

A Description of Preservice Teachers' Task Presentation Skills

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Abstract

A teacher's ability to present clear and appropriate movement tasks is strongly related to student learning. The purpose of this study was to describe the ability of preservice teachers to demonstrate task presentation skills following an introductory course in the basics of effective instruction. The task presentations of 15 preservice teachers across six elementary physical education lessons were analyzed using the Qualitative Measures of Teaching Performance Scale (Werner & Rink, 1989). The total QMTPS score was 55 or higher on 76% of the 90 lessons observed. A total score above 55 is an indicator of effective task presentations (Gusthart & Kelley, 1993). Preservice teachers with overall academic problems exhibited less effective task presentation skills. All preservice teachers demonstrated less effective task presentations when teaching dance.

Many factors interact to produce effective instruction. Conversely, several factors can interact to diminish the effectiveness of any single teaching performance (Landin, 1994). One variable in the effective teaching equation is task presentation. Task presentation is defined as an instructional event where the teacher communicates to learners "what they are to do and how they are to do it" (Rink, 1994, p. 270). A quality task presentation

increases student task adherence and practice time (Jones, 1992; Rink, 2010; Rink & Hall, 2008; Silverman, Kulinna, & Crull, 1995). According to Rink (2010), a teacher must present a task so the content and goals are clear to the student as well as the organizational environment in which it will be executed. An effective task presentation is brief, yet precise, and is communicated both verbally and visually.

The initial stage of learning a motor skill requires active cognition (Fitts & Posner, 1967; Rink, 2006). Therefore, a quality task presentation needs a cognitive focus for skill improvement (Magill, 1993; Rink, 2006; Silverman, Woods, & Subramaniam, 1998; Wiese-Bjornstal & Weiss, 1992). The cognitive focus should be presented with an emphasis on the qualitative critical elements of the desired movement. The critical elements are delivered as concise learning cues that are brief, accurate, and appropriate in number for the learner (Landin, 1994; Masser, 1993; Rink, 2010).

Accuracy in conveying the critical elements requires content knowledge, defined by Shulman (1987) as the "what" of a particular discipline and pedagogical knowledge, or the ability to structure the content. Inexperienced teachers may be lacking in what Shulman (1987; 1988) refers to as pedagogical content knowledge or the fusion of knowledge of subject matter, pedagogy, curriculum, and the students. These deficiencies may cause

novice teachers to select inappropriate cues, to overload the beginning learner with too much information, or to present information in a way that one would present to a skilled student (Belka, 2002).

The careful selection of information presented to learners combined with quality demonstrations facilitates accurate motor programs (Rink, 2010). Accurate and full demonstrations are a vital component of a quality task presentation. Previous research suggests a relationship between effective modeling conditions and the cognitive-developmental level of the young learner (Meaney, 1994; Weiss, Ebbeck, & Rose, 1992).

A quality task presentation is completed with a check for teacher clarity and an action that holds the students accountable for quality practice. Teacher clarity is ascertained when the teacher observes the students and confirms understanding of the task. A good measure of teacher clarity is when learner action and teacher intent are congruent (Rink, 2010). However, on-task behavior is not enough to reflect teacher clarity as students should also be held accountable for accurately practicing the task. Providing relevant feedback to learners about their performance is one way to hold students accountable for the intended action and is regarded as an important aspect of effective teaching. The ability to identify correct and incorrect aspects of motor skill performance in individuals is an important teaching skill required to provide accurate feedback (Dodds, 1994). While there is no conclusive evidence indicating that teacher feedback on its own has a direct influence on learning (Magill, 1994), student learning may be more influenced by the combination of quality task presentation, maximum practice time, and teacher observation and analysis of skills followed by skill-related feedback (Silverman, et al., 1998).

Research in physical education endorses the notion that how well a physical education teacher structures practice tasks and holds students accountable for completing the tasks relate to student learning (French, et al.,

1991; Gusthart & Sprigings, 1989; Hastie & Saunders, 1990, 1991; Jones, 1992; Kwak, 1993; Rink, French, Werner, Lynn, & Mays, 1992; Sau-Ching, 2001; Silverman, et al., 1995; Silverman, Tyson, & Morford, 1988; Werner & Rink, 1989). The same concept is supported in literature reviews on effective classroom teacher research where teacher clarity has been identified as one of the most consistent variables (Brophy & Good, 1986; Rosenshine & Stevens, 1986).

Earlier research has shown that effective teachers present tasks that are characterized by all or most of the following: 1) use full demonstrations; 2) have a cognitive focus using cues that are appropriate in number, accurate, and of qualitative value; 3) are clear to the students; and 4) follow with feedback that is congruent with the cognitive focus (Gusthart & Kelly, 1993; Gusthart, Kelly, & Graham, 1995; Gusthart, Kelly, & Rink, 1997; Gusthart & Sprigings, 1989; Sau-Ching, 2001; Werner & Rink, 1989). The research examining effective task presentation skills used an observation instrument called the Qualitative Measures of Teaching Performance Scale (QMTPS) (Werner & Rink, 1989). The QMTPS has been validated as a reliable instrument to predict a relationship between effective teaching and student achievement (Gusthart, Kelly, & Rink, 1997).

There have been previous studies of task presentation skills with elementary school teachers in a jumping and landing unit (Gusthart & Sprigings, 1989; Werner & Rink, 1989) and secondary school teachers in volleyball (Gusthart, et al., 1995; Gusthart, et al., 1997) and basketball (Sau-Ching, 2001). The findings have concluded that quality task presentations are a contributing factor to effective teaching and, in turn, student learning. However, there are still potential gaps in the literature on the relationship between the constructs of the QMTPS and teacher effectiveness in different settings and contents. To date the investigation of task presentation skills has been limited to inservice teachers and is absent for preservice teachers. The purpose of this study was to

describe the ability of preservice teachers to demonstrate task presentation skills following an introductory course in the basics of effective instruction. A secondary purpose was to determine the relationship of participant characteristics with task presentation skills.

Method

Participants

Fifteen preservice teachers (eight females and seven males) from a large southeastern university enrolled in a physical education teacher certification program volunteered to participate. The participants were enrolled in two sections of the second of three required methods courses in the teacher education program, an elementary teaching methods course. Informed consent was obtained from all participants and approval of the study was obtained by the university institutional review board.

Teacher Education Program

The curriculum of the teacher education program required preservice teachers (PTs) to complete a sequence of three teaching methods courses prior to student teaching. The PTs were required to earn a minimum grade of C to progress to the next course. The emphasis of the first course was to introduce PTs to the basics of effective instruction. Preservice teachers were introduced to concepts such as objectives, content development, task presentation, and planning. Each PT taught four lessons to small groups of peers and submitted lesson plans, audio tapes of their teaching, and a self-evaluation of the lesson to be graded by the teacher educator. Task presentation skills were emphasized in the lecture course and were expected to be applied in the teaching experiences.

In the second methods course, basic information concerning the elementary child, appropriate content for elementary school children, and management strategies for specific content were introduced during the first three weeks of the course. The class then met at one of two elementary schools twice a week for the remainder of the semester.

The teacher educators at each site held a brief seminar every session to assist PTs in the teaching process. Each PT taught one lesson per week and submitted a lesson plan, videotaped lesson, and a self-evaluation to the teacher educator.

The third methods course focused on teaching secondary students. The course was divided in order to provide experiences at both the middle and high school level. The course focused on developing and refining management skills of larger groups, holding students accountable for student learning, providing quality feedback, integration and communication of motor, cognitive, and affective objectives, and secondary content. Similar to the elementary methods course, PTs taught one lesson each week.

Participants' Grades in the Previous Course and Later Success in the Program

All fifteen PTs had successfully completed the first methods course and were enrolled in the elementary methods course when the data were collected. Preservice teachers were categorized based on their success in the previous methods course and their later success in meeting the requirements to student teach and complete the teacher education program. Eight PTs earned an A or a B in the first methods course and met the requirements for student teaching. Four PTs earned a C and met the student teaching requirements. Three PTs, two who earned a C and one who earned a B, did not meet the requirements to student teach and therefore did not finish the program.

Data Collection

Preservice teachers taught a total of nine lessons to a small group of elementary students (eight to ten students in grades three or four) during the semester. The actual lessons ranged in length from 25-35 minutes. The PTs were asked to provide the researcher with copies of the lesson plan, videotapes of teaching, and self-evaluations each week. Six lessons for each PT were viewed, coded, and analyzed. The content taught by the PTs included two lessons on striking with a paddle, two on dance and two on team sport

game skills where PTs elected to teach either soccer or volleyball skills. Preservice teachers were required to include the following in their lesson plan: 1) a developmental analysis of the content (Rink, 2006); 2) a progression of tasks; 3) skill cues for each task; 4) managerial tasks and transitions; 5) anticipated time for each task; 6) a task focus; and, 7) assessments.

QMTPS Instrument

The Qualitative Measures of Teaching Performance Scale (Werner & Rink, 1989) was used to assess PTs' task presentation skills. The instrument is divided into four constructs: Type of task, Task presentation, Student response, and Feedback. Task Presentation has five subcategories: Clarity, Demonstrations, Appropriate Number of Cues, Accuracy of Cues, and Qualitative Cues Provided.

Each category is scored on a scale of one to three with one being the favorable score. The categories, definitions, and scoring are presented in Table 1. The data were recorded as a frequency of occurrences, and converted to individual category percentages based on total tasks taught in the lesson. The category data were then summed and averaged to arrive at a total percentage score (maximum score is 100). Percentage data are used in this instrument because the number of total tasks in a lesson varies by lesson and by teacher (Werner & Rink, 1989). A total score above 55 on the QMTPS has been determined as an indicator of effective task presentations (Gusthart & Kelly, 1993).

The task presentations of all 15 PTs teaching each of the six lessons (90 videotapes) were analyzed independently by the researcher and two research assistants. All coding procedures were used from the original instrument with the exception of a change for appropriate number of cues. Since the lessons were taught to young children, the coding system was adapted qualifying one or two cues to be considered as an appropriate number of cues (Graham, 2001; Masser, 1993) instead of three as stated in the original instrument (Werner & Rink, 1989).

Reliability and Use of Instrument

The researcher and the two research assistants were trained to use the instrument by an individual experienced in using the instrument. Following the training process, the researcher, two research assistants, and the experienced trainer coded videotapes until the coders established a minimum inter-observer agreement of .85 for each category on two consecutive lessons. When the lesson content changed from game skills to dance, the practice procedure was repeated with the researcher and the research assistants until inter-observer agreement was once again established at .85 or higher for each category. During the coding process, 10% of the lessons were randomly checked for reliability, resulting in measures of .90 or higher.

The QMTPS analysis began with a review of the lesson plan to familiarize the researchers with the lesson intent. The recorded lesson was then viewed one task at a time. One complete task presentation was viewed before the tape was stopped for coding. The type of task was recorded and the task presentation elements of demonstration, accuracy of cues, number of cues, and qualitative value of cues were evaluated on a scale of one to three and documented (see Table 1). The videotape was restarted, viewed, and then stopped when the PT ended the practice and appeared to be preparing for the next task presentation. Scores were recorded for student response, teacher clarity and feedback before viewing the next task presentation. The percentages of best teaching behaviors from each category were calculated and then averaged for a total QMTPS score which was then used to represent a qualitative measure of teacher effectiveness for each lesson.

Results

The mean total QMTPS score for the six lessons exhibited by each PT are presented in Table 2. The total QMTPS score is organized to indicate the student characteristics (PTs who made an A or B in previous course, PTs who made a C in previous course and PTs who did

Table 1*QMTPS Observation Categories, Evaluation, and Score Value (Werner and Rink, 1989)***Task Presentation**

Clarity: Teacher's verbal explanation/directions communicate a clear idea of what to do and how to do it. This judgment is made after observing student responses to the task presentation.

Yes: Students are working on what the teacher asked them to do. (1)

No: Many students exhibit confusion, off-task behavior, or lack of intent to deal with the specifics of the task. (3)

Demonstrations: Modeling desired performance and is executed by the teacher, student(s), and/or visual aids.

Yes: Full model of desired performance. (1)

Partial: Incomplete model of task performance exhibiting only part of the movement. (2)

No: No attempt to model the movement task. (3)

Appropriate number of cues: The degree to which the teacher leaves the learner with information about the movement task. The teacher provides the learner with a cognitive focus through the use of cues and without overloading the learner.

Yes: One or two cues. (1)

No: Three or more learning cues (overload). (2)

None given: No cues given. (3)

Accuracy of cues: The degree to which the information presented was technically correct and reflected accurate mechanical principals.

Yes: All information was accurate. (1)

No: One or more incidences of incorrect information. (2)

None given: No cues given. (3)

Qualitative cues provided: The learner was verbally provided with the process or mechanics of the movement.

Yes: Teacher's explanation included at least one aspect of the process of the movement. (1)

No: Teacher's explanation included no aspect of the process of the movement. (3)

Student Responses

Student response is defined by the degree to which student responses reflect intent to perform the task as stated by the teacher.

Yes: Two or fewer students viewed exhibited inappropriate responses. (1)

Partial: Three or more students exhibited inappropriate responses. (2)

No: None of the students exhibited appropriate responses. (3)

Teacher Specific Congruent Feedback

The degree to which teacher feedback during a practice task is congruent with the focus (cues) presented in the task presentation.

Yes: Three or more incidences were evident in which teacher feedback was congruent with the task focus. (1)

Partial: One or two incidences of congruent feedback were evident. (2)

No: No congruent feedback was given. (3)

not finish the program). A total score above 55 is an indicator of effective task presentations (Gusthart & Kelley, 1993). The total QMTPS score was 55 or above on 68 of the 90 lessons (75.6%). Preservice teachers exhibited a score lower than 55 (range 29.8 to 54) on 22 lessons. The three PTs who did not finish the teacher education program taught 11 of the 22 lessons with total QMTPS scores below 55. Three PTs who completed the teacher education program exhibited total QMTPS scores higher than 55 on all six lessons. Seven PTs in groups that did finish the program exhibited total QMTPS scores above 55 on all but one of their six lessons. Overall, 13 of the 15 PTs in this study displayed good task presentation skills as evidenced by obtaining a total QMTPS score above 55 on the majority of the lessons observed.

The means of the six lessons across QMTPS subcategories are presented in Table 3 by student characteristic groups. No statistical analysis was conducted due to the small sample size in two of the student characteristic groups. The means for the six lessons in each category seemed to adequately represent the strengths and weaknesses of each group of PTs. All PTs exhibited good scores in clarity and student response. Feedback scores were low for all PTs. Preservice teachers who did not finish the teacher education program exhibited much lower mean scores in accuracy, appropriate number of cues, qualitative value of cues, and in feedback. Preservice teachers who made a C in the previous methods course had lower scores on demonstrations than other PTs.

Table 2

Total QMTPS by Preservice Teacher and Lesson

(Group)*/ Preservice Teacher by Code #	Striking 1	Striking 2	Dance 1	Dance 2	Games 1	Games 2
(A/B)						
001	75.30	64.50	50.00	58.30	73.00	62.80
009	62.40	84.60	45.30	78.00	81.30	79.40
014	88.00	80.00	53.00	63.00	73.00	65.00
015	87.50	82.80	70.00	57.80	66.20	78.60
006	68.80	70.00	50.00	56.50	65.00	75.30
007	76.10	68.80	87.30	60.40	45.30	52.50
002	67.80	73.20	81.30	71.25	64.40	71.00
013	81.80	74.80	71.00	61.25	36.25	83.25
(C)						
003	48.80	58.40	65.90	59.30	53.40	70.00
010	70.90	46.90	83.00	80.40	62.60	87.50
012	58.00	65.00	60.90	62.50	64.80	73.75
005	75.00	72.80	50.00	72.20	83.30	80.00
(DNF)						
004	55.00	54.00	41.00	38.00	67.00	50.00
008	67.10	71.80	71.60	58.00	39.00	48.10
011	53.00	35.00	41.50	29.00	55.00	39.00

*A/B: (Participants who completed the program and earned an A/B in Methods I)

C: (Participants who completed the program and earned a C in Methods I)

DNF: (Participants who did not meet the academic standards to finish the teacher education program)

Table 3

Mean QMTPS by Category and Student Characteristic

QMTPS Subcategories	A or B in Methods I		C in Methods I		Did not Finish		Overall	
	M	S	M	S	M	S	M	S
Clarity	87.8	5.9	92.0	5.9	82.6	11.0	87.9	7.3
Cues/Accuracy	70.4	12.7	65.1	11.8	41.9	18.0	63.3	16.9
Cues/Number	53.3	14.7	56.2	7.2	31.8	15.1	49.8	15.5
Cues/Qualitative	62.7	5.0	64.7	7.1	27.9	8.2	56.32	19.8
Demonstrations	58.4	8.8	37.4	5.1	49.5	8.4	51.0	11.8
Student Response	81.5	5.9	83.7	9.7	67.4	10.2	79.3	9.5
Feedback	34.2	10.2	35.3	14.0	11.8	5.8	30.0	13.7

Analyses were conducted to determine if there were differences among the total QMTPS and subcategory scores for task presentations in different contents and lessons. To determine the distributional characteristics of the total QMTPS score and subcategory scores, Kolmogorv-Smirnov tests were conducted to determine if each dependent variable was normally distributed. Tests indicated that the total QMTPS, demonstration, and qualitative cue scores were normally distributed. The scores for each of the three were analyzed in separate 3 (content) x 2 (lesson) ANOVAs. All main effects and interactions were nonsignificant for the total QMTPS and qualitative cues. The main effect for content, $F(2, 20) = 6.03, p < .05$, was significant for demonstrations. Repeated measures contrasts revealed demonstration scores were significantly higher in striking skills content ($M = 60.6, SD = 3.2$) than dance content ($M = 36.9, SD = 5.0$). The demonstration scores for game content ($M = 54.1, SD = 5.4$) was similar to both striking skills content and dance content.

The scores for the other subcategories of the QMTPS were not normally distributed.

Separate 3 (content) x 2 (lesson) Puri and Sen L statistic tests were conducted on the scores of the other QMTPS subcategories (accuracy of cues, number of cues, clarity, student response and congruent feedback). The Puri and Sen L statistic (Puri and Sen, 1969; 1985) is a distribution free test. Thomas, Nelson, and Thomas (1999) suggest the Puri and Sen Test is appropriate for a variety of statistical designs in the exercise sciences when the dependent variables are not normally distributed.

The main effect of content was significant in Puri and Sen L statistic tests for feedback, $L(2) = 8.01, p < .05$, and student response, $L(2) = 7.89, p < .05$. Pairwise contrasts indicated that feedback was similar for striking skills ($M = 30.1, SD = 3.6$) and games ($M = 33.3, SD = 4.0$) content. Feedback for striking skills and dance ($M = 20.2, SD = 5.4$) content was similar; however, feedback for games content was significantly higher than dance feedback. The repeated measures distribution contrasts for student response revealed striking skills ($M = 87.8, SD = 3.2$) had a significantly higher score than dance ($M = 69.3, SD = 4.1$). The student response scores for games ($M = 79.4, SD = 2.7$) were similar to

dance and skill content. No other main effects or interactions were significant for Puri and Sen L statistics tests on these subcategories or other subcategories of the QMTPS.

Discussion

Previous research has established that a teacher's ability to effectively present tasks is related to student achievement (Gusthart & Kelley, 1993; Gusthart, Kelly, & Rink, 1997; Kwak, 1993; Sau-Ching, 2001; Werner & Rink, 1989). Gusthart and Kelley suggested that a total QMTPS score of 55 or higher was an indicator of effective task presentation skills and that student achievement was higher in classes where teachers exhibited scores higher than 55. In previous research using the QMTPS, scores ranged from 23 to 73 for four elementary teachers in a jumping and landing unit (Werner & Rink, 1989), 35 to 67 for two elementary teachers in a jumping and landing unit (Gusthart & Sprigings, 1989), 40 to 70 with 14 high school teachers in volleyball (Gusthart, et al., 1995), 45 to 70 with nine middle school teachers in volleyball (Gusthart, et al., 1997), and from 46 to 63 with eight high school teachers in basketball (Sau-Ching, 2001).

The PTs in this study exhibited good task presentation skills according to the criteria of 55 or higher established by Gusthart & Kelly (1993). The total QMTPS score was 55 or above on 68 (75.6%) of the 90 lessons with scores ranging from 29 to 88. The total QMTPS scores were equal to or better than scores of experienced teachers reported in previous studies.

There are several possible reasons for the PTs' ability to demonstrate high QMTPS scores in this study. Two potential explanations are related to the teacher education program. As evidenced by the course syllabi, the initial methods/practicum course involved considerable time spent on task presentation skills. One possibility for the high scores is that the instructional emphasis on task presentations and the related peer teaching experiences in the initial methods/

practicum course may have transferred to teaching elementary school students in the second methods/practicum course. In the elementary practicum experience, most PTs were able to make quality task presentations, even though they were teaching a different age level, different content, and managing a more complex environment than in the previous peer experience. A second possible explanation is related to the influence of the teacher educators in both the initial and elementary courses. Teacher educators may have held the PTs accountable for quality teaching, not only through assessment, but by aiding them in planning quality task presentations and in setting personal goals to improve teaching skills.

Another reason for high scores may be contextual. The PTs taught only eight to ten students in a supervised early field experience compared to the full classes taught by inservice teachers in previous studies. A final reason may be that there is always the chance for slight interpretation variation using systematic observation instruments in different studies with different researchers.

Previous studies established that teachers typically have strengths and weaknesses within task presentation skills even if their total score is high (Gusthart & Kelly, 1993; Gusthart, et al., 1995; Gusthart & Sprigings, 1989; Sau-Ching, 2001; Werner & Rink, 1989). The overall strengths of the PTs in this study were in verbal communication of the motor skills as scores were highest in accuracy of cues, qualitative cues, students' response, and teacher clarity. Their ability to give accurate cues that were qualitative in nature provided evidence of content knowledge. The students' response to the tasks was generally accurate indicating that the PTs clearly communicated the intent of the tasks to their students.

The ability to provide congruent feedback begins by identifying a specific task focus, making it clear to the students, and then holding the students accountable for that specific task focus. While the PTs were able to successfully verbalize how to practice a task, they rarely held the students accountable for performing

the skill(s) correctly. This was evident in their low scores on providing congruent feedback. This finding is consistent with previous research that indicates PTs rarely focus on skill performance of individual children and have more of a tendency to observe the class as a whole for off-task behaviors (Bell, Barrett, & Allison, 1987; Byra & Sherman, 1993; Graham, Hopple, Manross, & Stitzman, 1993; Housner & Griffey, 1985). However, Byra and Sherman found that these skills could be developed during the teacher education process. The more experienced PTs in their study began to grasp the concept of focusing on motor skill acquisition as it became an emphasis of the PETE curriculum. Further research is needed to determine at what point PTs in teacher education programs can begin to hold students accountable for learning.

There were two factors that influenced the PTs' QMTPS scores: student characteristics and content. Three groups of PTs were identified based on their successful matriculation through the PETE program and grades in the initial methods course. Poor performances in two of the early methods course may have been predictive for the three PTs who did not complete the program. The PTs who earned a C in the first methods course and went on to complete the program were able to perform as well as the PTs who earned an A or B. These trends may indicate that some PTs may have needed the additional time and teaching practice provided in the elementary field experiences to be able to translate knowledge of task presentation into actual behaviors. This finding alludes to the idea that not all PTs master teaching skills at the same rate. More research is needed with larger samples of student characteristics to better understand these trends.

The second factor that influenced scores was content. Preservice teachers' abilities to integrate task presentation skills with content knowledge were much weaker for teaching dance than the other two contents (striking and team sports). The scores were lower in student response, demonstrations, and feedback. Possible explanations for the

discrepancies are participant comfort level with or knowledge of the dance content; lack of previous experiences in dance; or, lack of time spent practicing the dance in preparation to teach.

The current study provides evidence that it is possible for novice teachers to demonstrate some effective teaching skills previous literature assumed were likely to be found only in experienced teachers. The task presentation skills modeled by this group of PTs do not begin to encompass the breadth of true expertise that a few teachers reach after years of experience, but it does raise a question as to whether we should heighten the expectations of beginning teachers. Conceivably this study provides insight into what accreditation programs (e.g. NCATE) might consider in future revisions of beginning teacher skills. Future studies are warranted to better understand PT's acquisition of task presentation skills. Such studies would provide further information on the instructional and curricular processes that foster effective task presentation skills among PTs. Future research may benefit from comparative studies with PTs from other teacher education programs to determine if there are additional approaches that yield similar results.

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