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PHYSICAL EDUCATION TEACHER EDUCATION

Empowering Elementary Classroom Teachers to Teach Quality Physical Education

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Abstract

This study examines the effectiveness of a professional development program, the Physical Education Teacher Itinerant Program, for elementary classroom teachers in Southern California. The purpose of this program was to equip elementary classroom teachers to teach purposeful physical education. The California Legislature has given every elementary school district the option to either employ a physical education specialist or have the credentialed elementary classroom teachers teach the mandated physical education instruction for grades 1-6 (Cal. Educ. Code 51210.2., 2003). Several studies support hands-on training for improving teacher confidence to deliver quality physical education and increase student physical activity (Escriva-Boulley et al., 2018; Sallis et al., 1997).

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This study used a 5-point Likert scale survey to gauge 156 elementary classroom teachers' perceptions of their preparedness to teach physical education and implement developmentally appropriate physical education curriculum. Descriptive statistics were used to analyze teacher confidence levels, perceptions of preparedness, and satisfaction in teaching physical education. The results of the survey indicated that the classroom teachers were generally satisfied with the training and perceived it as beneficial for implementing developmentally appropriate physical education in their classrooms. This study can be used to inform districts of the value of embedded professional development programs in empowering elementary classroom teachers to deliver high-quality physical education.

Introduction

The Role of Physical Education Specialists

Physical education (PE) specialists play a pivotal role in schools by designing and implementing curricula that not only develop students' motor skills and physical fitness but also foster lifelong habits of health, teamwork, and resilience (Chong et al., 2018). These professionals are responsible for creating inclusive and engaging programs tailored to students' developmental needs, emphasizing both physical competence and social-emotional growth (Ciotto & Gagnon, 2018). Having a credentialed PE specialist leads to higher-quality instruction that improves students' physical fitness, motor skills, and engagement in lifelong physical activity (Latino et al., 2024; Wei, 2025). Research also shows that qualified PE specialists foster more inclusive and effective learning environments that enhance both physical and social development (Kumar & Patel, 2024).

Physical education is a required subject from grades one through twelve in California (Cal. Educ. Code §§ 51210, 51220). At the elementary level, the multiple-subject classroom teachers (CTs) are often responsible for teaching PE. At the secondary level, PE is taught by a single-subject credentialed PE specialist.

Physical Literacy and the Importance of Standards-Based Instruction

Physical education specialists are trained to teach physical literacy. This includes teaching the knowledge and concepts behind movement, building motivation and confidence to be active, developing accurate motor and sport-specific skills, strengthening overall movement competence, and fostering essential fitness knowledge. Physical literacy is presented in standard-based content such as fitness concepts, fostering teamwork and cooperation, developing motor skills, and promoting an active lifestyle in a fun and engaging way that is developmentally appropriate (Physical Literacy, 2024). According to the Society of Health and Physical Educators (SHAPE) America's Shape of the Nation (2016), 39 states across the United States (US) require students to participate in PE at the elementary level (SHAPE America, 2016). Although almost every state in the US requires elementary schools to offer PE, very few provide enough funding for equipment, professional development, or certified PE specialists to ensure successful implementation (Thompson et al., 2024).

Barriers to Quality Physical Education in Elementary Schools

Physical education specialists typically complete in-depth training, often majoring in or minoring in PE/Kinesiology for their undergraduate degree. With PE as their main area of concentration, they become equipped with strong content knowledge and confidence in teaching PE (Truelove, 2021). In contrast, CTs usually receive very limited training, which may include one PE-related course, which leaves them feeling underprepared and less confident in delivering effective PE instruction (Truelove, 2021). CTs take a variety of courses in multiple subjects, which limit their PE expertise.

Research shows that PE specialists have higher self-efficacy and usually have fewer barriers to teaching PE compared to CTs, who struggle with barriers like time constraints, having to teach core subjects, district assessments, lack of resources, and insufficient content knowledge (Truelove, 2021). Constantinides et al. (2013) compared elementary PE classes taught by specialists and non-specialists in New York City. They found that students in classes led by PE spe-

cialists received more effective teaching methods, stronger lesson organization, and more opportunities for practice in skill acquisition and were provided developmentally appropriate physical education (DAPE; Constantinides et al., 2013). In contrast, the classes that were taught by nonspecialists spent more time on management and unstructured game play, resulting in fewer meaningful learning opportunities. For a quality PE experience that is developmentally appropriate, students need to be taught by teachers who are highly qualified to ensure students can receive the proper foundation for lifetime fitness and health.

California's State Mandates PE Requirements and Accountability

In the State of California, elementary schools have a minimum mandated time requirement for PE, which is 200 minutes every 10 school days (Cal. Educ. Code § 51223, 1976). In 2013, there was a series of lawsuits whose purpose was to ensure schools were providing PE appropriately (*Cal200, Inc. et al. v. San Francisco Unified School District,* 2013). Following the lawsuits, elementary school teachers are now required to document and verify that they meet the state-mandated PE minute requirements (Adams, 2016). Now that districts are being held accountable for the state-mandated PE minutes, CTs face the challenge of integrating PE into the curriculum while striving for high test scores in other core subjects (Adams, 2015).

Part of the CT's responsibilities is to teach common core standards and administer excessive assessments; therefore, some districts have hired PE specialists so that the teachers can plan for common core and have one less subject to teach (Adams, 2015). California has the largest public school enrollment in the United States (Holley, 2024). According to Thompson et al. (2019), half of the elementary school districts do not comply with the state PE law mandating students in grades 1-6 get 200 minutes in 10 school days, or the equivalent of 20 minutes of PE/day. This leaves half of the students in California at a disadvantage, having inconsistent and inadequate PE instruction.

Discrepancies Between Physical Education and Physical Activity

If only half of California school districts comply with the state PE law, what happens with the other half that do not comply? More than

likely, PE is documented to include free play, or games like kickball and basketball, walking or running laps, or unstructured physical activities. There is a discrepancy with PE compared to physical activity, recess, non-instructional physical activities, and athletics/sports. According to the California Department of Education (2019), PE is an academic subject that, through standard-based instruction, provides students with age-appropriate structured lessons on movement skills and acquisition, health-related fitness, knowledge of fitness concepts, and social skills. Physical activity is any bodily movement produced by skeletal muscle activity that requires energy expenditure and includes recreational and fitness activities like jumping rope, playing sports, and doing household chores. Recess offers unstructured activity breaks in which students may or may not be physically active. Similarly, movement time in which multiple classes of the same grade level choose from several activities supervised by non-credentialed staff and/or vendors while the CTs have meetings is considered non-instructional physical activity rather than formal physical education, consistent with guidance from the California Department of Education (2023) and the Center for Disease Control (2017). Athletics/sports are geared towards skilled youth, focusing on sport-specific skill refinement and competition (CA Dept of Education, 2019).

If general non-structured physical activities are being substituted for PE, students are not afforded the opportunity for foundational skill development (e.g., gross motor skills) that promotes long-term development and health. It is important to distinguish PE from unstructured physical activities to promote the goal of PE, which is to develop physically literate individuals to become lifelong movers. The essential components of physical literacy include skills, knowledge, confidence, and motivation. To become physically literate, students must learn fundamental movement skills, physical fitness, fitness concepts, skill development, and overall well-being through organized, developmentally appropriate physical activities (Mengyu et al., 2025). A comprehensive PE program should not be replaced with walking, running laps, or non-instructional physical activities. This is common practice in elementary school settings that do not have a credentialed PE specialist to teach DAPE. Therefore, their lack of training leads to insufficient PE instruction.

Development of the Physical Education Teacher Itinerant Program (PETIP)

In 2008, a large urban district in Southern California started a two-year grant-funded initiative, supported by state allocations, to establish the Physical Education Teacher Itinerant Program (PETIP). The program was designed to strengthen elementary PE by having credentialed PE specialists (i.e., PETIP teachers) to deliver consistent hands-on professional development to CTs. PETIP teachers traveled to five elementary schools a week (Physical Education/Grants, 2018). The main objective of PETIP was to provide CTs with instructional methods, PE subject matter knowledge, and equipment, as well as provide resources for them to competently teach DAPE (Physical Education/Grants, 2018). This program served 85 elementary schools and was geared to bridge the gap where hiring a credentialed PE specialist was not possible. This program used a "teach the teacher" model where PE specialists worked side by side modeling best practices and building teachers' ability to deliver standards-based instruction. The CTs gradually take over teaching PE with the itinerant teacher's guidance.

Research on Professional Development in Physical Education

Research supports the effectiveness of hands-on professional development. Sherman et al. (2010) found that after receiving structured training, most classroom teacher participants in their study consistently delivered DAPE, compared to initially, the teachers had barriers like academic priorities. Academic priorities are a common reason that teachers do not prioritize PE time. Likewise, Escriva–Boulley et al. (2018) found that professional development improved CT's instructional approaches and led to increased student physical activity levels. Sallis et al. (1997) further reinforced that when CTs are properly supported with evidence-based PE programs, there is an increase in student participation and physical activity. These studies validate the positive impact of consistent hands-on professional development on teacher effectiveness and student outcomes in PE.

Purpose of the Study

The purpose of this study was to explore if PETIP effectively prepared CTs to deliver quality PE instruction. In particular, it focused

on whether consistent, hands-on professional development gives teachers the tools to teach structured, standard-based instruction that supports students' physical literacy. Authors sought to know if by working with PETIP, the CTs will have enough knowledge and confidence to provide a structured educational program designed to promote physical fitness, skill development, and overall well-being through physical activity.

Methods

The physical education teacher itinerant program served as a professional development model, equipping CTs to deliver quality standard-based PE instruction. This "teach-the-teacher" model promoted physical literacy for all students by equipping CTs with the tools to teach the necessary skills, knowledge, and resources to teach quality PE. This program aimed to strengthen CTs' instructional capacity in PE assists schools in meeting state-mandated PE requirements and fosters confidence in teachers lacking formal PE training, ultimately improving the quality of instruction. To evaluate PETIP's effectiveness, a survey was administered to current PETIP classroom teacher participants. Likert scale items were used to collect quantitative data on teacher perceptions, with descriptive statistics calculated to summarize responses.

Setting

Physical education instruction was delivered by the credentialed PE specialist, who provided both in-person lessons with the students and detailed lesson plans that aligned with the California State PE standards once a week. PETIP incorporated a gradual release model, which allowed the CTs to progressively build confidence and competence in delivering PE instruction based on modeled practices throughout the year with the support of the PETIP teacher (Physical Education/Grants, 2018). PE presents unique challenges compared to classroom teaching, which includes outdoor environments that are uncontrolled by the weather, noise challenges, larger movement spaces, and equipment that requires specific detailed instruction for safe and effective use.

PE lessons often involve quick transitions between multiple activities, for which classroom management strategies need to be

established. While CTs manage their classes in the classroom, teaching PE outside is quite different. The PE specialists brought essential pedagogical and practical experience in these areas that general classroom teachers may not have. The PETIP grant not only provided funding for a credentialed PE teacher but also equipment to enhance instructional delivery by having enough equipment for individual and small group practice of skills.

Participants

This study sample consisted of 156 elementary classroom teachers who participated in the PETIP program. Elementary schools/teachers volunteered to participate in the PETIP program. To model an effective PE class, the credentialed itinerant PE teacher (i.e., PETIP teacher) was assigned to participating schools for two years. This gave the PETIP teacher time to support more teachers in the school; each year they worked with a different set of teachers. Each weekday, a PETIP teacher was assigned to one elementary campus, where they worked with six or seven CTs for about 40 minutes each throughout that day. They worked alongside the same six to seven teachers one day a week for a whole school year.

Procedure (PETIP Intervention)

Survey data were collected through Google Forms utilizing a 5-point Likert scale. The survey aimed to gauge participating teachers' perceptions of their preparedness to teach PE and implement DAPE curriculum. It also gathered information on participants' demographics, education training background, and their confidence and satisfaction levels in teaching physical education before and after the PETIP program. `

Summary of the Survey

The survey was used to gather data and evaluate the CTs' backgrounds, confidence, perceptions, and preparedness related to PE after participating in the PETIP program. The survey examined several key areas, starting with the CT's instructional context and prior preparation by asking respondents to report their grade levels they teach, the type of PE-related training they received before PETIP, and their years of teaching experience. The survey also included the

duration of each CT's involvement with the PETIP teacher. Teachers self-evaluated their confidence in teaching PE both before and after the program, identified areas where they still felt least confident, and reported if PETIP improved their preparedness to implement DAPE. Their beliefs and attitudes about PE were measured through a series of Likert-scale statements addressing perceptions of PE's importance, personal enjoyment of physical activity, expectations for students' success, administrative support, and their responsibility in helping students overcome movement challenges.

The teachers were also asked to evaluate their PETIP training experience by rating the expertise of the PETIP teacher, clarity and quality of lesson plans, continuity of lesson progressions, adequacy of hands-on practice, relevance of the curriculum, sufficiency of weekly instructional support, and overall satisfaction with the embedded coaching model professional development. Teachers assessed their self-efficacy after participating in PETIP, including their confidence in teaching locomotor and motor skills, delivering health-fitness concepts, locating instructional resources, using grant-provided equipment, sharing PE knowledge with colleagues, and whether they felt additional support would be beneficial in the future.

Data Analysis

Descriptive statistics were used to analyze the demographic information and the Likert scale responses regarding teacher perceptions and confidence levels. Percentages, mean scores, and frequencies were calculated to highlight trends in CTs' self-reported confidence, preparedness, and satisfaction with PETIP. These analyses provided awareness into the relationship between participation in PETIP and CRTs' perceived ability to deliver DAPE.

Results

According to the survey results, the participating teachers' confidence, readiness, and perceptions of support when teaching PE were significantly improved by participating with PETIP. Teachers reported starting the program with limited PE instruction training and low confidence in teaching PE; however, after participating in the program, they reported substantial increases in competence and confidence. They reported that they valued the expertise of the PE specialists. The teachers also expressed that they were very satisfied

with the embedded professional development model and that they wanted to continue with the program. Overall, the findings imply that PETIP successfully improves teachers' capacity to provide high-quality physical education instruction.

A total of 156 CTs completed the survey. Participants represented a wide range of teaching experience, with 19.1% reporting 1-4 years, 20.3% reporting 21-24 years, and 27.0% reporting 25-29 years of experience.

PETIP Survey Results

The survey was used to evaluate the effectiveness of the PETIP program in preparing elementary classroom teachers to deliver high-quality physical education and support the development of physical literacy.

Teacher Education and Training Background

Most teachers (63.9%) reported completing only one college-level PE course, whereas (19.4%) reported taking multiple PE classes in their teacher education classes. Some teachers (23.9%) reported attending one to two workshops related to PE, and 7.7% reported participating in multiple PE professional development workshops (see Figure 1).

Confidence in Teaching Physical Education

Before participating in PETIP, 15.0% of teachers reported that they felt confident and 6.5% reported feeling very confident in teaching PE. Also, 35.9% reported feeling somewhat confident, 34.0% reported feeling neutral, and 8.5% reported feeling not at all confident (see Figure 2). After participating in PETIP, 36.8% of teachers reported being confident, and 33.6% reported feeling very confident (see Figure 2). The combined percentage for confident and very confident increased by 48.9 percentage points.

Figure 1
Teacher Education and Training Background

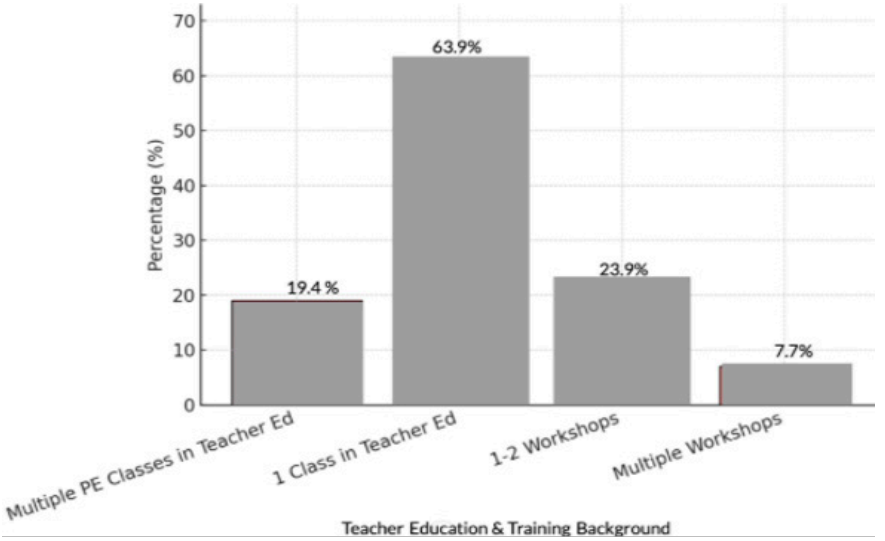
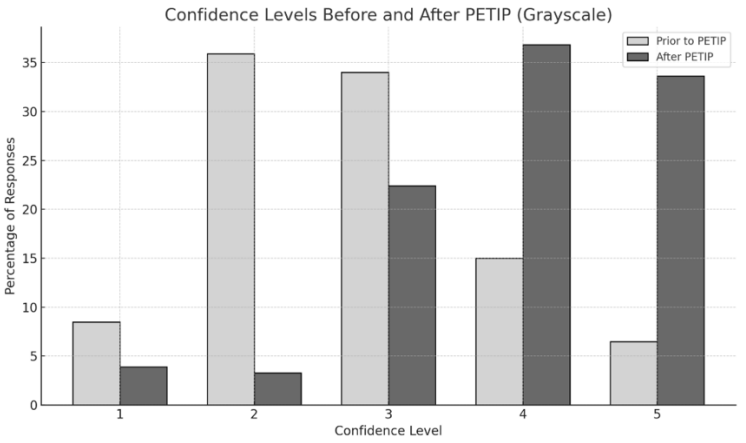


Figure 2
Confidence Levels Before and After PETIP



Perception of PETIP Teacher Expertise

A total of 73% of teachers agreed or strongly agreed that the PETIP teacher demonstrated knowledge and expertise in PE. Fewer than 1% disagreed.

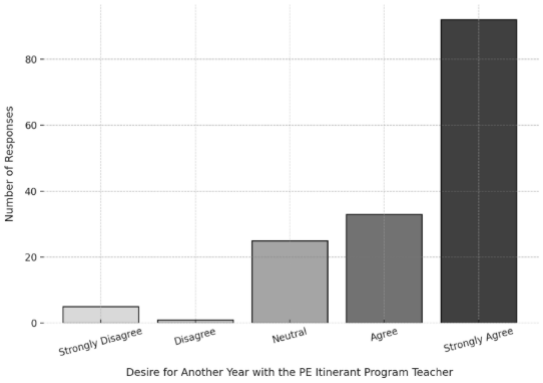
Confidence in Teaching Locomotor and Motor Movement Skills

After participating in the PETIP program, 52% of teachers agreed and 35% strongly agreed that they felt confident in teaching locomotor movements, for a combined total of 87%. Similarly, for gross motor skills, 59% agreed and 30% strongly agreed they felt confident teaching motor skills, for a combined total of 89%.

Desire to Continue the PETIP Program

Participating teachers overwhelmingly agreed they would like to continue in the PETIP program. Fifty-nine percent of teachers strongly agreed, and 36% agreed that they would like to continue working with a PETIP teacher for another year, for a total of 95% (see Figure 3).

Figure 3
Desire for Another Year with the PE Itinerant Program Teacher



Satisfaction With Embedded Training

After the PETIP program, 61.3% of teachers strongly agreed and 22.7% agreed that they were satisfied with the embedded PE training, for a combined satisfaction rate of 84% (see Figure 4).

Preparedness in Implementing PE Curriculum

When participants were asked how prepared they felt to implement the provided PE curriculum, most indicated moderate to high levels of preparedness. Specifically, 8% felt not prepared, 22% felt somewhat prepared, 41% felt prepared, and 24% felt very prepared (see Figure 5).

Figure 4
Desire for Another Year with the PE Itinerant Program Teacher

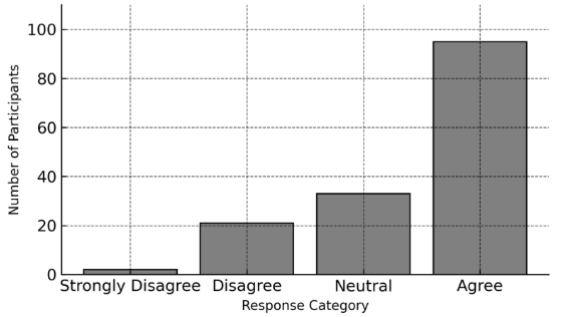
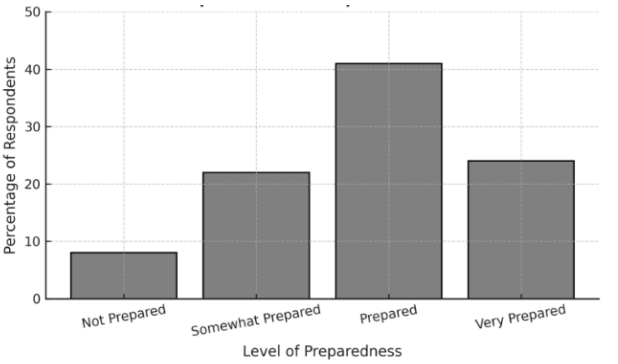


Figure 5
Desire for Another Year with the PE Itinerant Program Teacher



Discussion

The findings from this study indicate the ongoing need for targeted professional development in PE for CTs. Most of the participants reported completing only one college-level PE course, consistent with previous research indicating limited preparation in PE pedagogy for CTs (Escriva-Boully et al., 2018; Sherman et al., 2010). The limited training shows a critical gap in teacher preparation programs and reinforces the importance of ongoing, embedded professional training models like PETIP. Programs like PETIP that are focused on "teach-the-teacher" are especially valuable in districts where access to credentialed PE specialists is limited.

Confidence Gains

The results of this study showed that teacher confidence increased substantially after participation in PETIP. Self-reported ratings showed large improvements in both overall confidence to teach PE and the ability to implement DAPE lessons. These findings align with prior studies that link hands-on, long-term professional development with increasing CRTs' ability for self-efficacy and instructional competence (Sherman et al., 2010; Truelove, 2021). By providing modeling, feedback, and guided practice, PETIP appears to foster a practical sense of PE instruction that contributes to greater teacher confidence across all experience levels.

Satisfaction with the PETIP Model

Participant satisfaction with the embedded professional development PETIP model was especially high and showed that this model was valuable and effective. These results reflect positive perceptions of both the quality of coaching and the embedded nature of the support. The "teach-the-teacher" method, where credentialed PE specialists collaborate directly with the CTs, provides unique learning opportunities that traditional one-time workshops do not offer. These findings support prior literature outlining the value of ongoing professional development for improving teacher confidence in providing DAPE.

Sustainability

Demonstrating strong program sustainability and perceived benefit, nearly all participants expressed interest in continuing with PETIP an additional year. Continued desire to work alongside a PE specialist suggests that CTs viewed the partnership as a meaningful part of their professional growth. Keeping this embedded support could contribute to long-term improvements in providing DAPE, physical literacy, curriculum alignment with state standards, and student engagement in PE to create a path to a lifelong desire to move. For longevity, districts would need to plan for sustainable funding, beyond temporary grants, to support the continued employment of credentialed PE specialists.

Preparedness to Implement PE Curriculum

The participants reported improvements in their preparedness to deliver standards-based PE lessons after participating in PETIP. The majority reported feeling confident implementing lessons that align with the California State PE content standards, particularly those addressing locomotor skills (e.g., running, hopping, skipping), fundamental motor skills (e.g., throwing, catching, kicking), and manipulative skills using balls and implements. These findings suggest that the PETIP model effectively supports teachers in translating professional learning into standards-based instructional practice, leading to more consistent instruction in DAPE.

Limitations

There are a few limitations to consider, though this study provides compelling evidence for PETIP's effectiveness. First, the study used a Likert scale to collect self-reported data. While self-reported confidence is useful for measuring perceptions of teachers, it may not always be accurate for how effective it is for student outcomes or instructional quality. To give more comprehensive data, future research could include student assessments or observational data. Second, this study did not include a control group of teachers who did not participate in PETIP which limits the generalizability if improvement is due to PETIP participation. However, the substance difference of the before and after changes in confidence levels within the same group of teachers provides strong internal validity. Last, the study population was from one district in Southern California, which may restrict generalizability of the findings to other areas or states with different educational contexts or PE mandates.

Conclusion

This study conclusively demonstrates that the PETIP is an effective and highly valued professional development model for CTs. It supports the alignment of professional learning into classroom practice, which enhances the classroom teacher's preparedness and confidence in teaching PE. By implementing DAPE and delivering instruction that is standards-based, the CTs will have the skill set to help students become physically literate. The program's embedded curriculum with a hands-on approach, delivered by credentialed

PE specialists, directly addresses the existing gap in elementary PE, where a PE specialist is not provided.

The PETIP's value and positive effect on teacher quality are underlined by the high satisfaction rates accompanied by the strong desire of the PE specialists to continue the program. The results of this study provide compelling evidence for districts to consider implementing or expanding similar embedded professional development programs as a possible solution to the inability to hire PE specialists in the elementary setting. This program can be used as a tool for instructing and empowering elementary teachers to deliver high-quality physical education instruction that is developmentally appropriate, ultimately supporting the physical literacy and physical well-being of students.

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