

Background

The project „Schulsport 2020“ (QLB-project) aims to systematically develop the education of PE teachers considering current social challenges. One of three sub-projects addresses the topic “heterogeneity and promotion of inclusion”.

Theoretical framework

In the course of rising diversity of our society also everyday school-life is influenced by increasingly heterogeneous pupils. In this context, migration and inclusive education are major impact factors (Frohn, 2013).

In order to evaluate relationships between attitudes, self-efficacy and teachers' stress, this study aimed to develop respective scales comprising a broad range of heterogeneity dimensions existing in PE classes.

Methods

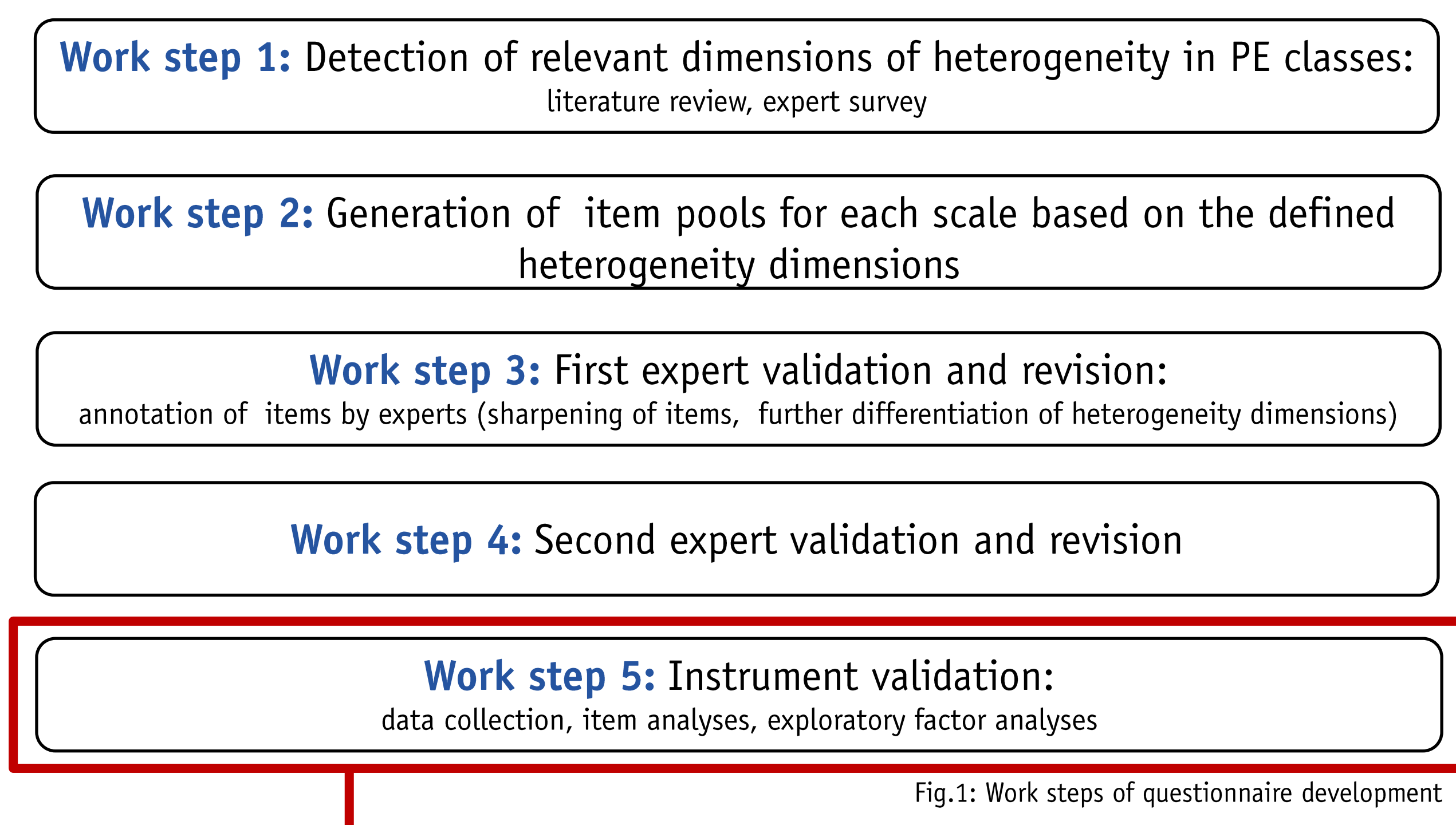


Fig. 1: Work steps of questionnaire development

Instruments: 3 Scales: Attitudes towards Heterogeneity in PE Classes (AH-PEC) Self-Efficacy in Teaching Heterogeneous PE Classes (SETH-PEC) Heterogeneity – related Stress in PE Classes (HS-PEC)

Subjects: n=750 (w = 482), age: 42,17 ± 10,36

Table 1: Subject distribution by type of school. Columns: Type of school, Total n, Female n.

Table 2: Subject distribution by region. Columns: Region, Total n, Female n.

Heterogeneity Dimensions

- Gender, Culturally influenced behavior, Religious customs, Socioeconomic status, Sporting competency, Athletic experience, Overweight, Underweight, Will to physically strain oneself, Self-confidence, Skin color, Sporting interests, Understanding of the teaching language, Special educational needs (SEN) in learning, Special educational needs (SEN) in language, Special educational needs (SEN) in hearing, Special educational needs (SEN) in seeing, Special educational needs (SEN) in social-emotional development, Special educational needs (SEN) in physical and motor development, Special educational needs (SEN) in cognitive development

Item examples

Scale of attitudes towards heterogeneity (AH-PEC) "... Please rate PE with the following learner constellations. Joint teaching of..." Item 2: "... pupils with different culturally influenced behavior."

Scale of self-efficacy towards heterogeneity (SETH-PEC) "I am sure that that teaching PE does not pose any difficulties, if..." Item 18: "...individual pupils have special educational needs in learning."

Scale of heterogeneity – related stress (HS-PEC) "Please mark how stressful the individual situations are for you. (does not apply for situations that never occur)" Item 5: "Different sporting interests of pupils"

Results

ITEM ANALYSES

- 1. Item Discrimination: AH-PEC: high to very high item discrimination for all items (.5 < r_ix < .85) SETH-PEC: high item discrimination for all items (.4 < r_ix < .7) HS-PEC: high item discrimination for all items (.4 < r_ix < .7) ... Elimination of items "underweight" and "skin color" in all scales in order to ensure comparability
- 2. Internal consistency: AH-PEC: Cronbach's alpha = .95 SETH-PEC: Cronbach's alpha = .91 HS-PEC: Cronbach's alpha = .91

EXPLORATORY FACTOR ANALYSES

Attitudes towards Heterogeneity in PE Classes (AH-PEC)

Table 3: Pattern matrix: Maximum Likelihood, Promax with Kaiser normalization

Table 3: Pattern matrix for AH-PEC. Columns: Item, Factor 1, Factor 2, Factor 3, h².

MAP – Test: extraction of 3 factors KMO = .95; Bartlett's Test: chi² = 9707.16, df = 153, p < .001

Table 4: Factor-correlation matrix

Table 4: Factor-correlation matrix for AH-PEC. Columns: Factor 1, Factor 2, Factor 3.

Self-Efficacy in Teaching Heterogeneous PE Classes (SETH-PEC)

Table 5: Pattern matrix: Maximum Likelihood, Promax with Kaiser normalization

Table 5: Pattern matrix for SETH-PEC. Columns: Item, Factor 1, Factor 2, Factor 3, h².

MAP – Test: extraction of 3 factors KMO = .92; Bartlett's Test: chi² = 5527.75, df = 153, p < .001

Table 6: Factor-correlation matrix

Table 6: Factor-correlation matrix for SETH-PEC. Columns: Factor 1, Factor 2, Factor 3.

Heterogeneity – related Stress in PE Classes (HS-PEC)

Table 7: Pattern matrix: Maximum Likelihood, Promax with Kaiser normalization

Table 7: Pattern matrix for HS-PEC. Columns: Item, Factor 1, Factor 2, Factor 3, h².

MAP – Test resulted in the extraction of 2 factors. As the respective EFA does not yield an interpretable factor structure a 3 factor solution, comparable to the other scales, was calculated. KMO = .86; Bartlett's Test: chi² = 713.88, df = 153, p < .001

Table 8: Factor-correlation matrix

Table 8: Factor-correlation matrix for HS-PEC. Columns: Factor 1, Factor 2, Factor 3.

Discussion

AH-PEC & SETH-PEC => 3-dimensional structure: factor 1: physical & mental aspects, factor 2: inclusive settings, factor 3: socio-demographic aspects ... HS-PEC => factor structure not clear => assignment of single items not clear

References

Abele, A. & Candova, A. (2007). Prädiktoren des Belastungserlebens im Lehrerberuf. Zeitschrift für Pädagogische Psychologie, 21(2), 107-118.