Involvement of PE teachers in motor testing. A pilot study with the MOBAK-1

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Introduction

- Fundamental motor patterns are prerequisites to specific motor/sports skills and a determinant of the involvement in physical activity
- If children fail to develop their motor skills prior to the growth spurt in puberty, they will have limited ability to develop sport-specific skills at older ages and stages of training and development
- Obviously, this will significantly impact their desire to continue in lifelong PA and limit their opportunities to develop as an athlete

Clarck & Metcalfe (2002)

Sport for Life Society (2016)
Introduction

• Nowadays, physical literacy is recognized as a priority

Evaluating children’s physical and motor competencies

• Motor assessment
  ◦ Follow-up of the children development
  ◦ Identification of potential delays
At school, tests are often used for educational and/or research purposes:
- Identifying the teaching goals
- Determining teaching effectiveness
- Assessing !!!!
- Comparing children’s development
- Measuring effects of a programme

Several test batteries have been developed in order to measure motor development of young children:
- M-ABC, KTK, TGMD ...
- Based on the assessment of performances
- Evaluation of the motor competencies

Herremann & Seelig (2014)
<table>
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<th>M-ABC</th>
<th>KTK</th>
<th>TGMD</th>
<th>BOTMP</th>
<th>CEReKi</th>
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Determine how the PE teachers organize the MOBAK-1 tests
Identify potential improvements
Methods

- 7 primary school PE teachers were trained to use the MOBAK-1 tests in their classes (Liege’s area)
- Description of the tests with video examples of the expected movements and common errors
- Analysis of the reliability of the teachers evaluating pupils’ performances showed on video

<table>
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<th>PE</th>
<th>Gender</th>
<th>Age (y)</th>
<th>Teaching exp. (y)</th>
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<th>2\textsuperscript{nd} grade (n)</th>
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Methods

- Post-training questionnaire
- PE teachers received a specific testing equipment
- Implementation of the test (265 1\textsuperscript{st} and 163 2\textsuperscript{nd} grades pupils - 6-8 year-old)
- Informal observation during one testing session
- Phone interview at the end of the testing (10-15’)

- Content analysis
- Inter-observer reliability ·
Findings – Teachers’ training

- All PE teachers have a testing experience
- Only 2 plan the tests at the beginning and at the end of an unit
- Combined with other aspects (behaviour, ...), performances are used to provide the marks
- Catching and Rolling reached the reliability requirements within the first 10 trials while 15 to 16 videos were necessary for the six other tests
- Two teachers seemed to have more difficulties that could be related to their lack of experience (P1) or a potential lower interest (P7)

Findings – Testing preparation

- 6/7 were really satisfied by the information provided by the researchers (3.86/4)
- 5/7 were confident about how to manage the evaluation (3.57/4)
- Before implementing the tests with their classes, all teachers read again the guidelines
  - P3 focused only on equipment setting and evaluation process
  - All others checked the whole guideline
  - No of them needed to re-watch the videos
Findings – Testing organization

- P2, P3, P4, P5, P7 worked alone
- P1 received a support from P2
- P6 worked with a colleague + one PE student

- 1 lesson (P1, P5, P6, P7)
- 1 to 2 lessons (P4)
- 2 lessons (P2)
- 3 lessons/class (P3)

Self preparation (reading guidelines + questions to P6)

Lesson time
Number of pupils
Pupils’ behaviour
+/- 15 pupils per lesson (35’)

Findings – Testing organization

- More time than expected (P3, P5, P7)
- Pupils one/one (P1, P2, P4, P5, P6)
- In- or de-creasing alphabetical order (P3)
- Groups of 3 (P4) or 6 (P6) => good solution for pupils’ behaviour

- PE teachers provided all information before each test
- Demonstration (P1, P2, P3, P5)
- Involvement of the pupils to check their understanding (P2)
- Pupil’s demonstration (P3)

Testing is like teaching=teacher ‘feelings’ are central but it influences the process => results
Findings – Testing organization

- No cues’ recall during testing (P2, P5)
- Recall when repeated errors (P1, P3, P4, P6)
- Additional cues during the testing (P4)
- Encouragement of the pupils (P1)
- Immediate feedback (P1, P3, P4, P6) => ‘self-perception’

- P3, P5 modified a test (adding a perpendicular line for sidestepping)
- Ask to the next pupil to be ready
- Throwing: next pupil collect the balls and give them (P1, P5, P6) or drop them in a recipient (P3)

Good initiatives to be added to the guidelines

Findings – Testing organization

- Keep the equipment on place (P3, P5)
- Activity proposed to occupy the waiting pupils (table games – P4; drawings – P2)
- P6 wrote a number on the hand of each child to facilitate the circulation of the pupils
- P6 worked with two ‘assistants’ => effectiveness and good behaviour of the pupils

Good initiatives to be recommended
Findings – Barriers

- Needed time
  - Modification of the teacher courses planning (P6)
  - Longer lessons (recess time – P7)
  - Setting equipment was time consuming (P3, P5)
- Pupils’ behaviour
  - Excitation due to waiting time (P1-2-4-5-7)
  - Rolling balls (throwing) increase pupils’ excitation (P1-3-5-6)
  - Lack of concentration (respect of the cues)
  - Difference between schools
  - Impact on the quality of the trials => influence on the validity of the data

Wulf (2013)
McCarthy et al (2013)

Findings – Barriers

- Equipment
  - Use of the mats of the jumping test (P3-5-6)
  - Target of the throwing test (P1)
  - Uneven floor for bouncing test (P5)
- Evaluation of the trials
  - Time to react was shorter than during the training session (P1)
  - One child starts before the readiness of the teacher (P5)

PE teachers do not have the same chances to succeed
Findings – Suggestions

- Pupils’ waiting time
  - A team work (P2-4)
  - Divide in subgroups (P3)
  - Organize a circuit (P4)
- Change balls (throwing)
  - Tennis balls => balls with scratch (P3) or soft (P6)
- Change jumping test
  - Using traditional hopscotch (P5-6)
  - Increase distance between ‘flags’ (P3)

Findings – Overall opinion

- Nice tests
  - Well imagined (P2)
- Adapted to the pupils’ age
  - Some tests were too difficult for 1st grade pupils and too easy for their 2nd grade classmates (P7)

These tests are well adapted. It’s PE teacher’s role to find ways to achieve (P1)
Conclusion

- PE teachers were able to implement the tests
- Individual adjustments
- Standardization is a big issue according to the diversity of the teaching context
- No certainty that their data could be used for research purpose
- First priority is to manage pupils’ behaviour
- 5/7 PE teachers are ready to use the MOBAK-1 battery in their professional practice

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http://hdl.handle.net/2268/206176

Kiitos
Pictures

- https://fthmb.tqn.com/1ZByK5FHQMxyPAt6ciWiR1sx7I=/3867x2578/filters:no_upscale():fill(0,0):no_resize():format(webp)/about/7_year_old_child_physical_kids_school_gym_LARGE_Echo-5682fca45f9b586a9e9a50fe.jpg
- https://www.youtube.com/watch?v=_okRltv-7Sk
- http://www.cbc.ca/parents/content/imgs/_8col/whatisphysicalliteracy_lead_istock.jpg