Chapter 3: Physical Education

3.1. Problems of Teaching and Teacher Training

THE SPECTRUM OF TEACHING STYLES PRE-STUDENT TEACHING PROGRAM: A FIRST YEAR STUDY

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Abstract

The focus of this investigation identified the differences and similarities observed between two pre-student teacher training programs: an experimental group (n=50) exposed to both the theoretical knowledge of the Spectrum and to the Spectrum's Implementation Model and a control group (n=50) following the existing program's eclectic guidelines. A variety of data was collected, including questionnaire, interviews, and video tape analysis. Questionnaire results revealed no differences between the two groups concerning student's perceptions of their teaching competence, skill attainment, use of teaching behaviors and potential success. However, video tape analysis revealed a fixation to one teaching pattern by the control group, whereas the experimental group demonstrated flexibility and used a variety of teaching behaviors. Other differences in the "image" of the class were identified. The experimental group demonstrated higher individual and private teacher-student interaction, more

variety of feedback forms, more specific feedback, more teaching styles, more teacher mobility within the class, less singular factual questions asked of the whole class and learners demonstrated more time-on-task, more social interaction, more opportunity for peer immediate feedback and more opportunities to make decisions. This preliminary study suggest that it may be invalid to use students' perceptions as the primary tool to measure the competence of teacher training programs.

Keywords: teacher training, program, teaching styles, spectrum, experiment

Introduction

This paper addressed the question, "What are students in the field experience program learning about teaching?" In 1985 at the AIESEP congress in Adelphi, Muska Mosston presented an alternative teacher preparation program. For the last year and a half at Florida Atlantic University, I have begun implementing the portion of that program which focused on teaching. This experimental teaching program coexisted with the more established five year old program. The following is a preliminary first year comparative study of these two programs. Data were gathered from questionnaires and video tapes comparing students' perceptions and feelings, and comparing what they say they do to what they actually do in student teaching. This study replicated the design and procedures outlined in, "Effects of Training in Mosston's Spectrum of Teaching Styles on the Feedback Behavior of Teachers" (Ashworth, 1983).

The experimental program used the Spectrum of Teaching Styles: From Command to Discovery (Mosston & Ashworth, 1989) as the theoretical knowledge about teaching and the Spectrum's Implementation Model for the acquisition and practice of these teaching methods.

The control program used a philosophically eclectic program which accepted the notion that the more students experience the realities of classroom teaching, the better equipped they will be for student teaching and the profession. The literature is rife with data about field experience. In spite of the debatable assets and identified liabilities of this experience "there can be little doubt that the most popular and most frequently used approach to providing teacher education students with practical experience is the field experience" (Quinn, 1986). "Invariably, the field experience component is held in the highest esteem" (Rooze, 1986). Since field experience has always been a part of the formal teaching program, it has now become a mandatory part of the accrediting process for universities and colleges in the USA (NCATE, 1987). Field experience is here to stay. But what does it really do?

Repeatedly, field experience has been depicted as a time for early observation,

practice and feedback which serve to modify behavior (Wheeler, 1986). Repeatedly, field experience is presented as the connecting link between theory and practice. Repeatedly, the cooperating teacher is identified as the single most important agent in pre-service teacher education (Flaitz, 1986). Repeatedly, students attest that they learned more about teaching from their field experience than from their university courses. Yet, the benefits of these programs are still debatable.

Concerns have been raised by a variety of educators: Berliner concluded that field experiences, "retard the development of analytic skills and thus, in present form, militate against the development of the profession" (1985, 3). Others claim field experience has "lacked sequential of developmental skills . . . And that public school teachers and administrators have been uninformed or lacked the skills to achieve the desired expectations." (Mann, Hines, Sworman & Roth, 1986). Ferrell and Howley (1988) state these experiences serve "merely to socialize prospective teachers into established patterns of school practice". Dewey (1904) warned that "an overemphasis on practice could lead to the unquestioned acceptance of the cooperating teacher's techniques and away from the development of reflective inquiry (Zahorik, 1988, 9). ". . . student's prior exposure . . . may well become a matter of routinizing inadequate or inappropriate strategies" (Quinn, 1986). And finally, "There is a mistaken belief that early field experiences automatically will help prospective teachers to think more like experienced teachers" (McNeil & Agne, 1987). Both the attacks and the praises sound convincing. The apprenticeship concept has withstood the test of time and crossed professional boundaries. It is a ubiquitous approach to learning. Yet, in education the contributions of an apprentice program remain questionable. The question remains: Is field experience developmental or detrimental?

Purpose

The purpose of this study was to identify whether differences occurred in perceptions and in actual teaching behavior between students who were in a regular field experience program and those in an experimental field experience program.

Procedure

Two different sets of students were studied: One group (n=100) of students was in their pre-student teaching experiences and the other group (n=25) of students was in their student teaching semester. All students, in both sets, were in either the experimental group, the control group or the mixed group. Questionnaire data were gathered from both the pre and the student teacher groups. All stu-

dents selected the program of their choice. Likert scale was used to determine the strengths of the responses on the questionnaire. The pre-student teaching group was administered a forty-five item questionnaire. The student teachers completed an eighteen item questionnaire and nineteen students (n=19) were randomly selected to video tape three teaching segments, whereby each segment was to represent a different teaching method or a different set of objectives.

The experimental Spectrum group experienced a two semester course. Each semester, students attended a lecture course three hours weekly for fifteen weeks, plus a one day weekly visit to a public school. Two micro teaching episodes, one with peers and one with public school children, were required per teaching style. During the second semester students received periodic classroom supervision. Students received two credit hours per semester.

The control group was required to participate in three semesters of 100 hours (1 day of week) of public school "aide" involvement each semester. One credit was given per 100 hours, totaling 300 hours for 3 credits. The only university contact in this program was a two hour orientation meeting at the beginning of each semester. At that time the guidelines and expectations were delivered: Students were expected to be active and participate as much as possible in order to prepare themselves for student teaching. Evaluation was given solely by the classroom teacher through an informational one-page questionnaire. However, reinforcement and follow-up activities by individual professors in the "Methods of..." courses was expected.

The mixed group comprised of a smaller number of students who participated in 1 semester of the 100 hours "aide" program and 1 semester in the experimental Spectrum program.

Results

The questionnaires' overall results, contrasting the students' perceptions, showed high similarity of results between the experimental and control groups. Yet, a comparison of the perception data to the video behavior data revealed a clear dichotomy between the two groups. Congruence between perceptions and video-taped behavioral analysis did not occur for the control group; whereas, the experimental group showed congruence between perceptions and behavior. The following summarizes the details of the data.

The forty-two item pre-student teaching questionnaire sought information about students' perceptions and feelings. The responses on approximately thirty-eight of the items were virtually the same for each group. Nearly identical frequency distribution occurred in their perceptions and feelings about what

they learned, skill acquisition, competence, satisfaction with program selection, and predictions of potential success. Students, from both groups, "strongly to mostly agreed" that their experiences were adequately training them to teach. They felt they had learned how to teach using a variety of methods (including social and cognitive methods) and that they could design open-ended questions. They felt they could alter their teaching to meet the needs of the students. They felt they had developed self awareness and could identify their strengths and weakness and knew how to improve their weaknesses when they occurred. They also felt they were going to be outstanding teachers. This list of purportedly acquired skills and its positive nature were impressive. Both groups felt they had received the "best program".

Slight differences within the questionnaire appeared in questions that required analytical interpretations, assessing question and modeling questions. The Spectrum group disagreed, whereas the control group agreed

- that they were trying to teach like their co-operating teacher. ($X2(1) = 13.970$, $p<.0002$)
- that they saw their cooperating teacher use a variety of teaching methods ($X2(1) = 4.918$, $p<.0265$
- that they were trying to emulate their cooperating teacher's manner of speaking with the children ($X2(1) = 2.229$, $p<.1355$)
- the experimental (Spectrum) group "strongly agreed", whereas the control group "strongly disagreed" that video taping could benefit their teaching skills. ($X2(1) = 19.516$, $p<.001$)

A marginal difference was identified in their response to the question, "I was rated by my cooperating teacher as outstanding". The control group "strongly agreed", whereas the Spectrum group only "agreed or somewhat disagree".

The eighteen item student teacher questionnaire sought information about students' perceptions, satisfaction with and evaluation of their pre-student teaching preparation and their perceived successes in student teaching. The questionnaire results were similar for both groups. Although statistical inferences could not be made due to the low population of each group (total n=25) the frequencies were nearly identical between the three groups. Both groups felt they had good pre-training and that they were successful. Students even stated they were able to teach as well as their cooperating teachers.

They felt that they were able to teach in a variety of methods, that they were emotionally attached to their children, that they were aware the children were learning because of their teaching, that they were prepared for the realities of teaching and that they were prepared for their first year as a professional. Only one question showed the possibility of a difference between the groups: the Spectrum group "strongly disagreed", whereas the control group "strongly agreed" that they were able to implement most of their ideas about teaching.

The video analysis became the crux of this study because this section revealed the degree of congruence between the students' perceptions and their actual teaching reality. The video analysis revealed classroom "image" and "pattern" differences among the three groups — control, experimental, mixed. (Image refers to, What did the classroom look like? or, What were the teacher and learners doing? Pattern refers to, Who was doing what? and In what manner were things done?) While teaching, the control group displayed a fixed image and patterns with minimal variability in "How" they taught. They, of course, changed "What" (subject matter -content) they taught, but not "How". The experimental group demonstrated variety in both "What" and "How". Data was gathered by identifying every feedback statement and charting each statement on 17 descriptive categories in order to supply an image or pattern of what happened, by whom, when feedback occurred. (See Table 1. for a condensed list of the categories, subcategories and frequencies within each group).

The video tape analysis revealed differences in the way of the Spectrum group used a variety of teaching methods, expected a variety of behaviors from the students, announced expectations separate from the task, provided more decision making opportunities for the students, designed deliberate socialization and self-concept building activities, and provided opportunities for private interaction with the teacher and between peers (Table 1.). These differences produced a variety of episodes that changed the images and patterns used in the classroom. The video analysis of students in the control group revealed a variety in activities but a predisposition to one teaching method. Their conception of teaching was demonstrated by the following repeated pattern: The teacher stood primarily in one position, asked a question, which sought a single factual answer. The teacher provided feedback with the one word "good", then generally repeated the learner's factual response. The process began again with another factual question. This conception and singular image was repeated episode after episode. These students could only design activities for whole class involvement, task and student expectations were in a general form such as "turn to page" and then directly jumped into the subject matter by asking a factual questions. The teacher was always the "giver" of feedback, and the feedback was primarily public. Although a higher total of feedback statements were given by the control group, most feedback statements were a single word response, only once a dialogue occurred during feedback. These students' conception about "how to teach" appeared singular and repetitive, regardless of their stated objectives. This fixed conception about teaching also surfaced in the original study which compared Spectrum teachers and non-Spectrum teachers (Ashworth, 1983).

The mixed group observed frequencies were not as varied as the experimental group but they were marginally more varied than the control group. Their conception of teaching revealed a somewhat, but both significant, altering of

Table 1. Feedback patterns and images – data form.

The following is a condensed version and summary of the data form used in this study. 17 categories were used, the results of eight categories with minimal frequencies have been omitted. Each category totaled the same number of feedback statements as seen in the first category Styles of Teaching.

Styles of teaching* * Defined by Mosston, & Ashworth, S. 1989		Experimental spectrum	Control F.E.	Mixed
1.	A – Command Style	21	2	28
2.	B – Practice Style	5	0	14
3.	C – Reciprocal Style	69	0	16
5.	E – Inclusion Style	89	0	0
6.	F – Guided Discovery	28	0	0
8.	B – Question/Answer Whole Class–factual	24	327	129
10.	G – Question/Answer Whole Class – non–factual	15	15	11
	Total feedback statements	256	349	203
Interaction initiated by:				
1.	T asking a question	95	213	133
2.	T making a statement	53	54	30
3.	L asking a question	56	22	11
...	Other			
What was the teacher doing when interaction was initiated				
1.	Standing (primarily) in one spot	71	101	60
2.	Walking around the room while next to the learner	48	39	47
3.	Walking around the room while away from the learner	85	42	7
4.	Writing on the board	18	46	26
...	Other			

Feedback given by

1.	Teacher	145	286	164
2.	Learner – to self	35	0	4
3.	Observer – (Spectrum term)	38	0	11
...	Other			

Degree of privacy

1.	1:1 Private	106	2	17
5.	One learner responses while other learners listen – whole class setting	85	165	107
...	Other			

Forms of feedback		Experimental spectrum		Control F.E.	Mixed
1.	Value--positive	63		98	51
4.	Corrective	27		20	28
5.	Corrective--reprimand		14	72	14
6.	Neutral	80		78	80
8.	Additional information other than above	23		8	4
...	Other				

Classroom image

1.	Separate introduction to task and learner's behavior/ expectation	42	29	6
3.	Choral performance by teachers' cues	17	0	3
4.	Learners work in pairs or groups by criteria	56	12	17
7.	Learners select their own level of difficulty in the task and check their work	70	0	0
8.	Teachers ask questions of learners – one learner responds at a time while others listen – whole class setting	52	229	110
...	Other			

Expectation statement

1.	Expectations subject matter and behavior stated in advance of doing the task	201	5	47
3.	Learners were told "turn to", or "listen and take notes", or "answer the questions" or "watch the film" -- learners were passively engaged -- primarily listening	252	116	27
...	Other			

Length of feedback

1.	One word response--	14	86	55
3.	One word response (repeats the learner's one word answer)	31	40	14
4.	4-5 word response	56	79	33
5.	Several sentence response	47	51	27
6.	Inteaction with learners	25	1	14
...	Other			

The following 8 categories were omitted from this summary:

- episode number
- time segment
- what was the learner doing when interaction was initiated
- feedback for
- content of feedback
- feedback about
- when was feedback given
- amount of information given to learners

the images and patterns used when teaching. The results indicated that they could marginally attempt those behaviors which were theoretically practiced during the first semester, but they could not even attempt any additional teaching behaviors.

Discussion

The results of this study suggest that if change and expansion of students' conception about teaching is to occur the emphasis of a teacher training program must be theoretically and behaviorally based in alternative teaching sty-

les. Alteration in the design and implementation of teacher training programs needs to be addressed. Courses that utilize lecture teaching methods, or provide intermittent classroom experiences, or programs that shift the imaging and patterning of teaching to an outside source or courses that allow the existing classroom realities to serve as the primary force for students' conceptualizing teaching behavior run the risk of perpetuating a teaching conception that is fixed. Such programs support Berliner (1985), Dewey (1904), Quinn (1986) and a host of others who regard field experience as a process which perpetuates a routine, inflexible, socializing process of non-inquiry which results in a singular, stagnated image of pedagogy.

The Spectrum of Teaching Styles is a unifying structure of alternative behaviors. This theory identifies a possible range and specific structures for a variety of teaching behaviors. It does not promote or exclude any "teaching" or "educational" idea — it embraces, included and is expanded by other contributions. The Spectrum merely provided a conceptual foundation (blueprint, set of rules) for implementing various objectives into a variety or teaching behaviors. It provides an accountability system for determining congruence between intent and action (what is planned and what is actually done). Structure is a feared and resisted word in Education. Structure has been associated with infringing on academic freedom, violating personality preferences and robotism the profession. The educational profession is beginning to accept the fact that teaching has structure, that it can be predicted and that teachers can be held accountable. Such a system is not to be feared. Such a system of predictability and accountability is grounds for a profession. The control groups' teaching behavior showed incongruity between their questionnaire perceptions and their behavioral actions. Yet, these students graduated this May with a degree in teaching! These students graduated without behavioral skills to match their perceived proficiency. Such incongruities can only lead to a distorted analysis of future professional issues.

In closing: Everyone speaks of change. But, what change is THE change that will make THE difference? — new buildings, new books, new carpets, new principals, younger teachers, required master's degrees, higher entrance scores? If the change does not address the problem, the "illness" will remain or temporarily be camouflaged. As previously stated, the "illness" in education is the fact that educational intentions are varied but classroom teaching is predominantly singular. Addressing the "illness" requires that teacher training programs be designed to provide students with:

- a behavioral repertoire in teaching
- an understanding that specific images and patterns are required in order to accomplish different methods or objectives
- an ability to teach using the concept of episodes (Mosston & Ashworth, 1989)

Altering students' fixed conception about teaching is the task for educators today. Changing the option-deprived world of the public classroom is the challenge. This preliminary study suggests that in a two semester course, as opposed to a one semester course, students begin to alter their teaching behavior when their conception about teaching has been expanded.

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