

Co-developing a whole-school physical activity framework



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🐦 @brainercise



Research: whole-school programmes have little, if any, effect on daily moderate-to-vigorous physical activity levels




The UK does not have a whole-school framework, therefore, internationally, frameworks are based on theory rather than multi-stakeholder input

Current UK policy and health schools scheme has a narrow focus on singular interventions which alone, research shows are unlikely to cause significant benefit to WPA

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PEDIATRIC OBESITY/OBESITY PREVENTION **WILEY** *obesity reviews*

Are school-based physical activity interventions effective and equitable? A meta-analysis of cluster randomized controlled trials with accelerometer-assessed activity

Rebecca Love  Jean Adams  Esther M. F. van Sluijs 

Summary

The prevalence of childhood obesity is increasing at epidemic rates globally, with widening inequalities between advantaged and disadvantaged groups. Despite the potential of schools as a universal context to access and influence all children, the potential of school-based interventions to positively impact children's physical activity behaviour, and obesity risk, remains unclear. We searched six electronic databases to February 2017 for cluster randomized trials of school-based physical activity interventions. Following data extraction, authors were sent requests for missing data. For each trial, a mean change score from baseline to follow-up was calculated for daily minutes of accelerometer-assessed moderate-to-vigorous physical activity (MVPA). For the main effect, by gender, and by socio-economic position (SEP), Tukey's *h*-test and the influence criteria 17 trials provided relevant data for inclusion in the meta-analysis. The pooled main effect for daily minutes of MVPA was non-significant and nonsignificant. There was no evidence of differential effectiveness by gender or SEP. This review provides the strongest evidence to date that current school-based efforts do not positively impact young people's physical activity across the full day, with no difference in effect across gender and SEP. Further assessment and implementation fidelity is required before it can be concluded that these interventions have no contribution to make.

KEYWORDS

children and adolescents, meta-analysis, physical activity, systematic review

1 | INTRODUCTION

The worldwide prevalence of childhood obesity has increased steadily over the past four decades. Obesity in childhood increases the risk of noncommunicable diseases in adulthood, which are estimated to cause 71% of the world's deaths.¹ The lifetime health care and productivity costs of childhood obesity have been estimated at £18.2 billion per child.² Physical inactivity is a key contributor to childhood obesity,³ and international guidelines recommend that

young people aged 5–18 years accumulate 'at least 60 minutes of moderate-to-vigorous physical activity (MVPA) daily'.^{4,5} However, globally 81% of adolescents do not meet these guidelines.⁶ Furthermore, physical inactivity is socially patterned, contributing to inequalities in associated health outcomes.⁷ In particular, children who are socioeconomically disadvantaged and girls are more likely to be physically inactive than children who are more advantaged and boys.^{8,9} Providing both equity by reducing inequalities in health behaviours and increasing a priority for national and international bodies,¹⁰

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OXFORD

Co-producing active lifestyles as whole-system-approach: theory, intervention and knowledge-to-action implications

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Summary

Population health interventions tend to lack links to the emerging discourse on interactive knowledge production and exchange. This situation may limit both a better understanding of mechanisms that impact health lifestyles and the development of strategies for population level change. This paper introduces an integrated approach based on structure-agency theory in the context of 'social practice'. It investigates the mechanisms of co-production of active lifestyle by population groups, professionals, policymakers and researchers. It combines a whole system approach with an interactive knowledge-to-action strategy for developing and implementing active lifestyle interventions. A system model is outlined to describe and explain how social practices of selected groups co-produce active lifestyles. Four intervention models for promoting the co-production of active lifestyles through an interactive knowledge-to-action approach are discussed. Examples from case studies of the German research network CapitalHearts are used to illustrate, how intervention models might be operationalized in a real-world intervention. Five projects developed, implement and evaluate interventions across the life-course. Although subgroups differ with regard to settings and population groups involved, they all focus on the four key components of the system model. The paper contributes new strategies to address the intervention research challenge of sustainable change of inactive lifestyles. The interactive approach presented allows consideration of the specificities of settings and scientific contexts for multi-fold purposes. Further research remains needed on what a co-produced knowledge-to-action agenda would look like and what impact it might have for whole system change.

Key words: structure and agency, population health intervention research, knowledge exchange, co-production, active lifestyle

Background: A 'whole-of-school' approach is nationally endorsed to increase youth physical activity (PA). Aligned with this approach, comprehensive school physical activity programs (CSPAPs) are recommended. Despite endorsement, a CSPAP includes physical education (PE), PA during the school day (PDA), PA before/after school (PABAS), staff wellness (SW), and family/community engagement (FCE). The purpose of this systematic review was to assess the effectiveness of CSPAPs in increasing youth PA. Methods: Electronic databases were searched for published studies that (1) used any of the 17 CSPAP components, (2) targeted ages 5–17 years old, (3) used interventions, (4) evaluated a CSPAP component, with at least 1 targeting school-based PA during school hours, and (5) reported measures on daily PA (steps). Standardized mean differences (SMDs) of PA from pooled studies effect sizes (small-to-large) were estimated. Results: Across 14 studies, 12 included PE, 10 PABAS, 1 PABAS, 2 PDA, and 14 FCE. No studies included all 5 CSPAP components. Overall, intervention impact was small (SMD 0.11, 95% CI 0.05–0.17). Conclusions: As designed, there is limited evidence of the effectiveness of multicomponent interventions to increase youth PA. Increased alignment with CSPAP recommendations may improve intervention effectiveness.

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Systematic Review and Meta-Analysis of Multi-Component Interventions Through Schools to Increase Physical Activity

Laura B. Russ, Collin A. Webster, Michael W. Beets, and David S. Phillips

Background: A 'whole-of-school' approach is nationally endorsed to increase youth physical activity (PA). Aligned with this approach, comprehensive school physical activity programs (CSPAPs) are recommended. Despite endorsement, a CSPAP includes physical education (PE), PA during the school day (PDA), PA before/after school (PABAS), staff wellness (SW), and family/community engagement (FCE). The purpose of this systematic review was to assess the effectiveness of CSPAPs in increasing youth PA. Methods: Electronic databases were searched for published studies that (1) used any of the 17 CSPAP components, (2) targeted ages 5–17 years old, (3) used interventions, (4) evaluated a CSPAP component, with at least 1 targeting school-based PA during school hours, and (5) reported measures on daily PA (steps). Standardized mean differences (SMDs) of PA from pooled studies effect sizes (small-to-large) were estimated. Results: Across 14 studies, 12 included PE, 10 PABAS, 1 PABAS, 2 PDA, and 14 FCE. No studies included all 5 CSPAP components. Overall, intervention impact was small (SMD 0.11, 95% CI 0.05–0.17). Conclusions: As designed, there is limited evidence of the effectiveness of multicomponent interventions to increase youth PA. Increased alignment with CSPAP recommendations may improve intervention effectiveness.

Keywords: comprehensive school physical activity program, physical education, staff, effectiveness

Summary

The purpose of a CSPAP is to increase the quantity and quality of PA opportunities through schools to improve performance in PA. Although comprehensive school physical activity programs (CSPAPs) are nationally endorsed, there is limited evidence of their effectiveness. This review was conducted to assess the effectiveness of CSPAPs in increasing youth PA. Programs and policies to increase PA using interventions are reviewed through schools, which are currently being implemented in numerous countries, such as Ireland, Finland, France, Germany, and Switzerland.¹ However, the extent to which interventions reflect, or have adopted, a whole-of-school approach remains unclear. Identifying the effects of interventions targeting multiple CSPAP components may provide a unique, and possibly more precise, perspective of certain efforts to increase youth PA through schools. The current study examined the effectiveness of 17 CSPAP multi-component interventions to increase the total daily PA of youth. Specifically, a systematic review and meta-analysis, using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines² was conducted on interventions that included 2 or more CSPAP components.

Methods

Search Strategy

Studies were identified and analyzed between August 2013 and January 2016. Two reviewers conducted independent searches of the following databases: Medline, Embase, and PsycInfo, and the following combinations of keywords: physical activity, school, children, adolescents, length of school day, and PA. The search strategy was designed to identify the greatest number of studies and to include the widest range of literature. Studies were further analyzed by title and abstract according to the PRISMA² guidelines. Excluding review articles on youth PA interventions were also identified and their references searched for inclusion in studies.

Additional Criteria

The interventions were included in this review (a) if aligned with the CSPAP components (b) targeted youth school-based

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Enhancing Academic Performance,
Health and Well-being:
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A conference for school leaders and governors
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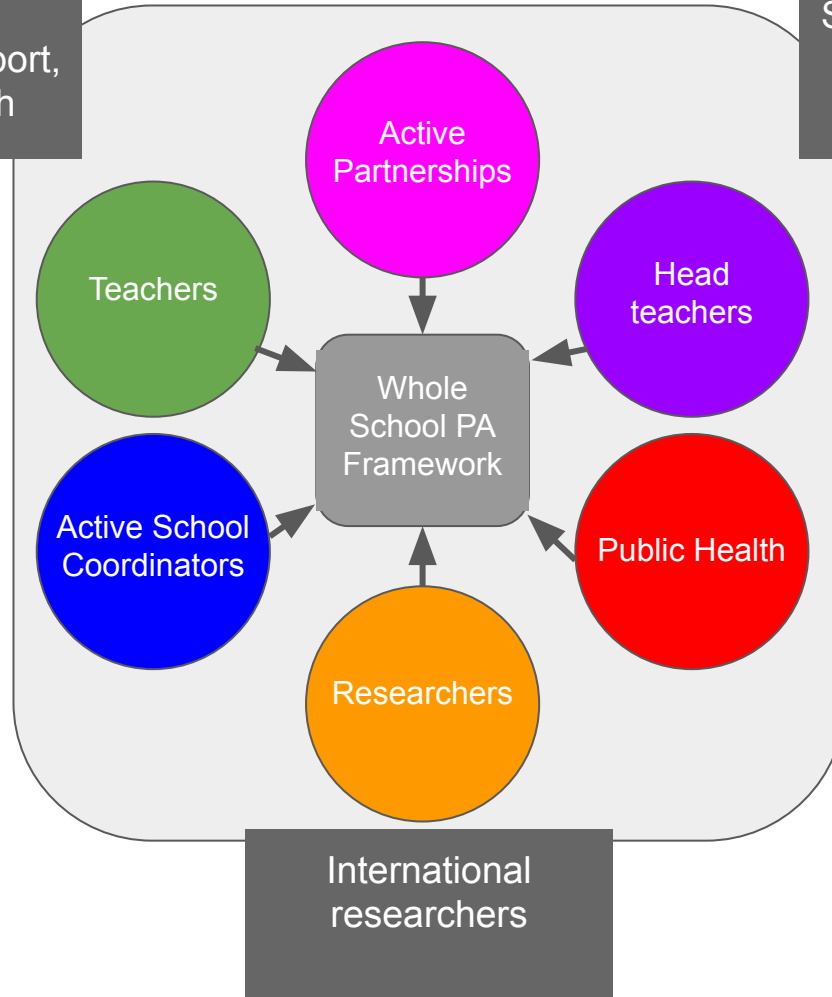
LEEDS
BECKETT
UNIVERSITY



Yorkshire
Sport
Foundation



Public Health
England



International
researchers



Aim: to support every child to increase their physical activity levels, working towards achieving 30/60 minutes per day.



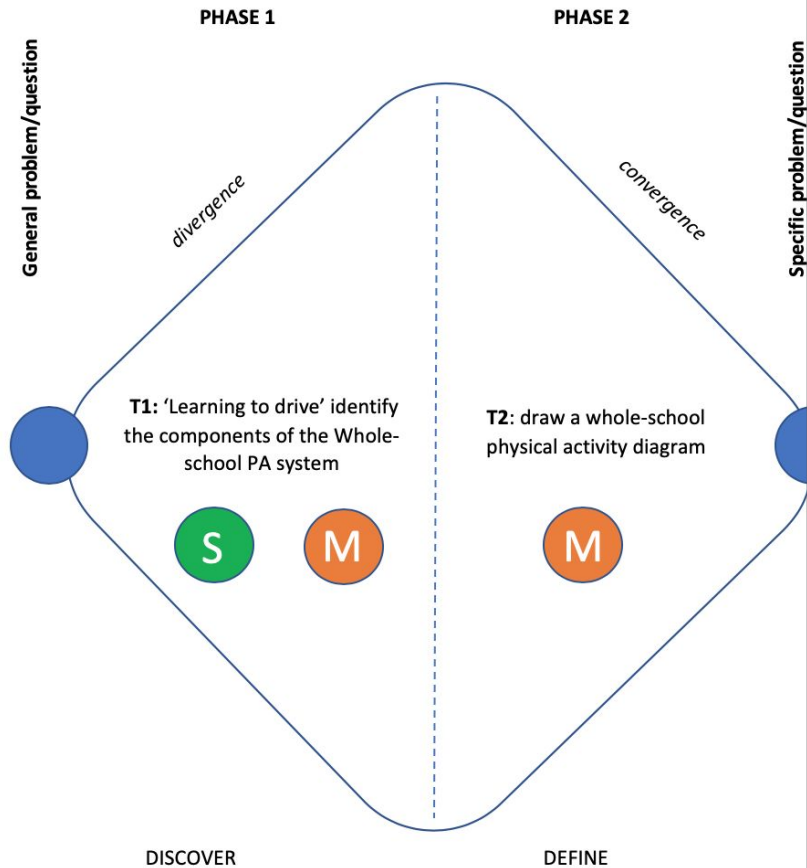
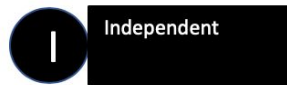
Mixed Stakeholder
Groups

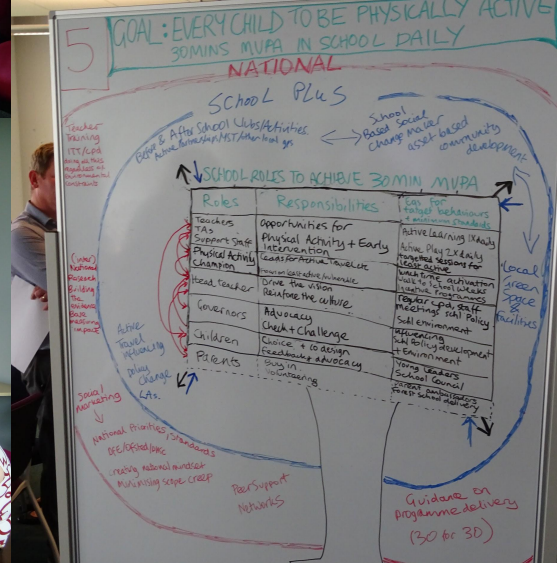
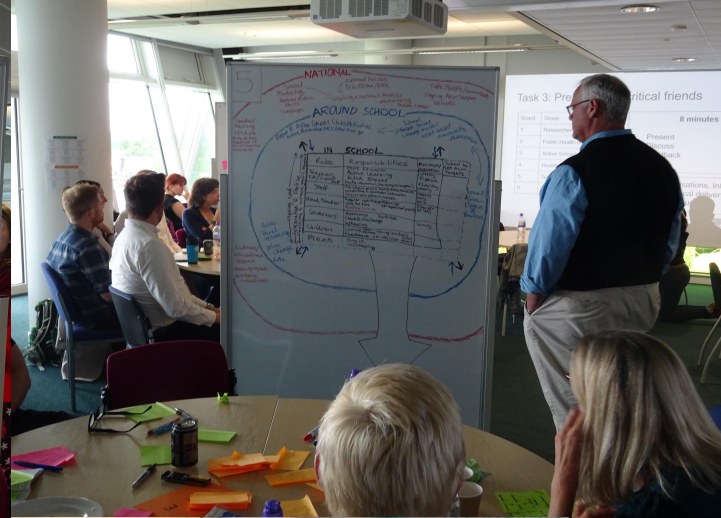
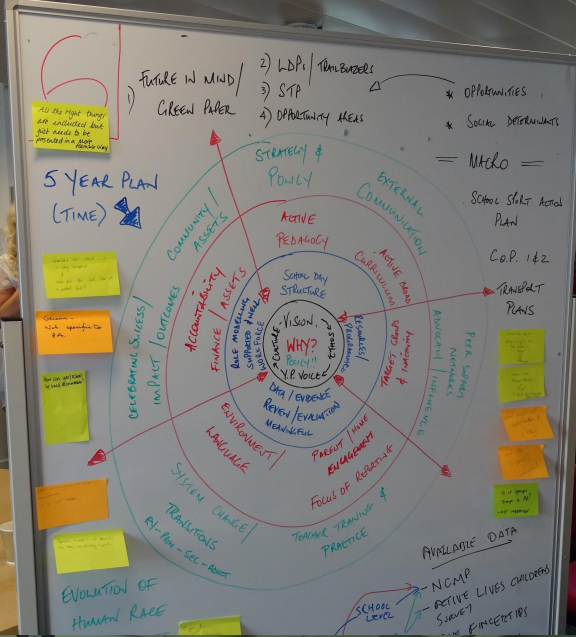


Same Stakeholder
Groups



Independent







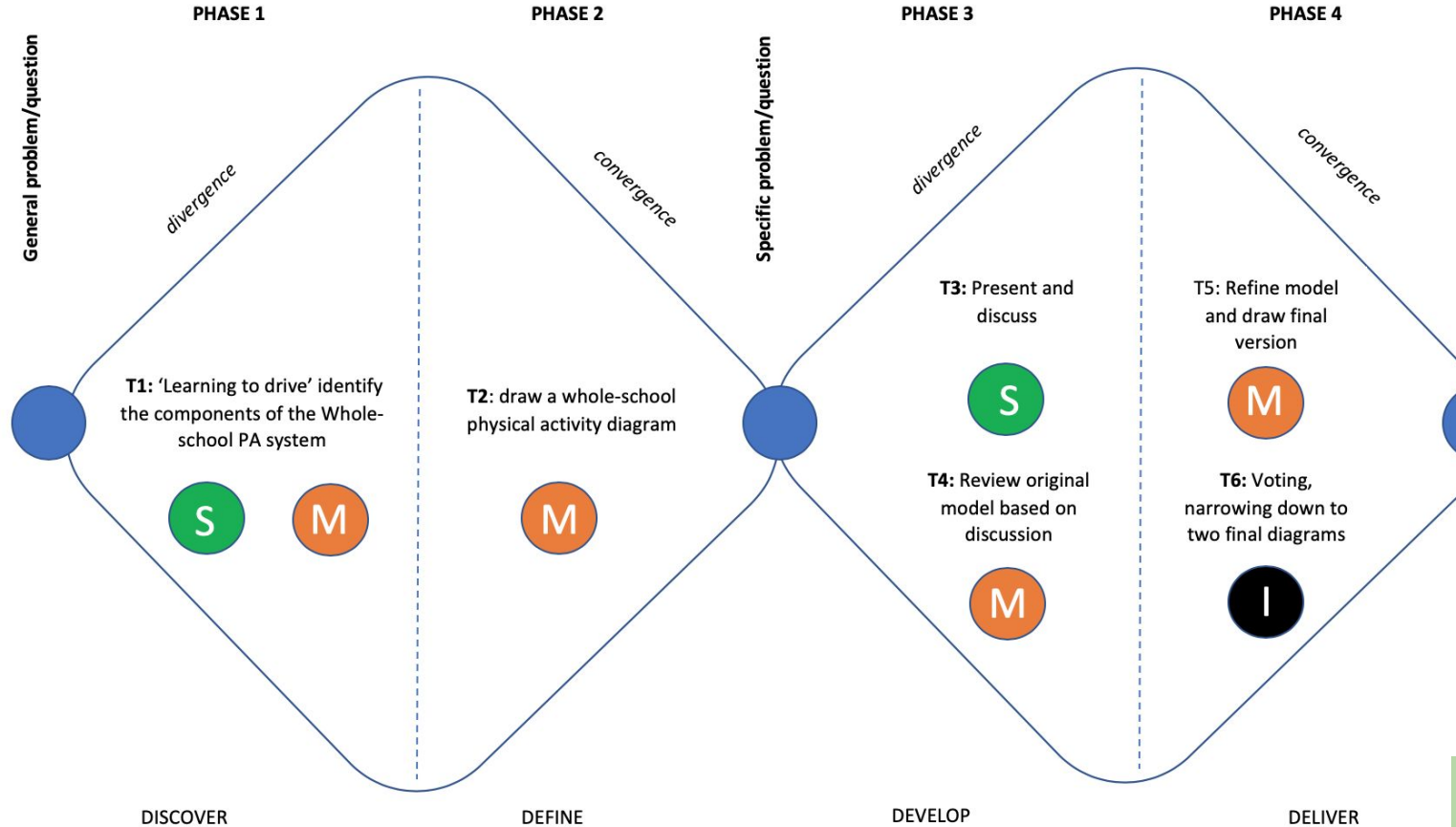
Mixed Stakeholder Groups



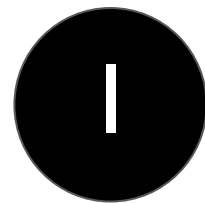
Same Stakeholder Groups

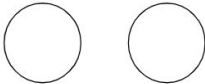
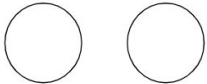
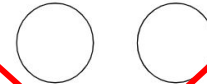
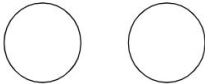
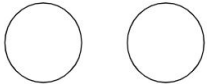
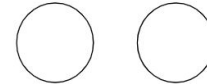


Independent



Task 6: Voting



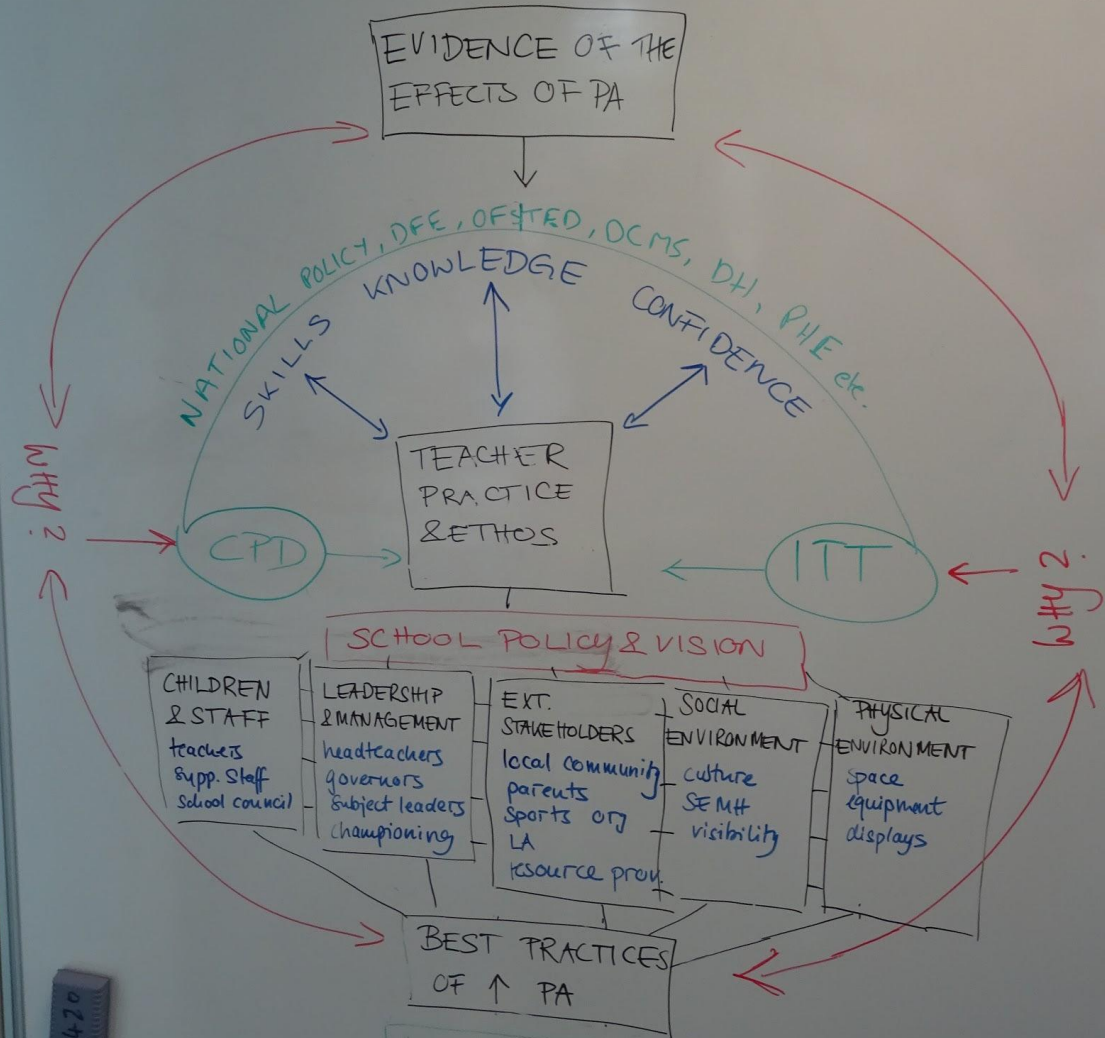
Stakeholder type: Researcher, teacher etc..		Group number: Model design team (e.g. team 3)
1.  Why do you like this diagram? Does anything need adding?	2.  Why do you like this diagram? Does anything need adding?	3.  Why do you like this diagram? Does anything need adding?
4.  Why do you like this diagram? Does anything need adding?	5.  Why do you like this diagram? Does anything need adding?	6.  Why do you like this diagram? Does anything need adding?
Any further comments:		

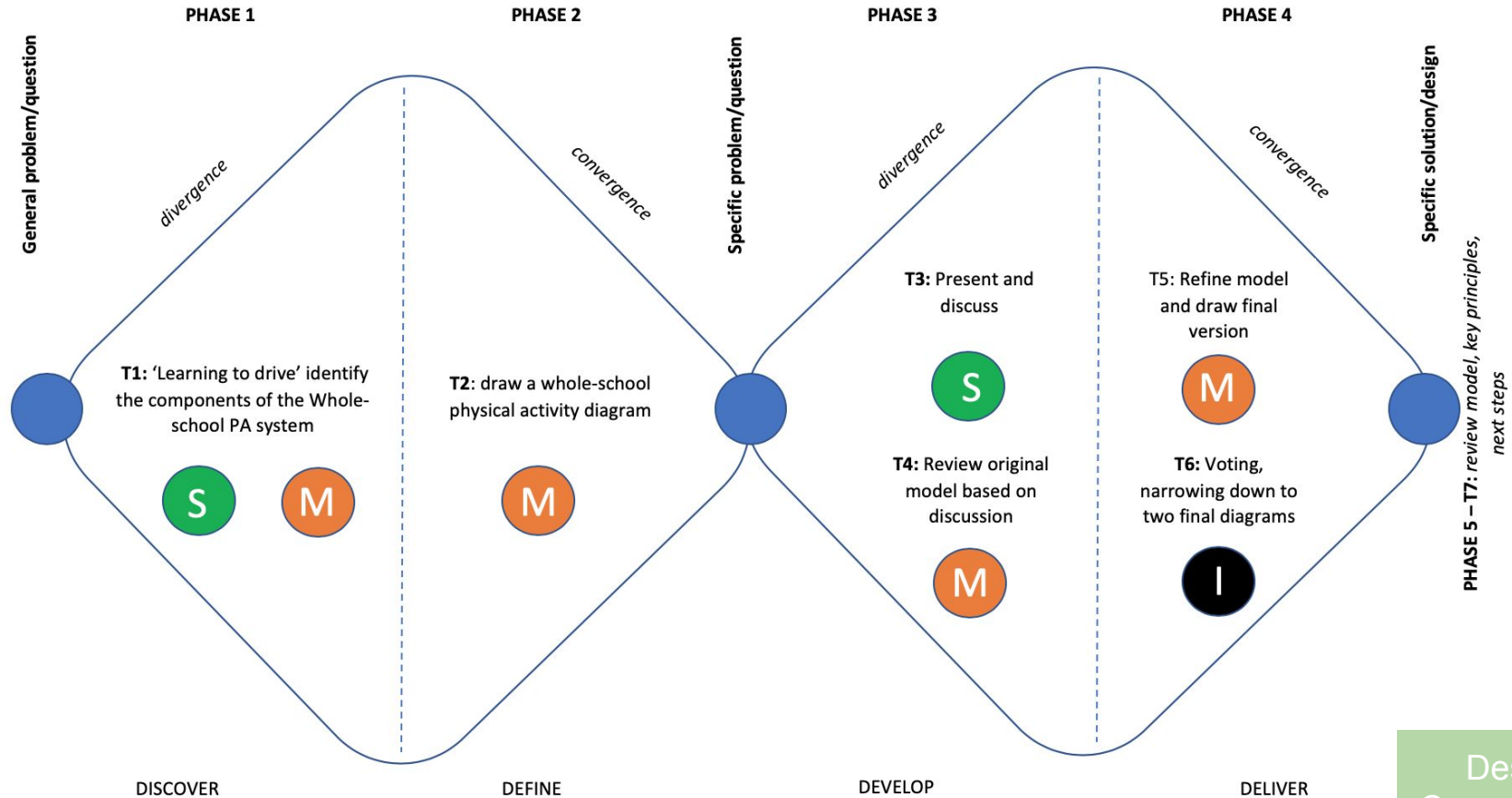
3 ★ stickers

Max 2 on any one model.

- Hand your form to Lauri or Luke
- Grab a drink

15:15 to 15:35

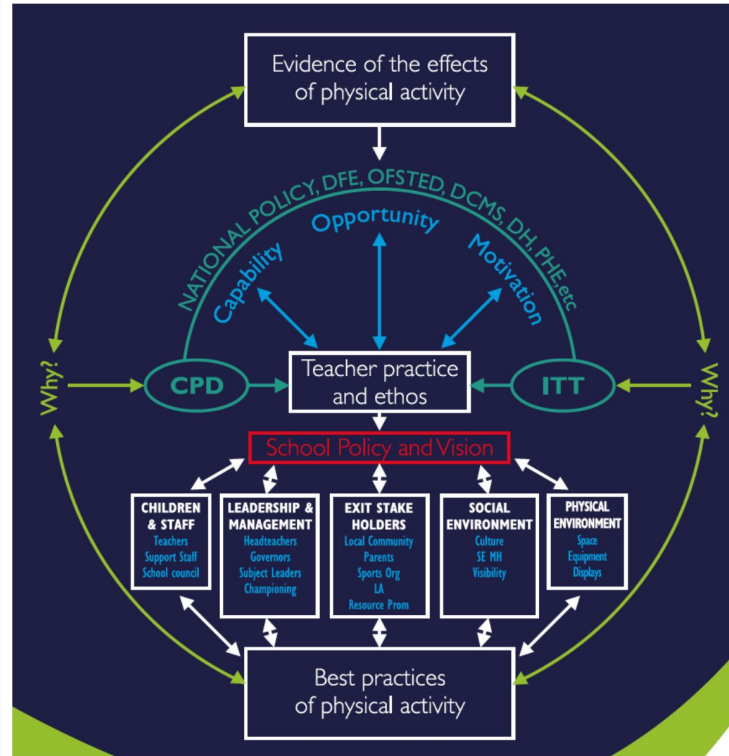




This section will involve sharing your views on the proposed changes.

We have a draft design of the initial model. The first round of questions will relate to the proposed changes to this model.

Model 1



Proposal 1: Alter the terms skills, knowledge and competence to Capability, Opportunity and Motivation to align the framework with the COM-B model ([Michie et al. 2011](#)).

Proposal 2: At the heart of the model, change teacher practice and ethos to whole-school practice and ethos.

Proposal 3: Alter the 5 original pillars (Children and staff, Leadership and Management, External stakeholders, social environment, physical environment) to five people-oriented pillars. (children and young people, teachers and school staff, school leaders, parents, wider stakeholders).

Proposal 4: Remove the social environment and physical environment as pillars and show these as interweaving through the five pillars.

Proposal 5: Present the five people-orientated pillars and the social and physical environment as a DNA helix.

Proposal 6: Introduce a new part to the model where children are included as the main beneficiaries.

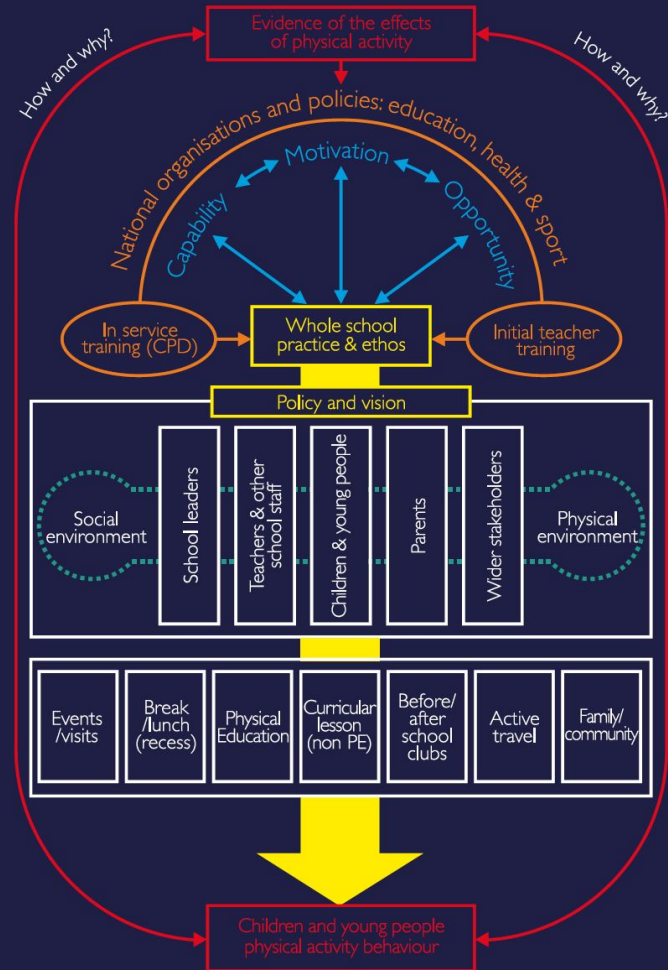
Proposal 7: Change the best-practice physical activity box to reflect the seven PA segments/ opportunities within the school day.

Proposal 8: Rotate the model 90 degrees to the left.

	1. Change skills, knowledge & competence to capability, opportunity & motivation	2. Change teacher practice & ethos to whole-school practice & ethos.	3. Change 5 original pillars to 5 people-orientated pillars	4. Show social & physical environment as interweaving through the 5 pillars.	5. Present the five pillars and social/ physical environments as a DNA helix?	6. Introduce a new part to the model where children are included as the main beneficiaries?	7. Change the best-practice physical activity box to include 7 PA segments/ opportunities?	8. Rotate the model 90 degrees to the left?
Nat Researchers (n=5)	100	100	80	100	20	80	60	40
Public Health (n=5)	100	80	100	100	0	80	80	80
Active Schools (n=4)	75	100	100	100	50	100	50	50
Head Teachers (n=5)	100	100	100	80	60	80	40	60
Teachers (n=5)	100	80	60	100	60	100	60	20
Active Partners (n=4)	100	100	100	75	25	100	75	50
Int Researchers (n=5)	100	100	100	80	40	80	0	40
Nat Organisations (3)	33	67	100	100	67	100	100	100
LDP (n=1)	100	100	100	100	100	100	100	100
Total (n=37)								
Overall in agreement	92	92	92	92	41	89	57	54
Number of groups with +ve response	8 of 9	9 of 9	9 of 9	9 of 9	3 of 9	9 of 9	6 of 9	4 of 9
Accept/ Decline modification	Accept	Accept	Accept	Accept	Decline	Accept	Accept	Decline

Modifications were accepted when >50% of the total sample voted for the change and more than half of the stakeholder groups (5 or more) voted for the change.

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