

# An investigation of preservice and primary school teachers' perspectives of PE teaching confidence and PE teacher education

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*Recent literature has indicated that many primary school teachers lack confidence about teaching physical education (PE) and it has been suggested that a major contributing factor is the quality of PE teacher education (PETE) they receive. The current study aimed to investigate the levels of PE teaching confidence of both preservice (n = 422) and inservice (n = 63) primary school teachers and their perceptions regarding the adequacy of their PETE. The analysis focused on the relationship between respondents' PE teaching confidence and their perceived quality of PETE for individual PE content areas. A subsidiary aim was to explore teacher perceptions of the strengths and weaknesses of their PETE and to consider their suggestions for the improvement of PETE. Results indicated that teachers possessed only moderate levels of confidence to teach PE and did not consider their PETE to be effective in preparing them to teach PE. Significant relationships were found between PE teaching confidence and perceptions about PETE for all PE content areas examined. Gender and cohort differences were also apparent. Results are discussed in light of recommendations for PETE and professional development for teachers.*

## Introduction

In most New South Wales (NSW) primary schools, classroom teachers are responsible for the programming and delivery of PE lessons. However, several Australian studies have described the lack of qualifications of classroom teachers to deliver PE programs, largely as a result of inadequate teacher training in PE (Moore, Webb & Dickson, 1997; Thompson, 1996; Walkley, 1992; Webb, Moore, Gray & Jessup, 1993). Notably, most of the research in this area was conducted many years ago. Moore et al. (1997) outlined many concerns regarding the effectiveness of primary physical education teacher education (PETE) in Australian universities. One of the major concerns identified was that most university courses are inadequate to develop the confidence needed for preservice teachers to be able to teach PE effectively. Other writers have indicated that many classroom teachers have criticised their PETE (Board of Studies, 1996: 11; Evans, 1990; Hickey, 1992; MacKendrick, 1996; Thompson, 1996).

An evaluation of PE courses offered to preservice primary teachers attending NSW universities described inequities in the university experiences of prospective classroom teachers and reported large inconsistencies and little standardisation between courses (Webb et al., 1993). It was suggested that primary school students may be disadvantaged, depending

on the institution where their teacher experienced preservice training. Additionally, the ACHPER Teacher Training Working Party (1997) conducted a review of primary PETE in Victorian Universities. One of the trends identified by the working party included:

*"Some university courses are totally inadequate to develop any level of confidence and competence in graduates for them to handle the complexity of the physical and sport education curriculum" (p.12)*

Previously, Walkley (1992) revealed that a preservice generalist teacher could graduate and commence teaching in primary schools without completing any coursework or practical experience in PE. His study reported that 10 out of 13 tertiary institutions offered degrees to generalists where they could graduate without having taught or been supervised teaching a PE lesson. A lack of experience in teaching PE and/or ineffective PETE may affect classroom teachers' ability to meet the demands of teaching PE, as a result of low levels of expertise and confidence. Other issues affecting teachers' decisions about PE teaching include a lack of time and interest and inadequate facilities and equipment (Cundiff, 1990; Tinning & Hawkins, 1988; Tremblay, Pella & Taylor, 1996; Turnbull, 1992). Furthermore, many classroom teachers consider themselves unqualified to teach PE and are aware of their inability to

teach PE properly (Cundiff, 1990; Hickey, 1992). These negative self-perceptions are indicative of low levels of confidence in their teaching ability in this area.

Xiang, Lowy and McBride (2002) found that many classroom teachers recognised that they were not equipped to teach PE after observing the complex nature of PE teaching. In a study in Queensland in 1988, Kirk, Colquhoun and Gore found that classroom teachers did not believe they had the knowledge to teach the skills of PE. Consequently, teachers may become unwilling to teach PE. Evans (1990) explained "It is a facet of human nature that we tend to avoid things we know little about or find potentially threatening to our self-esteem" (p.9). Evans proposed that teaching PE could become quite intimidating for teachers when students' knowledge of the rules, tactics, and strategies of various games is greater than their own.

A teacher's perceptions of his or her ability to teach PE may be directly related to the attainment of student outcomes. Applying Bandura's (1977) theory of social learning in this context, teachers who have confidence in their ability to teach PE would employ a greater variety of strategies and be more successful in changing the knowledge, skills and attitudes of students than teachers who exhibit low levels of confidence. Any doubts teachers have about their ability to impact on student learning in PE may result in inadequately planned programs, avoidance behaviours and ineffective teaching. Notably, a teacher's confidence levels may be considerably dependent upon the particular nature of the teaching task in question (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). This has particular relevance for classroom teachers who generally assume responsibility for the delivery of all key learning areas (KLAs) in the primary curriculum and may feel more confident teaching one KLA over another. Therefore, it is important to consider the confidence levels of prospective and practising primary school teachers specifically relating to PE.

## Purpose of the Study

Given that classroom teachers have been inhibited by low levels of PE teaching confidence for many years, there were a number of key aims of the current study: (i) to investigate the levels of PE teaching confidence of both preservice and inservice teachers and examine which PE content areas respondents feel most confident to teach (ii) to examine the perceptions of teachers with regard to the adequacy of their PETE (iii) to analyse results for key differences between preservice and inservice teachers and males and females (iv) to examine the relationship between levels of PE teaching confidence and perceived adequacy of PETE (v) to examine generalists' perceptions regarding the strength and weaknesses of their PETE and (vi) to investigate generalists' ideas and suggestions for improvement of their PETE.

## Method

### Participants

Data were collected from 485 generalist preservice and inservice teachers in NSW. The preservice teacher sample consisted of students studying a double degree (Bachelor of Arts/Bachelor of Teaching), majoring in primary education in the second (n = 156), third (n = 143), or fourth year (n = 123) of their higher education at a NSW tertiary

institution. The four-year integrated degree prepares students for teaching in the primary school. In the education component of the degree, students undertake courses offered in four strands: teaching and learning, primary KLA curriculum method, in-school experience, and research. The arts component consists of prescribed courses and KLA extended study courses.

Primary education students enrol in two PE courses as part of their primary KLA curriculum method strand (there are six KLAs in the NSW primary curriculum). In 2nd Year, contact time involves a one-hour mass lecture and a one-hour tutorial per week for seven weeks (equal to 5 credit points). In 3rd Year, a one-hour mass lecture and a two-hour tutorial is undertaken each week over nine weeks (equal to 5 credit points). Practical content for both courses includes activities from the four PE content strands of the K-6 Personal Development, Health, and PE (PDHPE) syllabus; Games and Sports, Gymnastics, Dance, and Active Lifestyle. Overall, PE related subjects only account for 10 out of a possible 320 credit points for the degree.

All preservice teachers from each year group were asked to be respondents and response rates for all cohorts were over 80%. The respondent categories for the inservice teachers included a random sample of classroom teachers in NSW primary schools from both the state school system and non-state school system. In total, 63 inservice teachers were included from 37 different schools. Of the total sample, approximately 86% (n= 415) were female and 14%(n= 70) were male. The ratio reflects the composition of the primary teaching force and is consistent with the findings of Smith (1999) who revealed that only 22.5% of teachers in Australian primary schools were male.

### Data Collection Procedures

The principal method of inquiry involved the collection of largely quantitative data from all respondents via the administration of a questionnaire. Second Year students completed the questionnaire before they had undertaken any PETE and before they had completed any practicum teaching experience. Third year preservice teachers completed the questionnaire immediately following completion of their compulsory PETE and had experienced at least a two-week block practicum. The 4th Year preservice teachers completed their questionnaire at the end of their last practicum experience at University and had completed three different length practicums (2 weeks, 4 weeks, & 8 weeks of a 10-week internship). All selected inservice teachers were asked to respond to a mailed questionnaire.

### Instrumentation

The questionnaire included three key categories of interest and utilised both select-response and open-ended questions. The first category of questions assessed the self-perceived levels of confidence in the teaching of seven PE content areas; Major Games, Gymnastics, Athletics, Dance, Aquatics, Fitness and Motor Skills. Respondents were asked to grade their level of confidence in each content area on a six-point Likert scale (with response options from strongly disagree to strongly agree) by responding to the statement: 'If I were to teach PE, I would feel confident and competent teaching...'.

The second category of questions asked the inservice teachers and 3rd Year and 4th Year preservice teachers to rate the quality of their PETE on a five-point Likert scale. Each respondent indicated whether they thought the quality of their preservice education was excellent, very good, average, fair, or poor for the same seven PE content areas listed above. Total scores for the seven content areas were tallied for each respondent, with a rating of excellent scoring five, down to a score of one for a poor ranking. The 2nd Year preservice teachers did not answer questions relating to teacher training as they had not completed any PE courses at university. The third category of questions was open-ended and included:

- What was the greatest strength of your course in PE?
- What was the greatest weakness of your course in PE?
- Overall, how effective was your course in PE in preparing you to teach the K-6 syllabus?
- Please suggest changes which you feel would make teacher education courses more effective in preparing teachers to teach PE.

### Data Analysis

Simple univariate analyses were used to screen the data. A normality check was undertaken for discrete variables to ensure distributions were not seriously skewed. Frequency distributions and other descriptive statistics were also examined. Pearson Product Moment correlation coefficients were generated to establish bivariate relationships between variables. Independent sample t-tests were utilised to contrast mean scores for variables between males and females. A one-way analysis of variance with post-hoc comparisons was used to examine significant differences between and within cohorts. Scheffe's t-test for multiple comparisons was utilised in this investigation, helping to reduce Type I error. Themes and patterns for open-ended responses were identified and responses were matched that were conceptually consistent with one of the themes. Themes were revised through continual comparison of

responses. All responses were coded, including those from respondents who offered multiple responses.

## Results

### Confidence Teaching PE

Table 1 displays results for the PE teaching confidence variable for each cohort and content area. In general, most respondents only 'agreed slightly' with statements concerning PE teaching confidence. Of the seven PE content areas listed, Motor Skills was the content area respondents indicated they would feel most comfortable teaching, followed by Major Games and Fitness. Respondents reported they would feel least confident and competent about teaching Gymnastics, Aquatics and Athletics. Overall, results suggested a tendency for scores to be progressively higher for cohorts from 2nd Year through 4th Year, suggesting a potential teacher education effect. Significant differences were found between cohorts (the 2nd Year preservice teachers felt significantly less confident and competent than the 3rd Year and 4th Year preservice teachers). This pattern is fairly consistent when individual PE content areas are examined. Inservice teachers (Ins) scored consistently lower than their 3rd Year counterparts for some areas (Gymnastics, Dance & Aquatics).

Table 2 illustrates results from the independent sample t-tests for the PE teaching confidence variable which revealed no significant gender differences overall. However, when individual PE content areas were analysed, it is evident that males were significantly more confident than females in four out of the seven content areas (Major Games, Motor Skills, Fitness & Athletics). Females were more confident teaching Dance. No significant differences were found for Aquatics and Gymnastics.

### Adequacy of PETE

An examination of respondents' overall perceptions of the quality of their PETE is displayed in Table 3. Largely, respondents indicated their PETE was only of 'fair' or 'average' quality. An analysis of the ratings for individual

Range: 1-6	Gymnastics	Dance	Major Games	Motor Skills	Fitness	Athletics	Aquatics	Overall
Overall Mean (= 485)	3.31 (1.38)	4.36 (1.29)	4.67 (1.15)	5.10 (0.88)	4.64 (1.14)	4.24 (1.24)	3.99 (1.42)	4.33 (0.80)
2nd (n= 156)	3.17 (1.37)	4.02 (1.28)	4.36 (1.15)	4.84 (0.93)	4.20 (1.24)	3.92 (1.32)	3.92 (1.37)	4.06 (0.83)
3rd (n= 143)	3.68 (1.20)	4.78 (1.07)	4.66 (1.03)	5.01 (0.90)	4.64 (1.08)	4.38 (1.12)	4.03 (1.40)	4.46 (0.76)
4th (= 123)	3.28 (1.43)	4.41 (1.31)	4.98 (1.16)	5.46 (0.67)	5.03 (0.97)	4.42 (1.22)	4.14 (1.42)	4.53 (0.77)
Inservice (n= 63)	2.86 (1.52)	4.14 (1.46)	4.84 (1.26)	5.24 (0.82)	4.95 (0.92)	4.40 (1.17)	3.81 (1.55)	4.31 (0.71)
F df= (3,481)	6.347	9.971	7.559	13.180	15.540	5.52	0.939	10.189
p	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	> 0.05	< 0.05
Cohort ↔ = sigt. difference	2nd↔3rd 3rd↔Ins	2nd↔3rd 3rd↔Ins	2nd↔4th, Ins	2nd↔4th, Ins 3rd↔4th	2nd↔3rd, 4th, Ins 3rd↔4th	2nd↔3rd, 4th	-	2nd↔3rd, 4th

Table 1: Levels of PE Teaching Confidence - Content and Cohort Comparison: Means (Standard Deviations [SD]).

Range: 1-6	Gymnastics	Dance	Major Games	Motor Skills	Fitness	Athletics	Aquatics	Overall
Male (n= 70)	3.09 (1.42)	3.34 (1.51)	5.21 (0.88)	5.30 (0.77)	5.01 (1.16)	4.64 (1.16)	3.87 (1.32)	4.35 (0.78)
Female (n= 415)	3.35 (1.38)	4.53 (1.16)	4.58 (1.17)	5.07 (0.89)	4.58 (1.12)	4.18 (1.24)	4.01 (1.43)	4.33 (0.81)
(df)= t	(483)= 1.46	(83.41)= 6.28	(114.3)= 5.3	(483)= 2.08	(483)= 3.0	(483)= 2.94	(483)= 0.78	(483)= 0.251
p	> 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	> 0.05	> 0.05

Table 2: Levels of PE Teaching Confidence - Content and Gender Comparison: Means (SD).

Range: 1-5	Gymnastics	Dance	Major Games	Motor Skills	Fitness	Athletics	Aquatics	Overall
Overall Mean (= 326)	2.79 (1.07)	3.10 (1.06)	2.92 (1.20)	3.59 (1.05)	3.24 (1.05)	2.53 (1.09)	2.68 (1.16)	2.97 (0.81)
3rd (n= 143)	3.10 (0.90)	3.48 (0.90)	2.94 (1.15)	3.71 (0.93)	3.40 (0.90)	2.70 (1.08)	3.06 (1.20)	3.19 (0.67)
4th (n= 121)	2.60 (1.04)	2.87 (1.01)	3.03 (1.15)	3.67 (1.05)	3.26 (1.06)	2.48 (1.08)	2.66 (1.13)	2.94 (0.80)
Inservice (n= 63)	2.42 (1.27)	2.68 (1.20)	2.65 (1.37)	3.16 (1.19)	2.82 (1.24)	2.21 (1.07)	1.84 (1.10)	2.54 (0.93)
F df= (3,323)	12.315	18.759	2.201	6.677	6.777	4.700	27.617	15.656
p	< 0.05	< 0.05	> 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Cohort ↔ = sigt. difference	3rd↔4th, Ins	3rd↔4th, Ins	-	Ins↔3rd 4th	Ins↔3rd 4th	3rd↔Ins	3rd↔4th, Ins 4th↔Ins	3rd↔4th, Ins 4th↔Ins

Table 3: Perceptions of PETE Quality - Content and Cohort Comparison: Means (SD).

Range: 1-5	Gymnastics	Dance	Major Games	Motor Skills	Fitness	Athletics	Aquatics	Overall
Male (n= 47)	2.74 (1.29)	3.06 (1.17)	3.00 (1.38)	3.34 (1.29)	3.11 (1.31)	2.45 (1.35)	2.60 (1.21)	2.90 (1.01)
Female (n= 279)	2.79 (1.03)	3.10 (1.04)	2.90 (1.17)	3.63 (0.99)	3.26 (1.00)	2.54 (1.05)	2.69 (1.16)	2.99 (0.77)
(df)= t	(56.214)= 0.239	(324)= 0.24	(323)= 0.493	(55.53)= 1.47	(324)= 0.936	(55.74)= 0.45	(324)= 0.523	(55.397)= 0.566
p	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05

Table 4: Perceptions of PETE Quality - Content and Gender Comparison: Means (SD).

Correlations (n=326)	r
Major Games	0.413*
Athletics	0.259*
Dance	0.298*
Aquatics	0.279*
Fitness	0.344*
Motor Skills	0.251*
Gymnastics	0.387*
<b>OVERALL</b>	<b>0.483*</b>
*Pearson correlation coefficients - significant at the 0.01 level (2-tailed)	

Table 5: Correlations Between PE Teaching Confidence and Perceived Quality of PETE.

content areas indicated that Motor Skills and Fitness were the content areas for which respondents considered they had received 'average' to 'good' training. Gymnastics, Athletics and Aquatics received the lowest ratings. Overall, inservice teachers recorded significantly lower scores than 3rd Year and 4th Year preservice teachers and 4th Year teachers recorded significantly lower scores than 3rd Year preservice teachers. This pattern was similar for all PE content areas.

Table 4 displays results for the gender and PETE analysis and illustrates that there were no significant gender differences for any of the individual PE content areas or overall.

### Relationship Between PE Teaching Confidence and Perceived Quality of PETE

An analysis of the relationship between results for PE teaching confidence and perceptions of the adequacy of PETE revealed significant correlations for all PE content areas and overall. Evidently, the activities respondents were

most satisfied with in their PETE were generally the same as those they felt most confident to teach and vice versa. Table 5 displays correlation coefficients for all areas and overall and detail moderate and positive significant relationships.

### Considering Their Perceptions and Suggestions about PETE

A summary of findings for the open-ended responses, along with representative examples, is now provided. Many respondents commented on the importance of knowledgeable and enthusiastic lecturers who presented relevant tutorials, as the greatest strength of their PETE:

*The lecturer - who made it fun and helped to relax those students who felt uncomfortable.* (Female, 4th Yr)

Respondents also identified the opportunity for participation in a wide range of practical subjects as a major strength of their training. Students were of the opinion that practical subjects assisted the development of practical skills necessary for teaching PE:

*Tutorials were excellent - they provided realistic practical ideas for lessons that we can use, it was fun to participate as well.* (Female, 3rd Yr)

The majority of responses describing PETE weaknesses were related to program factors, particularly the short length and lack of comprehensiveness of their tertiary PE training:

*There wasn't enough time, particularly as I lack confidence in this area and feel like I need more time learning about teaching PE.* (Female, 4th Yr)

Some respondents were quite critical of their PETE:

*There were no strengths, the PE course was pathetic - we had to do it as an extra and I don't remember getting much out of it at all.* (Female, Inservice)

Respondents also recognised a lack of variety in sporting activities and a poor coverage of the teaching of motor skills as limiting factors in the development of their PE teaching skills. Overall, respondents claimed that their PETE was relatively ineffective in preparing them for PE teaching. A dominant theme to emerge was the lack of time allocated to PE courses at university:

*We definitely need to spend more time in PE to feel confident to teach it. I would have liked to have done PE every year.* (Female, 4th Yr)

Respondents were asked to suggest changes they believe would contribute to making preservice education courses more effective in preparing teachers to teach primary school PE. There were a large number of responses to this question. An overwhelming number of respondents believed there was a need for a more extensive and comprehensive course in K-6 PE and that there should be greater credit point allocation for PE:

*More time, a course like this gave valuable ideas and knowledge, but it was very short. More time = more experience. At least a 400% increase in the time devoted to it.* (Male, 4th Yr)

It was suggested by some respondents that more exposure would have led to improvements in their confidence and ability to teach PE effectively:

*Not enough time spent in PE, more time would have given everyone better skills to teach PE.* (Female, 4th Yr)

There was also a recognised need for more practicums and school teaching experiences, in which opportunities were provided to teach PE. A number of respondents suggested that if time in PETE remained limited, courses would be improved if time spent in theory lessons was reduced and practical exposure increased:

*We need more time with hands-on experience... teaching and being involved in practical experiences. Learning by doing in the areas we lack confidence.* (Female, 3rd Yr)

### Discussion

The literature has suggested that many primary school teachers express a lack of confidence to teach PE effectively. The current study indicated that generalist teachers possessed only moderate levels of perceived confidence to teach various PE content areas and that PETE was associated with PE teaching confidence. Results of the present study indicated that Games and Sports received the highest mean confidence rating. Gymnastics and Aquatics were the activities preservice teachers felt least confident about teaching. These findings are supportive of previous research that has studied PE teaching confidence and specific content areas (Gard & Fry, 1997).

Scores for PE teaching confidence were generally higher for more advanced cohorts in preservice education, but tended to be lower for inservice teachers, which suggests some promise for the positive effect of PETE. Inservice teachers were generally less confident which raises the issue and importance of ongoing training and professional development to provide opportunities to increase PE teaching confidence. Teacher educators need to discuss and consider ways to increase levels of teacher confidence, due to the potential for improving the quality of PE programs delivered to children. Teacher educators should look to assess levels of confidence in specific PE content areas prior to the commencement of courses and should design lectures to cater for the needs of their learner group. Strategies to improve the confidence of female teachers particularly also need to be devised.

Overall, respondents rated their PETE as only average. Preservice teachers were generally more positive about their PETE than inservice teachers. Correlational analyses revealed that respondents felt more confident in those PE content areas they perceived they had received better quality PETE. The strongest relationship was found for Major Games and Gymnastics. This is an important finding and highlights the potential and important relationship between PETE and a teacher's belief in their ability to teach certain PE areas.

Given these results, it is of particular importance to consider teachers' perceptions about the strengths, weaknesses and potential areas for improvement of their PETE. Some common issues emerged upon consideration of respondents' evaluations of their PETE. Opportunities for involvement in practical learning experiences and being taught by enthusiastic and knowledgeable lecturers were considered the greatest strength of PETE. It is evident that PE teacher educators need to be aware of the considerable impact of their choices regarding the structure and delivery of courses on preservice teachers' levels of confidence and satisfaction of their PETE.

Easily the most widespread weakness identified by generalists was the short length of their training in PE. The lack of comprehensiveness of courses, compounded by minimal time training for teaching PE, were the major problems listed by most respondents. In general, generalists believed their K-6 PETE had not been particularly effective. The findings concerning the inadequacy of the PETE of respondents in the current study reiterates results revealed by a substantial number of researchers and commentators worldwide who have expressed considerable concern about the PE preparation of classroom teachers (Capel & Whitehead, 1994; Evans, 1990; Hardman & Marshall, 2001; Hickey, 1992; McKenzie, 1999; McKenzie, Alcaraz, Sallis & Faucette, 1998; Moore et al., 1997; Thompson, 1996; Walkley, 1992; Webb et al., 1993).

Respondents who offered suggested changes to improve K-6 PETE called for improvements in a number of areas. Most generalists reinforced the need for more extensive coverage of PE with a far greater credit point allocation delivered through longer courses. Furthermore, generalists recommended they be afforded more opportunities for exposure to PE teaching in their teacher training. This is an encouraging finding as teachers generally feel they could be more confident and effective PE teachers with more extensive preservice training.

As designers of teacher training courses in PE, teacher educators should respond to, or at least consider, concerns and recommendations of past and present students. Continued evaluation is imperative if progress is to be made in preparing future teachers of PE. Respondents' suggestions for changes to courses to improve their confidence in PE teaching were largely related to the weaknesses they identified. The small amount of time allocated to K-6 PE in teacher training was the source of the greatest criticism by preservice and inservice teachers alike. This is an important point considering PE related subjects in the preservice respondents' tertiary program represented only three percent of the total subject time during their degree.

However, it is important to acknowledge that a substantial issue in both university courses and primary schools is the 'crowded curriculum'. Interestingly, research relating to the teaching confidence of generalists has shown that primary teachers also lack confidence in science (Jarrett, 1999), art (The Senate Environment, Recreation, Communications and the Arts Reference Committee, 1995) and music (Russell-Bowie, McNerney & Yeung, 2001). Perhaps the length and structure of primary university degrees needs to be rethought given recent research indicating that generalists may possess low levels of teaching confidence in a number of areas.

Concomitant with recommendations for preservice education already outlined in this paper, preservice teachers in this study wanted greater opportunities to teach PE, observe lessons, practise writing programs, and learn about teaching motor skills. Only by increasing the amount of PE teaching and/or observation experiences, will preservice teachers become more familiar with the 'realities' of programming and teaching the K-6 syllabus and improve mastery expectations. Previous research (Thompson, 1996; Walkley, 1992) has discussed the need for minimum standards of competencies to be a part of the preservice

training of generalists.

As an alternative to the highly costly proposal of employing specialist PE teachers in primary schools, research has demonstrated substantial benefits from increased support for classroom teachers in their delivery of PE programs. In America, Faucette, Nugent, Sallis, and McKenzie (2002) have recently shown the value of professional development on classroom teachers' PE teaching confidence and highlighted the value of specialist assistance.

## Limitations

As this study only examined one preservice cohort, results should be treated with some caution. Future research should look to examine these relationships across universities and for different KLAS.

## Conclusion

Currently, the standard of PE teaching in NSW primary schools is questionable, particularly as the classroom teacher often experiences inadequate preservice education and lacks confidence to teach PE. Teachers' levels of confidence may contribute to the implementation and quality of PE programs and practice and to the level of outcome achievement of students. More extensive preservice training and ongoing professional development are necessary, particularly considering the interrelated nature and potential for improvement of the major inhibiting factors to teaching PE (lack of teacher confidence and adequacy of teacher training).

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## Author's Notes

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