

SHAPE America National Convention & Expo. March 17-21, Seattle, WA

Differences between Student Teachers' Perceiving and Implementing Mosston's Teaching Styles



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1. INTRODUCTION AND BACKGROUND

- Throughout the years, there have been numerous advances in the ways of teaching physical skills and activities in various school-settings; some of the most significant developments that emerged were Mosston's Spectrum of Teaching Styles (STSs).
- The appeal of the STSs framework was that they offered different teaching and learning approaches that assisted in the development of a variety of educational goals and helped teachers meet the needs and interests of the learners.
- Additionally, the STSs framework offered instructors the opportunity to see how to constantly modify a teacher's curriculum to meet different educational goals.



Note. The pictures used in this presentation was from the following resource:
<http://www.dreamstime.com/royalty-free-stock-photos-sport-equipment-2-image22802518>

- Since the STSs were introduced to the field of teaching physical education, they have been recognized by educators in many countries around the world and widely applied in their physical education teacher education (PETE) programs (Byra, 2002; Cothran & Kulina, 2008; Doherty, 2010; Mellor, 1992; Metzler, 2000; Mosston & Ashworth, 1994, 2002, 2008a; Sicilia-Camacho & Brown, 2008).
- Conceptually, the STSs have continuously been refined since the first edition in 1966 (Ashworth, 2008b; Boschee, 1972; Byra & Marks, 1993; Ernst & Byra, 1998; McCullick & Byra, 2002; Goldberger, Ashworth & Byra, 2012).

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- Since there is no single, perfect style of teaching that could be utilized within the framework of teaching physical education, verifying the effect of the STSs is always an interesting topic in the research of pedagogical inquiry (Byra & Jenkins, 2000; Gerney & Dort, 1992; McCullick & Byra, 2002; Mosston & Ashworth, 2008; Zeng et al., 2009).
- As a result, teachers and scholars in the field of teaching physical education apply the STSs as a framework for delivering instruction and conducting research at different school levels (Byra & Jenkins, 2000; Gerney & Dort, 1992; Greenspan, 1992; Kirby, Byra, Wallhead & Readdy, 2013; Mellor, 1992; Metzler, 2000; 2009; Zeng, 2012; Zeng, 2014; Zeng et al. 2009).

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- The findings of those pedagogical studies provided valuable information that enabled teachers to purposefully prepare and implement their teaching to match various teaching objectives and characteristics of their learners (Byra & Jenkins, 2000; Greenspan, 1992; Metzler, 2000; Sicilia-Camacho & Brown, 2008; Zeng, 2012; Zeng, 2014; Zeng et al. 2009).

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- Since 1970s, pedagogical scholars and physical educators have utilized the STSs framework, various instructional styles, widely accepted and understood terminologies, and possible resources conducting research studies in teaching physical education and coaching sports (e.g., Beckett, 1991; Byra & Jenkins, 2000; Ernst & Byra, 1998; Griffey, 1981; Locke, 1977; McCullick & Byra, 2002; Metzler, 2000; Zeng, 2012; Zeng, 2014; Zeng et al., 2009).
- However, study and information relate to how the student-teachers (including undergraduates and graduates, male and female) in PETE programs perceive and implement the STSs have still rarely covered. From this perspective, the present study would like to explore the above concern; therefore, the purposes of this study were to:

Purposes

- (a) investigate how the undergraduate and graduate student-teachers perceive and implement Mosston's STSs in a PETE program;
- (b) compare the differences in perceiving and implementing the STSs between undergraduates and graduates, male and female student-teachers; and
- (c) summarize and discover meaningful information on how the STSs work among the two levels' student-teachers so that the PETE professionals can better understand how the STSs work for different genders' of student-teachers, and better prepare future student-teachers become more skillful teachers.

2. METHODS

Participants

- Participants were 142 student-teachers wherein 84 undergraduates (age 20-22) and 58 graduates (age 22-29) or 96 male, 46 female. These participants enrolled in a STSs based teaching strategies course in a PETE program in an urban university located in northeast of the USA.
- All student-teachers (total = 157) during the investigation period (two full academic years) in the PETE program were invited to participant in a ‘Self report survey’; as a result, 142 student-teachers completed (Return rate = 90.5%) the Spectrum of Teaching Styles Inventory-adapted version (STSI-AV, Zeng, 2012).
- All the participants provided informed consent and were assured anonymity through the use of a given number.

Instrumentation

- The instrument used in this study was the Spectrum of Teaching Styles Inventory^{-adapted version} (STSI-AV, Zeng, 2012), this instrument was a polite study for investigating the status of how the student-teachers in PETE program perceive Mosston's Spectrum of Teaching Styles (the paper of that polite study was presented at 2012 American Association for Health, Physical Education, Recreation, and Dance (AAHPERD) National Convention and Exposition (Boston, MA).



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In the STSI-^{AV}, each style has its name, classroom description, what do you see happening in the classroom, and who is doing what, when?

The following three statements: 1) “I have used this style to teach physical education lessons”; 2) “I think this style of teaching would help students learn skills/ activities”; 3) “I think this style of teaching would motivate students to learn”.

The participants can respond to the statements by choose one of the following options: ‘never-use / strongly-disagree (score = 1.00)’ ‘seldom-use / some-disagree (score = 2.00)’ ‘sometimes-use / okay (score = 3.00)’ ‘often-use / some-agree (score = 4.00)’ or ‘always-use / strongly-agree (score = 5.00)’. The ‘Self report survey’ using the STSI-^{AV} was administered to the participants after all the course works / training programs were completed.

Course works and teaching training programs



- The course works and training programs implemented in the current study included: (a) 9 weeks lectures that covered the following chapters 2, 3, 6 - 15 in the book of *Teaching Physical Education*^{—First online edition} (Mosston & Ashworth, 2008).
- (b) Teaching episodes and lessons example workshop; that is, (1) during the workshop, the participants were provided various teaching episode and lesson plan using all the styles they have learned from the lectures (Style A, B, C, D, E, F, G, H, & I); and (2) the participant had time and opportunities to discuss what he/she has learnt from the examples, what is his/her plan to implement for the incoming teaching.

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- (c) Teaching episodes assignments --that is, the participants were requested to develop at least one teaching episode for each style learned by utilizing his/her favorite sport skills or physical activities, but were only required to submit any of the three teaching episodes as their assessments from those nine teaching episodes.
- (d) The actual teaching training –that is, a total of six weeks’ teaching training in our Educational Laboratory; where each participant got a chance to teach a “STSs lesson”.
- The “STSs lesson” required each participant to develop a STSs lesson plan containing a minimum of four different teaching styles with a 40 minutes designated time. After each lesson completed by the student-teacher, a 5 minutes ‘after teaching conference’ would be given by the instructor to provide feedback, comments and suggestions regarding on how well his/her lesson was done, which areas can be improved and etc. . .

Data analyses



- Data analyses were done by descriptive statistics and the independent samples t test. Although the participants were comprised of two levels' students, (undergraduate and graduate levels) but 95% of the student teachers at graduate level did not get the chance to take the STSs based teaching strategies course during their undergraduate years.
- Descriptive statistics were utilized to reflect the general status of how these student-teachers perceive and implement the STSs.
- The independent samples t -tests were employed for comparing the differences between the undergraduate and graduate, as well as the male and female student-teachers with regard to their perception and implementation of the STSs.

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3. RESULTS



- The descriptive statistics for all the participants can be found in Table 1.
- The following are the significant findings: 1) “I have used this style to teach physical education lesson”, the participants scored 3.37 to 3.89 on: the Command, Practice, Reciprocal, and Inclusion Styles; scored 2.11 to 2.41 included: the Self-Check, Convergent Discovery, Divergent Discovery, Guide Discovery, and Learner Designed-Individual Program Styles.
- 2) “I think this style of teaching would help students learn skills/activities”, they scored 3.50 and higher on: Command, Practice, Reciprocal, Inclusion, Guide Discovery, Convergent Discovery, and Divergent Discovery Styles.

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- 3) “I think this style of teaching would motivate students to learn”, they scored all above 3.00 on all nine styles with 4.20 (highest) for practice style and 3.20 (lowest) for Guide Discovery Style.
- Another important finding was that the participants self-reported they seldom used the following teaching styles during they were in the PETE program: Learner Designed-Independent Program style /style (2.11); Convergent style / style G (2.19); Guide-Discovery style / style F (2.38); Self-Check style / style D (2.41).
- In other words could be: the participants felt that during their student teaching, with the times allocated and the conditions available for them to teach, the above four teaching styles were difficulty for them to implement in their lessons.

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- The mean score comparison on the STSI-^{AV} released: male used significantly more ($p < .05$) Practice Style than female;
- female used significantly more ($p < .05$) Command Style than male.
- Graduates used significantly more ($p < .00$) Guide-Discovery Style and Divergent-Production Style than those of undergraduates.

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4. DISCUSSION

- The present study investigated the status of student-teachers perceiving and implementing the STSs in a PETE program in an urban university.
- The following two hypotheses (1) no significant differences regarding perceiving and implementing the STSs between the undergraduates and graduates student-teachers; and
- (2) no significant differences regarding perceiving and implementing the STSs between male and female student-teachers were also examined
- (the details of those status and differences have present in Table 1, Table 2 and Table 3; as well as in the results section).

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- The present findings were similar to those of Abdurrahman and Nilüfer (2012), Jaakkola and Watt (2011), Kulinna and Cothran (2003), and Cothran et al. (2005). –omitted here.
- The findings from the present study should have no a big surprise, because the participants came from different education levels (graduate & undergraduate) and gender (male and female); as well as they all have received the ‘Course works and teaching training programs’ (this should be the main reason of the present findings differ from those of all the previous studies). Other than that the following could be the reasons behind those differences:

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- 1) Age, there were 2-9 years age differences between the undergraduates (20-22 years old) and the graduates (22-29 years old); with these differences they were not only differ in education level but also differ in life experiences.
- 2) Experiences, the graduate student-teachers had 1-6 years working experiences; with the working experiences one may perceive, react and perform things differently.
- 3) Combination factor, the third reason could be a comprehensive factor, that is gender, age and education level combination. It was this combination factor that caused participant's attitudes, cognition, the way of deliver subject matter and motivate his or her students' learning during his/her teaching. In short, this is an unclear reason; more studies are needed for this concern.

What factors could contribute those PE teachers fall in this beliefs trend?

- One possible explanation is a relate to the subject matter content or physical skills/activities are well defined and agreed to use the teaching styles in reproduction cluster (A-E).
- The second possibility is that PE teachers respond to their students' preferences. Cothran, Kulinna, and Ward (2000) found that many students in the U.S. preferred reproduction teaching styles.
- Another possibility is that the PE teachers actually were lack of experience with the styles from the production cluster (F-K) – not receive any instruction and examples in used the production styles as they were as students in PE classes or in PETE programs (White, 1998).
- This lack of experiences and instructions (with certain examples and opportunities to implement) impacts their confident and, consequently, their uses of the styles were limited.

Conclusions



- In conclusion, the participants in the present student expressed that (a) they often use Command, Practice, Reciprocal, and Inclusion Styles teaching PE lessons;
- (b) they believed, implement Command, Practice, Reciprocal, Inclusion, Guide-Discovery, Convergent-Discovery, and Divergent-Production teaching styles in their teaching have really helped their students' learning; and
- (c) they also expressed that implement the Spectrum of teaching styles to teach PE lessons would able to motivate their students to learn better.

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- Moreover, male student-teachers in favor Practice Style and Guide Discovery Style, while female student-teachers prefer Command Style and Convergent Discovery Style.
- No significant differences, however, in perceiving and implementing Reciprocal Style and Self-Check Style between male and female student-teachers.
- The graduates in favor Guide Discovery Style and have a stronger belief that “Guide Discovery Style would motivate students to learn”; student-teachers at graduate level also used more Divergent-Production Style than that of the undergraduates’ student-teachers.

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5. WHAT DOES THIS ARTICLE ADD?



- The findings of this study extend the previous studies relate to how PE teachers perceive and implement the STSs.
- The present study marks the first attempt to explore how student-teachers' perceive and implement the STSs in a PETE program.
- Despite the design has its shortcomings, the results of this initial attempt provided some insights into the status of how the student-teachers perceive and implement the STSs and why the student-teachers perceive and implement the STSs differently due to their education levels and gender differences.

6. RECOMMENDATIONS

- Professionals in PETE programs should equip and prepare themselves with various pedagogy theories and skills that will enable them provide complete and solid pedagogical information and knowledge (such as the Spectrum theoretical framework) to their teacher candidates in their programs.
- Not only provide a series lectures but also make the requirements of course works and teaching training programs as specific, detail, and match-up with the professional (e.g., In US, the standards of the National Council for Accreditation of Teacher Education);
- with the characteristics of these requirements, the teacher candidate in their PETE programs will obtain the opportunities to learn and practice multiple teaching styles / methods / approaches in various settings / environments that will change a common phenomenon: “PE teachers worldwide tend to only implement reproduction teaching styles” once reported by Cothran and her colleagues (2005).

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