

Digital Technology in Physical Education Teacher Education in a post COVID19 era (DiTePETE)

Partners

- Research group DiTePES¹, Department of Teacher Education (ILU), Norwegian University of Science and Technology, represented by Dr Ove Østerlie².
- Griffith Institute of Educational Research (GIER)³ and the School of Education and Professional Studies, represented by Dr Sue Whatman⁴, Doctor of Education Program Director, and co-leader of EDJEE in GIER.
- Complutense University of Madrid, Faculty of Education, represented by Dr Maria José Camacho-Miñano⁵.

In addition, this project has a letter of intention with the 1,5mill€ EU Erasmus+ funded “Phys-Ed Academy” teacher academy project⁶ led by Dr Mats Hordvik⁷ at the Norwegian School of Sport Sciences. This intention is to ensure that by keeping both entities informed during over the project lifespan, the knowledge developed in both projects will increase in quality.

Rationale behind the project

Health and Physical Education (HPE) is experiencing rapid transformation in the wake of COVID19 and the collective turn towards hybrid and online learning in teacher education around the world. What does this mean for embodied programs such as Physical Education Teacher Education (PETE)? What does this mean for appropriate, “contemporary and effective continuing professional development (CPD) for PE teachers”? (c.f. Armour et al., 2017).

In Norway, physical education (PE) is one of the subjects in mandatory schooling that experiences to a large degree being taught by teachers without formal training. As much as 50% of the PE teachers in primary school have no specific pedagogical education within PE (Perlic, 2019). This creates an imperative to design more accessible ways to provide continuing professional development (CPD) and/or extended education to in-service PE teachers. Especially since PE, as part of the practical and aesthetical subjects, traditionally receives less attention when it comes to these opportunities given to in-service teachers. While we know that, in Norway, the practical- aesthetical subjects constitute about 25% of the total class time in mandatory schooling, only less than 10% of the ongoing additional- and extended education, or CPD, for in-service teachers are dedicated those very teachers (Karlsen et al., 2020). In Australia, schooling is largely a State Government responsibility and the qualification levels of HPE teachers vary by state. For example, in Queensland, government

¹ <https://www.ntnu.edu/ilu/ditepes>

² <https://www.ntnu.edu/employees/ove.osterlie>

³ <https://www.griffith.edu.au/institute-educational-research>

⁴ <https://experts.griffith.edu.au/9556-sue-whatman>

⁵ <https://www.ucm.es/mjcamachom/>

⁶ <https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/teacher-academies>

⁷ <https://www.nih.no/en/about/employees/mats-melvold-hordvik/>

primary and secondary schools are required to appoint HPE-qualified teachers wherever possible in accordance with their employment laws. In other states, particularly in primary schools, HPE is largely delivered by classroom teachers.

Following the experiences and call for more research into hybrid models in PETE, e.g., from Calderón et al. (2020) and Howells et al. (2022), and the potential of digital literacies to accelerate learning in HPE (Chambers et al., 2014), this project aims to explore new hybrid and online approaches in PETE. This include exploring how this can create opportunities for more people to attend PETE - lowering barriers like geography, race, ethnicity, migration status, gender, and age - and creating online communities of practice to bring together PETE educators and PE teachers (c.f. Whatman, 2016). This project also responds to ILUs management statement, with NTNU's international development plan⁸ as a backdrop, that there is a goal that all NTNU's departments should have a professional environment at a high international level, and that digital solutions must be part of the international education offer at NTNU.

Together, drawing from our international experiences when designing courses using digital technology in a Health and Physical Education pedagogical framework, we intend to reach the following outcomes through this timeline:

Tentative timeline of the project with intended outcomes

Phase 1 (Fall 2022)

- Develop the project description and write up agreements with implemented partners

Phase 2 (March-May) Spring 2023 - (March-May) Spring 2024

- Scoping review on digital technology in PETE
- Scoping review on PETE with focus on impacts of socio-economic circumstances, mental and emotional upheaval and discrimination on the grounds of race, ethnicity, migration status, gender and age on students' experiences of education to form a solid knowledge foundation for development of experimental module.
- Initial phase of development of experimental module.

Phase 3 (Sept-Nov) Fall 2024 - (March-May) Spring 2025

- In this phase Dr Østerlie will be working at the Griffith University as part of his sabbatical leave.
- Develop experimental module for hybrid teaching in Health and Physical Education, for use in NTNU and Griffith University PETE (HPE teacher education) and testing of the module.
- Publish one shared scientific article based on data generated in described project, in appropriate international, Q1 journal such as Physical Education & Sport Pedagogy or Sport, Education and Society.
- Conduct literature reviews and trans-national research (international cases) into fully digital courses in Health and Physical Education.
- Invited presentations to ACHPER conference, and Griffith PETE cohorts.
- Lay ground for a collaboration between the institutions involved including students and staff exchange.

⁸ <https://www.ntnu.edu/international-development-plan>

Phase 4 (Sept-Nov) Fall 2025 – (March- May) Spring 2026

- Implement modules in university portfolio and adaption to other subjects and contexts.

Ethical considerations

Research data generated in the project will be managed according to best practice and be as open as possible and as closed as necessary. Data containing personal information will be processed according to GDPR, Griffith University and NTNU guidelines⁹. This include development a Data Management Plan¹⁰ describing how the research data will be managed and stored, and that research data will be published and shared openly in our repository for research data, NTNU Open Data¹¹.

References

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⁹ <https://i.ntnu.no/wiki/-/wiki/English/Collection+of+personal+data+for+research+projects>

¹⁰ <https://i.ntnu.no/wiki/-/wiki/English/Data+management+plan>

¹¹ <https://i.ntnu.no/wiki/-/wiki/English/NTNU+Open+Data>