you bounce it at the one, it's not going to get there. Now, if I bounce it at the two, it might get there, but I'm

> probably going to have to reach to get there. The thing about number 1 is that it would take more than one bounce to get there. Now if I bounce it four, where is it going to land?
>
> Students: Hit him in the legs.

John showed examples of bouncing the ball in different spots between him and his partner to help the students understand why they needed to bounce the ball three quarters of the distance between each other. After the demonstration and explanation, John had the students work with their partners to practice each key part of the bounce passing skill while presenting each cue of the skill. The explicit "tell–show–do" teaching strategy helped the students connect each learning cue with each part of the skill kinesthetically and cognitively.

Researchers pointed out that involving the students in the process of the teachers' explanation and demonstration of the task is instrumental for the students to understand a new concept and to elicit a deep understanding of it (Charalambous, 2010; Chen & Rovegno, 2000; Hill et al., 2008; Rink, 2006). Hill et al. (2008) reported that the teachers with strong mathematical knowledge for teaching skillfully guided the students to cognitively think about the reasoning of mathematics during their task explanation. They encouraged the students to contribute their ideas without sacrificing the integrity of the mathematics content. Similarly, Charalambous (2010) reported that one teacher with strong mathematical knowledge for teaching guided the students cognitively in the process of the task presentation. The teacher used the students' ideas throughout the task presentation to make it meaningful to students.

In their interviews, the teachers stated the purpose of presenting learning cues while demonstrating the skill was to help the students focus on what they are learning and remember how to do it. For example, John said,

> Every skill that we do, I try to make sure there is something quick for them to remember. We just did underhand throw, so we used the learning cues, "stand, stop, and throw." I would say the cues, so it's in their head. I try to have three so they can remember, so they can do it as they are performing.

Sally echoed,

> We used the verbal cues for teaching each skill. For example, when teaching overarm throw skill, I get them to say the verbal cues as they do: Make a T, step with an opposite foot, arm back, twist trunk, throw, and tickle the knee. That's key I think for them to remember.

Researchers stressed that elementary students learn a new skill more effectively when they are presented with a few stimuli than when they are offered various stimuli. When the teacher presents a specific cue at a time, students are able to concentrate on and learn the cue effectively (Magill, 2001; Rink, 2006).

Creative and Efficient Management Strategies

The teachers' use of efficient class organization strategies is instrumental to helping the teachers run the class smoothly and maximize students' learning time (NASPE, 2009; Rink, 2003, 2006). The teachers in this study used their class management strategies to efficiently organize the class to maximize the students' learning time. We observed that when teaching small-step and skill-oriented learning tasks, to efficiently spread the students out, the teachers had the students find their own personal space and/or stand on a sideline to individually practice the task. Everyone had a ball and took turns practicing the task with their partners. For example, in Betty's floor hockey lesson, Betty had each student find their own personal space to dribble the puck with the hockey stick within the general space. In Betty's skateboarding lesson, she initially assigned each pair of students to sit down behind their designated skateboard placed on the carpet square. Throughout the lesson, the students worked with the same partner and used the same formation to take turns practicing each task. Since she used the same organization format for the small-step sequential tasks, the students were quickly engaged in the practice after each task presentation.

To quickly group students, the teachers used the previously assigned partners as a pair and an established squad as a group to work on the task. For example, when teaching basketball dribbling and passing skills in conditioned game situations to two fifth grade classes, John used the established squads as their teams and had each team collect the ball from and return the ball to their assigned bag each time they completed the task. Rebecca used a creative

way to group students. She had each student pick up one of five colored popsicle sticks in the cup at a time and then organized the students with the same color sticks into a team. The efficient and creative ways to group students and assign each group into a station helped maximize the students' learning time. When asked how they organized the class for doing a specific task smoothly, the teachers reflected that they used different strategies to divide the class into groups. Betty said, "Count them off and put them into groups. Sometimes, I'll make them different vegetables and get them into a group." John said, "The station is good. The stations are very helpful, and using things from the past are good. I just want to make sure [they get moving] quickly."

When assigning each pair and each team to their own working station, the teachers asked the students to immediately practice the skill to maximize the students' learning time. For example, when organizing the class into five groups for a dribbling with jogging task, Sally assigned the first group to the purple station and said, "Rile, Demean, Tyler, and Erica, you four, stand up. You are a team. You four, get a ball and go to a purple hoop. You may practice dribbling till the other teams are ready." We observed that as soon as the students went to their stations, they began practicing dribbling in place while waiting for the teacher's signal for starting the task.

To maximize the students' practice time, the teachers also set up the equipment for each station or each pair prior to the class. When the students went to each station, the equipment was ready for them to pick up and use right way. For example, in Betty's skateboarding lesson, she placed a skateboard on a carpet square for each pair of students prior to the lesson. As soon as she paired the students, she designated each pair to sit down behind the assigned skateboard. In Rebecca's and John's bowling lessons, they set up the bowling lane, ball, and bowling pins for each group prior to the lesson. In John's basketball lessons, he placed each bag of basketballs on each corner for each team to pick them up quickly as soon as they went to their assigned corner. Once the students completed the task, the teachers asked them to return the equipment to its original spot. The ways the teachers set up the equipment helped the students efficiently collect the equipment for the task and return the equipment for the next instruction. In addition, the teachers used their established routines to start and stop the practice while holding the equipment. We observed that the students started their practice as soon as they heard the music and immediately stopped their practice when the teacher

turned the music off or the teacher said, "Freeze." The students quickly put the ball between their feet, put the hockey stick on the floor, and placed the bowling ball on the lane to quietly listen to the teacher's instructions. The findings of this study supported the key features of effective class organization and management strategies (Reynolds, 1992; Rink, 2006). The efficient class organization strategies helped maximize the students' learning time (Chen, 2005; Rink, 2006; Rovegno, 2003).

Interactive and Tailored Instructional Responses

Teaching practices are more than designing and presenting learning tasks and organizing class and students. The teacher's instructional response to students' ongoing learning determines how well the students are able to achieve specific learning outcomes. As the students are pursuing the tasks, the teacher's role lies in providing appropriate instructional guidance including observing and analyzing students' performance, offering hints, readjusting and emphasizing tasks, asking questions, and providing feedback about critical features of task performance. This instructional support should be adjusted and calibrated based on the students' needs and the task demands (Ball & Forzani, 2009; Charalambous, 2010; Rink, 2003, 2006; Rovegno et al., 2003; Shulman, 2004).

The teachers in this study provided the students with interactive and tailored instructional responses to the quality of task engagement and the integrity of lesson objectives. While the students performed the task, when finding a majority of the students losing control of the ball, the teachers stopped the class immediately and reemphasized the key features of the task, redemonstrated the proper way to do the task, and sometimes adjusted the conditions of the task to ensure the students could successfully and safely perform the task. For example, in Sally's dribbling lessons, when finding some students lost control of the ball and some students were at risk of bumping into each other while rushing into delivering the ball from one Hula-Hoop to another, she stopped the class and reemphasized the task.

Sally: And freeze. Tell me how not to bump others.

Student A: Keep head up.

Sally: Yes, I want you to keep your head up. (She demonstrated dribbling while keeping head up and at waist height.) Control and watch your movement, use our space safely. Slow down

because you are crashing into people. Watch where you're going to go. Keep that ball below your waist, dribble low.

As the students redid the task, Sally frequently reminded the students of moving safely, dribbling lower, and watching out. We observed that the students slowed their dribbling speed and once in a while looked up while dribbling.

When the students were individually working on the task, the teachers initially observed the entire class. After identifying individual students who were performing a skill incorrectly, the teachers talked to specific students about what they were not doing correctly. When pointing out the error, the teachers demonstrated a correct technique of the specific part and provided specific learning cues. For example, in Betty's skateboarding lesson, one girl put her gliding leg in the wrong direction in relation to one foot on the board. She walked to that girl and guided her as follows:

> You seem to be having a hard time; I think it would better if you did it this way. (She demonstrated where to put one leg on the board and where to put another leg on the floor.) Are you left or right handed? Okay, you are right. I think you would be better putting your left foot on here and then bringing up your right foot. Get those feet so they are right behind each other and not next to each other.

When she observed a boy falling down from the skateboard, she guided him: "Why did you fall? You put your foot too way far back. Put your feet close to the screws." When she found another girl who put her foot too far back on the board causing her to have a hard time bringing another foot up to the board, she pointed out, "Put your foot more toward the front, then try to bring another up."

When the students worked on the task in groups, the teachers walked around to each station and watched each group performing the task and then provided tailored guidance. For example, in Rebecca's bowling lesson, when the students were performing the bowling practice with their group members, she initially viewed the entire class's performance and then walked to a specific group to watch each group member perform the task. When she found students did not perform the bowling correctly, she asked questions so the students would critically think about their movement performance. As she directed the students' attention to their own errors of the skill execution, she demonstrated that specific part of the technique

and provided specific learning cues to help the students correct their immature movement patterns. The following lesson transcript illustrates how she provided interactive and tailored instructional guidance.

> Rebecca: AJ that was perfect, except what is coming out first? Have your thumb come out first and then answer the phone. (She demonstrated the correct technique of the follow-through.) Alice, dominant foot first. (She demonstrated stepping a right foot first.) Corey, that was perfect, except why did it go this way? You swung your arm to the side, and that is why it went that way. Good Angel, but bend down a little more when you bowl. (She demonstrated bending knees a little.) Nick stop, come back. Look at your grip. Remember the "bunny ears." Nick, that was perfect except "answer the telephone." Emma that was good, but your arm came way back here, but your arm came out here, and you want to swing, swing. Next time think about keeping your arm straight. (She demonstrated how to swing the bowling arm backward and forward while keeping the arm straight.)

She first confirmed what parts of the technique the students did correctly. Then, she pointed out what specific part the students did not do correctly by providing the specific cue for helping the students correct the specific phase of the skill. The tailored instructional guidance helped the students to understand why they performed the skill incorrectly and how to fix that specifically.

When the students were working on the bingo–bowling game and spelling bee–bowling game, Rebecca observed the students' bowling performance and then provided specific feedback to constantly direct the students' focus on their bowling techniques. She interacted with the students as follows:

> Good, Dustin. Nice straight arms. Good job, Parker! What foot did you end up on? Try to get yourself balanced so you end up on your opposite foot. John, bend down so it doesn't bounce….So do you go bowling a lot? That was good form, Kara. Sally, so what did you mark down? How many did you knock down? Sam, I can tell you go bowling. Nice consistent speed. All right, Angel, don't step on the foul line this time. AJ, what happened? Why did the ball bounce? Your arm was straight and your thumb came out right, but bend down

> next time. Good, Alexis. What are you aiming for? What number? What are you aiming for this time, Eric? All right, I'm coming to verify. Did you get a strike? Who got the strike? Tara? Okay. I want you to write the team members down, and then I want you to give it to me since you guys were first.

When asked how they interacted with students during their task engagement, Sally said, "I constantly walk around, monitor, remind, and check their forms of skill performance." Rebecca echoed, "I am always on my feet going from group to group or just around the whole gym. If I see some students are struggling, I'll go over and help them out." John confirmed, "I try to spread myself out through the gym as much as I can. If I do see something that's not right, I correct it quickly. If I don't do that, they are getting bad practice." Betty stated,

> I walk around and see what they are doing. If I see the ball is not going where they want it to go, I'll ask, "Why is it not happening? Are you holding the racket straight? Why is the ball going that way?" So you need to watch and help them out."

The teachers used interactive and tailored instructional guidance to steer the students' focus toward their own game play and correct techniques of the skill execution. These findings were congruent with previous studies. Chen (2005) reported that when the students had problems performing the skill correctly and using the skills appropriately in game-like situations, the teachers asked a series of thought-provoking questions to engage the students in identifying their own problems, reemphasized critical conditions of the tasks, and provided suggestions and specific feedback related to skill performance and tactical skill application. The teachers' timely instructional responses helped the students work on the tasks with quality. Hill et al. (2008) noted that teachers with high mathematical knowledge for teaching were skillful at observing students' ongoing learning responses and discerning what problems and confusions students had. When finding the students were confused with a given concept, the teachers used different examples to reexplain the information to the students and simplified the explanation. When the students merely focused on the procedures of the mathematical problems, the teachers used targeted questions to gradually involve

the students in deeply thinking about the conceptual ideas underlying the mathematical procedures to help the students reconstruct meaning of the concepts. Based on the nature of the task and the specific problems the students had, the teachers used contingent instructional strategies to guide the students, arriving at a solution from different ways.

Conclusions

The teachers in this study provided the students with the quality of teaching practices through enacting the key features of the four essential dimensions of teaching practices during a lesson. This study provided the concrete examples of what quality teaching practices were like in a lesson. This study confirmed that to implement quality teaching practices, teachers should provide students with progressively sequential and authentically meaningful learning tasks. Teachers should integrate explicit instruction and use students' prior knowledge to present the learning task. Teachers should efficiently organize the class, students, teaching materials, and space for the task engagement. Teachers should timely provide tailored instructional guidance on the classroom floor to maintain the integrity of learning objectives. Lack of implementing any one of the essential dimensions during a lesson would be harmful for the quality of teaching and learning as a whole.

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