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Corresponding author: nrgreen58@gmail.com

PHYSED-ACADEMY: AN ERASMUS PROJECT FOCUSING ON TEACHER EDUCATION SIGNATURE PEDAGOGIES IN PHYSICAL EDUCATION

*Nigel Green*¹

Abstract: This Erasmus + project has a primary outcome of developing and testing a set of signature pedagogies that can be used across physical education teacher education in Europe and around the world. These pedagogies will foster equitable outcomes in physical education for pre-service and in-service teachers in their ongoing professional learning. A systematic review of literature and testing of signature pedagogies in physical education has taken place in seven European nations. Three signature pedagogies of teacher education in physical education across international contexts are identified and presented in terms of their surface, deep and implicit structure, including: (auto)biographical pedagogies, experiential pedagogies, and pedagogies of professional learning. This project has explored the similarities and differences between each of the three groups of pedagogies and what makes a pedagogy of teacher education in physical education distinct from a pedagogy of teacher education more broadly. This project offers a preliminary shared language of teacher education pedagogies in the field of physical education and is intended to open a dialogue around preparing and supporting pre-service teachers, in-service teachers, and teacher educators in the context of physical education, with the aim of ensuring more authentic, transformative and equitable teacher education practices in physical education.

Keywords: signature pedagogies, physical education, teacher education, pre-service, in-service

¹ Professor, Physical Education and Physical Literacy Consultant, European Union Physical Education Association (EUPEA), United Kingdom, nrgreen58@gmail.com

Introduction

The PhysEd-Academy Project is an Erasmus+ funded teacher academy, bringing together teacher educators and teachers from seven European nations to facilitate radical change in physical education in both teacher education programs and schools. The PhysEd-Academy begins from the perspective that the field of physical education is built on old and inefficient traditions that are far from current recommended practices and policies, resulting in physical education and physical education teacher education having little or limited impact on children and youth. The PhysEd-Academy aims to directly address current challenges in the field of physical education (PE) by improving four imperative quality factors in PE, including the purposes and content, school teaching, teacher education, and teachers' continuous professional development. In order to do so, the PhysEd-Academy project brings together a network of teacher educators and school teachers from 11 partner institutions in seven European nations to: identify and articulate a set of signature pedagogies for learning across teacher education programs; test the set of signature pedagogies in initial teacher education and continuous professional development; and identify connections between teacher education and school student outcomes. This will involve a series of research projects and the development of several outcomes and resources.

Signature Pedagogies

A pedagogy within teacher education 'can be viewed as the theory and practice of teaching and learning about teaching' (Loughran, 2013, p. 129). Although there have been studies related to the pedagogy of teacher education and more specifically the pedagogy of PE teacher education, it is considered as being in its infancy (Korthagen, 2016; McEvoy et al., 2015). Researchers in the field of PE teacher education, have highlighted the need for the consideration and development of 'signature pedagogies' within PE teacher education programs (O'Sullivan, 2014; Tannehill et al., 2021), to ensure a shared understanding and practice that can guide the development of teacher education pedagogy. This includes both PE initial teacher education (PE-ITE) and PE continuous professional development (PE-CPD).

A comprehensive scoping review was undertaken by Hordvik and Beni (2024) covering the period from 2015 to 2023, with consideration of articles related to the field of teacher education in PE, across international contexts, examined through the perspective of Shulman's (2005) 'Signature Pedagogies in the Professions'. This study considered the current literature on teacher education in PE and then proposed a preliminary shared language of signature pedagogies of teacher education in PE. Signature pedagogies of teacher education, as suggested by Shulman (2005) refer to the

forms of teaching- learning that leap to mind when thinking about the preparation and ongoing learning and development of teachers. They can be applied to different courses, programs and institutions and feature three layers of structure, linked to surface, deep and implicit learning. Three signature pedagogies of teacher education in PE were identified, these being (auto)biographical pedagogies, experiential pedagogies, and pedagogies of professional learning. Hordvik and Beni's (2024) study offers a preliminary shared language of PE teacher education pedagogies which enabled this project to consider how a shared language related to pedagogical approaches might inform a more intentional practice across PE teacher education that ensures more authentic, transformative and equitable PE teacher education practices.

In defining what a signature pedagogy entails, Shulman (2005) proposed that a signature pedagogy can be described through three structures, being surface, deep and implicit. Surface learning refers to the observable, operational aspects of teaching and learning. This includes the specific actions and methods used in the classroom such as demonstrating, questioning, and interacting with students. Surface learning focuses on the practical, day-to-day activities that make up the teaching process, which are essential for understanding how a particular profession is taught and learned. In PE this would relate to demonstrating techniques, interactive activities and assessment and feedback strategies. These surface level activities are essential for developing the practical skills and knowledge that future PE teachers need to effectively teach and engage their students (Hordvik and Beni, 2024).

A signature pedagogy also has deep learning which refers to the foundational principles and theories about how best to impart knowledge and skills within a profession. This includes the fundamental assumptions and beliefs about teaching and learning that guide the educational process. For example, in medical education, the deep structure might involve the emphasis on clinical reasoning and patient-centred care. In legal education, it could focus on developing critical thinking and argumentation skills. In PE this would consider the theoretical foundations of the subject, pedagogical strategies and curriculum design. These deep structures shape the way teachers are trained, ensuring that they not only acquire practical skills but also develop a deep understanding of the educational theories and principles that underpin effective teaching (Dow et al., 2021).

The third dimension is its implicit structure, which refers to the acquisition of knowledge, skills, behaviours, and professional dispositions that occurs subconsciously or without direct instruction. It is the learning that takes place informally through observation, practice, and social interaction. This dimension is often less visible but crucial, as it shapes the moral and ethical framework within which future PE teachers operate. Implicit learning plays a critical role in shaping future PE teachers professional iden-

tities, teaching methods, and interactions with students, often through the signature pedagogical practices of the discipline. In PE it instils a sense of professional ethics, attitudes toward inclusivity and equitable access to PE as well as commitment to lifelong learning, where the latest research and best practices in PE are considered.

Shulman (2005) argued that there is a need for the continuous development of a shared and research-based practice. He acknowledged that critics of the idea of signature pedagogies would argue that teacher educators should be allowed to teach in their own ways, however, if the PE teacher education profession is to be respected then strategies for preparing professionals must be systematic.

The three proposed PhysEd-Academy signature pedagogies follow Shulman's suggestions of signature pedagogies which represent systematic ways of preparing teachers for the profession. However, whilst accepting the signature pedagogies, there is also an acknowledgement that teaching and learning are non-linear, complex and continuous and as such the pedagogies provide opportunities for surface, deep and implicit learning within PE, which will be different for every teacher and teacher educator. The intention is not to provide a prescriptive strategy to train teachers but to propose a common language of signature pedagogies that can be drawn upon by the teacher educators. Each teacher educator and training teacher has their own personal experiences of life and learning and as such, their beliefs, experiences and attitudes should be considered when selecting signature pedagogical practices. The aim of the PhysEd-Academy is to clarify understanding of the signature pedagogies related to training PE teachers to ensure international clarity of professional practices.

The three signature pedagogies are (Auto) biographical pedagogies, experiential pedagogies and pedagogies of professional learning. (Auto) biographical pedagogies consist of narratives, vision and vignettes. From a narrative perspective, at a surface structure, teachers engage in stories (their own and others') through transformative pedagogies, such as narrative writing, written reflections, peer debriefing. From a deep structure, narratives would involve inquiring into and reflecting upon personal experience and experiences of others to stimulate critical thought, reflexivity, and agency. From an implicit structure, narratives would expect teachers to challenge taken-for-granted ways of thinking. From a vision perspective, at surface structure level, teachers would be supported in developing and articulating a personal vision for PE. At a deep structure level, teachers would be supported to develop a picture of the learning they wish to achieve with their classes. And from an implicit structure level, teachers would be encouraged to take a stand for a preferred future for PE and speak up against contrary policies and procedures. Vignettes are the third pedagogical approach within the (Auto) biographical section and at a surface level teachers would engage with short stories of real or hypothetical characters and their situations/problems in the form of

text, images, or other forms of stimuli. At a deep level teachers would engage in discussion related to real-life problems, contexts and experiences to promote the deepening of critical reflection. At an implicit level, teachers would engage with the discomfort of change that leads to the disruption of assumed narratives.

The second signature pedagogy is experiential pedagogies. There are four specific pedagogical approaches within this section, being, living the curriculum, peer teaching, school placement and service learning. Within the living the curriculum approach, at surface level, teachers would experience learning as a student in a PE class, while teacher educators' model appropriate teaching practice, through explicitly describing, justifying and questioning their decisions and practices. At deep structure level, teachers would be supported in learning about teaching, associated theory and practice. Here, teachers would develop an understanding of students' experiences of learning and of effective teaching through bodily/lived experiences of PE teaching-learning that harmonize or contrast what they have previously experienced as school students. At the implicit level, teachers would be encouraged to challenge their beliefs and values about teaching-learning in PE. Peer teaching, at a surface level, would allow teachers to teach their peers, who act as pupils, thereby experiencing both teaching and learning in PE. At a deep level teachers would be allowed to learn by doing, developing pedagogical skills and confidence to teach, by beginning in a modified setting before teaching in schools. At an implicit level, teachers would be encouraged to challenge their beliefs and values about teaching-learning in PE and to develop critical thinking and reflexivity. The school placement is the third experiential pedagogy and at a surface level, teachers teach in an authentic school context with observation and supervision from a cooperating teacher /mentor. As they move to a deep structure, teachers are encouraged to develop pedagogical skills and confidence to teach in schools and also bridge the theory-practice gap. The implicit level encourages teachers to develop of confidence and competence in relation to considering students' needs and abilities and of their own professional identity. The final pedagogy in the experiential section is service learning. At a surface level, teachers engage in a community-based placement or temporary volunteer experience to meet and consider the needs of a particular community/population. As a deep level, teachers are provided with hands-on experience with particular populations to develop strategies for inclusion. At an implicit level, teachers are supported in fulfilling civic responsibility and caring for others, as well as being encouraged to challenge assumptions and perceptions of diverse populations.

The final section of signature pedagogies are pedagogies of professional learning. The first of these is community of learners (e.g., community of practice, learning communities). At a surface level, groups of teachers with a shared vision will work together (in-person, online or hybrid) for mutual support and learning. At a deep level, teachers are

enabled to participate in professional discourse, sharing of ideas and are provided with time and support for them to learn. At an implicit level, teachers are encouraged to reflect on their individual pedagogical practices and underlying beliefs and assumptions about teaching/learning. Practitioner inquiry, which includes self-study and action research, is the second pedagogy within this section. At a surface level the teacher engages in a study of their own practice with the goal of improvement and support from (a) critical friend(s). At a deep level, teachers are provided with a supportive context for them to engage with, reflect on and ask questions of their own practice, with an aim to improve their (understanding) of practice. At an implicit level, teachers are encouraged to develop reflexivity and challenge taken-for-granted practices.

Development of signature pedagogies in practice

Once the signature pedagogies were clarified, the project allowed the initial teacher educators and teachers who were involved, to consider, reflect and share experiences related to the different signature pedagogies. This allowed clarity, not only in relation to the signature pedagogies themselves, but also in relation to the surface, deep and implicit structures of each pedagogy. The teacher educators from each partner nation were then required to implement one or more signature pedagogies in their practice in at least one module/course. The teacher educators met regularly in their small international communities or practice to discuss their experiences and to receive support from other members of the group. These experiences were then shared at project meetings and the teacher educators were then tasked with testing the signature pedagogies in continuing professional development (CPD) for in service teachers (ISTs). Initially, project partners designed a teaching pack for use with ISTs. Each teaching pack focused on innovative PE content/pedagogy and integrated one or more signature pedagogies for ISTs' professional learning. The ISTs in each location were then supported by teacher educators (TEs) through the use of signature pedagogies, to test the implementation of the teaching pack in their school context. Following on from this pilot process, the teaching packs were refined and the TEs supported local ISTs in learning about and implementing the teaching packs through a blend of online and in-person PE-CPD activities related to the SPs.

Qualitative data was collected in five forms, including: reflective diaries from both TEs implementing SPs in their practice and ISTs' implementing the teaching packs; focus group interviews with ISTs and pre-service teachers (PSTs) following implementation of signature pedagogies in their CPD and ITE programs, respectively and with school students; communities of practice (CoPs) meeting transcripts from large and small CoPs; non-participant observations of both TEs implementation of signature pedagogies in ITE and ISTs' implementation of the teaching packs in their classrooms;

artifacts, such as lesson plans and work samples, as applicable. It is important to note that data collected with ISTs and PSTs was collected in their primary language, while data collected from project partners has been collected in English.

Data was then analysed within the different sub-projects that align with the various research questions, and was guided by specific, theoretically driven analytic questions derived from the research questions and sub-questions in each study. These questions had been developed by members of the research groups that were responsible for each sub-project. All of the data was analysed first in the language in which it was collected. Selections of data that were translated to English for the purpose of group analysis and/or publications have been translated using a bi-directional approach. The findings have been shared at conferences and will form academic articles as the project concludes.

The teacher packs were also shared at a summer school in Slovenia, where project ITEs and ISTs gathered to experience the materials practically and provide reflections. The teacher packs and signature pedagogies will be shared through various outlets including journal articles, websites, webinars and at conferences, and will be supported by video and written materials, so that PSTs, ISTs and ITEs can access and use the projects resources.

Conclusion

How the universality and flexibility of the signature pedagogies will be received by ITEs, ISTs and PSTs remains to be seen, with the diverse international teacher education contexts and cultures. Due to the nature of any project, the long-term impact may be difficult to analyse and in relation to this project, funding does not allow longitudinal study. However, the project has followed a rigorous process to develop and test the signature pedagogies and it provides clear guidelines about signature pedagogies related to PETE which could enhance and solidify a shared language of PETE pedagogy across the world.

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