

# 3<sup>e</sup>

## CONGRÈS INTERNATIONAL

sur la formation et la  
profession enseignante  
Genève, Suisse

### Professional Action Competence in Education for Sustainability for Pre-service Physical Education Teachers: A person-centered study

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This work was carried out within the pilot  
centre Ampiric, funded by the French State's  
Future Investment Program (PIA3 /  
France 2030) as part of the "Territories of  
Educational Innovation" action.

BANQUE des  
TERRITOIRES



**Emancipatory  
Education for Sustainability**

Cultivate **skilled** and **active** citizens who are informed and **motivated** to live sustainably and contribute to a more sustainable society  
(Carbach & Fischer, 2017)

Importance of teachers' **professional competencies**  
(Stevenson et al, 2017 ; Boeve-de Pauw et al, 2015)



Sass et al., 2022

**Professional Action  
Competence in Education for  
Sustainability (PACesd)**

PCK

Willingness

Self-  
efficacy

Sass et al., 2022

**Physical Education Teachers  
Professional Action Competence in  
Education for Sustainability (PACesd)**

PCK

Willingness

Self-  
efficacy

**Misunderstanding and misconceptions** about sustainability and EfS  
(Lohmann & Goller, 2023 ; Baena-Morales et al., 2022 ; Merma-Molina et al, 2023)

**Important** to implement EfS in PE  
(Lohmann & Goller, 2023)  
**Positive attitude** toward EfS in PE  
(Lohmann et al, 2023)

... **but** ...

High percentage of future PE teachers : **negative perception** of sustainability  
(Lorente-Echevarria et al, 2024))

**High self-perception of competence** to implement sustainability contents in PE  
(Fröberg et al., 2022 ; Baena-Morales et al., 2023)  
Wiklander et al, 2024)

Introduction

Methods

Results & Discussion

Conclusion

Sass et al., 2022

**Physical Education Teachers**  
**Professional Action Competence** in  
Education for Sustainability (PACesd)

PCK

Willingness

Self-  
efficacy

**Few studies** on professional competence in EfS

Lack of studies about **self-efficacy in EfS**

No study measured PE teachers' PACesd on a **unique cohort**

## Research questions :

(1) Future PE teachers' **PACesd level**



(2) Future PE teachers' **PACesd profile**



(3) Impact of **gender** on PACesd level & profile



## Cross-sectional design

### Participants



**412** future  
french PE  
teachers'

### Measures



PACesd-questionnaire  
(Sass et al., 2022)



### Analyses



- (1) PACesd level**  
Descriptive statistics /  
Correlations / One-  
sample t-test
- (2) PACesd profile**  
Latent profile Analysis
- (3) Gender effect**  
MANOVA & Chi-  
squared test



(1) Future PE teachers' **PACesd** level



pPCK

Moderate

**Higher\*** than the score of Sass et al (2022)

Contrast with **external PCK assessment** (Lohmann & Goller, 2023; Merma-Molina et al., 2023)

Willingness

Low

**Lower\*\*\*** than the score of Sass et al (2022)

**Contrasting findings** in the literature on PE teachers (Lorente-Echeverría et al., 2024 ; Lohmann & Goller, 2023 ; Lohmann et al., 2023) ...  
→ barriers and levers ?

Self-efficacy

Moderate

No significant differences than the score of Sass et al (2022)

Consistent with the literature on PE teachers (Baena-Morales et al., 2023; Froberg et al., 2022; Wiklander et al., 2024)... but very **surprising!**

	Mean	SD	Skweeness	Kurtosis	t(411)	p
pPCKesd	4.35	.78	-.25	.09	<b>2.27</b>	<b>.023*</b>
Wesd	3.09	.92	.03	-.05	<b>-4.98</b>	<b>&lt;.001***</b>
SEesd	4.36	.71	-.29	.71	-.463	.644

(2) Future PE teachers' **PACesd** profile



Variables	High scores profile <i>Moy. (SD)</i>	High-moderate scores profile <i>Moy. (SD)</i>	Low-moderate score profile <i>Moy. (SD)</i>	Low scores profile <i>Moy. (SD)</i>
<b>pPCKesd</b>	5.63 (.26)	4.81 (.39)	3.84 (.35)	2.98 (.59)
<b>Willingness</b>	4.27 (.89)	3.47 (.70)	2.63 (.73)	2.15 (.84)
<b>Self-efficacy</b>	5.59 (.31)	4.70 (.41)	4.03 (.40)	3.01 (.50)

pPCK > SE    N = 352    SE > pPCK

Dunning-Krueger effect ?



# Annexe

(3) Impact of **gender** on PACesd level & profile



pPCK

Score Femme > Score Homme\*

Willingness

No difference

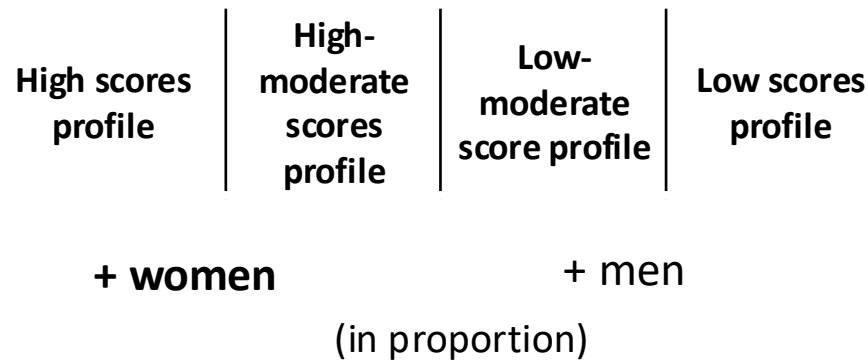
Self-efficacy

Score Femme > Score Homme (trend)

**Contrasting literature** on this point, in PES (Lohmann et al., 2023; Froberg et al., 2022; Wiklander et al., 2024), as in other disciplines (Vukelic, 2022; Ogunyemi et al., 2022)

Tendency for gender to be a discriminating variable in terms of EfS teaching competencies ...

... often in favour of women



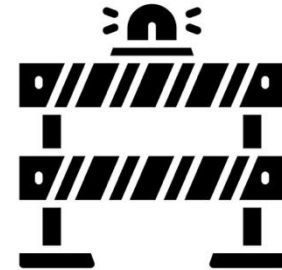
Reflect on initial and continuous **training**



Qualitative data to compare pPCK and an **external PCK assessment**



Interviews to identified **levers and barriers** to implement EfS in PE





**THANK YOU  
FOR YOUR  
ATTENTION**



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