Using scientific literature in Physical Education Teacher Education: Barriers, possibilities and suggestions for future research

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In this small article I will briefly summarize some main points in relation to the use of scientific literature in Physical Education Teacher Education. I hope that the article will be a source for inspiration, critical discussion and further collaborations on this task.

The content and structure of Danish teacher education are highly debated these years. One of the recurrent questions is what knowledge student teachers should engage with during their education. In that regard the chairman of the external examiners at the Danish teacher education, Hans Krab Koed, recently suggested that Danish student teachers should read more primary scientific literature and less textbooks (Bjerril, 2019). This induces new challenges on teacher educators who become the main agents for mobilizing scientific literature into teacher education.

This issue also involves Physical Education Teacher Education (PETE). Stronger relationships between research and educational practice in PETE may play a key role in initiating and processing changes in Physical Education (PE) in order to establish and maintain a strong and up-to-date subject. To educate PE student teachers to become capable of using and critically discussing new and relevant scientific literature may thus be considered a key element in PETE. But what are the main barriers for mobilizing scientific literature into PETE? And what should be future directions for working with research in PETE?

In this small article, I briefly summarize some basic points in relation to these questions. The article is based on my paper "A mountain too high to climb? An exploratory study of perceived barriers to mobilisation of research literature into physical education teacher education experienced by a group of Danish PE teacher educators exploratory study on teacher educators' use of scientific literature in PETE" (Svendsen, 2019).

What are the barriers towards mobilization of scientific literature into PETE?

Time: As suggested by McEvoy, MacPhail & Heikinaro-Johansson (2017) time seems to be an important factor for PE teacher educators in their involvement with research in general. In similar fashion, I found that PE teacher educators had a positive stance towards using scientific literature in PETE for the purpose of qualifying PE student teachers' decisions and reflections about PE as a school subject but also that they found it a very demanding and time-consuming task. The issue of time was – on the one hand - related to the process of searching, selecting and critically reading scientific literature, and – on the other - to the process of 'translating' scientific literature into something applicable in teacher education. These tasks were clearly experienced as something additional to the daily activities, and it was often deprioritised because of time-issues (Svendsen, 2019).

Value: According to Tack & Vanderlinde (2015) and MacPhail, Ulvik, Czeniawski, Oolbekkink-Machand & Bain (2018), teacher educators often experience a 'role-conflict' when they are expected to engage in research. Furthermore, it has been emphasised that teacher educators experience the world of research and the world of teaching as two separate cultures with different rationales and different values (Elstad 2010 and EVA, 2017). PE teacher educators in the present exploratory study expressed a clear cultural identity rooted in teaching. They thought it was valuable for themselves to read scientific literature in order to get new inputs and ideas and to qualify their supervision on e.g. bachelor thesis. But to some degree they also felt that the engagement with scientific literature could not really help them in the 'primary task' of teaching and they repeatedly stressed that there was a need for more applied papers (Svendsen, 2019).

Practical experiences: Related to this, PE teacher educators in my study portrayed practical experiences as the main source of professional development in PETE. They found it difficult to find scientific literature that added value to the student teachers' future practice and/or which was reported in a useful way. Research was in other words often considered too remote from the complex identity of teacher education as an applied subject and more specifically PE as a bodily, practical subject (Svendsen, 2019).

Students' competences: Finally - and closely related to the former theme - there are clearly some important barriers related to the competences of the PE student teachers, who PE teacher educators found lacked the skills necessary to read scientific literature. The skills related to language (ability to read long papers in English), motivation and interests (they were concerned with PE as an applied subject) and academic level (Svendsen, 2019).

Future directions

It is definitely worth discussing how, why and if scientific literature should be part of PETE. The issues raised above points to three main attention areas.

First of all, these barriers address an ongoing critique of the types of research that is conducted and of the ways it is reported and made available to teachers and students in teacher education (Healey, 2005; Nelson & Campbell, 2017; Wieser, 2016). It is clearly relevant to consider how to enable the production and distribution of research and scientific literature directed at practitioners (Cain et al., 2016) and positioned *between* the textbook and the general scientific paper (Svendsen, 2019).

Secondly, it is necessary to emphasise the need for further structural support and resources. In that regard, it seems relevant to map the need for professional development in relation to research activities and the use of scientific literature among PE teacher educators so that relevant and motivating initiatives which meet teacher educators' needs and circumstances are initiated. It may also be an important next step to develop and test educational models that may strengthen the mobilisation of research and support knowledge sharing and collaboration between PETE stakeholders (Svendsen, 2019).

Finally, it is relevant to emphasise that while incorporating scientific literature in courses for PE student teachers may be one obvious way to implement research in PETE, it is also essential to take alternative strategies into account where students are actively involved in research projects (Healey, 2005). There is, therefore, a need to develop educational models that may support research-based activities in PETE in general (Svendsen, 2019).

Do you want to know more about this topic? You can contact Annemari Munk Svendsen amsvendsen@health.sdu.dk Or visit the Learning and Talent in Sport (LET'S) homepage: https://www.sdu.dk/da/om_sdu/institutter_centre/iob_idraet_og_biomekanik/forskning/forskningsenheder/learning+and+talent+in+sport

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