

Supplementary File 2a. Changes in teacher behaviour outcomes measures at post-intervention assessment.

Measure	Control, Mean (SD)				Intervention, Mean (SD)				Adjusted Difference in Change			Cohen's <i>d</i>	ICC - School
	Baseline		Post-intervention		Baseline		Post-intervention		Estimate	SE (95% CI)	<i>p</i>		
Maximising Movement and Skill Development	n = 32	17.50 (5.24)	n = 29	18.10 (4.44)	n = 32	18.28 (3.48)	n = 29	27.90 (6.77)	8.72	1.65 (5.50 to 11.98)	<0.001	1.96	0.23
Reducing Transition Time	n = 32	11.50 (3.64)	n = 29	10.62 (2.53)	n = 32	10.28 (1.78)	n = 29	22.03 (4.10)	12.49	0.92 (10.70 to 14.30)	<0.001	4.36	0.22
Building Competence	n = 32	18.41 (4.73)	n = 29	16.83 (2.63)	n = 32	17.31 (3.36)	n = 29	22.83 (5.30)	6.96	1.14 (4.75 to 9.19)	<0.001	1.67	0.23
Supporting Students	n = 32	13.75 (3.07)	n = 29	13.93 (3.50)	n = 32	13.72 (3.14)	n = 29	19.90 (4.23)	5.95	0.84 (4.32 to 7.59)	<0.001	1.92	0.24

*Note:* All mean values refer to ratings made by independent observers. Maximising Movement and Skill Development measured on scale from 9 to 45 (sum of 9 items, each with a 1 to 5 Likert scale). Reducing Transition Time measured on scale from 7 to 35. Building Competence measured on scale from 8 to 40. Supporting Students measured on scale from 6 to 30. 20% of videos were double-rated with an overall intra-class correlation of 0.67 for these ratings. Cohen's *d* = adjusted difference in change / pooled *SD* at baseline. Changes to outcomes after trial commenced – We intended to examine video-based ratings of teachers' implementation at all three time points. Due to limited resources, however, we could not employ blinded raters for final phase (i.e., maintenance). Thus, only baseline and post-intervention ratings could be analyzed.

Supplementary File 2b. Teacher Process Evaluation Ratings.

<b>Intervention Component</b>	<b>Rating Mean</b>	<b>SD</b>
<i>Overall intervention</i>		
Enjoyable	4.58	0.52
Useful	4.82	0.38
<i>Presentations of the AMPED Principles and Strategies</i>		
Increased my understanding	4.51	0.57
Provided me with useful strategies	4.54	0.54
<i>Good &amp; Poor Practice Videos – online reflection</i>		
Useful	4.52	0.49
<i>My Practice Videos – online self-reflection</i>		
Useful	4.76	0.59
<i>Group Discussion</i>		
Increased my understanding	4.34	0.56
<i>Micro-teaching</i>		
Increased my understanding	4.35	0.65
Increased my confidence	4.35	0.59
Helped me implement	4.46	0.56
<i>Action Planning</i>		
Helped me implement	4.33	0.57
<i>Mentoring</i>		
Useful	4.45	0.51
<i>Website</i>		
System Usability Score	4.60	0.48

Note: All items rated on a scale from 1 (strongly disagree) to 5 (strongly agree).

Supplementary File 2c. AMPED Intervention Adoption.

<b>Core Components</b>	<b>Proportion of Teachers Completing</b>
Good and Poor Practice Reflection Online During Workshop	97.88%
My Practice Self-reflection Online During Workshop	98.11%
My Practice Self-reflection Homework Online	83.49%
Action Plans	95.28%
Mentor Meetings	88.68%
<b>Additional Components</b>	
Resources Downloaded	71.70%
Mobile App downloaded	90.57%
Used Mobile App	52.83%

Note: Adoption data collected from the website database. Changes to analyses after trial commenced – We intended to conduct per protocol analyses to investigate the influence of teachers’ adoption of the intervention, as indicated by the proportion of intervention components completed by each teacher (e.g., workshops attended and online tasks completed), on student outcomes (e.g., MVPA during PE lessons). However, most teachers completed all components and these ceiling effects precluded meaningful per protocol analyses.