Development and optimization of an in-service teacher training on motivational assessment in PE

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Introduction

Self-determination theory (Deci & Ryan 2000)

Basic Psychological Needs
- Autonomy
- Relatedness
- Competence

Autonomous motivation in PE

MOTIVATED LEARNERS IN PE:
- Better learners
- > Concentration
- > Effort
- > Transfer of skills
- > Motivation to be active out-of-school (e.g. Vansteenkiste, 2005; Haerens, 2010)
Introduction

Current assessment practices frustrate rather than stimulate students’ psychological needs (Krijgsman et al., 2015; Maes et al, 2015, *in preparation*)
Motivation frustration through assessment

- Not taking into account student differences
- Comparison with standardized- or peer referenced norms (summative)
- Student involvement is low
- Emotionally unsafe assessment environments
- Lack of structure: unclear grading criteria and grading decisions

Motivational outcomes:
- Concentration
- Effort
- Better learning
- Transfer or learning

(Krijgsman et al., 2015; Maes et al, 2015, in preparation, Johnson et al., 2011)
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Study aim

To develop an in-service teacher training aimed at enhancing PE teachers’ knowledge on motivational aspects of quality assessment and to provide them with the skills to implement these aspects into their daily practice.

- Theory-based: Assessment for learning (e.g. Black et al., 2009) & SDT
  - Formative (focused on learning process) vs summative (focused on the product of learning)

- Connected with PE teachers daily practice
- Connected to previous learning
- Opportunities for interaction, reflection and sharing of ideas
  (Armour & Makopoulou 2012; Garet, 2007; O’Sullivan & Deglau 2006)
Methods – Training development

TRAINING CONTENT (4 h)

- Theoretical part
  - Initial group discussion
  - Background info on PE goals, statutory goals etc
  - Video assignment

Flowchart:
- Development phase
  - Determining learning outcomes
  - Developing training content
  - Consulting PE teachers
  - Consulting PE expert group
Methods – Training development

TRAINING CONTENT (4 h)

- Theoretical part
  - Initial group discussion
  - Background info on PE goals, statutory goals etc
  - Video assignment
  - Motivation theory (SDT)
  - Assessment for Learning

- Practical part
  - Assignment: improving assessment situations
  - Setting development goals
Identify (de)motivating aspects
Methods – Training development

**TRAINING CONTENT (4 h)**

- **Theoretical part**
  - Initial group discussion
  - Background info on PE goals, statutory goals etc
  - Video assignment
  - Motivation theory (SDT)
  - Assessment for Learning

- **Practical part**
  - Assignment: improving assessment situations
  - Setting development goals
Motivating assessment

Feed-up

Where am I going?

What is the next step?

Where am I now?
Motivating Assessment Mixing Console (MAMC)
Methods – optimization phase

Development phase

- Determining learning outcomes
- Developing training content

Consulting PE teachers

Consulting PE expert group

Optimization phase

- Training 1
- Training 2
- Training 3

Quantitative & Qualitative measures: Questionnaires & Focus groups

Adjustments & Improvements

Consulting PE teachers
Methods – optimization phase

- Iterative research design (Aelterman et al., 2015)
- PE departments of five secondary schools participated in the study
- A final sample of 33 PE teachers attended one of the three training sessions
- Two PETE teachers with experience in PE and assessment provided the training

Optimization phase

Quantitative & Qualitative measures: Questionnaires & Focus groups

Adjustments & Improvements
## Findings – Questionnaire

|                      | Training 1 (n=11) | Training 2 (n=12) | Training 3 (n=10) | F  
|----------------------|-------------------|-------------------|-------------------|------
|                      |                   |                   |                   | df. (2, 30) |
| **Theoretical background** |                   |                   |                   |      |
| Interaction          | 4.09 (0.70)       | 4.50 (0.67)       | 4.50 (0.53)       | 1.484 |
| Innovation           | 4.00 (0.63)       | 4.08 (0.79)       | 4.00 (0.47)       | .62  |
| Interest             | 4.27 (0.42)       | 4.11 (0.59)       | 4.23 (0.27)       | .392 |
| Intelligibility      | 4.36 (0.32)       | 4.46 (0.40)       | 4.35 (0.41)       | .276 |
| **Essentiality**     | 3.27 (0.90)       | 3.83 (0.93)       | 3.60 (1.00)       | 1.036 |
| Overall              | 4.00 (0.37)       | 4.19 (0.43)       | 4.14 (0.38)       | .735 |
| **Practical assignments** |                   |                   |                   |      |
| Interaction          | 4.36 (0.50)       | 4.25 (0.62)       | 4.10 (0.74)       | .468 |
| Innovation           | 3.81 (0.87)       | 3.75 (0.62)       | 3.70 (0.67)       | .070 |
| Interest             | 4.14 (0.81)       | 4.29 (0.62)       | 4.25 (0.35)       | .184 |
| Intelligibility      | 4.23 (0.41)       | 4.25 (0.58)       | 4.05 (0.37)       | .568 |
| Essentiality         | 4.46 (0.52)       | 4.75 (0.45)       | 4.50 (0.70)       | .923 |
| Overall              | 4.12 (0.49)       | 4.15 (0.41)       | 4.08 (0.24)       | .299 |
| **Practical usefulness** | 4.44 (0.39)       | 4.36 (0.50)       | 4.30 (0.27)       | .320 |
| **Barriers to implementation** | 1.90 (0.39)       | 1.90 (0.34)       | 2.34 (0.36)       | 5.182* |
| **Presentation**     | 4.44 (0.40)       | 4.57 (0.35)       | 4.43 (0.26)       | .565 |
| **Overall score**    | 8.22 (0.47)       | 8.23 (0.76)       | 8.20 (0.42)       | .010 |
Findings – Focus Groups

- Overall, the training was very well received and deemed very innovative
- MAMC provided good insight and was easy to use and directly applicable
- Theory was made very accessible through practical application

- The amount of options was overwhelming for some participants (‘Where do I start’?)
- More time to reflect, especially with colleagues from other PE departments
- Anticipated implementation problems
  - less progressive colleagues that did not attend the training
  - Time constraints
- Strong demand for follow-up
Conclusion & Recommendations

The in-service teacher training provides a good starting point for improving assessment in PE, however…..

Continued support and follow-up after the initial training is important (one training is not enough) (e.g. Bechtel and O'Sullivan 2006).

– Additional training sessions
– Coaching
– Communities of practice (e.g. Goodyear & Casey, 2013)
Thank you for attention

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