

<b>Institution:</b> Newman University		
<b>Unit of Assessment:</b> 23		
Title of case study: Active learning during primary school physical education in the West Midlands		
<b>Period when the underpinning research was undertaken:</b> 2014-2018		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Dr Emma Powell	Senior Lecturer in Teacher Education	April 2009 to date
Dr Lorayne Woodfield	Senior Lecturer in Sport and Health	September 2002 to date
<b>Period when the claimed impact occurred:</b> 2016-2020		
<b>Is this case study continued from a case study submitted in 2014?</b> ✘/N		
<b>1. Summary of the impact</b> (indicative maximum 100 words)		
<p>Powell and Woodfield's research has positively impacted teacher practice regionally to increase active learning time in primary school physical education (PE) by 28%, almost double that of any published teaching strategy intervention internationally. The research has resulted in the development of an innovative and effective set of teaching principles to address the current issue of insufficient physical activity (PA) in PE which negatively impacts children's engagement and learning. Dissemination of the research-informed SHARP Principles to qualified and student teachers has improved the quality of teaching in over 500 primary schools regionally, and is beginning to inform practice nationally and internationally.</p>		
<b>2. Underpinning research</b> (indicative maximum 500 words)		
<p>Building upon previous research into school-based PA (outputs included in RAE 2008 and REF2014 submissions), the underpinning research for this case study aimed to explore and increase children's PA during key windows of opportunity in a primary school day, i.e., breaktimes and PE. The research was driven by both Dr Powell's and Dr Woodfield's previous careers as primary school teachers, and current roles as lecturers in PE (including teacher training).</p> <p>The SHARP Principles are specifically grounded in three, mixed-methods research studies (Powell, Woodfield &amp; Nevill, 2016; Powell et al, 2018; Powell <i>et al.</i>, 2020). Observational mixed-methods research of active learning time during PE was conducted between April 2014 and December 2015 and resulted in the publication of Powell <i>et al.</i> (2018) which identified that children were actively moving for 42.4% (mean) of lesson time, and below the recommended 50-80%, furthermore, that teacher behaviours (i.e., classroom management and organisation) predicted active learning. Interviews with both teachers and children revealed that teachers' 'knowledge and beliefs', 'pedagogy' and teacher 'development' influenced the teaching of PE, thereby reducing active learning. The research recommended that future interventions need to target knowledge and beliefs towards PE along with the development of effective teaching strategies, and that interventions need to be grounded in behaviour change theory and use an ecological approach.</p> <p>The results of the observational research were used to inform the development of the SHARP Principles in collaboration with teaching staff at a West Midlands Primary School, and the efficacy of these teaching principles were established through a quasi-experimental study</p>		

design. Results of this novel teaching intervention produced a mean increase in active learning in the intervention group to over 72.6% of lesson time (Powell, Woodfield & Nevill, 2016), and further scaled-up research (where the Principles were introduced to teachers working in a range of primary schools) also resulted in a similar increase (28%) (Powell et al., 2020). The findings of this body of research have shown that these teaching principles make a positive impact upon active learning time during PE. As a result, the SHARP Principles have been identified in academia as “worthy of serious consideration” (Draper, N. & Stratton, G. (2019) *Physical activity: a multi-disciplinary introduction*. London: Routledge).

### Conceptual development of the SHARP Principles

The underpinning research resulted in the development of the SHARP Principles Model to help schools and physical education subject leaders with the implementation of the Principles. The SHARP Principles are grounded in a unique combination of theoretical constructs including selected ingredients from the BCT, SDT, and elements from McLeroy’s ecological model (individual, interpersonal and organisational). These constructs target the teachers’ behaviour to produce a change to their practice which ultimately leads to an increase in active learning time during PE lessons, and therefore the model helps schools to create an environment which supports sustained behaviour change.

Given the efficacy of the underpinning research these teaching principles have been and continue to be shared and disseminated more widely with school-based practitioners to increase active learning time in PE.

### 3. References to the research (indicative maximum of six references)

All four outputs contributed to the development or evaluation of the efficacy of the SHARP Principles. Output 2 is an observational study on physical activity in PE lessons and the factors influencing active learning time. Output 3 is a school-based intervention to increase physical activity during break times. Findings and conclusions drawn from the research published in outputs 2 and 3 were used to inform the research design published in output 1, an exploratory quasi-experimental study to increase active learning in PE. Output 4 was a larger scale study which confirmed the positive findings reported in Output 1, that the SHARP Principles are effective at increasing active learning time in PE.

1. Powell, E., Woodfield, L.A. and Nevill, A.M. (2016) Increasing children’s physical activity in primary school physical education: the SHARP Principles Model. *Preventive Medicine Reports*. <https://www.sciencedirect.com/science/article/pii/S2211335515001643>
2. Powell, E., Woodfield, L., Nevill, A.M., Powell, A.J. and Myers, T.D. (2018) ‘We have to wait in a queue for our turn quite a bit’: examining children’s physical activity during primary physical education lessons. *European Physical Education Review*. ISSN 1741-2749
3. Powell, E., Woodfield, L., Powell, A.J., Nevill, A.M. and Myers, T.D. (2018) *Evaluation of a Walking-Track Intervention to Increase Children’s Physical Activity during Primary School Break Times*. *Children*, 5 (10) (135). ISSN 2227-9067
4. Powell, E., Woodfield, L.A., Powell, A.J. and Nevill, A.M. (2020) *Assessing the Wider Implementation of the SHARP Principles: Increasing Physical Activity in Primary Physical Education*. *Sports*, 8 (1). p. 6. ISSN 2075-4663
- 5.

### 4. Details of the impact (indicative maximum 750 words)

The regional impact of the research is considered to be in two main areas; the direct impact upon teacher and student teacher practice in increasing active learning time in primary PE lessons in the West Midlands and the indirect impact for children’s learning as a result of the change to teachers’ practice.

#### Impact on physical education teacher practice

As an education community-based teaching intervention, Powell's and Woodfield's research, through its dissemination (through a series of workshops, set of resource cards and YouTube video), has positively contributed to primary physical education practice in the following ways:

Teacher training: All student and trainee primary school teachers graduating from Newman University have been trained in the use of the SHARP Principles since the 2015-2016 academic year. As a result, over 500 newly qualified teachers to date, 95% of whom take up their first teaching posts in West Midlands schools (50% in Birmingham schools), have been trained in the use of the SHARP Principles and now have a focus on active learning time in the PE lessons they teach. This research-informed training has helped to prepare students for both their school experience placements and future employment, and student feedback highlights that as a result of the training they have received 88% feel more prepared and 80% feel more confident to teach PE.

Teachers' professional development: three research-informed teacher workshops held since September 2019 (two on-campus and one online due to Covid-19 restrictions) have introduced the SHARP Principles to 62 teachers working in at least 45 West Midlands schools, with some teachers working across a number of schools, and provided teachers with the opportunity to apply the Principles to their existing PE planning. Feedback from all the teachers who attended the workshops highlighted that they had an increased awareness of how active children should and could be in PE lessons.

As the workshops explore the behaviour change model to help support the implementation of the SHARP Principles in schools, and because many of the practitioners who attended the workshops have a subject leadership responsibility for physical education in their schools, the impact of the dissemination of the research is expected to be far greater. Based upon workshop feedback, over 60% of teachers said they would be sharing the Principles with colleagues through continuing professional development opportunities and implementing them to improve the quality of teaching in their school. In their workshop feedback another teacher commented that they intended to share it within their sport coaching environment, highlighting the application and potential reach of the Principles beyond primary PE.

The creation of free teacher resource cards and the recent (June 2020) development of an accompanying YouTube video (as of 18/03/21 250 views; <https://www.newman.ac.uk/knowledge-base/active-learning-time-in-physical-education-the-sharp-principles-teaching-resources/>) is helping to increase the reach of the SHARP Principles beyond the West Midlands. Requests for the resource cards have been received from as far away as Scotland in the UK and Chile internationally. After viewing the video and requesting the resource cards an Assistant Headteacher stated in their feedback that the principles had been '*shared with the whole school with staff and specific sports coaches*' and that their Dudley school intends for '*all staff the follow the principles to ensure maximum engagement and involvement of all pupils*'.

The wider dissemination of this research-informed practice will increase the reach of the SHARP Principles amongst physical education practitioners nationally. Recent collaboration with the University of Strathclyde, will result in the dissemination of the Principles amongst practitioners in East Renfrewshire. Furthermore, Powell and Woodfield were invited to submit an article for publication in the Spring 2021 edition of *Physical Education Matters*, the professional journal of the Association of Physical Education (afPE) in the United Kingdom. The journal goes out to 3200 members, 98% of which are UK based.

### **Impact upon pupil learning, behaviour and engagement**

Through changes to teachers' practices, the indirect impact of the SHARP Principles research upon primary pupils can be considered in terms of their learning, behaviour and engagement in PE lessons. The exact number of children regionally to have been positively impacted by the change to teacher' practices is difficult to measure but a conservative estimate is that over

**Impact case study (REF3)**

200,000 children's PE lessons will have a focus on active learning time as a result of the dissemination of the Principles since 2015-2016 academic year. One teacher who attended the workshop highlighted how the changes made to planning and teaching as a result of the Principles would help their Birmingham school to '*implement personalised learning into PE lessons*', thereby further supporting learning.

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

1. Letter from Headteacher of a Birmingham primary school that implemented the SHARP Principles across the school (pdf)
2. Video of a class teacher and PE Lead Teacher at a Birmingham primary school talking about the SHARP Principles and changes to their own practice (pdf link to Panopto recording)
3. Written statement from a Newly Qualified Teacher at a Birmingham primary school about the SHARP Principles and changes to their own practice (pdf)
4. Feedback from attendees of on campus teacher workshops in September 2019 and January 2020 (pdf scans of handwritten feedback sheets) and the online SHARP Principles teacher workshop in November 2020 (Excel spreadsheet from online feedback)
5. Feedback on SHARP Principles and Teacher Resource Cards (Excel spreadsheet)
6. Letter from Primary PGCE Coordinator at Newman University (pdf)
7. Feedback from Newman PGCE student teachers who attended online university lecture and workshop in November 2020 (Excel spreadsheet)