8th World Conference on
Arts, Humanities, Social Sciences and Educations
May 22-23, 2025 | Vienna, Austria

https://doi.org/10.62422/978-81-981590-2-1-002

Implementing Technology-Enhanced Quality Physical Education for Physically Active and Mentally Healthy Kids

Dr. Weiyun Chen
Associate Professor, School of Kinesiology, University of Michigan, USA.

A staggering 78.2% of Michigan youth do not engage in the recommended 60 minutes of moderate-to-vigorous physical activity (MVPA) each day. This lack of daily MVPA has significantly contributed to the prevalence of childhood obesity and has exacerbated mental health and well-being for youth. Currently, 31.4% of Michigan youth are overweight and obese. In a recent survey, lack of physical activity, stress, and anxiety emerged as top concerns for child health. Given the urgency of the situation, it is crucial to ensure that school-aged children participate in a minimum of 30 minutes of daily MVPA during school hours as they spend more than half of their waking hours there. Providing students with quality physical education (QPE) is the whole-school approach to promoting daily MVPA. One key QPE indicator is engaging students in MVPA for at least 50% of class time. Integrating technology into QPE lessons is essential to achieve this goal. Toward this end, we have developed and implemented the first year of our two-year large-scale funded project: Sustaining Quality Physical Education for Health Kids. The purpose of this keynote presentation is to share findings from our first-year study in four key areas.

1. Teacher Training:

- How we trained teachers to enhance their content knowledge, pedagogical skills, and dispositions for implementing the Technology-Enhanced (Smart)-QPE intervention during regular school-offered regular PE classes.

2. Smart-QPE Intervention:

- What specific Smart-QPE Interventions were implemented by trained PE teachers during a 12-week period?
- Rationales for integrating the Heart Zone Move System into QPE lessons.
- Differences between Smart-QPE lessons and traditional PE lessons.

3. First-Year Project Results:

- Impacts of the Smart-QPE intervention on real-time, objective measures of MVPA and cardiorespiratory fitness among fourth- and sixth-grade students enrolled in eight elementary and middle schools.
- Effectiveness of the 12-week Smart-QPE intervention on social emotional learning (SEL), psychological well-being (PWB), mental health, and daily physical activity (PA among these students.
- Associations between objectively measured MVPA in Smart-QPE lessons and SEL, PWB, mental health, and daily PA among these students

4. Learnings from Implementation:

- Insights gained from implementing the Smart-QPE intervention in school settings.
- How these findings will inform the second year of the project to better implement the intervention in 20 schools.

Implications: By sharing our implementation strategies and the findings from the first-year of this large-scale study, we aim to provide valuable insights into the key implementation strategies used to maintain intervention fidelity while allowing for necessary adjustments to ensure flexibility in schools settings.

Biography:

Weiyun Chen is a tenured associate professor of Applied Exercise Science and Director of the Physical Activity and Health Laboratory in the School of Kinesiology at the University of Michigan. Dr. Chen's research focuses on developing, implementing, and evaluating physical activity (PA) interventions in PA behaviors, functional fitness, cognitive functions, mental health, and psychological well-being across life spans. She has published 100 articles on peer-reviewed journals, with most being the first or senior/ corresponding author. She has delivered over 210 presentations, including 60 invited keynote and featured speaking at international and national conferences and 42 teachers training workshops.