

1 Learning to Teach Spectrum Style

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21 RUNNING HEAD: Spectrum Style

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Abstract

4 Mosston and Ashworth's Spectrum of Teaching Styles (1994) is widely incorporated
5 within physical education teacher education (PETE) programs. The purpose of this
6 paper is to describe a PETE program that utilizes Mosston and Ashworth's (1994)
7 Spectrum of Teaching Styles as the theoretical framework for understanding the
8 teaching-learning process. A planned sequence of educational experiences that
9 combines theory, observation of demonstration, practice and feedback under protected
10 conditions, and practice and feedback in the "real world" setting (Joyce, Weil, &
11 Showers, 1992) serves to enable the pre-service teachers to experience success in
12 Mosston and Ashworth's teaching styles, and, in turn, understand the teaching-learning
13 process. A description of the sequenced courses the students experience over their
14 last five semesters in the program, courses in which the Spectrum serves as the
15 framework, is presented.

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Learning to Teach Spectrum Style

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2 It has been 33 years since Muska Mosston introduced the Spectrum of Teaching
3 Styles in his book, Teaching Physical Education (1966). Many in the field of physical
4 education and education alike from around the world have embraced the Spectrum of
5 Teaching Styles as a framework for delivering instruction in schools (Gerney & Dort,
6 1992; Greenspan, 1992; Mellor, 1992), designing undergraduate teacher preparation
7 programs (Ashworth, 1992; Mueller & Smith, 1999), and conducting research (Byra &
8 Jenkins, 1998; Goldberger & Gerney, 1986, 1990; Telama, 1992). In marking the silver
9 anniversary of the Spectrum, the *Journal of Physical Education, Recreation, and Dance*
10 (Franks, 1992) featured a collection of articles to reflect the importance the Spectrum
11 has had on physical educators, teacher educators, and researchers in the arena of
12 physical education.

13 Mosston and Ashworth's Spectrum of Teaching Styles (1994) is widely
14 incorporated within physical education teacher education (PETE) programs. However,
15 the degree to which the Spectrum is a component of PETE curricula varies from one
16 program to another. In many programs Spectrum teaching styles are simply introduced
17 in a single teaching methods course, introduced as a way to present lesson content. In
18 other programs, albeit fewer, the Spectrum is woven into two or possibly three
19 professional preparation courses in which Spectrum theory is presented and opportunity
20 for practice provided. In even fewer programs the Spectrum serves as the theoretical
21 construct upon which the PETE program is built.

1 The purpose of this paper is to describe a PETE program that utilizes Mosston and
2 Ashworth's (1994) Spectrum of Teaching Styles as the theoretical framework for
3 understanding the teaching-learning process. A planned sequence of educational
4 experiences that combines theory, observation of demonstration, practice and feedback
5 under protected conditions, and practice and feedback in the "real world" setting (Joyce,
6 Weil, & Showers, 1992) serves to enable the pre-service teachers to experience
7 success in Mosston and Ashworth's (1994) teaching styles, and, in turn, understand the
8 teaching-learning process. Knowing the theory (principles and rationale) associated
9 with a new teaching style helps one better understand when and how to use it.

10 Observing demonstration lessons of a new teaching style, demonstrations presented by
11 instructors who are relatively expert in the method, helps one visualize how the style
12 unfolds in action. Practicing under protected conditions (e.g., with peers, one child, or
13 small groups of children who are relatively easy to teach) with feedback allows one to
14 get a "feel" for the style. Finally, practicing under "real world conditions" in the presence
15 of a peer coach, a fellow teacher who is also new to the teaching style, enables one to
16 working a new instructional method into his/her teaching repertoire.

17 According to Joyce et al. (1992) learning a new teaching style requires all four of
18 these elements. Examining the theoretical rationale, observing demonstrations, and
19 practicing with feedback under protected conditions will enable most individuals to
20 acquire the skills associated with using a new teaching style. However, taking that new
21 teaching style and transferring it into one's regular teaching repertoire requires practice
22 teaching in the school setting in the presence of a peer coach.

1 In the remainder of this paper I will describe how the Spectrum is woven into the
2 movement (activity), professional preparation, and field experience courses of this
3 PETE program. The manner in which the Spectrum is intertwined in the program
4 reflects the elements that Joyce et al. (1992) postulate as essential for the successful
5 implementation of a newly acquired model or style of teaching. In addition a discussion
6 of how the effects of the Spectrum are being researched will be presented. This paper
7 represents but one way that the Spectrum is used to assist preservice teachers in
8 learning to teach; it is not the only way. The Spectrum is taught in many other
9 programs, albeit differently.

10 Students who are enrolled in this four year degree program learn to teach
11 Spectrum style by means of (a) participating in Spectrum lessons, (b) studying the
12 theoretical basis of the Spectrum and each individual teaching style, (c) observing live
13 and videotaped demonstrations of Spectrum episodes, (d) practicing Spectrum teaching
14 styles in relatively protected conditions (e.g., teaching peers; teaching one learner;
15 teaching small groups of learners) in the presence of an experienced Spectrum teacher,
16 and (e) practicing Spectrum teaching styles in the regular school setting while being
17 coached by a peer. A description of the sequenced courses the students experience
18 over their last five semesters in the program, courses in which the Spectrum serves as
19 the framework, follows.

20 First Exposure

21 The student's first exposure to the Spectrum is as a participant. During their
22 freshman and sophomore years the students complete four movement core-activity

1 courses, one of which is delivered within the framework of Mosston and Ashworth's
2 (1994) Spectrum of Teaching Styles. The four activity courses, each of which is two
3 credit hours (students meet four times per week, 50-minutes per session), are based on
4 the skill theme and movement concepts approach (Graham, Holt/Hale, & Parker, 1998).
5 The movement class in which the Spectrum is central is titled Striking and Volleying.

6 In this course students learn about Mosston and Ashworth's (1994) teaching styles
7 through active participation in Spectrum episodes. One or two Spectrum episodes
8 selected from the reproductive (styles A through E) and productive (styles F through H)
9 clusters are presented during each lesson by instructors who are trained in Mosston
10 and Ashworth's teaching styles. Joyce et al. (1992) suggest that experiencing the role
11 of the learner is an important step in gaining comfort with and successfully implementing
12 a new teaching method. This represents the students first formal exposure to Mosston
13 and Ashworth's (1994) Spectrum of Teaching Styles.

14 Theory, Demonstration, and Practice I: One-On-One Teaching

15 After having been exposed to the Spectrum as participants, the pre-service
16 teachers (PTs) learn more about four of Mosston and Ashworth's (1994) teaching styles
17 through theory, demonstration, and practice. The practice (B), guided discovery (F),
18 convergent discovery (G), and divergent production (H) are the teaching styles of focus
19 in Teaching Lab I, a course completed by the undergraduates during the fall semester
20 of their junior year.

21 Teaching Lab I is designed to give PTs opportunity to acquire the knowledge and
22 develop the skills necessary to provide young children developmentally appropriate

1 movement experiences. During the first half of the course the PTs are introduced to the
2 four aforementioned styles of teaching through lecture, discussion, demonstration, and
3 peer practice. During the second half of the course they incorporate the learned styles
4 in the lessons they teach. Each PT instructs one four or five year old child twice a
5 week, 90 minutes per session, in the areas of skill themes and movement concepts,
6 physical fitness, and swimming. The PTs must employ at least two of the four teaching
7 styles in each session. Because the focus of Teaching Lab I is on learner exploration,
8 the divergent production style is employed more frequently than the other three teaching
9 styles. Teaching styles from the reproductive and productive clusters are introduced at
10 this early stage to help the PTs better understand a learner's capacity to discover
11 movement concepts and capacity to replicate skill models. Practice-teaching is
12 conducted under highly protected conditions in Teaching Lab I.

13 Theory, Demonstration, and Practice II: Small Group Teaching

14 In the spring semester of their junior year the PTs are enrolled in two courses that
15 have Spectrum instruction at the core, the Teaching Methods course and the
16 accompanying practicum course titled Teaching Lab II. The underlying premises and
17 assumptions of the Spectrum and its teaching styles are presented to the students via
18 lecture, discussion, observation, and demonstration in the methods course. Opportunity
19 to practice each style with fellow classmates, to learn the nuances of each style, is also
20 provided in the methods course. Once the Pts have gained a minimal level of
21 competence and comfort in a given teaching style, they incorporate that teaching style
22 in their lessons in Teaching Lab II.

1 In Teaching Lab II the PTs incorporate Mosston and Ashworth's (1994) teaching
2 styles in their day-to-day instruction with elementary and middle school learners. Two
3 K-8 parochial schools serve as the teaching sites for Teaching Lab II. Each PT delivers
4 four 3-week instructional units during the semester to different grade groups comprised
5 of 10 to 15 learners. The physical education curriculum, as developed by the university
6 supervisors, is based on the skill themes and movement concepts approach (Graham et
7 al., 1998).

8 The PTs are required to include one Spectrum episode in each lesson taught
9 during Teaching Lab II. By the end of the practicum they have practiced each teaching
10 style (A-K) three or more times under the observation of a university supervisor and
11 peer. Often the PTs express more comfort with one or two of the styles by the end of
12 the semester because they have attempted these teaching styles a greater number of
13 times than the others. Joyce et al. (1992) report that until teachers try a new teaching
14 strategy 10 or more times, they will continue to feel a certain level of discomfort.

15 A criticism leveled against faculty involved in teacher education is the lack of
16 involvement in the real world of teaching school-aged children/youth. The instructors in
17 Teaching Lab II are assigned to teach a three-week unit of instruction to elementary or
18 middle school learners each spring semester. One of the expectations of the course
19 instructors is to incorporate Mosston and Ashworth's (1994) teaching styles into their
20 daily instructional routine. While the faculty teach, the PTs serve as coaches.

21 Reversing the roles (teacher and coach) has had significant impact on both the PTs and

1 instructors. Much has been learned by both groups since adding this twist to Teaching
2 Lab II.

3 Theory, Demonstration, and Practice III: Teaching in the Public Schools

4 During the fall semester of their senior year the PTs are enrolled in two courses
5 that have Spectrum instruction at the core. These courses are Teaching Lab III and
6 Curriculum Development. In Lab III the PTs are no longer practice-teaching under
7 protected conditions. Rather, they are practice-teaching under "real world" conditions in
8 the presence of a peer coach. The PTs teach daily physical education to full classes of
9 elementary and secondary learners in a public school setting. Assigned to cooperating
10 teachers in pairs, the PTs complete four weeks of teaching at both the elementary and
11 secondary levels. Each day they are responsible for teaching one lesson and observing
12 their partner teach for one lesson. While their partner teaches, the non-teaching partner
13 takes the role of peer coach. By the end of Teaching Lab III the PTs have practiced
14 each teaching style (A-K) two or more times at both the elementary and secondary
15 levels under the observation of a peer coach.

16 The peer coach is the key to success in Teaching Lab III. The functions of the
17 peer coach include provision of companionship, analysis of application, and analysis of
18 learner expectations (Joyce et al., 1992). Companionship provides reassurance that
19 problems are normal and shared. In analyzing the application of a given teaching style
20 the peer coach can help determine the match between the desired objectives and the
21 appropriateness of the selected teaching style. Each teaching style has a matching set
22 of student expectations. Whenever a new teaching style is introduced, students must

1 become acquainted with what is expected of them. In following these three functions
2 the peer coach makes the transition between practicing in protected conditions and
3 practicing in the workplace easier. In turn, the quality of the peer coaching relationship
4 will effect the likelihood of a teacher feeling competent enough to incorporate a new
5 teaching style in his/her teaching repertoire.

6 In the curriculum development class the students are required to reflect on the
7 teaching they do in Teaching Lab III. Class discussions bring to life the PTs'
8 gymnasium successes and failures as they relate to general education and Spectrum
9 specific issues and concerns. The PTs also learn about the relationships between the
10 reproductive and productive teaching styles and the different curriculum models (e.g.,
11 reproductive teaching styles are preferred to productive teaching styles in curriculum
12 models that emphasize specific knowledge or motor skills).

13 Student Teaching

14 During their 16-week student teaching experience the PTs, who are now student
15 teachers, are provided an opportunity to apply theories and concepts learned in the
16 undergraduate program. The student teaching experience is evenly split between the
17 elementary (K-6) and secondary levels (7-12). The student teachers are expected to
18 continue to incorporate a variety of teaching styles in their teaching during the student
19 teaching experience. However, this expectation is embedded in the reality that a
20 student teacher is frequently placed with a cooperating teacher who knows little about
21 Mosston and Ashworth's (1994) teaching styles. Expecting students to extend their
22 working knowledge of the Spectrum under such circumstances is unrealistic.

1 Having few cooperating teachers who are Spectrum literate is problematic. This
2 issue is presently being addressed by the PETE faculty in two ways. First, a course
3 titled the Spectrum of Teaching Styles has been developed for teachers out in the state.
4 This course is delivered via videotape and teleconferencing. Teachers who are enrolled
5 in this course learn about each teaching style through lecture (videotape), observation
6 of demonstration episodes (videotape), class readings (text), class discussion
7 (teleconferencing), and practice. After lecture, demonstration, reading, and discussion,
8 the enrollees plan, implement, and assess at least three episodes of the presented
9 teaching style each week in their own school settings. During the first hour of the
10 following class the teachers share their successes and failures of the previous week on
11 telephone.

12 The second way this problem is being addressed is through the organization of the
13 student teaching experience. Student teachers are being placed in pairs at some of our
14 teaching sites. This format permits the student teachers to coach one another, much
15 like they did in Teaching Lab III. It also allows the cooperating teacher to dialogue with
16 the peer coach during observations. Often this dialogue serves to spark the
17 cooperating teacher's interest in the Spectrum, which sometimes results in their
18 enrollment in the Spectrum of Teaching Styles course. Far from being perfect, we
19 believe we are moving forward in creating an environment for the student teachers that
20 supports the continued use of Mosston and Ashworth's (1994) teaching styles in their
21 student teaching experience and long into their teaching career.

22 Program Research

1 It is the Spring of 2000. The major elements of the program are finally in place.
2 Over the next several years we will be fine-tuning the program to improve upon what we
3 presently have. A question that looms large now is, what effect is this program having
4 on the graduates' teaching?

5 The value of any program must be tested through research. Over the past two
6 years the employment of Mosston and Ashworth's (1994) teaching styles has been
7 monitored in our students' instruction during their student teaching experience and, for
8 some, during their first two years of teaching. Based on written notes compiled during
9 on-site university supervisor visitations, student teachers were observed employing
10 Spectrum teaching styles in approximately one-third of their lessons. For those who
11 were teaching in their first or second year, Spectrum teaching styles appeared in slightly
12 more than half of the lessons observed.

13 What do these results suggest? First, it must be noted that these students did not
14 experience all of the major elements of the PETE program. In research lingo, they
15 didn't receive the entire intervention. Given this limitation, the results seem
16 encouraging. The findings show some definite program carry-over into the real world of
17 teaching. However, much more research needs to be conducted over the next five
18 years via interview, survey, and observation to better understand the effect of this
19 program on the program graduates. Questions to be answered include: (a) Why (and
20 why not) do the student teachers and/or program graduates employ Spectrum teaching
21 styles in their instructional routines?; (b) What impact does this educational program
22 have on the cognitive behaviors of our student teachers and program graduates?; (c)

1 What impact does this educational program have on the instructional behaviors of our
2 student teachers and program graduates?; and (d) What are the long term effects of this
3 educational program on the graduate's use of the Spectrum teaching styles?

4 Summary

5 Mosston and Ashworth's (1994) Spectrum of Teaching Styles serves as the
6 theoretical framework for understanding the teaching-learning process. Spectrum
7 instruction spans the last three years of the four-year PETE program. The students
8 learn about the Spectrum of Teaching Styles through a planned sequence of
9 educational experiences that combines lecture, discussion, observation of
10 demonstrations, and practice and feedback in protected conditions and the real school
11 setting (Joyce et al., 1992). The Spectrum is at the core of one movement, two
12 pedagogy, and four field experience courses. That makes it central to a total of seven
13 courses. The delivery of these courses is shared across five faculty members who are
14 committed to a set of similar beliefs. Preservice teachers who graduate from the
15 program will have spent their last five semesters with the same cohort group of
16 students. This is a carefully constructed program that reflects the characteristics of
17 other "high impact" teacher education programs (Graber, 1996) and "the conditions
18 needed to produce graduates who make a positive difference in the quality of physical
19 education in school programs" (Siedentop & Locke, 1997, p. 31).

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