

Professional knowledge of PE teacher candidates for education for sustainable development (ESD)

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Background and Purpose

ESD empowers people to change the way they think and work towards a sustainable future. Sustainable development topics like health, education, environmental protection, or mobility are inherent in sports and may be addressed within PE. The purpose of this paper is to show how we can contribute to professional knowledge of PE teacher candidates (Hellberg-Rode & Schrüfer, 2016) by implementing ESD within PE teacher education.

Methods

The teaching unit consisted of a theoretical part and a practical part (sport climbing). Additionally we linked contents of both parts during a 5-day field trip. Before (T1) and after the teaching unit (T2) a survey was conducted ($N=18$). The following variables were measured in the intervention group and in a control group (only T1): ESD content knowledge (CK), self-efficacy (SE) and enthusiasm (EN) for ESD as well as decision making in daily life (DM).

Results

There was no significant difference between the ESD and control groups regarding CK, EN, and DM and a tendency towards SE being higher in the ESD group ($t(55) = 2.02, p = .05$, at T1). During the ESD seminar, CK increased significantly from T1 to T2 (Cohen's $d = .09 - 2.6, p < .05$). There was a significant but small increase in EN ($d = .06, p < .05$) but not in SE and DM.

Conclusions and Implications

Whereas participants already had a high degree of self-efficacy and enthusiasm for ESD in the beginning, content knowledge was increased significantly. We encourage university scholars, to implement ESD topics within PE teacher education in order to promote teacher candidates to think and work towards a sustainable future.

References

Hellberg-Rode, G., & Schrüfer, G. (2016). Welche spezifischen professionellen Handlungskompetenzen benötigen Lehrkräfte für die Umsetzung von Bildung für Nachhaltige Entwicklung (BNE)? Advance online publication. <https://doi.org/10.4119/UNIBI/zfb-v20-i1-330>