A Reflective Study on the Use of the Spectrum of Teaching Styles in Physical Education Micro-Teaching Workshop

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Physical education (PE) teacher education aims to equip new teachers with versatile instructional strategies. A core framework is Mosston and Ashworth's Spectrum of Teaching Styles, which conceptualizes teaching as a continuum of decision-making approaches. At one end are **teacher-centered (reproductive)** styles (Command, Practice, Reciprocal, Self-Check, Inclusion), where learners reproduce demonstrated skills or information. At the other end are **learner-centered (productive)** styles (Guided Discovery, Convergent, Divergent, Learner-Designed, Learner-Initiated, Self-Teaching) that engage students in problem-solving and creativity. The Spectrum is internationally regarded as a pedagogical model for PE, helping teachers match style to learning outcomes. For example, Pill et al. (2024) argue that the Spectrum "details the 'how, when and why' of pedagogical decisions," guiding teachers to align strategy with curriculum goals.

In teacher education, **micro-teaching** provides a scaffolded environment for practice. As Cavanaugh (2022) notes, micro-teaching lets trainee teachers teach brief, simplified lessons to peers, with immediate feedback and reflection. Originally developed in the 1960s, micro-teaching reduces risk and helps teachers "conduct teaching simulations, receive immediate feedback, and develop critical reflections on their teaching practices". Modern implementations emphasize reflective practice: student-teachers often record their teaching, review the video, and engage in guided reflection with mentors and peers. Research indicates micro-teaching can boost self-confidence, pedagogical skills, and classroom management of preservice teachers (He & Yan, 2011; Walshe & Driver, 2019; Batman & Saka, 2021). For instance, Batman and Saka (2021) found that Turkish pre-service physics teachers who engaged in repeated micro-teaching with structured reflection showed significant improvements in lesson planning, communication, and classroom management skills.

Reflective practice is central to teacher development. Schön (1983) defines it as continuously thinking about one's actions "while you are doing it" (reflection-in-action) and afterward (reflection-on-action). Effective reflection turns teaching experiences into learning opportunities. In education, structured reflection models (e.g. Gibbs's cycle) guide teachers to evaluate their lessons, identify what worked or not, and plan improvements. PE researchers emphasize that reflection elevates teaching beyond technical skill, helping teachers consider context, student needs, and underlying assumptions. For example, Dervent (2015) showed that Turkish preservice PE teachers progressed from surface ("technical") to deeper reflective levels through journaling after micro-teaching, leading to better lesson planning and time management.

Micro Teaching in CACPE

The Bachelor of Physical Education (B.P.Ed.) programme at Chandrashekhar Agashe College of Physical Education is a two-year professional teacher education programme. The Physical Education Micro Teaching Workshop is a compulsory component of the first-year B.P.Ed. curriculum. During this workshop, student teachers are required to conduct two lessons each on the teaching skills of set induction, demonstration and practice, and class management, with each lesson lasting between five and ten minutes. Subsequently, they are required to conduct three bridge lessons of approximately twenty minutes each. Prior to participating in the Micro Teaching Workshop, B.P.Ed. students complete a course that provides detailed theoretical knowledge of various teaching styles in physical education, particularly the Spectrum of Teaching Styles. Consequently, student teachers are expected to apply the teaching styles they have learned theoretically while planning and delivering physical education lessons during the workshop. The Micro Teaching Workshop thus serves as an important platform for bridging theoretical understanding and practical application of pedagogical approaches in physical education teacher education.

Rationale and Significance : Integrating the Spectrum of Teaching Styles into micro-teaching could enrich PETE by exposing students to diverse pedagogies. However, novices often default to traditional Command and Practice approaches. Monacis et al. (2024) found that in-service PE teachers overwhelmingly reported using reproductive styles far more than productive ones in their lessons. Similarly, Espada (2023) surveyed PE students and found they intended to use teacher-centered styles more often, though preference for guided discovery and divergent styles increased with advanced study. This suggests a developmental trajectory and the potential impact of education on teaching style choice. Yet few studies examine how micro-teaching experiences and reflection interact with style adoption. In other

words, there is a gap in understanding how engaging with the full spectrum of styles during simulated teaching – coupled with reflective analysis – influences future PE teachers' pedagogical decision-making and confidence.

Literature Synthesis and Gaps

Recent empirical studies highlight trends related to teaching styles in PE education. Survey research indicates both experienced and novice PE teachers favor reproductive styles. For example, Monacis et al. (2024) found that Italian PE teachers reported significantly more frequent use of Command and Practice styles than student-centered approaches. Likewise, a large Spanish study by Espada (2023) showed that senior PE students still scored higher on intentions to use reproductive styles, though interest in Guided Discovery and Divergent styles grew with each year of study. Qualitative work echoes this: Syrmpas et al. (2017) interviewed Greek PE teachers and observed that, despite valuing the Production cluster philosophically, most teachers actually implemented reproductive approaches, citing factors like classroom management, limited time, and lack of training in student-centered methods. These findings underscore a persistent lean towards teacher-directed modes in PE, suggesting a need to examine how experience and reflection might shift practice.

Research on micro-teaching and reflection offers promising but dispersed insights. In broader teacher education, reflective micro-teaching has been shown to boost self-efficacy and pedagogical skill. Lewis (2024) studied student teachers (TESOL context) and found that talking about micro-teaching activities promoted deeper reflection on teacher identity, beyond immediate lesson problems. Studies also report that micro-teaching fosters confidence and reflective thinking: student-teachers "consider the use of video combined with guided reflection… to have great potential in helping them form links between theory and practice" (Kourieos, 2016). Batman and Saka's (2021) intervention with repeated micro-teaching plus reflective diaries significantly improved preservice teachers' subject mastery, planning, and classroom management skills. Dervent (2015) in a PE setting found that engaging novices in cycles of micro-teaching and reflection advanced their reflective thinking from technical to contextual levels, with clear gains in planning and time management.

Gap : Despite this rich literature, no study has specifically connected the two domains: how PE trainees use the full Spectrum of teaching styles within micro-teaching, and how reflective practice mediates this process. In other words, while the benefits of micro-teaching and reflection are documented, and the Spectrum theory is well-theorized, we lack research on their intersection in a physical education teacher education context. This study aims to fill that gap by illuminating the reflective experiences of student-teachers as they experiment with diverse teaching styles in a

controlled setting, thereby advancing both theory and practice in PETE.

The study will pursue the following research objectives

- Document student-teachers' reflections on their experiences implementing each style, focusing on planning, execution, and perceived student engagement.
- Identify challenges or adjustments noted by students for each teaching style (e.g. classroom control, pacing issues) and how they respond to these challenges. Evaluate changes in student-teachers' self-reported confidence and intended future use of different teaching styles before and after the micro-teaching experience.

The study will address the following research questions:

1. Which teaching styles from the Spectrum do B.P.Ed student-teachers choose for their micro-teaching lessons, and what justifications do they give for those choices?

2. How do student-teachers describe and reflect on their lesson experiences when using each style (e.g. what worked, what was difficult, how students responded)?

3. What perceived effects do student-teachers report on their own learning and on learner engagement associated with different teaching styles in the micro-teaching context?

Methodology

The present study adopted a qualitative descriptive research design using the survey method to explore the reflections and experiences of B.P.Ed. student teachers regarding the use of the Spectrum of Teaching Styles during a Physical Education Micro Teaching Workshop. The population of the study comprised 106 first-year Bachelor of Physical Education (B.P.Ed.)

students enrolled in the Chandrashekhar Agashe College of Physical Education Pune for Physical Education Teacher Education (PETE) programme. A purposive sampling technique was employed to select participants who had conducted micro teaching lessons under the direct guidance and supervision of the researcher and had experience in implementing various teaching styles from the Spectrum of Teaching Styles. Accordingly, fifteen student teachers were selected as the sample for the study; however, twelve participants submitted complete responses and were included in the final analysis. Data were collected through a researcher-developed reflection sheet consisting of open-ended questions related to lesson planning, teaching experiences, learner responses, implementation challenges, learning outcomes, and perceptions regarding the effectiveness of different teaching styles. The reflection sheet was

administered online through Google Forms following the completion of the micro teaching workshop. Participants were requested to provide detailed reflections based on their actual teaching experiences. The collected responses were compiled electronically and analysed using thematic analysis. The analysis involved repeated reading of the responses, identification of meaningful statements, coding of recurring ideas, and grouping of similar codes into broader themes. The resulting themes were used to interpret the experiences of student teachers and to understand the perceived effectiveness of the Spectrum of Teaching Styles in physical education micro teaching.

Results

Table I : *Percentage Distribution of Teaching Styles Used by B.P.Ed. Student Teachers During the Physical Education Micro Teaching Workshop*

Teaching Style	Percentage %
Reciprocal Style	
Practice Style	66.7
83.3	
Self Check Style	41.7
Inclusion Style	58.3
Guided Discovery Style	50
Divergent Discovery Style	33.3
Convergent Discovery Style	8.3

Table 1 presents the teaching styles used by the B.P.Ed. student teachers during the Physical Education Micro Teaching Workshop. The findings indicate that the practice Style was the most frequently used teaching style, adopted by 83.3% of the participants. The findings suggest that the student teachers showed a preference for learner-centered teaching styles that encourage student participation, autonomy, and engagement during physical education lessons.

The purpose of this study was to explore the experiences of B.P.Ed. student teachers regarding the use of the Spectrum of Teaching Styles during a Physical Education Micro Teaching Workshop. The analysis of reflective responses revealed several recurring themes related to student participation, learning experiences, teacher development, challenges encountered, and perceptions regarding the effectiveness of different teaching styles.

Enhanced Student Participation and Engagement

One of the most prominent findings was the positive impact of the Spectrum of Teaching Styles on student participation. Participants consistently reported that learners were more actively involved in the lesson when styles such as Inclusion Style, Guided Discovery Style, Reciprocal Style, and Practice Style were used. Student teachers observed that learners demonstrated enthusiasm, curiosity, and willingness to participate in activities. Several respondents highlighted that students remained actively engaged throughout the lesson and showed eagerness to solve challenges and complete tasks.

The use of productive teaching styles appeared to create an environment in which learners became active contributors rather than passive recipients of information. Student teachers noted that learners enjoyed discovering solutions independently and remained focused on the activities. The opportunity to perform tasks according to individual ability levels increased participation and reduced learner hesitation. Participants further reported that students exhibited greater interest in physical activities and sports when teaching styles encouraged exploration and autonomy.

Recognition of Individual Differences Among Learners

A second significant theme emerging from the reflections was the recognition of learner diversity. Student teachers acknowledged that learners possess varying abilities, learning speeds, interests, and confidence levels. The implementation of Inclusion Style particularly enabled participants to understand the importance of accommodating individual differences within physical education lessons.

Several respondents stated that allowing students to practice according to their own ability levels resulted in improved engagement and learning outcomes. Student teachers became aware that not all learners respond equally to direct instruction and that flexible teaching approaches are essential for creating inclusive learning environments. This realization contributed to a deeper understanding of learner-centered pedagogy and reinforced the importance of adapting instructional strategies to meet diverse learner needs.

Development of Independent Learning and Discovery

The reflections indicated that productive teaching styles, especially Guided Discovery Style, encouraged independent thinking and problem-solving among learners. Student teachers reported that learners generated their own solutions, explored multiple movement patterns, and demonstrated creativity while performing tasks.

Participants observed that students were able to explain the cues they discovered and demonstrate their findings to peers. Such experiences provided evidence that learning was not limited to skill execution but extended to cognitive engagement and reflective thinking. Several respondents described Guided Discovery as more effective and enjoyable than traditional approaches because it encouraged active learning and deeper understanding.

The findings suggest that discovery-oriented teaching styles facilitated meaningful learning experiences by promoting learner autonomy and encouraging students to become active participants in the construction of knowledge.

Professional Growth of Student Teachers

Another major theme concerned the professional development of the student teachers themselves. Many participants reported increased confidence in lesson delivery after

implementing different teaching styles. Exposure to diverse instructional approaches helped them understand how learners respond under varying teaching conditions.

Student teachers indicated that the workshop enhanced their ability to plan lessons, organize activities, manage equipment, and make instructional decisions. Several participants expressed that the experience motivated them to experiment with innovative teaching methods in future professional practice. They also acknowledged the importance of patience, flexibility, and pre-planning in conducting effective physical education lessons.

The reflective responses suggest that practical exposure to the Spectrum of Teaching Styles contributed significantly to the development of pedagogical competence and professional confidence among future physical education teachers.

Challenges in Implementing Diverse Teaching Styles

Despite the positive experiences, participants reported several challenges during lesson implementation. Time management emerged as the most frequently mentioned difficulty. Student teachers found that discovery-oriented and inclusive activities often required additional instructional time, making it difficult to complete all planned activities within the allotted period.

Classroom management was another commonly reported challenge. Participants noted difficulties in monitoring all students simultaneously, maintaining discipline, and ensuring that every learner understood the task requirements. Some respondents indicated that learners occasionally required extended explanations before they could effectively engage in the activity.

Additional challenges included preparing task cards, organizing equipment, making on-the-spot modifications, and managing transitions between activities. These findings indicate that while learner-centered teaching styles offer substantial educational benefits, their successful implementation requires careful planning and management skills.

Perceived Effectiveness of the Spectrum of Teaching Styles

Most respondents believed that the use of different teaching styles enhanced both participation and learning. Student teachers reported that learners remained more focused, enthusiastic, and actively engaged when they were given opportunities to explore, discover, and practice according to their own capabilities.

Participants also indicated that the use of varied teaching styles reduced boredom and increased the amount of active learning time. Many expressed the view that employing multiple teaching styles created richer learning experiences than relying solely on traditional teacher-centered approaches. Overall, the findings suggest a highly positive perception of the Spectrum of Teaching Styles among B.P.Ed. student teachers.

Discussion

The present study sought to examine the experiences of B.P.Ed. student teachers who implemented various styles from the Spectrum of Teaching Styles during a Physical Education Micro Teaching Workshop. The findings provide valuable insights into how future physical education teachers perceive and experience diverse instructional approaches.

A major finding of the study was the positive influence of the Spectrum of Teaching Styles on student participation and engagement. Participants consistently reported increased learner involvement when using styles such as Inclusion, Guided Discovery, Reciprocal, and Practice. This finding aligns with the theoretical assumptions of Mosston and Ashworth, who argued that different teaching styles create varying opportunities for learner participation and decision-making. By shifting some instructional decisions from teacher to learner, productive teaching styles promote greater learner ownership and engagement in the learning process.

The findings also support previous research suggesting that learner-centered approaches contribute positively to motivation and participation in physical education settings. When students are encouraged to explore, discover, and solve problems independently, they become more invested in the learning process. The present study indicates that even within a micro teaching environment, student teachers were able to observe meaningful improvements in learner engagement through the use of alternative teaching styles.

Another important outcome was the recognition of learner diversity. Participants reported gaining a deeper understanding that students differ in their abilities, interests, and learning preferences. This realization is particularly significant because inclusive physical education requires teachers to address the needs of diverse learners. The positive perceptions associated with Inclusion Style demonstrate its value as a pedagogical tool for accommodating individual differences while maintaining active participation.

The findings further suggest that productive teaching styles contribute to cognitive engagement and higher-order thinking. Guided Discovery emerged as one of the most appreciated teaching styles among participants. Student teachers observed that learners actively generated solutions, explained their reasoning, and demonstrated creativity during task performance. Such observations are consistent with constructivist learning principles, which emphasize that meaningful learning occurs when learners actively construct knowledge through exploration and experience.

The study additionally highlights the role of the Spectrum of Teaching Styles in teacher education. Student teachers reported increased confidence, improved lesson planning skills, and enhanced understanding of instructional decision-making. These outcomes suggest that practical experiences with diverse teaching styles can strengthen pedagogical competence among preservice teachers. Exposure to different teaching styles allows future teachers to move beyond traditional command-oriented instruction and develop a broader repertoire of teaching strategies.

The reflective responses further revealed the importance of experiential learning within teacher preparation programs. Rather than merely learning about teaching styles theoretically, participants experienced the practical challenges and benefits associated with their implementation. Such experiences are likely to contribute to deeper professional learning and greater readiness for future teaching responsibilities.

However, the study also identified several challenges. Time management emerged as the most significant concern. Discovery-oriented teaching styles often require additional time for questioning, exploration, and learner decision-making. This finding is consistent with previous observations that learner-centered approaches may be more demanding in terms of planning and lesson organization. Student teachers must therefore develop effective strategies for balancing learner autonomy with instructional efficiency.

Classroom management difficulties were also frequently reported. Monitoring multiple learners engaged in different tasks requires advanced management skills, particularly in physical education settings where movement and activity levels are high. The challenges reported by participants suggest that teacher education programs should provide additional opportunities for developing classroom management competencies within learner-centered instructional environments.

Overall, the findings demonstrate that the Spectrum of Teaching Styles offers considerable educational value for both learners and teachers. While implementation challenges exist, the benefits associated with participation, engagement, autonomy, inclusion, and professional growth appear to outweigh the difficulties. The study therefore reinforces the importance of integrating the Spectrum of Teaching Styles into physical education teacher education programs.

Conclusion

The findings of this reflective study indicate that the use of the Spectrum of Teaching Styles during a Physical Education Micro Teaching Workshop positively influenced both learner engagement and teacher development. Student teachers reported enhanced student participation, increased learner autonomy, greater recognition of individual differences, and improved learning experiences. Guided Discovery and Inclusion Styles were particularly valued for their ability to promote active learning and meaningful participation.

The study also revealed that implementing diverse teaching styles contributes significantly to the professional growth of future physical education teachers by enhancing confidence, lesson planning skills, and pedagogical awareness. Although

challenges related to time management and classroom management were identified, participants viewed these difficulties as valuable learning experiences that contributed to their professional development.

Overall, the study supports the integration of the Spectrum of Teaching Styles into physical education teacher education programs as a means of preparing future teachers to create inclusive, engaging, and learner-centered learning environments.

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