The Spectrum of Teaching Styles and Its Role in Conscious Deliberate Teaching

For teachers to know the value of the Spectrum, they must consciously and deliberately plan teaching-learning episodes; execute the plan with behavioral accuracy and consistency; and analyze and evaluate the process and product in relation to intended goals.

RUDY MUELLER SUZANNE MUELLER

The Spectrum is an integrated model of teaching styles. Each style is located on a decision-making continuum that gives teachers and students more or less decision-making responsibility in one or more of the three phases of teaching: planning, activation, and evaluation. Each style is grounded in a different effective teaching concept with clearly delineated roles for the teacher and learners. Each style is distinctly different from the others and each is behaviorally reproducible.

Yet, the Spectrum is more than a decision-making continuum with role delineations for teachers and learners. The Spectrum:

- opens a way to find compatibility between the intent and action of a lesson;
- offers a way to assess the accuracy of the intended instruction;
- provides a basis for making decisions about the compatibility of other instructional structures and teaching skills;
- makes it possible to clearly communicate to others a whole complex behavioral construct by using a few words;
- gives clear direction and emphasis to the component of pedagogy in teacher education;
- contributes to the establishment of pedagogy as a science of teaching; and
- makes it possible for all teachers to learn and use the styles regardless of personality, idiosyncrasies, or individual "artiness" in teaching. In other words, one's concern with preserving a personal teaching style is not negated by using the Spectrum. In fact, those who use the Spectrum have found that it enhances their personal teaching styles.

The Spectrum takes teaching from an intuitive place to a conscious and deliberate act in planning, activating, and evaluating teaching.

First, for teachers to know the value of the Spectrum, they must believe teaching is a proactive act in which teachers consciously and deliberately plan teaching-learning episodes; execute the plan with behavioral accuracy and consistency; and analyze and evaluate the process and product in relation to intended goals.

If teachers don't view teaching as proactive, teachers as prime movers, and prescribed instructional structures as the essence of teaching, then to use the Spectrum or not use the Spectrum is academic. Likewise, teachers who use a few teaching styles or strategies and their own idiosyncratic teaching behaviors limit their professional potential and cannot ensure appropriate learning opportunities for all learners.

Becoming a conscious and deliberate teacher means that teachers must be willing to examine their present teaching behaviors and be open to acquiring new ones or changing old ones. Teachers must make informed choices about the instructional structures which will most likely attain the learning goals they set. Teachers must learn about the pedagogical structures that exist, understand the relationships among them, behaviorally implement them with a high degree of competency, and evaluate the success of their implementation.

As educators, our ultimate question should not be one which seeks to determine the one best way. We should not be trying to pit one instructional structure, one organiza-

tional arrangement, one learning task design, or one type of educating aid against another. The question should be: Which combination of teaching style, pedagogical strategy, teaching skills, and learning tasks do I select and use in this situation to ensure the compatibility and congruency necessary to reach the predetermined goals of this episode, lesson, or series of lessons?

What follows is a sequential description of the planning phase of conscious and deliberate teaching. Teachers must know the subject matter to be taught and must know their learners' developmental stages, range of abilities, learning styles, needs, and interests. Once teachers know what and who to teach, they can determine the psychomotor, cognitive, and/or affective process/product goals that will result in learning. They must then design the teaching-learning episodes needed to reach those goals.

A teaching-learning episode consists of two components: subject matter design and instructional structures. An episode is a period in which the teacher and learners are in the same instructional arrangement working on a particular subject matter goal. A lesson could be one episode or could contain two or more episodes. One episode ends and another begins whenever the subject matter design or the instructional structure changes.

The instructional structure choices teachers make when designing episodes include determining a teaching style, a pedagogical strategy, and compatible teaching skills.

The combination of these instructional structures are chosen based on the process/product goals the teacher has determined for the episode.

Teaching styles from the Spectrum delineate the decision-making relationship between the teacher and learner, and the style-specific roles of the teacher and learners.

Pedagogical strategies delineate the organization of people, equipment or materials; the design of materials; and/or the timing or sequencing of events. Typically, a pedagogical strategy can be used with a variety of teaching styles because the strategies have a limited delineation of the interpersonal decision making or role relationship between teachers and learners.

For example, the pedagogical strategy of learning centers focuses on presentating subject matter organized thematically in stations at which learners visit, read task cards, and complete designated activities. Learning centers could be used in conjunction with the Practice style with single-standard tasks, during the Inclusion style with multiple-standard tasks, or during the Divergent Production style with problem-solving tasks.

Teaching skills are the host of behaviors teachers use to plan, activate, and evaluate the teaching act.

Process Goal	Teaching Style	Pedagogical Strategy
Determination of learner's skill level doing the spike from a throw "set up" to regulation net height	Reciprocal (small group)	Behavioral Test

Teaching Skills:

- Select or design behavioral test
- Design evaluative skill criteria for observer
- Accurately assess quality of test performance
- Accurately analyze test results
- Design relevant individual programs for each learner

Figure 1. Episode 1: Volleyball

Process Goal	Teaching Style	Pedagogical Strategy
Independent physical practice at the challenged level, analysis and evaluation	Self-check	Diagnostic and prescriptive with self-learning tasks

Teaching Skills:

- Design learning task(s) for each learner's present ability level
- Structure the environment to facilitate the design of the learning task(s), learner work space, and flow and movement of learners as they engage in task pursuit
- Select, design, and/or construct the materials for the episode (lesson)
- Communicate instructions, directions, and visual model(s) of the subject matter and the learning task
- Communicate the set of process/product expectations including the learners' and teacher's roles
- Monitor learners' behavior to ensure a high frequency rate of task and role pursuit
- Observe to collect performance data
- Analyze performance data
- Guide task performance (practice) by communicating indirect feedback messages, and after listening to the learner communicate his/her self-evaluation comments, verify the self-evaluation or communicate the teacher's evaluation or embellish on learner's self evaluation

Figure 2. Episode 2: Volleyball

Table 1. Teaching Styles, Pedagogical Strategies, and Teaching Skills Compatibility Chart

Reciprocal Style

Compatible Ped. Strategies	Compatible Teaching Skills
a. Task criteria card/sheet/placard b. Learning centers c. Contracting d. Work sheets e. Fishbowling f. Role playing with script g. Group projects h. Testing i. Learning packets j. Resource/materials centers k. Goal setting l. Others	1. Identify process and product goals 2. Write behavioral objectives in all three domains which reflect the process/product goals 3. Design single standard task with observational criteria for peer observer 4. Give a clear and succinct explanation 5. Provide quality demonstration/visual model 6. Accurately observe and analyze learner performance 7. Give accurate indirect feedback to peer observer about the "doer" learner's performance 8. Give accurate direct feedback to the peer observer (and other members of the supporting cast) about how well he/she is functioning in the designated role 9. Conduct an indirect summary session for learners to describe and evaluate episode/lesson before the teacher does 10. Others

Table 2. Teaching Styles, Pedagogical Strategies, and Teaching Skills Compatibility Chart

Divergent Production Style (Problem Solving)

Compatible Ped. Strategies	Compatible Teaching Skills
a. Work sheets b. Brainstorming c. Learning centers d. Station learning e. Open discussion f. Individual programs g. 20 questions j. Forced ranking k. Hot seat l. Gaming m. Simulations n. Forced ranking o. Case studies p. Group projects q. Debating r. Movement problems s. Experiments t. Others	1. Identify the process and product goals 2. Write behavorial objectives in all three domains which reflect the process product goals 3. Design learning tasks which are open ended problems (Possible/Feasible/ Desirable) which induce divergent thinking and divergent production 4. Give clear and succinct explanations of the learning task and the teacher's expectation for both the learner and the teacher 5. Accurately observe and analyze learner performance 6. Give accurate indirect feedback and clues to assist learners 7. Conduct an indirect summary session for learners to describe events, share ideas or products, and evaluate the session based on their personal involvement 8. Others

They include designing learning materials, structuring the learning environment, communicating task information, demonstrating, giving feedback, clarifying, listening, questioning, and monitoring learner performance. Although most teaching skills are used during the actual teaching, the way in which they are used must be compatible with the goals, styles, and strategies the teacher determined previously.

Conscious and deliberate teaching not only requires teachers to know about subject matter, learners, and pedagogy, but also requires them to choose and accurately use the instructional structures congruent with the learning goals they determine for learners.

The following are examples of conscious and deliberate goal planning:

Product Goal

1. Each learner can demonstrate self-improvement in replicating the volleyball spike.

Process Goals

1. Learners will take a behavioral test to determine their skill level.
2. The teacher will design an individual program to match and challenge each learner's ability.
3. Learners will organize themselves in small groups of three and work cooperatively to facilitate each other's pursuit of the learning task.

Figures 1 and 2 demonstrate how teachers who establish their product and process goals can consciously and deliberately select the compatible instructional structures and behaviors to plan and activate teaching-learning episodes which increase the possibility of attaining their predetermined goals. To help educators accomplish this task, we have produced two analysis tools: a chart showing the compatibility of various teaching styles, pedagogical strategies, and teaching skills; and a series of Structural Congruency Profiles, each of which lists the criteria for a different instructional structure.

The Teaching Styles, Pedagogical Strategies, and Teaching Skills Compatibility Charts depict the pedagogical strategies and teaching skills

Table 3. Structural Congruency Profile

Teaching Style: Inclusion

Essential Elements	Yes	No
1. Learners determine posture, organization, and geography to see and hear teacher explanation		
2. Teacher explains multistandard learning task(s) designed to accommodate each learner's ability level		
3. Teacher communicates evaluation criteria		
4. Teacher communicates teacher and learner style roles		
5. Teacher demonstrates if requested by learners		
6. Unless prescribed by the learning task, learners determine posture, organization, and geography during task pursuit		
7. Teacher organizes task(s) in one of the four task/space arrangements:		
a. Single task/single station—one task to be done in learner's own workspace		
b. Single task/multiple stations—one task carried out at more than one workspace		
c. Multiple tasks/single station—more than one task carried out at one workspace		
d. Multiple tasks/multiple stations—more than one task carried out at more than one workspace		
8. Teacher indicates when task explanation is over		
9. Learners self-assess and locate task level commensurate with their present ability level		
10. Learners locate workspace and begin task pursuit when ready or seek additional assistance		
11. Teacher monitors appropriateness of learner level choice, quality, and quantity of performance and decorum		
12. Teacher collects data on learner performance and compares it to task criteria		
13. Teacher communicates feedback messages in the form of questions:		
a. Content of question is about task pursuit or learner decorum and is either approving, disapproving, or corrective		
b. The question contains specificity about learner performance		
c. The feedback question is delivered in conversational space and tones		
14. Learner's self-evaluation:		
a. Learner compares own performance to teaching criteria		
b. Learner responds to teacher's feedback questions		
15. After the indirect feedback process, teacher gives direct feedback to learner about self-analysis		
16. After learners complete their first level choice, they choose the next appropriate level		

Table 4. Structural Congruency Profile

Teaching Skill: Direct Performance Feedback

Purpose: Provide learners with direct approving and corrective feedback to enhance performance

Essential Elements	Yes	No
1. When learner performed correctly, teacher gave:	____	____
a. frequent approving feedback	____	____
b. specific approving feedback about good technique	____	____
c. approving feedback about good effort	____	____
2. When learner performed incorrectly, teacher:	____	____
a. observed learner to determine consistency of mistake and analyze error source	____	____
b. gave correction as soon as possible after error determined a pattern	____	____
c. provided specific corrective feedback	____	____
d. corrected one error at a time	____	____
e. gave simple, limited, information	____	____
f. talked about what leaner did and compared it to what should have been done	____	____
g. provided visual model of correct performance	____	____
h. checked for learner understanding of feedback	____	____
i. observed learner performance attempts after feedback completed	____	____
1) approving, if correct	____	____
2) encouragement if good effort	____	____
3) correction if error repeated or change in task degree of difficulty	____	____

Source: American Coaching Effectiveness Program, 1990.

that are compatible with each teaching style. Once teachers have selected a teaching style to meet their episode goals, they can choose from among the compatible pedagogical strategies and teaching skills that supplement episode goal attainment. For example, a teacher designs a product goal of learners demonstrating a variety of self-generated movement solutions to divergent movement problems. The teacher chooses Divergent Production as the teaching style. The teacher could then refer to the Compatibility Chart on Divergent Production teaching style to see what pedagogical strategies could be used to help reach the product goal. In this case, the teacher might choose learning center, station learning, or individual programs. The teacher could then refer to the Compatibility Chart to follow the teaching skills necessary for designing and implementing the learning activities to reach the product goal.

A Structural Congruency Profile (SCP) is a descriptive list of the criteria that make up a teaching-learning concept (i.e., teaching style, pedagogical strategy, teaching skill, learning theory, subject matter concept). The SCP is organized as a checklist and can be used as a congruency guide when designing a teaching episode, as a reminder of the factors which need to be activated during the implementation phase, and as a checklist to ascertain the percentage of behavioral congruency during the assessment phase. Structural Congruency Profiles allow teachers to become more precise in their planning, more deliberate in their implementation behaviors, and more accurate when they evaluate the congruency of their behaviors with the pedagogical structures they chose to implement their episode goals. For example, a teacher selects the Inclusion style for a lesson episode because the product goal is learner success in pitching accuracy at his or her own ability level. The teacher then refers to the Inclusion style SCP to plan the lesson, making sure the episode design matches the criteria for the style (e.g., students can choose from different target distances as they pitch at their own target, a single-task–multiple-station task arrangement). When activating the episode, the teacher could refer to the SCP to check the congruent type of feedback learners must receive in the Inclusion style. Finally, if the teacher videotapes the episode, he or she can view the entire lesson, using the SCP to check whether the teaching behaviors are congruent with the Inclusion style (e.g., Were evaluative criteria communicated? Did learners self-assess? Was feedback in the form of a question?)

The Spectrum of Teaching Styles has had a pivotal role in conscious and deliberate teaching. Teachers must be skilled in a variety of instructional structures to meet the varying needs, abilities, and learning styles of their students. The Spectrum helps teachers organize their instructional choices based on the decision-making relationship and effective teaching concept that will accommodate their learners. Additionally, the Spectrum provides the starting place from which teachers

can choose compatible pedagogical strategies to organize learners and materials and compatible teaching skills to behaviorally implement the plans that will help attain the desired goals.

Mosston's *Spectrum of Teaching Styles* has made a monumental contribution to pedagogy and the concept of conscious and deliberate teaching. No other structure has provided an organized framework in which to place all the "right ways" to teach so teachers can consciously and deliberately make accurate choices in matching instructional structures with process/product goals to facilitate student learning.

References

American Coaching Effectiveness Program. (1990). *Sport pedagogy: Session 3* Leader Level Clinic Video Series (2nd ed.). Champaign, IL: Human Kinetics Publishers.

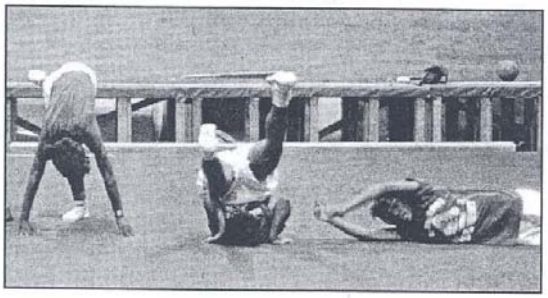
Mosston, M., & Ashworth, S. (1990). *The spectrum of teaching styles: From command to discovery.* New York: Longman.

Mueller, R. (1980). *East Stroudsburg University physical education pedagogy III manual.* (In-house publication used in PRPE 340 Ped III: Prescriptive Models of Teaching Physical Education.)

Mueller, R. (1990). *The role of structural congruency profiles in the design and assessment of teaching/coaching episodes.* AIESP World Convention, Loughborough University, England.

Rudy Mueller is a professor at East Stroudsburg University, Zimbar Gymnasium, East Stroudsburg, PA 18360. Suzanne Mueller is an associate professor at East Stroudsburg University.

Rudy Mueller was part of the Spectrum's original design, development, dissemination, and integration into school programs. Suzanne Mueller became Rudy and Muska's colleague in 1970 when they came to East Stroudsburg (PA) University.



Students can experience the Divergent Production style (Style H) during lessons such as a rolling exercise. Here students learn to produce multiple responses to a single question (e.g., How many ways are there to roll?).