

THE INFLUENCE OF TPSR PEDAGOGY ON STUDENT LEARNING

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ABSTRACT: The purpose of this pilot study was to compare traditional and TPSR-based physical education instruction on sport skill and personal and social responsibility attribute development in elementary students. Two third grade classes were randomly assigned to either intervention (e.g. Responsibility-Based PE) or traditional PE. The same basketball unit was taught to each class by the same physical education teacher. The intervention class was framed through Hellison's Teaching Personal and Social Responsibility (TPSR) model. To assess the effects of teaching style (responsibility vs. traditional), average baseline responsibility scores and basketball skill scores were compared between intervention and traditional models using independent *t* tests. All data analyses were conducted on an intention-to-treat basis. There was a significant difference in post-intervention summary scores for TPSR ($F = 42.71$, $p < 0.001$). The sub-components of responsibility (self-control, participation, effort, self-direction, and caring) all demonstrated significant differences at post-intervention ($p < 0.001$). There was a significant difference in post-intervention basketball skills summary scores ($F = 11.85$, $p = 0.01$). The passing ($p = 0.016$) and safety ($p < 0.001$) demonstrated significant differences at post-intervention. There was no difference at post-intervention for dribbling ($p = 0.46$) or shooting ($p = 0.19$). The TPSR-based instruction model produced significant improvements in motor skill development with the added benefit of developing personal and social responsibility skills.

Keywords: Teaching Personal and Social Responsibility, Student Learning, Skill-Development, Physical Education

INTRODUCTION

In the United States of America there is growing momentum to add physical education as part of the "common core" of educational competencies for K-12 students. This is in part due to the sustained epidemic of obesity and the mounting evidence that physical activity positively contributes to student learning. The National Association for Sport and Physical Education (NASPE) serves as a unifying voice for physical educators as to the need for quality physical education programs in schools. In this role NASPE developed physical education teacher and student learning standards consistent with quality physical education learning experiences. These standards serve as a framework for physical education teacher education program and practitioners alike.

As part of effective instructional management, NASPE (2009) identified a need for teachers to be able to "implement strategies to help students demonstrate responsible personal and social behaviors in a productive learning environment" (Element 4.6). Element 5.3 added a further need for teachers to utilize the reflective cycle to impact student learning [1]. Standard 4 of the National Standards and Grade-Level Outcomes for K-12 Physical Education (NASPE, 2013) identifies the goal for physically literate students to exhibit "personal and social behavior that respects self and others [2]. These two documents support the use of teaching personal and social responsibility (TPSR) pedagogy in K-12 physical education settings.

TEACHING PERSONAL AND SOCIAL RESPONSIBILITY (TPSR) PEDAGOGY

Don Hellison has been a staunch advocate for the use of physical activity to teach personal and social responsibility to youth for nearly four decades [3]. Hellison's Personal and Social Responsibility model was developed to foster life skills and values in youth through physical activities [4]. Since its conceptualization it has routinely been used in after-school physical activity programs and is increasingly being integrated by physical education teachers during physical education instruction.

PSR pedagogy is centered on four themes: student relationships, integration, transfer, and empowerment. The development of positive student relationships, both with their peers and with teachers, is vital in creating a caring learning environment that enhances students' sense of belonging and control. This is fostered by mindful integration of PSR pedagogy throughout the curriculum, as well as, by providing opportunities and guidance in the transfer of learned skills and behaviors beyond the confines of the physical education class. In doing so the physical educator can create an environment where students develop a sense of empowerment toward their learning. By keeping S.I.T.E of these themes, physical educators can develop responsibility-based learning experiences throughout the K-12 physical education curriculum [5].

PSR pedagogy utilizes student-center approach to promote a reflective learning environment. Walsh (2008) identified five components of a PSR lesson: 1) Relationship Time, 2) Awareness Talk, 3) Lesson Focus, 4) Group Meeting, and 5) Reflection. Through the use of the PSR lesson format physical educators can provide opportunities for students to develop responsibility, encourage student voice and engagement in the learning process, and reflect on their role in learning.

TPSR teaches students to take charge of their own decisions, learn to control their emotions, and promote self-development. Hellison's teaching personal and social responsibility model is a well-established approach, which uses physical activity as a vehicle to promote positive youth development among urban youth [6]. Researchers suggest that TPSR programs can positively impact the motivation of "at-risk" youth [7, 8]. Urban youth are at greater risk for negative physical and psychological outcomes due to the environmental, physical, and social makeup of their communities (USDHHS, 2000). Wright & Burton (2008) suggested the TPSR model for physical education classes to promote life skills. To date few studies have looked at the impact of TPSR pedagogy on student learning in primary grade students. This population may serve a critical role in establishing a foundation of responsibility that can be transferred throughout their educational careers. The purpose of this pilot study was to compare traditional and TPSR-based physical education instruction on sport skill and personal and social responsibility attribute development in elementary students.

MATERIALS AND METHODS

Two third grade classes were randomly assigned to either intervention (e.g. Responsibility-Based PE) or traditional PE. The same basketball unit was taught to each class by the same physical education teacher. The intervention class was framed through Hellison's Teaching Personal and Social Responsibility (TPSR) model. Students in the intervention group (n=28) received physical education lessons created and administered by the primary investigator. Students in the traditional group (n=28) received the same content also delivered by the primary investigator using a teacher-centered approach. Both classes used peer assessments during their basketball units to assess responsibility levels and skill performance.

The intervention class utilized the TPSR lesson plan format and included relationship time, awareness talks, lesson focus, group meetings, and reflection time. Content was delivered through

student-centered pedagogy that encouraged student interactions, self- and peer-assessments, and reflection time. The traditional class was presented using a teacher-centered approach and included a standard warm-up, lesson focus, and closure which were all lead by the physical education teacher. All classes met for the same length of time and were taught by the same veteran teacher. The intervention and traditional physical education classes were assessed prior to the start of (baseline) and at the end of the basketball unit on basketball skill development (dribbling, passing, shooting, safety and behavior) and on key components of the TPSR model (respect, participation, effort, self-direction, and caring). Basketball skills were peer-evaluated using a 5-point Likert-Like (5-outstanding, 1-needs improvement) scale. Students were trained by their physical education teacher on use of the scale and score were verified by the teacher. TPSR attributes were evaluated using the student responsibility section of the Tool for Assessing Responsibility-Based Education by their teacher [9]. TARE evaluates student responsibility across five domains (respect, participation, effort, self-direction, and caring) on a 5-point (4-Very Strong, 0- Very Weak) scale. The scale demonstrated strong intra- and inter-rater agreement across all domains.

Data Analysis

To assess the effects of teaching style (responsibility vs. traditional), average baseline responsibility scores and basketball skill scores were compared between intervention and traditional models using independent *t* tests. All data analyses were conducted on an intention-to-treat basis. To determine whether the intervention program increased responsibility scores greater than the control group, an analysis of variance (ANOVA) model was used wherein the 4-week change in responsibility scores was the dependent variable and experimental group assignment (responsibility vs. traditional) was the independent variable. A similar ANOVA model was used to assess intervention-related changes in basketball skill scores. Independent *t* tests were used to compare intervention and traditional model scores on each of the responsibility and basketball skills sub-components.

RESULTS

Comparison of Groups at Baseline

Baseline comparisons of the intervention and traditional classes are shown in Table One. The classes did not differ relative to the Basketball Skill scores in dribbling, passing, or shooting or on the TPSR subcomponent scores. Classes did differ in Basketball "Safety" ($t=-2.38$, $p = 0.02$) and TPSR summary score at baseline ($t = -2.04$, $p = 0.046$).

Table One: Baseline TPSR and Basketball Skill Scores

	Responsibility	Traditional	<i>t score</i>	<i>p value</i>
TPSR summary	2.48 ± 0.51	2.16 ± 0.64	-2.04	0.046*
Self-Control	2.29 ± 0.71	2.00 ± 0.90	-1.32	0.19
Participation	2.57 ± 0.88	2.25 ± 0.97	-1.30	0.19
Effort	2.61 ± 0.86	2.21 ± 0.86	-1.68	0.09
Self-Direction	2.29 ± 0.76	2.07 ± 0.81	-1.02	0.31
Caring	2.64 ± 0.62	2.29 ± 1.05	-1.99	0.51
BB Skill	2.13 ± 0.42	2.05 ± 0.44	-1.45	0.15
Summary	2.18 ± 0.55	2.12 ± 0.49	-0.87	0.39
Dribbling	2.00 ± 0.72	1.97 ± 0.58	-1.05	0.30
Passing	1.89 ± 0.79	1.86 ± 0.71	-0.32	0.75
Shooting	2.46 ± 0.64	2.26 ± 0.77	-3.38	0.02*
Safety				

Responsibility

The 4-week intervention-related changes in responsibility components are shown in Figure 1. There was a significant difference in post-intervention summary scores for TPSR ($t=-6.54, p < 0.001$). The sub-components of responsibility (self-control, participation, effort, self-direction, and caring) all demonstrated significant differences at post-intervention ($p < 0.001$).

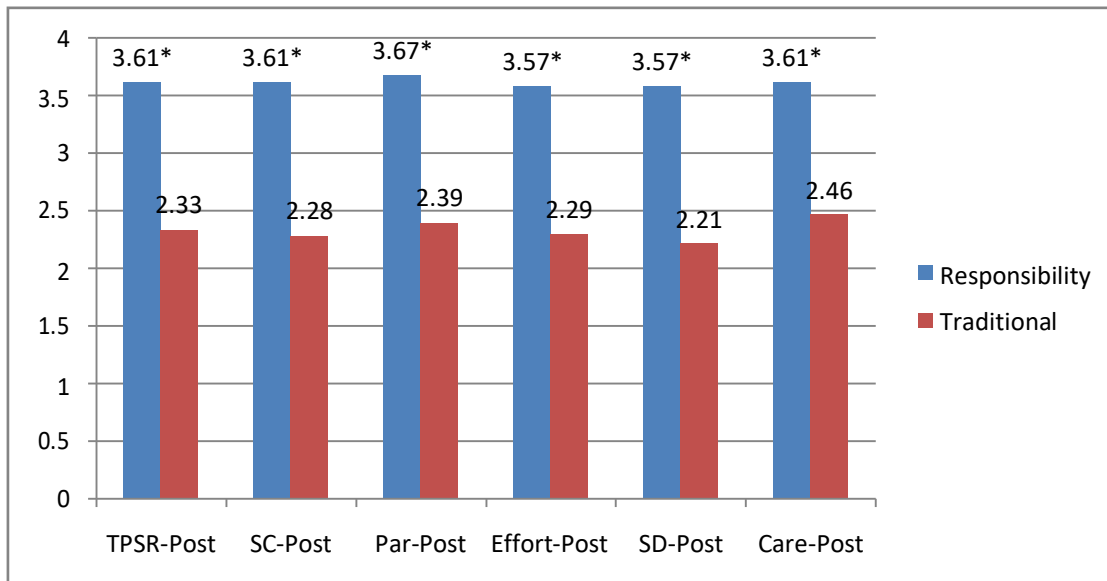


Figure 1: Post-Intervention Responsibility Scores

Basketball Skill

The 4-week intervention-related changes in basketball skills components are shown in Figure 2. There was a significant difference in post-intervention basketball skills summary scores ($t=-3.44, p = 0.01$). The passing ($t=-2.49, p = 0.016$) and safety ($t=-4.40, p < 0.001$) subcomponents demonstrated significant differences at post-intervention. There was no difference at post-intervention for dribbling ($t=-0.75, p = 0.46$) or shooting ($t= 1.30, p = 0.19$).

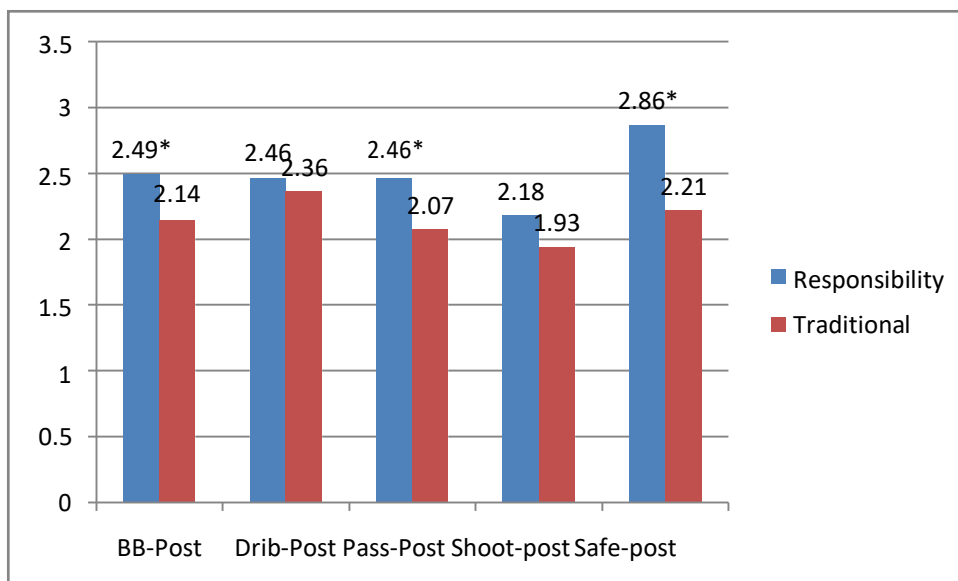


Figure 2: Post-Intervention Basketball Skill Scores

The 4-week intervention-related changes in Summary Responsibility and Summary Basketball Skill scores are shown in Table Two. There were significant differences in Responsibility summary scores at both pre ($t=-2.04$, $p=0.046$) and post ($t=-6.54$, $p < 0.001$) and in the Basketball Summary scores at post intervention ($t=-3.44$, $p < 0.001$). There was no difference in Basketball Summary scores at baseline.

Table Two: Summary Scores for Responsibility and Basketball Skill

	Mean (sd)	t score (df)	p-value
TPSRpre			
Traditional	2.16 (0.64)		
Responsibility	2.48 (0.51)	-2.04 (54)	0.046*
TPSRpost			
Traditional	2.32 (0.94)		
Responsibility	3.61 (0.43)	-6.535 (54)	0.001*
BBpre			
Traditional	2.05 (0.44)		
Responsibility	2.13 (0.42)	-0.70 (51)	0.48
BBpost			
Traditional	2.14 (0.41)		
Responsibility	2.49 (0.34)	-3.44 (54)	0.001*

DISCUSSION

The purpose of this study was to compare traditional and TPSR-based physical education instruction on sport skill and personal and social responsibility attribute development in elementary students during a 4-week basketball unit. The results indicated three major findings. Specifically, participants in the TPSR-based physical education program demonstrate significant improvement in responsibility attributes (control, participation, effort, self-direction, caring) across the 4-week unit and when compared to the traditional physical education group. Secondly, overall basketball skill score was improved in the TPSR-based physical education group across the intervention when compared to traditional group. Finally, the TPSR-group demonstrated improvements in safety suggesting a positive impact on classroom climate.

Results from present study are consistent with Cecchini et al., (2007) which demonstrated improvements in self-control in school-aged youth after a “personal and social responsibility” program [10]. The combination of improvement in teacher-assessed responsibility attributes and peer-assess the basketball safety measure suggests that a TPSR-based physical education program can contribute to a positive learning environment where students feel physically and emotionally safe to participate. Anecdotally, the physical education teacher noted an improvement in climate and fewer behavior disruptions in the TPSR-based class.

Parker & Hellison (2001) recommended the TPSR model as an effective pedagogical approach to promoting personal and social responsibility consistent with beginning teacher and physical education standards [11]. The results of the present study demonstrate that use of a reflective pedagogical approach to physical education can positively impact student behavior and learning. While not assessed in the current study, improvements in student enjoyment [3] and intrinsic motivation [12] have also been noted as outcomes from TPSR programming. This has particular implications for physical educators in public school settings where students are required to take physical education coursework and often exhibit low motivation and engagement [13, 14].

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