An Examination of Physical Education Teachers From a Research-Based Preparation Program

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Teacher education programs are striving to produce graduates who teach with greater effectiveness. The knowledge base for teaching effectiveness continues to grow and remains a primary focus in educational research. Many preservice teachers are benefiting from research by experiencing undergraduate programs that include early and more frequent practice, peer teaching and the use of audio-visual equipment for descriptive analysis of teaching. A research-based program which provides sequential and incremental clinical experience should help recent teacher education graduates to teach more effectively than prior graduates.

Transferring what is learned in college to inservice teaching is, however, a problem for many beginning teachers (Steen, 1985). The "problem of transfer" from preservice to inservice teaching is yet to be solved (Locke & Dodds, 1984). The socialization of teachers is an area of investigation that has been examined in order to help explain why teachers have certain beliefs and pedagogical views. A portion of the research on teacher socialization has focused on changes that occur during a student's college career and throughout the beginning years of teaching.

Some scholars believe that there may be little "wash out" of pedagogic beliefs between teachers' formal education and their employment. The "wash out effect" has been defined as a period of time when the effects and influences of teacher education programs diminish (Zeichner & Tabachnick, 1981; Templin, 1989; Lawson, 1989). They propose that the lack of "wash out" is because teaching is biographical (Zeichner, 1980; Zeichner & Tabachnick, 1981; Lortie, 1975, Silverman & Deichman, 1974). The biographical explanation indicates that teachers use pedagogical methods similar to those of their former teachers, which means that teaching is part of one's biography. Lawson (1983a, 1983b), notes that students may enter the profession with a preconceived ideology about the role of a successful teacher due to extended interactions during their schooling. Lacy (1977), Zeichner (1980), and Snyder (1981) suggest that there may be little "wash out" during their professional training because students may act in ways to foster the impression that they have adopted the ideas and teaching strategies promoted by their teacher educators but actually they have not.

Others believe that teachers are impacted by formal training but the effect of preservice programs is often overshadowed by circumstances encountered in the school setting (Feiman-Nesmer, 1983). At least four forces have been identified which are believed to act as change agents in altering pedagogical beliefs during student teaching. These forces are the cooperating teacher (Edgar & Warren, 1969; Hoy, 1968; Templin, 1979; Zeichner, 1980), the students (Freibus, 1977; Templin, 1981; Schempp, 1985), the bureaucratic structure of the school (Pruitt & Lee, 1978), and the ecological environment of the classroom (Doyle & Ponder, 1975; Copeland, 1980).

One obvious approach in determining whether a preparation program is helping teach-

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ers to teach effectively is to examine its graduates as inservice teachers. Locke and Dodds (1984) believe that the truest test of program effectiveness is program evaluation through observation of the behavior of graduates. Burton (1977) states that studies which follow graduates are the best sources of information for improving teacher preparation programs. The logistical problems of conducting such studies make research difficult, thus, only a few such studies are found in the literature.

Three published follow-up studies which actually examined behavior were found in the general education area. Borg (1979) conducted a follow-up of inservice teachers trained in a minicourse, which was a self-contained, self-instructional package designed to help teachers master specific teaching strategies and skills. After 39 months, the performance of subjects remained significantly superior to their precourse performance in 8 of 10 targeted behaviors. Leith (1982) analyzed the teaching of second year teachers who had been involved in micro-teaching during their preservice education. He concluded that "long-term follow-up made clear that the advantage in classroom teaching performance given by micro-teaching with personal feedback persists over a prolonged period without further micro-teaching" (p.203).

In another follow-up study, Falcone (1978) evaluated a secondary English teacher education program on the degree to which expected outcomes of the program were achieved by graduates. The investigator noted that two of the expected program outcomes were achieved, two expected outcomes pertaining to teaching behaviors were partially achieved, and one expected outcome pertaining to continual professional growth was not achieved.

In physical education, Freedman (1985) utilized a direct method of observing teacher behavior in a follow-up study of program effects. Freedman observed 14 graduates with the Teacher Observation System (TOS) and matched the observed behaviors with 16 student teachers from the same program. He found that the graduates spent significantly more time managing their classes than did the student teachers. Activity time was approximately equal between groups. Both the new teaching graduates and the student teachers gave more positive than negative feedback, but both reprimanded students more than they gave praise. Both groups expressed satisfaction about their preservice education.

The preceding research does not provide definitive work of program impact on teacher beliefs; in some cases graduates maintained targeted behaviors and in other instances they did not. These inconclusive results suggest the need for further study.

The purpose of this study was to investigate the educational beliefs and teaching practices of selected physical education teachers who were recent graduates of a major southeastern university. Teachers' educational beliefs and instructional practices were examined in comparison to the professional preparation program and the viewpoint of their professors in the physical education department.

The specific questions pursued in this descriptive research were:

How have the educational beliefs of the recent graduates changed, if at all, throughout the years of professional preparation and inservice experiences?

What are the current teaching practices of the teachers and how do these actions compare to particular practices advocated in the teacher preparation program?

What perceptions did the teacher educators have of the graduates when they were undergraduate students in the professional preparation program?

Method

Rationale

Because the key variables have not been identified which explain the disappearance of teaching skills and beliefs demonstrated and espoused in professional preparation (McDonald, 1980), this research did not seek to test the

impact of specific variables which might influence the transfer of beliefs and skills, instead, a descriptive approach of inquiry was selected to attempt to gain an "inner understanding" of human behavior (Rist, 1979, p. 20) by examining the thoughts, feelings and behaviors of subjects. Such exploratory and descriptive procedures may be of benefit in subsequent research to test theories generated from this study.

Design

This investigation was confined to teachers who were recent graduates of a major southeastern university, and who were also employed as teachers for two to four years in the state of South Carolina. The eight graduates who met these criteria were contacted and asked to volunteer to participate in this study. Two teachers declined. Information was obtained through formal and informal interviews with teachers and their teacher educators, on-site observations of the teachers, a psychometric inventory, a demographic questionnaire, and an adaptation of the Qualitative Measures of Teaching Performance Scale (QMTPS) (Rink & Werner, 1989), and a system to determine the percentage of time devoted to instruction, management and student activity. A number of research-based specific teaching skills and frameworks are advocated by the teacher educators. Many of these expectations are represented in the QMTPS and can also be found in Table 1.

Through direct observation of instruction throughout the curriculum and analyses of departmental documents, curriculum guide, brochures and articles the investigator concluded that the university preparation program is systematically designed. It is implemented to encourage the transfer of teaching skills and beliefs to subsequent inservice teaching, thus, the preservice teachers experience extensive peer-teaching, micro-teaching, and early, continuous, and well-supervised practica. Those experiences are part of a systematic and cohesive program of preparation to apply the fruits of research to the acquisition of instructional skills.

Table 1
INSTRUCTIONAL FOCUSES OF THE PROGRAM

I. Themes of Program

A. Elementary curriculum is organized with skill themes and movement concepts.

B. Unit plans include developmental analyses and lesson plans.

C. The four stages of game play are used as a framework for the development of game skills.

D. Lesson Planning
   1. Objectives:
      a. Objectives must include behavior, conditions and criteria.
      b. Each lesson has psychomotor, cognitive and affective objectives.
   2. Learning experiences must meet the following criteria:
      a. Have the potential to improve the motor performance of students.
      b. Provide maximal activity or practice time for all students at a appropriate level of ability.
      c. Be appropriate for the experiential level for all students
      d. Have the clear potential to integrate the psychomotor, affective, and cognitive educational goals whenever possible.

II. Instructional Behaviors

A. Use of time: a high percentage of activity time is promoted. Instructional time is expected to be moderate and management time minimized.

B. Content development utilized-(see Rink, 1993)
   Appropriate use of extension, refinement and application tasks.

C. Feedback: predominance of specific, congruent, positive feedback.

The teacher education faculty members themselves share similar beliefs about the purpose of physical education and the nature of effective teaching. This conclusion was made as a result of interviews with and teaching observations of the teacher education faculty members. The curriculum is designed so that all physical education teacher preparation faculty members work closely in the preparation of students, often co-teaching classes. Students also frequently communicate individually with faculty members in classes and in clinical experiences.

Interview data with teachers. The primary research tool was an in-depth semi-structured interview technique (Patton, 1990) which was used to gain the teachers' views about past and current beliefs and practices. Open-response questions were used to elicit data. An interview guide was utilized to structure the formal interview process. Interviews were tape-recorded and transcribed. The questions were grouped into sections related to (1) the transition from pre-

service to inservice teaching, (2) current practice, (3) personal beliefs about teaching, (4) studentship, and (5) view of the teacher education program. As an example of the interviewer's approach in questioning, the interviewer asked the teachers to describe a typical lesson from start to finish. Then, related questions about teaching were posed. Probes were used to assist the interviewee when deemed necessary by the interviewer.

Interview data with teacher educators. The teacher interviews and teacher educator interviews were conducted in a similar manner. Physical education teacher educators at the university who had each of the participants in an undergraduate class volunteered to be interviewed. Pseudonyms were used for the three teacher educators: Dr. Waters, Dr. Strong, and Dr. Free. These interviews focused on the teacher educator's perceptions of the teachers as students and as teachers. More specifically, teacher educators were asked questions which focused on: (1) courses they taught the participants, (2) how the participants would be described as students, (3) the level of teaching for which the participant was most suited, (4) perceptions of the participants' major reason for career choice, (5) assessment of the type of teacher the participant was upon graduation, and (6) information concerning the participants since graduation.

Self-report data. In addition to the interviews, self-report data were collected prior to the initial interview via: a demographic questionnaire and an adaptation of the Teacher Efficacy Scale (Gibson & Dembo, 1984).

The demographic questionnaire was used to collect background information for the following purposes: (a) to simplify the collection of factual information, (b) to allow for more time for probing in face-to-face interviews, and (c) to help the investigators to better personalize the beginning of the interview.

The Teaching Efficacy Scale (TES) (Gibson & Dembo, 1984) assessed two dimensions of teacher efficacy. Individual teaching efficacy is the situation-specific expectation that the teacher can help students. General teaching efficacy is the teacher's expectation that teaching/schooling can influence learning. The 30-item TES was scored on a five-point Likert Scale. The reliability coefficients for general teaching efficacy and person teaching efficacy are .75 and .78 respectively (Gibson & Dembo, 1984) (see Table 2).

QMTPS data. Another source of data collection was a slight modification of the Qualitative Measures of Teaching Performance Scale (QMTPS) (see Table 4) (Rink & Werner, 1989). The QMTPS was used to determine the extent to which the teachers has maintained instructional skills. The QMTPS was divided into three constructs: type of tasks, task presentation, and appropriateness of student response for the task. There was a 94.7% inter-observer agreement and a 96.4% intra-observer agreement for the QMTPS. The QMTPS was collected through analysis of a representative lesson taught by the teachers. An analysis of the teacher's use of time (management, instruction, and activity) was also completed in conjunction with the QMTPS (see Table 3).

Table 2
Teaching Efficacy Scores

Participant	*General Efficacy	**Individual Efficacy
Everett	16	44
Patsy	16	42
Jeff	23	37
Phil	23	44
Erika	21	44
Thadd	17	44

*General Teaching Efficacy (Gibson & Dembo, 1984) test score range is from 0 - 36.
0 = low efficacy, 36 = high efficacy

** Individual Teaching Efficacy
test score range is from 0 - 49.
0 = low efficacy, 49 = high efficacy

Table 3
Time Analysis

	Everett	Patsy	Jeff	Phil	Erika	Thadd
Activity Percent	61	20	22	46	37	59
Instruction Percent	30	63	59	43	41	27
Management Percent	9	17	19	11	22	14
Total	100%	100%	100%	100%	100%	100%

Activity Time - the time when most students (over 50%) are involved in purposeful motor activity.

Instruction Time - the time when most students (over 50%) are receiving information about how to move or perfect a skill.

Management Time - the time when most students (over 50%) are not receiving instruction on lesson content or involved in lesson activity. Managerial behavior deals with student organization and conduct.

Selection of Participants

Six full-time physical education teachers served as participants in this research. The sample included three second year teachers (Everett, Phil and Patsy), one third year teacher (Jeff) and two fourth year teachers (Erika and Thadd). Pseudonyms were used for the teachers. All teachers were graduates of the same university with a B.S. degree in Physical Education and were teaching in South Carolina. Two teachers taught on the secondary level and four were elementary school teachers.

Data Collection

After an informed consent was obtained, both self-report inventories were completed and returned prior to initial interviews. The teachers participated in two interviews which each ranged in length from one to two hours. The formal interviews were audio-taped and transcribed for analysis. On the day of the initial interview, a researcher also observed and video-taped a minimum of three lessons. One of the three or more lessons which the researchers judged as most representative of the teacher's teaching was selected for QMTPS analysis and for analysis of the time the teacher (students) spent in management, instruction and activity. Interviews, similar to those with the teachers, were also conducted with the teacher educators.

Analysis of Data

The process of analysis was one of gradual reduction of data. The process evolved into two descending stages of analysis.

The first stage of the analysis process involved a merging of the qualitative and quantitative data. This level was comprised of (1) individual case reports, which included information from interviews with teachers and their teacher educators, (2) quantitative teaching data, and (3) scores on the Teaching Efficacy Scale. Individual case reports made up a significant portion of the level 1 analysis. The reports drew attention to experiences and characteristics particular to the individual teachers. Each teacher's language was maintained through the use of direct quotations.

In the second stage of the analytic process, the researchers continued to analyze the information from the first stage, which included a cross-case analysis, a data analysis strategy described by Miles and Huberman (1984). Analysis included comparison both within and across cases. The result was identification of a series of recurring patterns or theme that reflected similarities and differences between teachers.

An educational research audit was conducted by an experienced qualitative researcher at both the stages of data reduction (Guba & Lincoln, 1981). In addition to the audit, all of the teacher educators and another experienced researcher read and discussed the findings. To help confirm conclusions the teachers also were asked to verify information included in their own case study.

RESULTS AND DISCUSSION

The results are presented as both major themes which emerged from the data and three cases representing profiles of the subjects' instructional behavior.

Table 4
QMTPS Results

	Everett		Patsy		Jeff		Phil		Erika		Thadd		Mean	
Type of Task	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Informing	6	1	12.5	1	14	1	6	1	14	1	4	1	9	1
Refinement	0	0	12.5	1	43	3	35	6	29	2	9	2	21	2
Extension	83	15	75	6	29	2	59	10	57	4	87	20	65	9.5
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Application	11	2	0	0	14	1	0	0	0	0	0	0	4	.5
Total Tasks		18		8		7		17		7		23		13
Clarity														
1. yes	100	18	100	8	100	7	94	16	100	7	87	20	96	13
2. no	0	0	0	0	0	0	6	1	0	0	13	3	4	.7
Demonstration														
1. Full	33	6	75	6	71	5	35	6	100	7	17	4	55	6
2. Partial	0	0	0	0	0	0	24	4	0	0	13	3	7	1
3. None	67	12	25	2	29	2	41	7	0	0	70	16	38	7
Amount of New Information														
1. Appropriate	91	17	88	7	86	6	100	17	100	7	100	23	94	13
2. Inappropriate	6	1	12	1	14	1	0	0	0	0	0	0	6	.5
3. None given	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accuracy of Information														
1. Accurate	100	18	100	8	100	7	100	17	100	7	87	20	98	13
2. Inaccurate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. None given	0	0	0	0	0	0	0	0	0	0	13	3	0	0
Qualitative Information														
1. yes	44	8	100	8	71	5	82	14	100	7	22	5	70	8
2. no	56	10	0	0	29	2	18	3	0	0	78	18	30	5

Socialization Strategies

Lacey (1977) has identified socialization strategies which students are likely to employ as they enter formal teacher education. The three strategies are: (1) "internalized adjustment, in which the individual complies with the beliefs that the constraints of the situation are for the best", (2) "strategic compliance, in which the individual complies with the authority figure's definition of the situation and the constraints of the situation but retains private reservations about them", and (3) "strategic redefinition of the situation", implying that change is brought about by individuals who do not possess the formal power to do so. They achieve change "by causing or enabling those with formal power to change their interpretations of what is happening in the situation" (Lacey, 1977, pp. 72-73). Lacey's model was used as a framework for examining teachers in this study.

From conversations with the teachers and their teacher educators and observations of the

teachers' instructional performance, it appeared that, for the most part , the teachers incorporated the internalized adjustment socialization strategy during their preservice education. These teachers apparently adopted the values and "way of behaving" that were promoted by their teacher educators. These teachers indicated that they received a unique and high quality education in physical education at the university. The following are selected statements made about the university experience:

> In reference to her student teaching experience, Patsy said, "I thought I was better than the people I was working under." Although not anxious to be compared to others, Everett noted that he felt he could teach as well or better than anyone in his district. He explained, "some of them just don't know what the new method is." Phil commented that he knew that he "was as well prepared as I could ever be to be a teacher fresh out of college. I know that I was better than a lot of teachers that have been out there and have more experience than I do. We were taught the right way to teach." Erika said that she, "has better insight of the purpose of P.E. and why we are here" than the other teachers in her district.

The teacher educators believed that overall the teachers "bought into" the view of physical education espoused by the teacher education faculty. Dr. Waters described Patsy as a student who was committed and one who "bought into the system." Everett, Phil, Jeff, Erika and Thadd were also described in a similar manner by all three teacher educators, with one exception. Dr. Strong said Phil was a student who did not buy into the system entirely, but "took what he wanted from it."

Interestingly, when asked if their view of the purpose of physical education had changed since they began full-time teaching, two teachers remarked about changes in their perceptions before and during their preservice. Everett noted that his view had changed since he enrolled at the university. He said of the university, "they pretty much sold me on it" [view of purpose of physical education]. He continued that, as he entered the university, he thought he was going to learn to teach students how to play sports:

> But a lot of kids already know how to play sports. They need help in coordinating the individual skills that go with it to put it all together. They know the rules and what they are supposed to do. If they can learn those skills then they can apply them to a sport.

Phil had a similar comment about how his view had changed since he began as an undergraduate:

> I thought that our job was to teach them basketball so that everybody knew basketball exactly the same way. Teach them football or whatever the sport is. [But] I became more skill oriented in my teaching, rather than sport-oriented.

It has been well documented that pre-training can have a powerful influence on the types of beliefs that future teachers develop (Lacey, 1977; Zeichner, 1980; Snyder, 1981). The preceding statements imply that, at least in part, Everett and Phil changed their preconceived notions of physical education while they were preservice students.

Referring to his current teaching, Jeff said, "I don't feel committed to teach that way [the way he learned at the university]. I do it because that's the way I want my class to be."

The teaching behavior and espoused beliefs of the teachers in this study, as well as statements by the teacher educators, then, indicated that formal education generally predominated over the pre-professional conception of teaching acquired by the teachers. What Lortie (1975) calls the "apprenticeship-by-observation" from their prior schooling was substantially offset by their formal education.

Incorporation of Teacher Actions Advocated in Teacher Education Program

In their professional preparation, these teachers were taught that their primary responsibility as physical educators was to help their students learn motor skills. The professional program

emphasized that, in order for students to learn, motor skills must be taught for quality responses.

All six teachers said that they continue to believe that skill development is their primary purpose. Patsy said that, "as an elementary P.E. teacher I think it [purpose of physical education] is basically to make kids more skillful. That way they can carry it over into everyday life." Phil indicated that the purpose is to help students develop motor skills so that they can be active. On a similar note, Erika explained that she felt that the purpose is not "to make them super skilled in any particular sport, but to give them chances for success so that they will pursue that area."

The six teachers said that they were effective, in varying degrees, in teaching motor skills. Observations indicate that the teachers have maintained many of the skills which they demonstrated in preservice training (see Table 1). Although what these teachers took to their first teaching positions was shaped by the requirements of that role and place (Feiman-Nemser, 1984), their teaching practices were similar to the practices advocated by the teacher preparation program.

Their scores on Gibson and Dembo's (1984) Individual Sense of Teaching Efficacy Score were toward the high end of the range (see Table 2). According to their scores, these teachers believed that they could help students learn. They all said that they made a difference in students' motor skills. The teachers' expectations that teaching/schooling can influence learning (general teaching efficacy) was not as high as their projection of individual efficacy.

Patsy said that she knew that she made a difference in students' motor skills by their pre and post test scores on skills tests. "That's like a motivational thing that keeps me going: it is knowing that they are improving, because gosh, if their skills weren't improving or getting better, I'd quit." Phil said that he knows that his classes have helped students because he "has seen a difference in students' motor skills in the short time that he has been teaching." Erika indicated that being a "reflective teacher" helped her be more effective. She believes that she gives good "group and specific feedback", is flexible, and "expects a lot" from her students. Thadd felt especially effective if he was able to stay with a particular content, "If I pick certain things and just stick with it, I've actually seen a marked improvement."

However, in the researchers' view, there was a variability among these teachers in (a) the extent to which they were able to use the skills and knowledge that were part of the university program, and (b) their effectiveness in helping students attain quality movement responses. Based on whether they were able to use the skills and knowledges fostered at the university, the teachers clearly fell into two clusters. Five of the teachers exemplified *partial incorporation* of skills and knowledges fostered by the university, and one teacher, Everett, showed a *more comprehensive incorporation* of the skills and knowledges fostered at the university. When the effectiveness factor is considered, the researcher divided the partial incorporation group into (1) partial incorporation-more effective, (Patsy, Jeff and Phil) and (2) partial incorporation-less effective (Erika and Thadd). It is important to note that the determination of effectiveness throughout this section is based on the researchers' careful observation and particularly on the teachers ability to attain quality movement responses from students, thus helping students to gain motor skills. The researchers were qualified to make such criterion referenced judgments because, in addition to years of teacher education experience, they were "conversant with the research literature" which was a criteria suggested by Eldar, Seidentop & Jones (1989, p. 190).

More Comprehensive Incorporation-More Effective

It appears from both the interview and video examples that Everett, the more comprehensive incorporation teacher, attempted to incorporate to his current teaching almost all of the skills and knowledge which were part of the university program. This teacher is quite effective in

helping students learn motor skills; he also had a high score on the Individual Teaching Efficacy Scale (see Table 2). He believes strongly that his job is to help students become "skillful movers".

> We have just as much responsibility to make them skillful in moving activities as teachers in math, science and reading do to prepare them to deal with those kinds of things when they get out of school.

During his preservice work, Everett, was considered a model student. Dr. Walters described this teacher as a potential "role model" for everyone in the state. In all facets of teaching it seemed that Everett was committed to being the best possible teacher. For example, Everett is a strong manager. He stated that, "I think that I had management under control by the first nine weeks," Everett's self-assurance as a manager contrasts the finding that one of the strongest concerns of beginning teachers is class management and discipline (Veenman, 1984). In the analyzed lesson, only nine percent of his class time was used in management (see Table 3). About the effects of his teaching, Everett said, "I wouldn't be doing my job if I didn't think I made much of a difference. I do, I think that the kids are improved." This teacher felt successful at helping students improve motor skills when students met skills objectives by the end of the unit. He frequently uses videotaping to analyze students' movements and help students analyze their own patterns.

Everett stands out because of his tenacity in attempting to be effective. First, it appears that he truly attempts to teach every lesson effectively; in his own words he "gives it what (he) has" for every lesson. He is consistent. It is believed that if one of his teacher educators came to observe Everett, they might say, "this is the type of teaching we attempted to cultivate."

Partial Incorporation-More Effective

Patsy, Jeff and Phil are placed into partial incorporation-more effective group. The researchers believe that these teachers implemented most of what was presented to them at the university in their inservice teaching. Although they have not fully incorporated all program aspects, they are effective in helping students learn motor skills.

According to Steen (1985), beginning teachers apparently reject or "forget" many skills and commitments that they were taught in college. For teachers in this group, because of the cognitive information they shared, it is more likely that some skills and commitments have been modified to fit their own personalities and teaching conditions, rather than forgotten.

Three factors related to the teaching context and perceived outcomes appear most responsible for the choices of teaching emphasis by the three teachers. The first factor is related to the affect of the students whom they teach. These teachers are very concerned about the feelings and attitudes of their students. They believe that utilizing some of the skills and knowledge learned to the extent promoted by the university might inhibit positive student affect. Dr. Strong described how Patsy might not be the strongest manager of the learning environment among the six teachers because, "she doesn't buy into teacher control, teacher domination . . . she has an extreme sensitivity to people and students."

Jeff, in another example, expressed concern over "pushing" students too much. "The ones that aren't [naturally skilled], I think I can push them as far as I can without getting them frustrated. I don't like a student to get frustrated at doing something." Phil described another aspect of his relationship with students as a desire to please his students. He had replaced a "well liked" teacher and he felt that in a sense he had to win over the students from the former teacher. "I spent more time trying to explain myself than I did teaching." He also indicated that students' attitudes often caused him to hurry through refinement tasks. He felt he "loses kids" when he tries to refine skills so he "goes ahead and moves more quickly" than he feels he should. When he commented on his frequent use of extension tasks, he said that he used extension tasks to "try to stop them [students] from getting bored, for one thing, to give

something to think about and to make it more interesting for them." In the observed lesson Jeff had three refinement tasks and two extension tasks (see Table 4).

Due to their concern for students' feelings, Patsy, Phil, and Jeff allow student feelings and behaviors to control curricular and instructional decisions more than Everett, who demonstrated a more complete transference of teaching skills.

The second and third variables responsible for these teachers' choices to modify what they learned in their professional preparation are related to time and energy levels. The teachers do not feel that they have enough time to adequately plan or evaluate their teaching and do not have time to effectively teach students each week.

They each described how the lack of time affected their teaching. Patsy listed her extracurricular responsibilities which included: organizing programs for the parent-teacher group, coordinating field days, and leading inservice workshops. These commitments took away from the time she could devote to specific teaching related activity. Jeff discussed how he could be even more effective if he could spend more time with which class every week. He also said that he wished he could focus longer on each content area.

A lack of time was one major reason Phil gave for being unable to effectively evaluate his teaching.

> I don't really have all the time to sit down and make some notes and say this worked well and this didn't . . . the only time I have is about 35 minutes for lunch. So, I don't have time to evaluate myself.

Relatedly, a shortage of physical energy is also a reason why these three teachers do not incorporate all that they learned. Patsy said that she did her best teaching after school breaks. Even on a weekly basis a period of rest caused her to change her teaching. "Sometimes I don't do the best teaching . . . I will turn back around maybe after I have had a restful weekend. I'll start doing my job like I should again." She also explained how a lack of energy had directly affected her teaching because she allowed students to stay on task for an excessive amount of time. "They would be right on task. So, I was happy and they were happy. I really should have gone on to something else, but my mind was really tired." In the observed lesson Patsy had seven task changes (see Table 4).

Partial Incorporation-Less Effective

The other two teachers, Erika and Thadd, also incorporated parts of what was presented at the university. Their teaching behavior was similar to the three teachers just discussed, with one major exception. Erika and Thadd were less effective in teaching motor skills. The critical difference between these teachers and the others is that Erika and Thadd do not teach for or expect quality motor responses from their students. It is important to note that these two teachers are "good", but not effective teachers (Berliner, 1987). They are both professional and truly want to be effective teachers, however, they fail to teach for high quality student movement responses. In the analyzed lessons, each teacher had two refinement tasks. Refinement tasks should communicate the teachers concern for quality performance. The researchers believed that Erika and Thadd have lower expectations for students learning in physical education than the other teachers in this study. They do not hold students accountable. Erika sees no difference between holding students accountable for good quality work and pushing them. She explains, "pushing them is hard, pushing them through the stages and through lessons is hard." She believes that students are less motivated when they are "pushed" during the lesson:

> Yes, like they practice hard. I know that it is important. I know that they are not going to get any better if they are not actually doing the task. But you are going to lose—I would lose 50% of my kids' motivation if I took that teaching and goal, if I were rigid. I would lose them. So, I guess it is important to get good rapport.

In addition to the variables noted in the

previous section (student affect, time available and teacher energy) other variables may contribute to the ineffectiveness of these two teachers. These teachers may not have acquired the skills they needed to be effective during their undergraduate program. It happens that both of these teachers are fourth-year teachers. It should also be noted that during these two teachers' preservice education curriculum, curricular changes were being implemented in the teacher education and they did not receive the full "new curriculum".

Analysis of Instructional Behavior

The teaching behavior of selected teachers will be described in the following section. In the interest of efficiency and thoroughness, only three teachers will be represented. First will be, Everett, the comprehensive incorporation, more-effective teacher, then Patsy a partial incorporation, more effective teacher, and last will be Erika a partial incorporation, less effective teacher.

Everett In a self-description of a typical lesson, Everett, a middle-school teacher, said that students are given three minutes to be dressed out and in the gym. There is a warm-up task written on the board which students read and then warm-up independently. Popular music is played at this time. After the warm-up students come together and Everett presents the initial task. At this time students are ability grouped. Everett teaches interactively and provides feedback until the closure which ends approximately three minutes before the bell rings.

In the observed lesson, Everett taught "striking with short handled implements" to sixth graders. This was the second lesson in a Pickle Ball unit. In this lesson Everett used a unique method of developing content which did not include any refinement tasks. After the informing task he had 15 extension tasks and two application tasks (see Table 4). His extensions were very slightly more difficult than the preceding task, so that he was able to get good quality movement before he had students work on a different extension or application task. It should be noted that Everett was also frequently observed refining students' movement quite effectively in lessons which were not analyzed.

Everett indicated that he changes tasks "when about three-fourths of the class are doing the skill" at the expected level. He individualizes tasks for those students who are not ready to change focus. He said that he seldom presents a task without a demonstration and prefers to have students demonstrate. In the observed lesson, Everett only included a demonstration for about one-third of the tasks. The reseacher observed that the absence of demonstrations often occurred for tasks that were only moderately different from the previous task. For example, a demonstration was not used when he extended a task from striking a ball with a racket while walking to striking a ball while jogging. Summary cues were not often utilized in the observed lesson. Everett said that he found the use of summary cues more advantageous with individual skills than with game play.

Everett is very conscious of the way that time is used in his lessons. He is sure that his students are getting "a lot of activity time." In the analyzed lesson his students activity time constituted approximately 61% of the class. Thirty percent of class time was spent on instruction and 9% in management (see Table 3). Everett's use of class time and his scores on the psychometric inventory in relationship to the other teachers in the study was examined by the researcher. Everett had a higher percentage of activity time and a lower percent of management time than the other teachers. He had a relatively high individual teaching efficacy score (according to the TES score) (see Table 2).

Patsy When asked to describe a typical lesson, Patsy reported that students generally read the first task on the board outside her class, then come in and begin work on that task. When everyone has been working quietly for a few minutes, she stops the class and gives an overview of the lesson. Patsy tells the students what they should be able to do by the end of the class and also has the objective written on the board. Next she gives the extension tasks until refine-

ment or application tasks are needed. This process continues throughout the lesson. Patsy provides a reflection time toward the end of class for students to talk about what they did during class.

In the observed lesson, Patsy taught "taking weight on hands" to third graders. This was approximately during the middle of the gymnastics unit. There were eight tasks in the lesson, one informing, one refinement and six extension tasks (see Table 4). When asked what she considered when she changed tasks, Patsy responded that she tries to observe students "motor responses, what they are doing or how we can do it better." Patsy said that she tried to include a demonstration in each task presentation. In the observed lesson she used full demonstrations for six tasks (see Table 4).

Patsy expressed great concern about her use of class time. She strives for high activity time for her students, but she believes she spends too much time talking. Patsy was observed to use 63% of class time instructing, 17% in management, and 20% with students engaged in activity (see Table 2). This activity time is well below the percentage advocated by the university. The researcher's analysis revealed that this low activity time was partially due to an attempt to let students express themselves in class discussions and demonstrations. Also related to use of time, Patsy tended to give long tasks presentations, yet she was the teacher who most frequently used summary cues.

Erika Erika indicated that in a typical lesson students practice skills and then move into game play. She said, "They know that we improve our skills, that's first and foremost, and then, if we are ready for a game, we will play a game." She has her fifth and sixth graders eventually play modified games, while seventh and eighth graders play games with most of the conventional rules.

In the analyzed lesson, seventh graders were in the initial lesson of a volleyball unit in which the overhead pass was being taught. Erika had two refinement tasks and four extension tasks (see Table 4). Erika discussed the difficulty that she had in developing content as she would like. She indicated that while "she wants to practice, the students want to play the game."

> These kids get bored to death. They will sit down. They won't even participate. You have to give them more credit for being skilled, that's the hardest. They can't see the whole thing, that's the hardest part in refining-is that they get bored going back.

The researcher did not observe good quality movement by the students in Erika's classes. Students were cooperative and were giving what appeared to be reasonable effort, but quality movement was not expected or cultivated by the teacher.

Erika said that she uses extension tasks when she sees "enough quality, when they show me what I want." She tries to make her extension tasks appropriately progressive so that she does not have to refine often.

She indicated that she uses summary cues and demonstrations when she presents a task. Students are encouraged to verbally repeat the cues as they practice. In the analyzed lesson all seven tasks had full demonstrations, while summary cues were used infrequently (see Table 4). In the analyzed lesson Erika used 37% of class time with students in activity, 41% in instruction and 22% in management.

Conclusions and Recommendations

A goal of the teacher education program at the university was to have teachers incorporate what they learned in college to inservice teaching. At the risk of oversimplifying the results of this research, it does appear that, at least to some degree, the teachers have incorporated many of the skills which they demonstrated as undergraduates (see Tables 1 & 4), to their inservice teaching. The professional preparation program at the university was relatively successful in helping these prospective physical education teachers become more effective teachers. It is clear that their preservice education had some influence on their current beliefs and practices. For these teachers, this research does

not strongly support teaching as biographical nor that what the teachers learned as undergraduates has "washed out".

Generally, the participants reported that their view of the purpose of physical education was similar to that of their teacher educators. All six teachers said that they made a difference in students' motor skills and their scores on the Individual Sense of Teaching Efficacy Scale were relatively high. Each of the six teachers indicated that they were aware of their use of time and strived to keep practice time high and management and instruction time low. Only Everett responded that he was proud of his use of time. Several teachers had higher instruction time than would be advocated by the university program. All teachers continue to teach in the interactive method which they demonstrated at the university.

Since some success has been achieved, the teacher educators should continue the well-established preparation process, while also striving to improve the programs' effectiveness in developing skills and helping them to transfer to different teaching settings.

First, the teachers in this study all indicated that they believe that the main purpose of physical education was to help students learn motor skills. This has led to the adoption of a similar framework (university promoted) by presenting content and managing the learning environment among the teachers in this study. Each teacher, however, had a unique teaching orientation or style for helping students acquire motor skills. Perhaps during the undergraduate experience students should be encouraged to begin to identify their own "teacher value system" so that they become more reflective and explicitly evaluate teaching methods and curricular decisions according to their own personal philosophies.

It might also prove beneficial to have preservice teachers involved in forecasting conditions that they will encounter in their first teaching positions. An awareness of potential impediments to teaching effectiveness and strategies to combat these detrimental influences should be developed before they have completed their teacher preparation program. Some of the obstacles to teaching effectiveness found by the teachers in this study were a feeling of wanting to accommodate student's desires in many aspects of teaching, becoming physically tired from teaching, and maintaining enthusiasm in the face of repetitive lessons.

Forecasting and developing strategies for these types of teaching hurdles could be done through thorough discussions with other students, faculty members and experienced teachers. Seminars could be conducted which address time management, the development of coping skills and the benefit of networking with other new and experienced teachers. Other strategies could include having a guest panel of "expert teachers" address pertinent issues and having students work with interactive video disk to help develop reasonable plans to deal with future detrimental influences in the teaching environment.

It appears that the preparation programs has been relatively successful in helping students learn to extend tasks for content development. However, the teacher educators should help preservice teachers develop a better understanding of the design and use of application tasks. There appears to be some confusion as to whether to include application tasks which are cooperative or competitive in nature. The confusion apparently contributed to a lack of application tasks in the participants' teaching. The program should continue to emphasize the importance of refining movements for quality motor responses. The recent emphasis on refinement has made a difference in the more recent graduates. All of the teachers in this study were skillful managers of the learning environment, which the researchers and teachers linked to the teachers' undergraduate experiences. The teacher educators should also continue to concentrate efforts on helping preservice teachers to use teaching time wisely.

A specific research recommendation for the university is to conduct true longitudinal studies which examine influences on teaching which

were illuminated in this research. Researchers could utilize the existing rich data base collected in the teacher preparation program which exists from extensive videotaping of undergraduate teaching performances. Further, a second phase follow-up study should be made of the subjects from this study, particularly of the four who were only in their first two years of teaching.

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