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12th FIEP EUROPEAN CONGRESS
Luxembourg | 13.9.-16.9.2017

Children motor skills competencies in Wallonia: *descriptive data and testing battery discrimination analysis*


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Introduction



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MOBAK - 1
Basic motor competencies in first grade



TESTMANUAL

Herrmann & Seelig, 2014)

- ▀ 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.

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Aim of the study

- ▶ The aim of the study is to
 - ✓ improve criteria in order to avoid the failure that are not related to children ability
 - ✓ to compare the actual dichotomous scoring system with another scoring system taking in consideration the progression of the children.



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Methods : MOBAK-1

MOBAK-1	Object-control			
	Throwing (1)	Catching (2)	Bouncing (3)	Dribbling (4)
				
Qualification	Hitting a small target.	Catching a ball.	Bouncing a ball without losing control.	Dribbling a ball without losing control.
Test task	The child throws from a 2 m distance at a target with 6 juggling balls.	The child catches the ball after the turning point.	The child stands behind a marked line and bounces a small basketball along the corridor until the finish line without losing the ball.	The child stands behind a marked line and dribbles with the ball along a corridor until the finish line without losing the ball.
Criteria	Hitting the target counts as a point. Overhead casts only.	The ball is to be caught when still in the air.	The ball can be bounced with two hands. The child has to look straight ahead. The ball may not be held or lost. The child may not leave the corridor.	The ball may not be lost. At least 5 contacts with the ball. The child must not stop. The child has to look straight ahead. No side steps. The ball can be dribbled with both feet. The child may not leave the corridor.
Evaluation	6 attempts, amount of hits is recorded.	6 attempts, amount of balls caught is recorded.	2 attempts, amount of successful attempts is recorded.	2 attempts, amount of successful attempts is recorded.
Test set-up	A target is placed at a 1.30 m height. A scratch line is placed 2 m away from the target.	The test leader drops the ball from a 2 m height and 1.30 m distance so that the ball reaches a height of at least 1.30 m after it has touched the ground.	Marking a corridor using tape (5 m x 1 m).	Marking a corridor using tape (5 m x 1 m).
Materials	<ul style="list-style-type: none"> • 6 juggling balls • 1 target (diameter: 40 cm) • Scratch line 	<ul style="list-style-type: none"> • 1 small rubber ball or tennis ball 	<ul style="list-style-type: none"> • 1 small basketball (size 3, diameter: 17cm) • Ground markings 	<ul style="list-style-type: none"> • 1 (soft) ball (diameter: 21 cm) • Ground markings

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Methods : MOBAK-1


MOBAK-1	Body movement			
	Balancing (5)	Rolling	Jumping (7)	Moving sideways (8)
Qualification	Balancing across a see-saw.	Rolling forward.	Jumping forward continuously.	Moving variably.
Test task	The child balances across a see-sawing long bench without leaving the bench.	The child performs a roll forward fluently and is able to stand afterwards.	The child jumps between and beneath the carpet tiles fluently. The child has to jump on one leg between the tiles and with straddled legs beneath the tiles.	The child starts at the first cone, moves sideways to the second cone and moves sideways back to the first cone without changing his or her viewing direction. Moving back and forth twice counts as one trial.
Criteria	Fluent crossing of the bench without stopping or leaving it. Normal walking (no half steps).	Hands can be used for support. No rolling off the sides. Fluent execution of movement.	The carpet tiles are not to be touched. The child must jump fluently without stopping for more than 1 second. The takeoff leg between the tiles can be chosen freely.	Fluent side steps. The hip stays parallel to the marking.
Evaluation	2 attempts, amount of successful attempts is recorded.	2 attempts, amount of successful attempts is recorded.	2 attempts, amount of successful attempts is recorded.	2 attempts, amount of successful attempts is recorded.
Test set-up	A long bench is placed upside-down on a springboard, forming a see-saw secured with gymnastic mats.	2 gymnastics mats are placed in a row.	4 carpet tiles are placed in a row with a 40 cm gap between them.	2 cones are placed on a marking at a distance of 3 m from each other.
Materials	<ul style="list-style-type: none"> • 1 long bench • 1 spring board • 4 gymnastics mats 	<ul style="list-style-type: none"> • 2 gymnastics mats 	<ul style="list-style-type: none"> • 4 carpet tiles (40 cm x 40 cm) 	<ul style="list-style-type: none"> • 2 marking cones • Ground markings

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Methods : MOBAK-1

Score system :

	Measure	Scoring		
Object control	Throwing	6 attempts	5-6 success = 2 points 3-4 success = 1 point 0-2 success = 0 point	Failure analysis
	Catching	6 attempts		
Body movement	Bouncing	2 attempts	2 success = 2 points 1 success = 1 point 0 success = 0 point	
	Dribbling	2 attempts		
	Balancing	2 attempts		
	Rolling	2 attempts		
	Jumping	2 attempts		
	Moving sideways	2 attempts		



7 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 Ciapse 2, 2017, Jyväskylä, Finland
- 368 children (age=6-8 YO)
- assessed by ≠ PE teachers

STUDY 2


- Jidovtseff, Vandeloise, Cloes, Morgado & Mornard: Measuring children motor skills with MOBACK-1: descriptive data and critical analysis. Presented at Ciapse 2, 2017, Jyväskylä, Finland
- 166 children (age=6-8 YO)
- assessed by the same experimenter

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

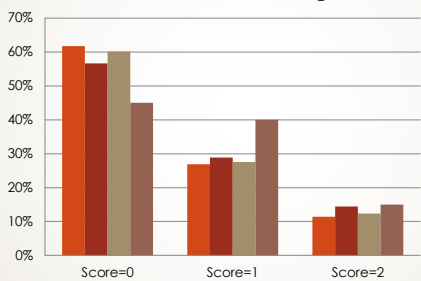
Reference

Herrmann, C., Gerlach, E., & Seelig, H. (2015). Development and validation of a test instrument for the assessment of basic motor competencies in primary school. *Measurement in Physical Education and Exercise Science*, 19(2), 80-90.

8 Results : throwing



Throwing



Score	Stud 1 (%)	Stud 2 (%)	Stud 1 + Stud 2 (%)	Herrmann (%)
Score=0	62	58	60	45
Score=1	28	30	28	40
Score=2	12	15	12	15

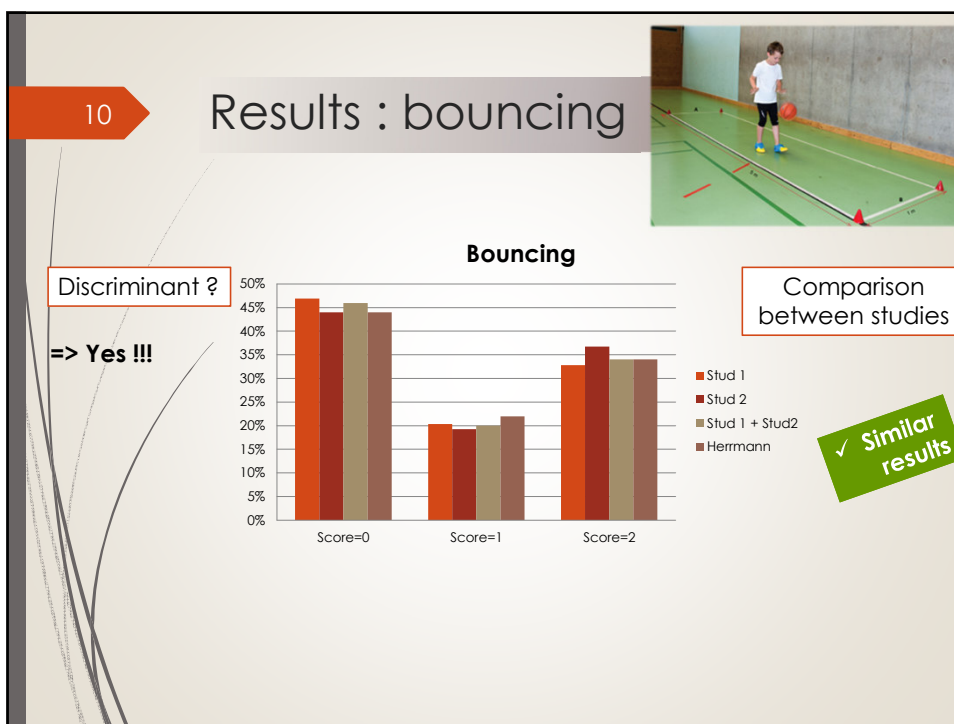
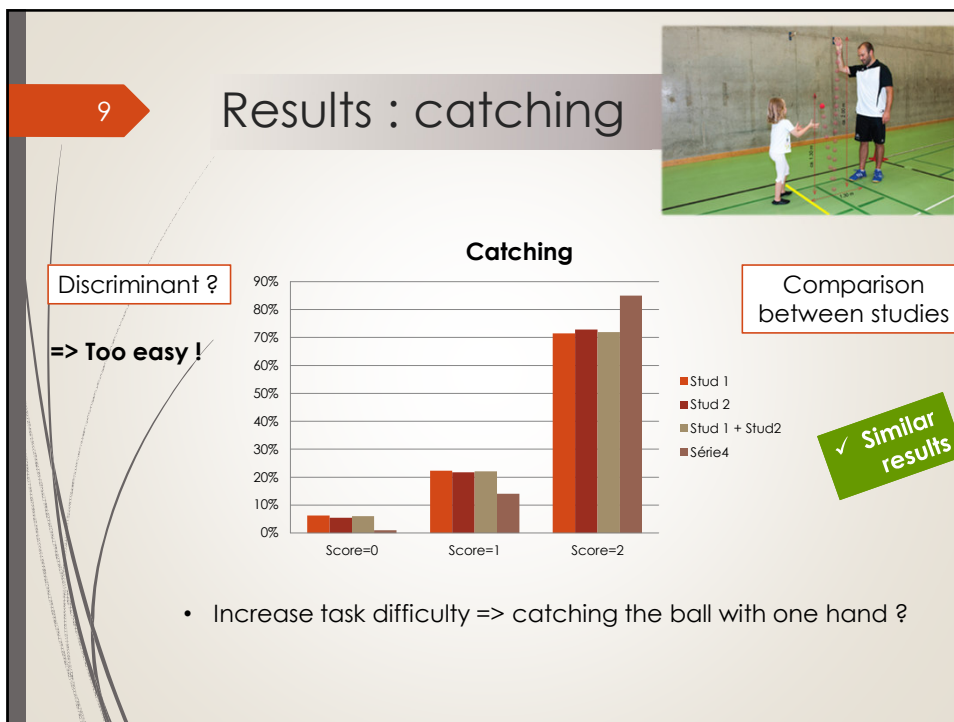
Discriminant ?
 => Too hard !

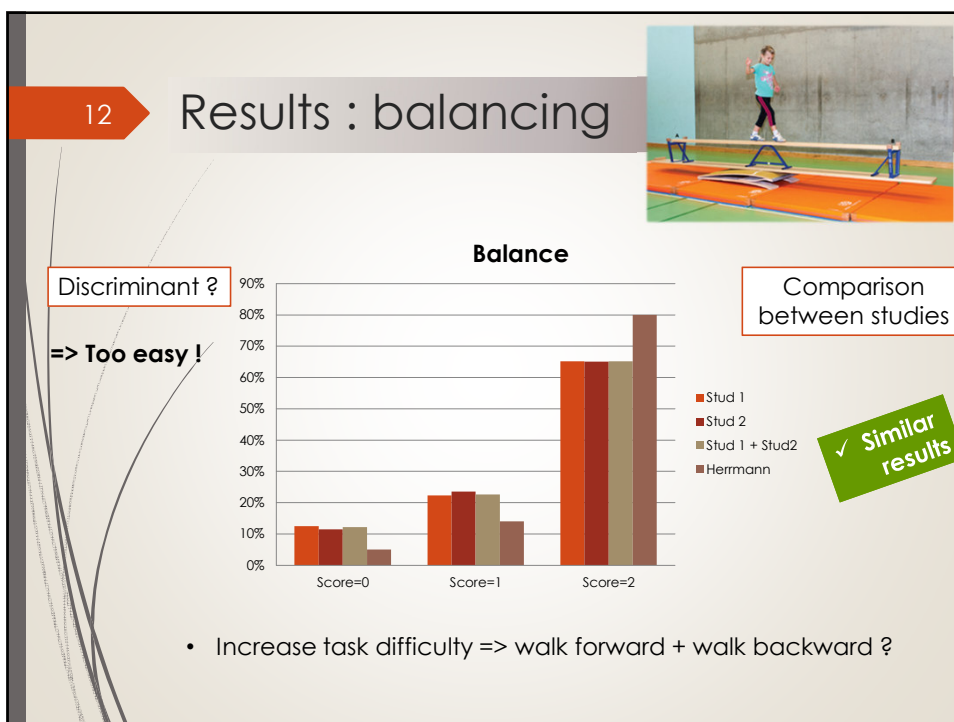
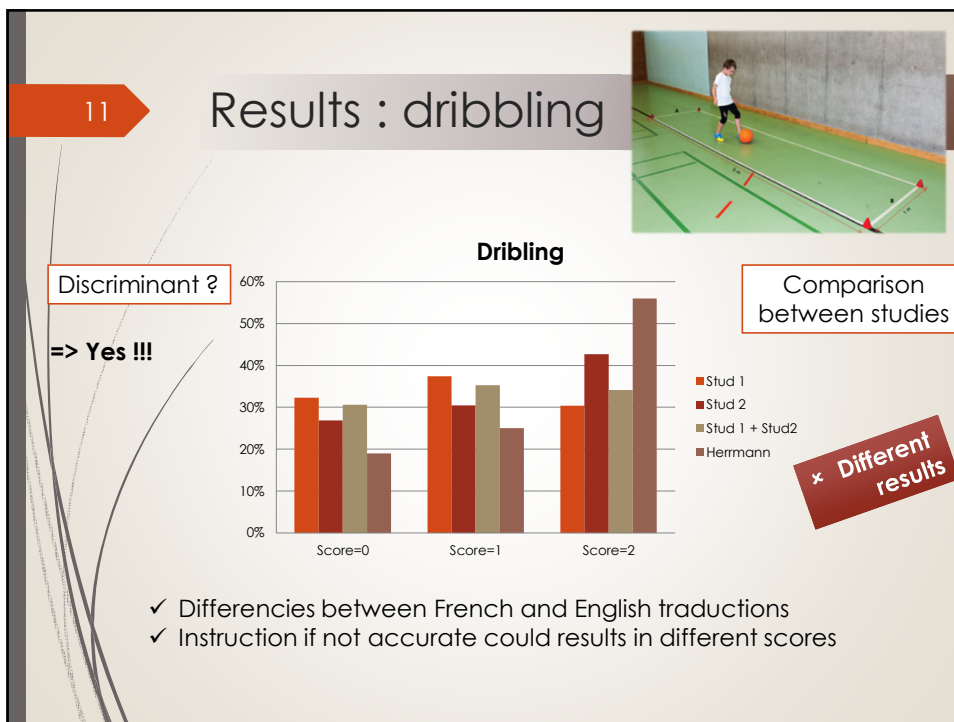
Comparison between studies
✓ Similar results

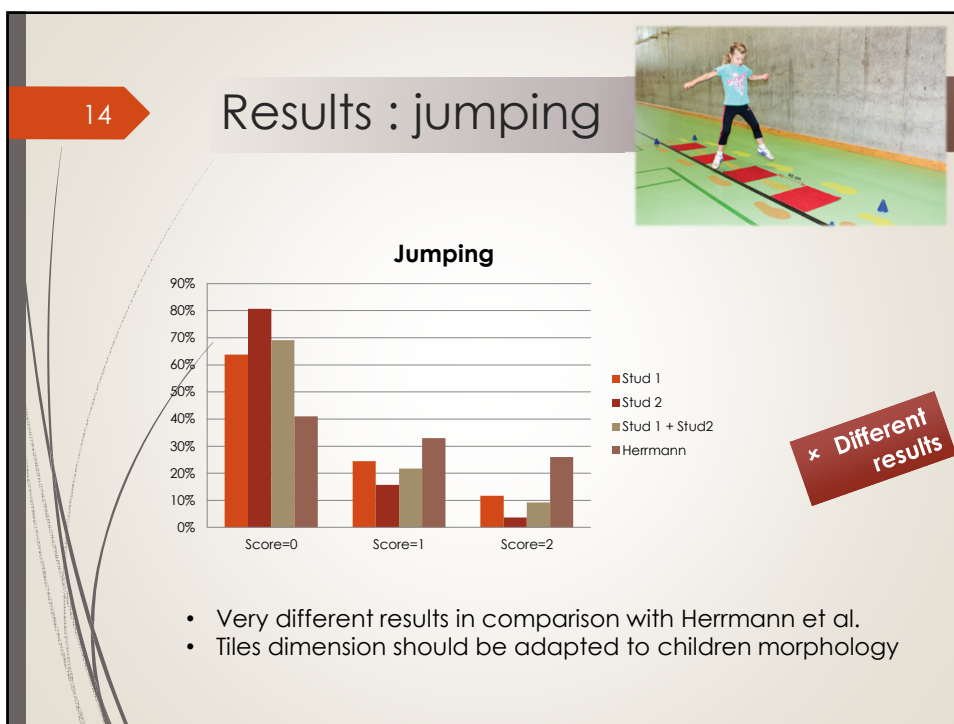
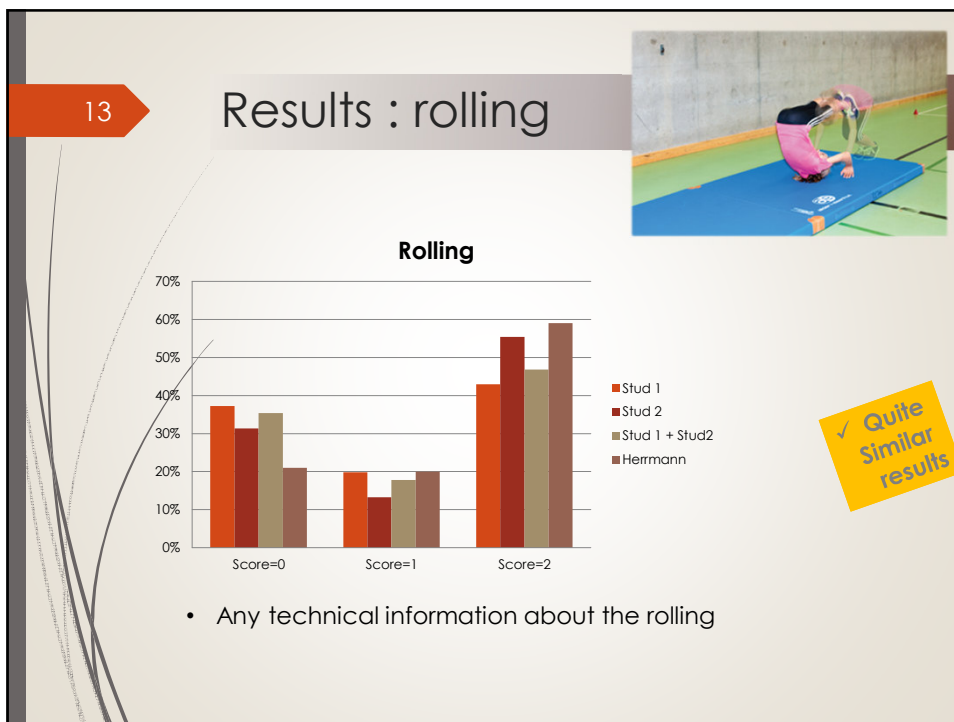
Throwing distance (2m) too far ?

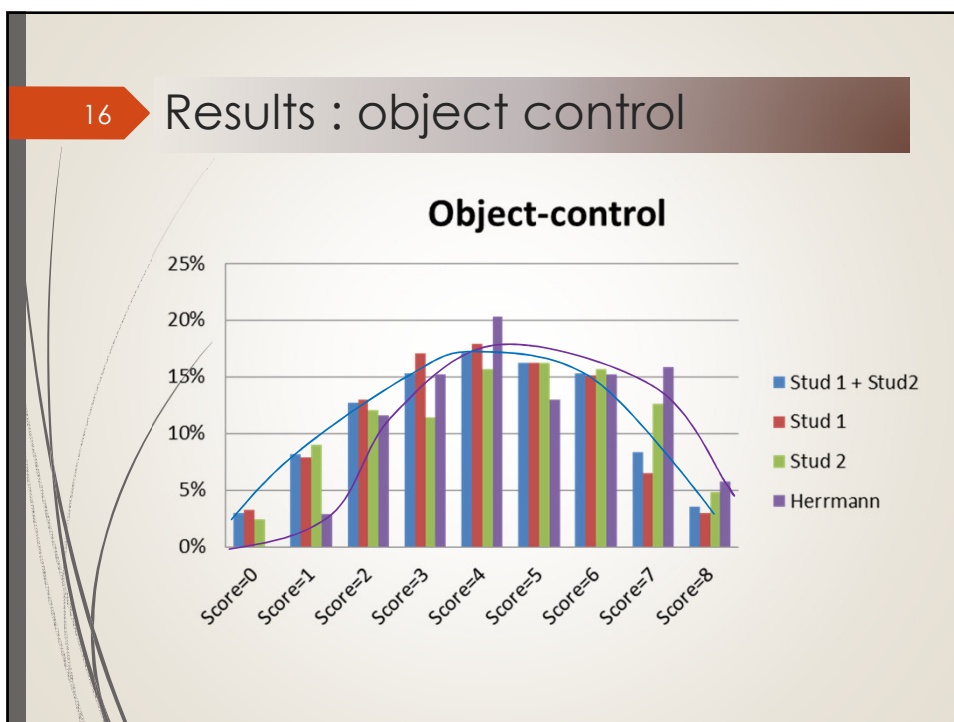
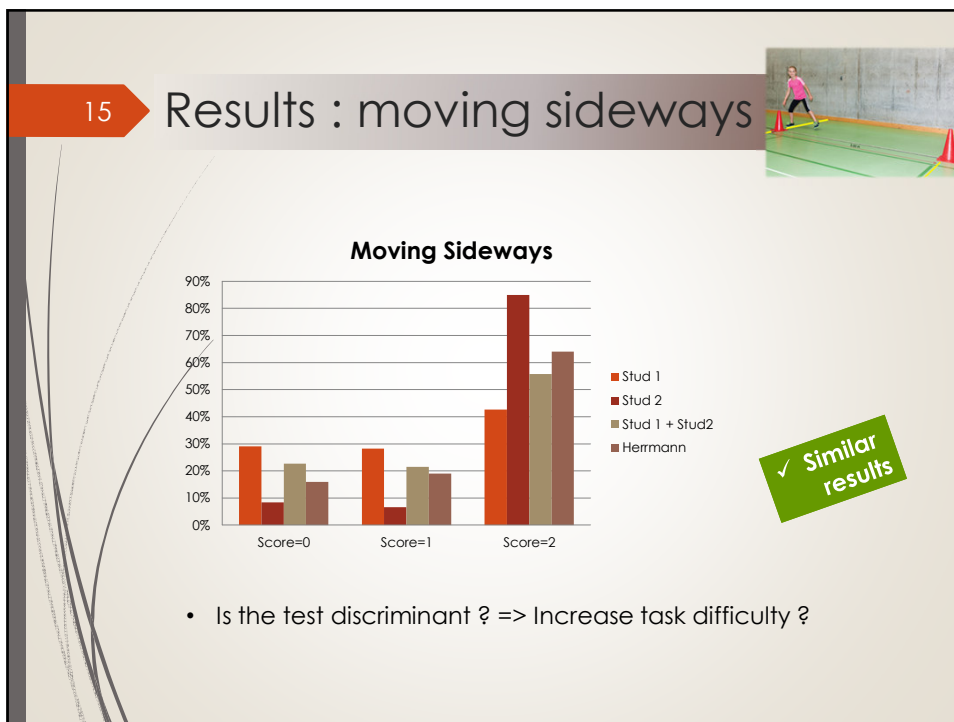
Scoring system too severe ?

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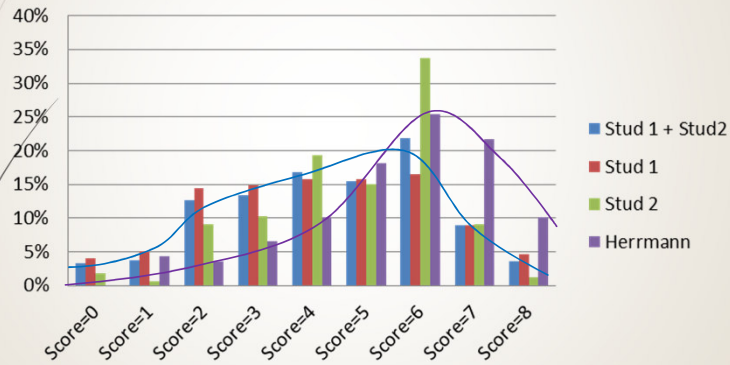




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Results : body control

Body-control




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Results : how score distribution should look like ?

Between test Inconsistency



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Conclusion

- 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



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