Introduction

- The development of motor skills competencies is critical during childhood should be considered as the central learning outcome in PE
- Assessing motor competencies of the children make sense for teachers, trainers and researchers.
- The MOBAK-1 testing battery has been recently developed with the aim of assessing a wide panel of motor skills in relationship with body movement and object-control abilities (1).
- This battery is based on a success/failure scoring system.
Aim of the study

The aim of the study is to:

1. Improve criteria in order to avoid the failure that are not related to children's ability.
2. Compare the actual dichotomous scoring system with another scoring system taking into consideration the progression of the children.

Methods: MOBAK-1

Object-control

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Throwing (1)</th>
<th>Catching (2)</th>
<th>Bouncing (3)</th>
<th>Orbitting (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test task</td>
<td>Hitting a small target.</td>
<td>Catching a ball.</td>
<td>Bouncing a ball without throwing control.</td>
<td>Orbitting a ball without throwing control.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Hitting the target counts as a point. Only overhead catches.</td>
<td>The ball can be caught when still in the air.</td>
<td>The ball can be bounced with both hands. The child has to keep the ball in the air. The child may not occur any fault.</td>
<td>The ball may not be lost. At least 5 attempts are recorded. The child must not stop. The child can only start again if the child has made a mistake. No side steps. The ball can be stopped with both hands. The child may not lose the ball.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>6 attempts, amount of hits is recorded.</td>
<td>6 attempts, amount of balls caught is recorded.</td>
<td>2 attempts, amount of successful attempts is recorded.</td>
<td>2 attempts, amount of successful attempts is recorded.</td>
</tr>
<tr>
<td>Test setup</td>
<td>A target is placed at 1.50 m height. A scratch line is placed 2 m away from the target.</td>
<td>The test leader drops the ball from 2 m height and 1.50 m distance so that the ball reaches a height of at least 1.50 m after it has touched the ground.</td>
<td>Marking a corridor using tape (5 m x 1 m).</td>
<td>Marking a corridor using tape (5 m x 1 m).</td>
</tr>
<tr>
<td>Materials</td>
<td>6 jogging balls.</td>
<td>1 target (diameter: 40 cm).</td>
<td>1 small rubber ball or tennis ball.</td>
<td>1 small basketball (size 3, diameter 15 cm).</td>
</tr>
<tr>
<td></td>
<td>1 needle.</td>
<td>1 meandering.</td>
<td>Ground markings.</td>
<td>Ground markings.</td>
</tr>
</tbody>
</table>
Methods : MOBAK-1

### Body movement

<table>
<thead>
<tr>
<th>Measure</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throwing</td>
<td>5-6 success = 2 points</td>
</tr>
<tr>
<td></td>
<td>3-4 success = 1 point</td>
</tr>
<tr>
<td></td>
<td>0-2 success = 0 point</td>
</tr>
<tr>
<td>Catching</td>
<td>2 attempts</td>
</tr>
<tr>
<td></td>
<td>2 success = 2 points</td>
</tr>
<tr>
<td></td>
<td>1 success = 1 point</td>
</tr>
<tr>
<td></td>
<td>0 success = 0 point</td>
</tr>
<tr>
<td>Bouncing</td>
<td>2 attempts</td>
</tr>
<tr>
<td>Dribbling</td>
<td>2 attempts</td>
</tr>
<tr>
<td>Balancing</td>
<td>2 attempts</td>
</tr>
<tr>
<td>Rolling</td>
<td>2 attempts</td>
</tr>
<tr>
<td>Jumping</td>
<td>2 attempts</td>
</tr>
<tr>
<td>Moving sideways</td>
<td>2 attempts</td>
</tr>
</tbody>
</table>

### Failure analysis

- Score system:
Methods: MOBAK-1

**STUDY 1**
- Cloes, Mouton, Jidovtseff & Vandermeeren: Involvement of PE teachers in motor testing. A pilot study with the MOBAK-1. Presented at Ciapss 2, 2017, Jyväskylä, Finland
- 368 children (age=6-8 YO)
- assessed by PE teachers

**STUDY 2**
- 166 children (age=6-8 YO)
- assessed by the same experimenter

**STUDY 1 + STUDY 2 = 534 children**

Reference

Results: throwing

**Discriminant ?**
- Too hard !

**Comparison between studies**

- Throwing distance (2m) too far ?
- Scoring system too severe ?

<table>
<thead>
<tr>
<th>Score</th>
<th>Stud 1</th>
<th>Stud 2</th>
<th>Stud 1 + Stud 2</th>
<th>Herrmann</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50%</td>
<td>60%</td>
<td>40%</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>20%</td>
<td>10%</td>
<td>30%</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
<td>-</td>
</tr>
</tbody>
</table>

0-2 hits => 0 point
3-4 hits => 1 point
5-6 hits => 2 points

0-1 hits
2-3 hits
4-6 hits

Similar results
Results: catching

- Increase task difficulty => catching the ball with one hand?

Results: bouncing

=> Yes !!!
Results: dribbling

Dribbling

Discriminant ?

=> Yes !!!

Comparison between studies

- Differences between French and English translations
- Instruction if not accurate could result in different scores

Results: balancing

Balance

Discriminant ?

=> Too easy!

Comparison between studies

- Increase task difficulty => walk forward + walk backward?
Results: rolling

- Any technical information about the rolling

Results: jumping

- Very different results in comparison with Herrmann et al.
- Tiles dimension should be adapted to children morphology
Results: moving sideways

- Is the test discriminant? => Increase task difficulty?

Results: object control

- Similar results
Results: body control

Body-control

Results: how score distribution should look like?

Between test Inconsistency
Results were similar/quite similar to previous studies for 6 out of 8 tests.
Dribbling and Jumping test presents more important differences.
Clear protocols and instructions are highly recommended.
Document translation in local language should be verify.
Shape of the score distribution differs from a test to another.
Réflexion is needed about any pertinent adaptation and any further worldwild use.

Thanks for your attention.

b.jidovtseff@ulg.ac.be