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2009

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Original Publication Citation

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The Teaching-Learning Process: A Set of Instructional Strategies and Tactics Through Analysis of Mosston’s “Spectrum of Teaching Styles”

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OVERVIEW
While there has been a transitory shift of attention toward National Standards for Physical Education (2004) and curriculum development, many of the “Instructional” texts such as Buck, Lund, Harrison, & Blakemore (2007) still include elements of the study of teaching styles. This change in focus still has a vision for creating various teaching-learning environments in an effort to meet the needs of a wide range of learners yet the impact is much different. In 1992 the Journal of Physical Education, Recreation and Dance published a series of articles that revisited the accomplishment as well as the profound impact of Mosston’s Spectrum of Teaching Styles. Goldberger (1992) nested in a series of compliments cited “Nixon and Lock who described the Spectrum of Teaching Styles as the most significant advance in the theory of physical education pedagogy in recent history…”. As characterized by Metzler, (1988) “The Spectrum of Styles developed by Muska Mosston is one of the most, if not the most, widespread conceptualizations of teaching in physical education today” and nothing has replaced this central focus for physical education pedagogy. There is still a pedagogical attention paid to the decision-making process and how to best create opportunity to learn. As presented by Ashworth (1992) “Most teacher educators agree that the knowledge, behavior, skills, and talents of an individual teacher affect the level of proficiency and efficiency with in the classroom.”

This analysis of teaching is comprised of a series of articles that are intended to introduce the reader or provide for a refocusing for those familiar to Mosston’s eleven styles along the spectrum of teaching styles. Mosston developed them as a result of his work at Pennsylvania’s Temple University and East Stroudsburg University and then at Rutgers University and the Center on Teaching. Since the first publication of Teaching Physical Education, which introduced The Spectrum of Teaching Styles, Mosston demonstrated his love for the teaching-learning process in physical education by challenging other professionals to expand their instructional repertoires in an effort to meet goals, subject matter concepts, and student needs. In conjunction with coauthor, Sara Ashworth, they expanded what was first introduced as a seven station discussion on teaching styles to where it is now a full eleven station spectrum, with unlimited potential providing recognition for the many variations each teacher could build into the teaching-learning process.

Over the next several Oklahoma HPERD Journals, the authors intend to present a description and examples of the “Spectrum of Teaching Styles”, along with suggestions for the readers to strengthen the teaching-learning process for the students. This effort is an attempt to help teachers meet the never-ending challenges that are presented by students, irrespective of their age, grade, interest, ability level or geographic location. This series of articles is a continuation of Mosston’s work to help teachers strengthen their instructional skills in an effort to better serve the needs of their students.

Introduction of the Spectrum – From Command to Self-Teaching
As presented by Mosston, the teaching-learning process is a relationship between two (or possibly more) individuals, teacher and learner, who must develop a unique connection during this process, that is governed by a series of decisions. The importance of commonplace choices, that are many times taken for granted, such as where students are organized; how individuals are positioned; what subject-matter is being addressed, the amount of time allotted; what and how supplies will be distributed, become evident under analysis. All these decisions are linked to what subject-matter is being addressed and instructional decisions regarding how to present, setting of performance expectations, how to demonstrate elements to be practiced, drills, as well as modified games/activities and practice performed, and how, along with when, to assess student learning. Mosston is clear to establish that every decision that is made, during any part of the instructional process, is built upon responding behavior which in turn influences every succeeding decision. The impact of every decision also affects each and every person who is engaged in the process. Mosston (1992) suggests “that teaching is governed by a single unifying process: decision making. Every act of deliberate teaching is a consequence of a prior decision.’’

As defined by Mosston in the Spectrum of Teaching Styles, the instructional process, as compartmentalized and described, is separated into three distinct phases. The first is the pre-impact set of decisions which are all the choices that are made prior to the teacher and learner coming face-to-face. All of these decisions are categorized together and defined, because they occur prior to instruction beginning, as "intent". The second category is defined as impact set, which includes all the decisions that are part of the actual instructional interaction between teacher and student. These decisions help to define all the action elements of the instructional process. Mosston describes the third category as post-impact, which are decisions having a bearing on performance evaluation, such as providing feedback or conducting either a formative or summative assessment.

As can be observed when examining the Spectrum of Teaching Styles schematic diagram presented in diagram 1, there are six underlying concepts that support the spectrum:

The Teaching-Learning Process cont.
1. The Axiom: **TEACHING BEHAVIOR IS A CHAIN OF DECISION MAKING**

2. The Anatomy of any Style:
   - **PreImpact**
   - **Impact**
   - **PostImpact**
   - Sets of decisions that must be made

3. The Decision Makers:
   - Teacher: Maximum
   - Learner: Minimum
   - Minimum
   - Maximum

4. The Spectrum:

5. The Clusters:

6. The Developmental Effects:
   - **Physical Channel**
   - **Social Channel**
   - **Emotional Channel**
   - **Cognitive Channel**
   - **Moral Channel**

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Diagram 1 The Structure of the Spectrum
The Teaching-Learning Process cont.

The Spectrum of Teaching Styles

Style A – Command Style
Style E – Inclusion Style
Style I – Individual Program-Learners Design Style
Style B – Practice Style
Style F – Guided Discovery Style
Style J – Learner-Initiated Style
Style C – Reciprocal Style
Style G – Convergent Style
Style K – Self-Teaching Style
Style D – Self-Check Style
Style H – Divergent Production Style

The Infrastructure of the Spectrum

1. The Axiom: The basis for the Spectrum of Teaching Styles is that all elements of teaching behavior are the result of a chain of decisions. Each action in the teaching-learning process is the result of a specific decision and each action that follows is impacted by all the prior choices.

2. The Anatomy of Any Style: This is comprised of all the possible decisions that are made in each of the three phases. As described above, these are all the decisions leading up to when students arrive and all the interactions between teacher and student, including performance assessments. This element of the spectrum describes the “what” and “how” along with an understanding that there is an impact on each of the many subsequent decisions that are made throughout each of the three phases in the instructional process.

3. The Decision Makers: Decisions can be made by either the teacher or the learner. This concept also includes the amplitude with which the individual contributed to the decision. The teacher, as well as the learner can contribute their decision making power from maximum to a minimum. As presented by Mosston, when the teacher contributes a maximum value on a decision, the learner must contribute a minimum. It is possible for the reverse to occur. When one of the individuals relinquishes a little of the decision making power, the other may assume more.

4. The Spectrum: There are eleven styles of teaching based upon “who” in the instructional decision making process makes the choice about “what” and “when”. In addition, there are countless alternative styles that are nested between the identified styles on the continuum of the spectrum. The instructional position on the spectrum is determined by the specific decisions that are made. Changes in teaching style are then accomplished by continuously shifting the responsibility from the “who makes the decision”… from teacher to learner and vise-versa.

5. The Clusters: The spectrum has two basic clusters and each reflects the ability to respond. The first group (styles A – E) represents teaching and related instructional behaviors that classify the learner’s responses based upon reproducing an element of knowledge, reproducing a demonstrated skill or imitating or replicating a practice activity. This is generally acknowledged as primary information, basic skills and simple functions. In this “zone” the learner responds by adhering to the decisions that have been made by the teacher. The line between the two clusters is called the “Discovery Threshold”.

The second cluster of teaching styles (styles F – K) are grouped together as a result of the learner’s ability to make decisions about the production of new knowledge, discovery of alternative routes of achievement or respond by simply creating a path to success. These teaching styles represent the learner’s ability to discover and successfully reach the established instructional objective.

6. The Developmental Effects: As each decision and series of decisions are made, the influence of previous decisions as well as the resulting choices, impacts each learner in a unique way. The Spectrum provides a structure to analyze the impact of decisions as well as the unique impact on the individuals who are influenced by the instructional choices during the quest to accomplish the instructional objectives of the lesson. This analysis examines the impact in a variety of learning domains.

(Style A) The Command Style

The Command Style of teaching is characteristic of the teacher making all of the instructional decisions (pre-impact; impact; post-impact) within the structure of the teaching style in pursuit of achieving the performance expectations and learning objectives.

(Instructional Phase) (Decision Maker)
Pre-Impact Teacher
Impact Teacher
Post-Impact Teacher

In each phase of instruction during the Command Style, there is a direct relationship between teacher, who is making the decisions, and learner, who is responding by replicating behavior. Each action by the teacher, who is directing activity, is followed by an exact movement by the learner, who is duplicating the demonstrated activity. The content, location, time allocations, lesson pace and activity sessions are all decisions that are made by the teacher. The instructional objectives, along with teaching episodes and practice activities, are the decision of the teacher. Following direction, the learner responds with specific answers, duplicating demonstrations and replicating specific motor skills to successfully reach the objective.

The Pre-Impact Phase Decision Maker
1. Instructional objective for the episode Teacher
2. Which “Teaching Style” Teacher
3. Learning style Teacher
a. Initial teaching style matched with learning, evaluation, proceed
b. Initial teaching style matched with learning, evaluation, new selection, proceed
4. Whom to teach Teacher
5. Subject matter for the lesson Teacher
a. Type of subject matter
b. Quantity of tasks
c. Quality of performance
d. Order of tasks (random or progressive sequence)
6. When to teach (pace) Teacher
a. Starting time for each task
b. Pace of the activity tasks

The Teaching-Learning Process cont.
Decision Sets          Decision Categories

Preimpact
(Content: Preparation)
1. Objective of the episode
2. Selection of a teaching style
3. Anticipated learning style
4. Whom to teach
5. Subject matter
6. When to teach (time):
   a. Starting time
   b. Pace and rhythm
   c. Duration
   d. Stopping time
   e. Interval
   f. Termination
7. Modes of communication
8. Treatment of questions
9. Organizational arrangements
10. Where to teach (location)
11. Posture
12. Attire and appearance
13. Parameters
14. Class climate
15. Evaluative procedures and materials
16. Other

Impact
(Content: Execution and Performance)
1. Implementing and adhering to the preimpact decisions (1–14)
2. Adjustment decisions
3. Other

Postimpact
(Content: Evaluation)
1. Gathering information about the performance in the impact set (by observing, listening, touching, smelling, etc.)
2. Assessing the information against criteria (instrumentation, procedures, materials, norms, values, etc.)
3. Providing feedback to the learner.

   About subject matter
   a. Value statements
   b. Corrective statements
   c. Neutral statements
   d. Ambiguous statements
   Immediate
   About roles
   Delayed

4. Treatment of questions
5. Assessing the selected teaching style
6. Assessing the anticipated learning style
7. Adjustment decisions
8. Other

Diagram 2 The Anatomy of Any Style of Teaching on the Spectrum
The Teaching-Learning Process cont.
c. Duration of each task
   Teacher

d. Order of performance
   Teacher

7. Modes of communication
   Teacher

8. Treatment of questions
   Teacher

9. Organizational arrangements
   Teacher

10. Where to teach the lesson (location)
    Teacher

11. Posture
    (instructional cues related to body position)
    Teacher

12. Attire and appearance
    Teacher

13. Parameters (atmosphere & limits)
    Teacher

14. Class climate
    Teacher

15. Evaluation procedures and materials
    Teacher

16. Other (any other exclusive category)
    Teacher

The Impact Phase

1. Implementing and adhering to the pre-impact decisions
   Teacher

2. Adjustment decisions
   Teacher

   a. Problem occurs, identify it & correct it, proceed
   b. Problem occurs, terminate activity, move on to next

3. Other (any other exclusive category)
   Teacher

The Post-Impact Phase

1. Gathering performance information about the impact phase
   Teacher

2. Assessing the information against criteria
   Teacher

3. Providing feedback to the learner
   Teacher

4. Treatment of questions
   Teacher

5. Assessing the selected teaching style
   Teacher

6. Assessing the anticipated learning style
   Teacher

7. Adjustments based upon assessments
   Teacher

8. Other (any other exclusive category)
   Teacher

The Command Style of teaching creates a simple scenario where the teacher gives direction and the learner responds by replicating the requested knowledge, skill, or behavior. This style, while efficient in accomplishing the selected learning objective, is most effective for basic skills, and there is very little creativity. Classes, when observed and individuals are assessed, will demonstrate conformity with little ability to improvise and respond to open skill situations. The most obvious drawback to the use of this style of teaching is the uniformity of decisions not matching the individual learning styles of each of the learners in the group. The second, drawback identified by Mosston is the “power” of the teacher that is unresponsive to the sensitivity, as well as needs of the learner. The third drawback to the command style is the excessive repetition that is required of everyone. This delays the more gifted students while at the same time the initial starting skill is far beyond the ability and understanding of others.

Looking at the Command Style of Teaching

This style of teaching, displaying the characteristics of a teacher-centered episode, places the teacher making all the decisions about every aspect of each of the three instructional phases of the class. As a result, from the time students report to the class, through each of the approximately twenty-seven instructional elements, until dismissal the teacher is in control of what happens, when it will happen, what will be taught, practice opportunities, who will participate and what if anything will be assessed to measure learning. The learner listens to the teacher, responds to all the directions, practices when and what the teacher has planned. During practice sessions the learner reproduces all of the learning tasks without any creativity, listens to feedback and is engaged in measuring critical learning by the design of the teacher. Gerney and Dort (1992) support this style in the face of some controversy and unwillingness to yielding all the decision making power to any one authority figure. “Style A, however, has its place. We use it when there is a question of safety and for efficiency of instruction.”

(Style B) The Practice Style

The Practice Style, as the second teaching style on the Spectrum of Teaching Styles continuum, is the first to shifts some of the decisions from the teacher to the learner. This shift of decision making power also provides for a change in the dynamics of the relationship between teacher and learner as well as a change in the teaching-learning atmosphere.

The changing responsibilities of the learner begin to have a big impact on the teaching learning process as the responsibility for finding a successful route to achieving the lesson objectives is now, in part, shared between the teacher and the learner. In this style, the teacher must begin to trust that the learner will make solid decisions based on an understanding of the instructional objectives. This expansion of the individual’s “learner” role must be taken into consideration during the development of the other two phases (Pre-Impact & Post-Impact) of the teaching-learning process. This style shifts the responsibility for approximately nine decisions to the learner during the Impact Phase. This style creates an opportunity for learners to implement, during the Impact Phase, the decisions made in the Pre-Impact (planning) Phase of the teaching-learning process. This implementation allows for individuals to work independently in an effort to achieve the instructional goals.

The Pre-Impact Phase

1. Instructional objective for the episode
   Teacher

2. Which “teaching style”
   Teacher

3. Learning style
   Teacher

TRENDS IN DRUG USE? cont.
The Teaching-Learning Process cont.

- **a.** Initial teaching style matched with learning, evaluation, proceed
- **b.** Initial teaching style matched with learning, evaluation, new selection, proceed
- **4.** Whom to teach
- **5.** Subject matter for the lesson
- **c.** Type of subject matter
- **d.** Quantity of tasks
- **e.** Quality of performance
- **f.** Order of tasks (random or progressive sequence)
- **6.** When to teach (pace)
- **g.** Starting time for each task
- **h.** Pace of the activity tasks
- **i.** Duration of each task
- **j.** Order of performance
- **7.** Modes of communication
- **8.** Treatment of questions
- **9.** Organizational arrangements
- **10.** Where to teach the lesson (location)
- **11.** Posture
- **(instructional cues related to body position)**
- **12.** Attire and appearance
- **13.** Parameters (atmosphere & limits)
- **14.** Class climate
- **15.** Evaluation procedures and materials
- **16.** Other (any other exclusive category)

The Impact Phase

- **1.** Implementing and adhering to the Pre-Impact decisions
  - **a.** Posture
  - **b.** Location
  - **c.** Order of tasks
  - **d.** Time to start and end
  - **e.** Pace
  - **f.** Transitions between episodes
  - **g.** Attire & appearance
  - **h.** Questioning for clarification
- **2.** Adjustment decisions
  - **a.** Problem occurs, identify it & correct it, proceed
  - **b.** Problem occurs, terminate activity, move on to next
- **3.** Other (any other exclusive category)

The Post-Impact Phase

- **1.** Gathering performance information about the Impact Phase
- **2.** Assessing the information against criteria

Looking at the Practice Style of Teaching

The second teaching style, Practice Style, has many of the same characteristics as the Command Style in each of the three phases of a teaching-learning episode. The teacher makes several decisions including which decisions will be transferred to the learner. In the Practice Style the teacher identifies the time that will be dedicated to the learner and then allows the learner to make the next series of decisions in the learning process. There are approximately nine (Impact Phase 1a-h) decisions in the impact phase of the lesson that are made by the learner according to Mosston. When the teacher has completed the Pre-Impact Phase of the lesson and releases the student to practice the identified objectives the learner then chooses what, the order of events, location for practice events, the practice pace, for how long and transitional events. These decisions then allow the teacher to move around the area freely providing feedback and making suggestions to strengthen the learner’s performance. The learner is also responsible to question the teacher related to clarifying the performance. Included in this style is an understanding that the learner may be trusted and is capable of working toward the instructional objectives of the lesson. The teacher then assumes control of the teaching-learning process for the remainder of the lesson.

Conclusion

As stated clearly and very distinctly by Greenspan (1992), “The Spectrum of Teaching Styles became my philosophy before I ever set foot in my elementary classroom. Although its importance cannot be denied, what to teach is emphasized by too many college classes. The Spectrum taught me how to teach”. Each teaching styles along the Spectrum of Teaching continuum that has been identified by Mosston, along with the many variations that lie between each of the teaching styles, has a specific purpose which has been determined by the decisions being made and by whom. When engaging learners in the teaching-learning process, it is important for the teacher to consider how individual learners will best respond to making decisions. There is a trusting bond that is developed within the decision making process when employed systematically considering learner abilities as well as maturity.

The final thought to be conveyed in this segment of the series is that there continues to be a strong emphasis within teacher preparation programs for instructors as well as school-based supervising teachers to provide a variety of pre-service opportunities to challenge future professional physical educators. Confronting individuals or groups with a variety of different “tests” can better prepare students for the student teaching experience and if again challenged in that setting the result will be a stronger, better equipped professional.
It is the intent of the authors to review and introduce the components and strengths of each of the instructional styles that comprise the Spectrum of Teaching Styles.

References
National Association for Sport and Physical Education. (2001) Physical Education is Critical to a Complete Education, NASPE,

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