

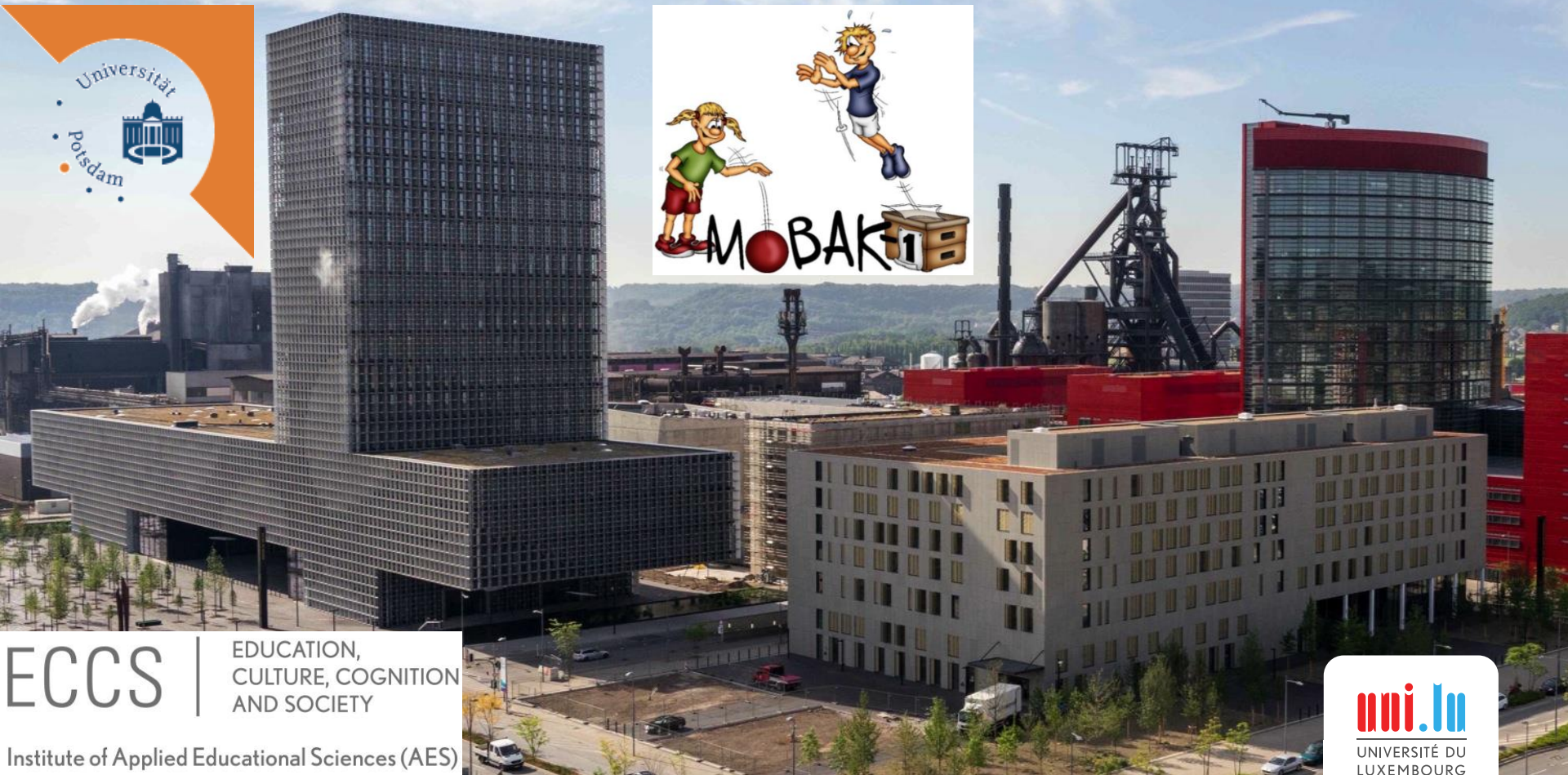


# University of Luxembourg

Multilingual. Personalised.  
Connected.

## Assessing Basic Motor Competencies in Primary School – an International Comparative Study in Europe

Scheuer C., Cloes, M., Colella, D., Emeljanovas, A., Heim, C.,  
Jidovtseff, B., Masarykova, D., Mieziene, B., Seelig H., Vlcek, P.,  
Vrbas, J., Herrmann, C.



ECCS

EDUCATION,  
CULTURE, COGNITION  
AND SOCIETY

Institute of Applied Educational Sciences (AES)

# 1. Background MOBAK-Network



UNIVERSITY OF LUXEMBOURG  
Education, Culture, Cognition  
and Society (ECCS)



Departement für Sport,  
Bewegung und Gesundheit

## The Netherlands



Hanze Unive  
Sciences  
Groningen



## Lithuania

Lithuanian Sports  
University



## Italy

School Interfaculty of secondary  
teacher's school training,  
University of Turin

Laboratorio di Didattica delle  
Attività Motorie,  
University of Foggia



## Greece

Faculty of Physical Education  
and Sport Science,  
National and Kapodistrian  
University of Athens



HELLENIC REPUBLIC  
National and Kapodistrian  
University of Athens

## Sweden

School of Health and  
Medical Sciences  
Sport Science,  
Örebro University



## Belgium

Université de Liège,  
Département des sciences de  
la motricité



## Slovakia

Faculty of Education,  
Trnava University

## Portugal

Human Kinetics Faculty,  
Departement of Education,  
Social Sciences and  
Humanities,  
University of Lisbon



## Austria

Department of Sport Science  
and Kinesiology  
University of Salzburg



## Czech Republic

Faculty of Education,  
Department of Physical  
Education,  
Masaryk University Brno



FACULTY OF EDUCATION  
Masaryk University

Assessing Basic Motor Competencies in Primary School –  
an International Comparative Study in Europe – Scheuer C., et al.

Saying Yes to Diversity in Sport  
ICSEMIS 2016 – Santos, São Paulo – Brazil

# 2. Methods Test items



**Throwing**



**Catching**



**Bouncing**



**Dribbling**



**Balancing**



**Rolling**



**Jumping**



**Side stepping**

# 2. Methods

## MOBAK-Network

### MOBAK-1 Switzerland (Zurich)

- ... Sample: **317** first graders (girls = 55%)
- ... Age: M = 7.04 years (SD = .37); BMI: 16.08 (SD = 2.25)
- ... Assessment: University of Basel (Christian Herrmann)



Departement für Sport,  
Bewegung und Gesundheit

### MOBAK-1 Germany (Frankfurt)

- ... Sample: **1091** first and second graders (girls = 45 %);
- ... Age: M = 6.80 years (SD = .89); BMI: 16.30 (SD = 2.37)
- ... Assessment: University of Frankfurt (Christopher Heim)



### MOBAK-1 Czech Republic (Brno)

- ... Sample: **153** first and second graders (girls = 55 %);
- ... Age: M = 7.37 years (SD = .62)
- ... Assessment: Masaryk University Brno (Petr Vlcek)



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Masaryk University

# 2. Methods

## MOBAK-Network



### MOBAK-1 Luxembourg

- ... Sample: **150** first graders (girls = 47%)
- ... Age: M = 6.74 years (SD = .34)
- ... Assessment: University of Luxembourg (Claude Scheuer)



UNIVERSITY OF LUXEMBOURG  
Education, Culture, Cognition  
and Society (ECCS)

### MOBAK-1 Lithuania (Kaunas)

- ... Sample: **120** first graders (girls = 48 %);
- ... Age: M = 7.76 years (SD = .33); BMI: 16.14 (SD = 2.30)
- ... Assessment: Lithuanian Sports University (Arūnas Emeljanovas)



### MOBAK-1 Italy (Foggia)

- ... Sample: **85** first graders (girls = 45 %);
- ... Age: M = 7.24 years (SD = .30); BMI: 17.53 (SD = 3.04)
- ... Assessment: University of Foggia (Dario Colella)



# 2. Methods

## MOBAK-Network

### MOBAK-1 Slovakia (Trnava)

- ... Sample: **241** first graders (girls = 56 %)
- ... Age: M = 7.06 years (SD = .57); BMI: 16.02 (SD = 1.46)
- ... Assessment: Trnava University (Dana Masarykova)



### MOBAK-1 Belgium (Liège)

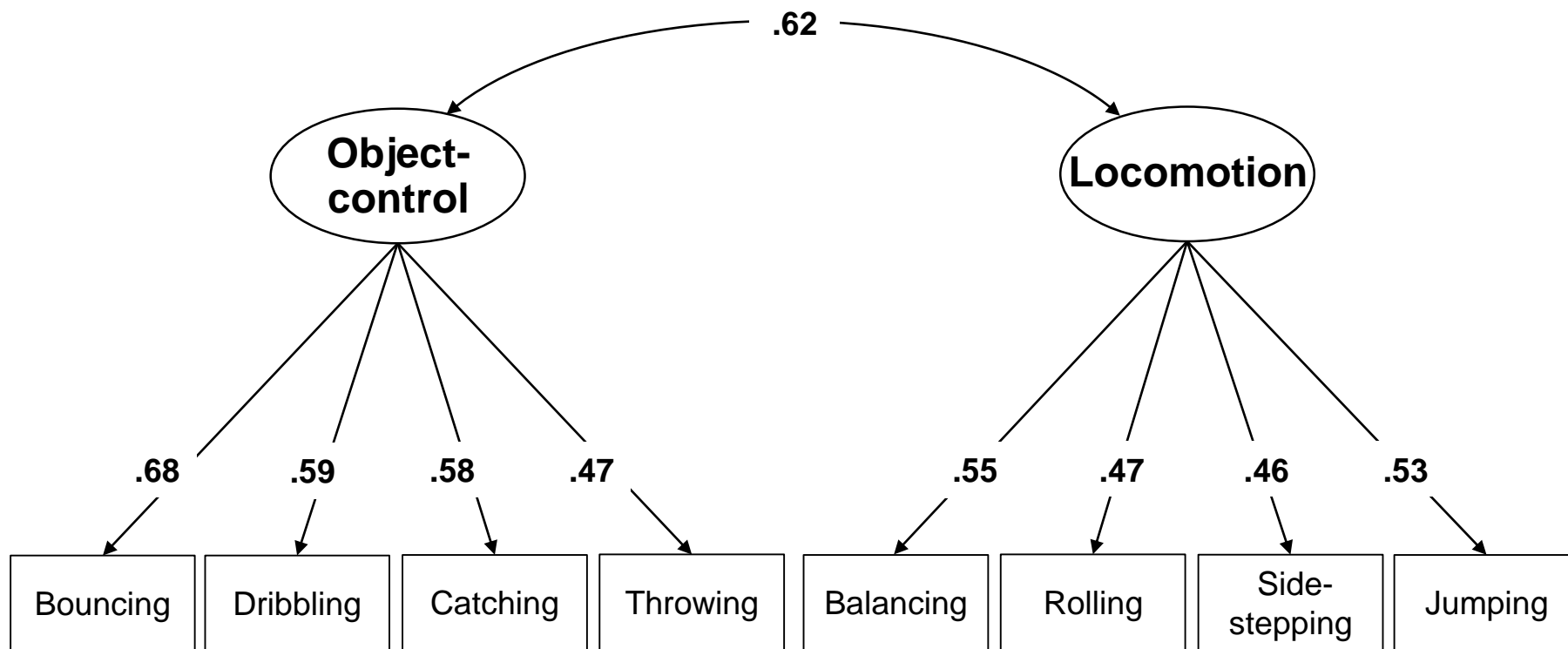
- ... Sample: **166** first graders (girls = 55 %);
- ... Age: M = 7.23 years (SD = .64)
- ... Assessment: Université de Liège (Boris Jidovtseff)



# 3. Results

## MOBAK-EU

### Confirmatory factor analysis (Total sample: N = 2336)

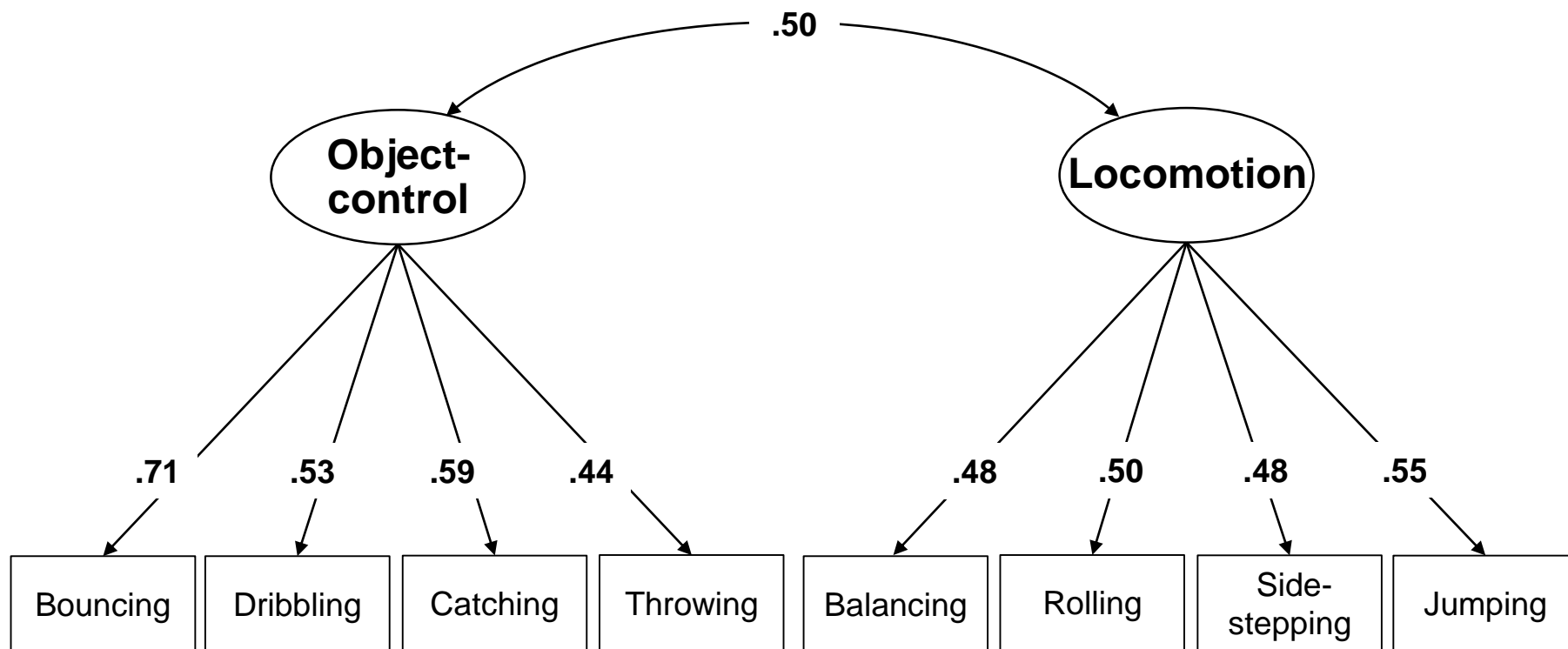


(CFI = .97; TLI = .96; RMSEA = .035 [.027 - .044]; WRMR = 1.13)

# 3. Results

## MOBAK-EU

**Confirmatory factor analysis** (Total sample: N = 2336)  
taking into account the **multilevel structure** (students in countries)



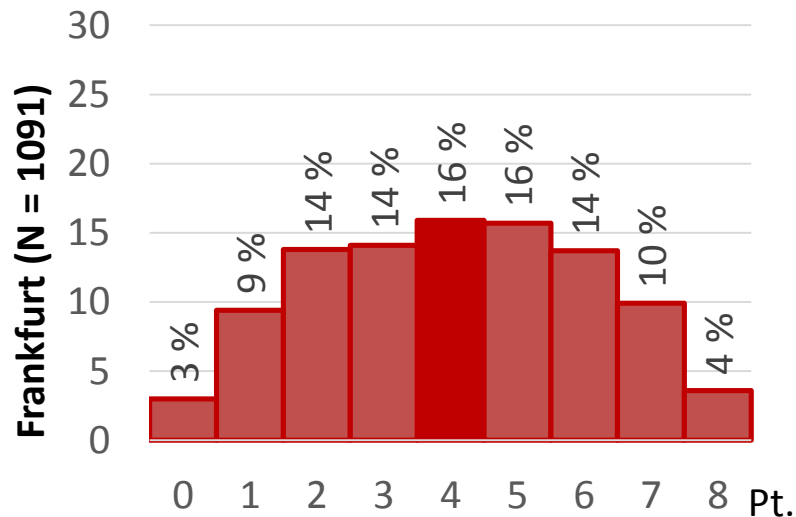
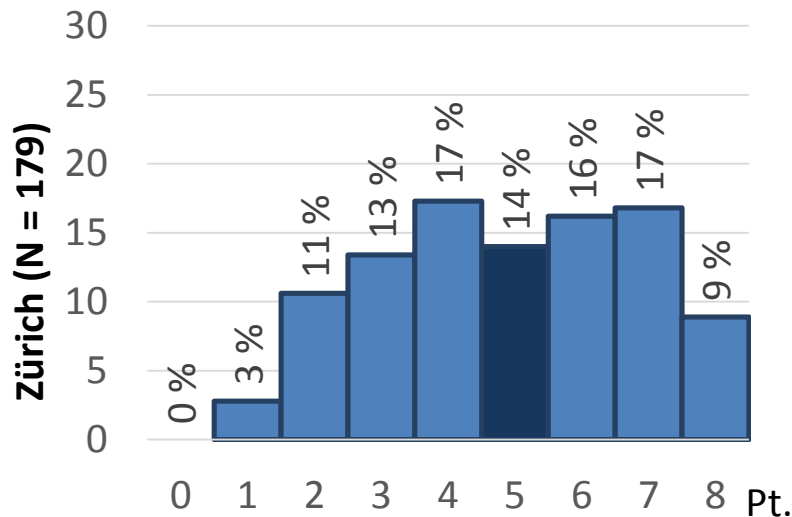
(CFI = .97; TLI = .95; RMSEA = .019 [.009 - .029]; WRMR = 0.87)



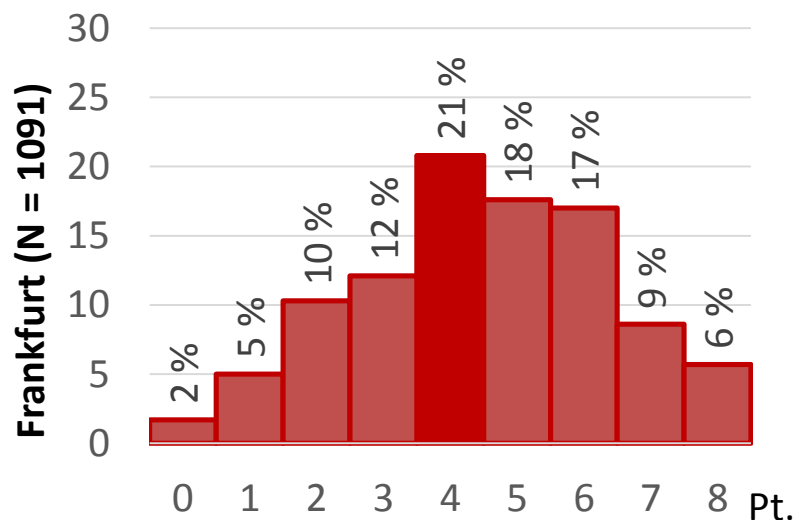
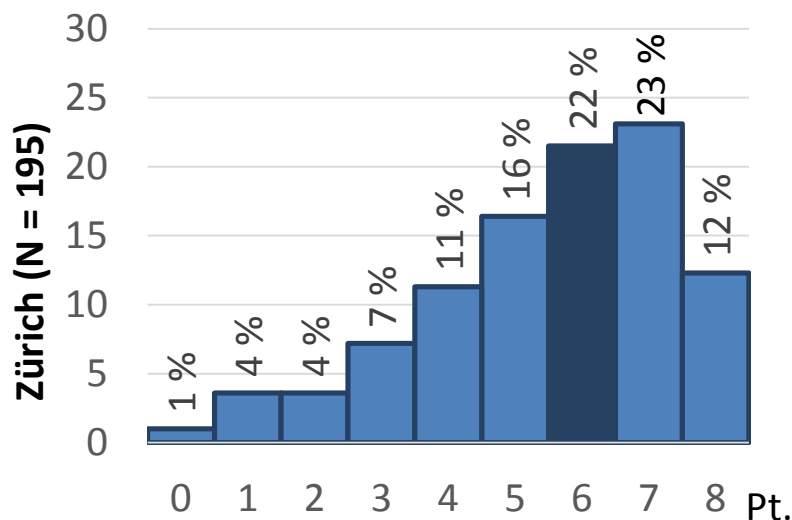
# 3. Results

## Descriptive Statistics

Object-control



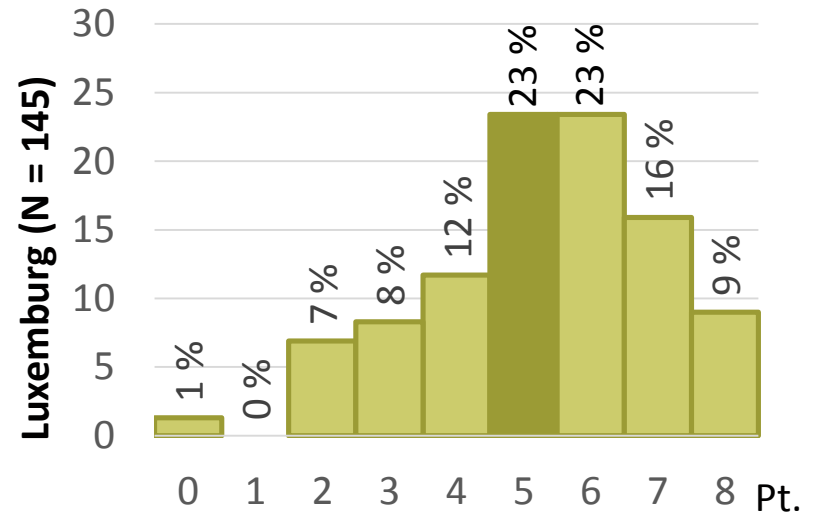
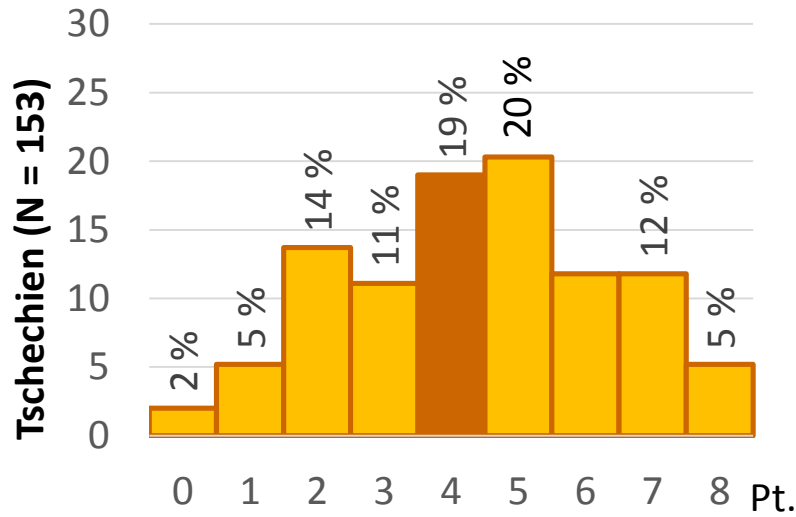
Locomotion



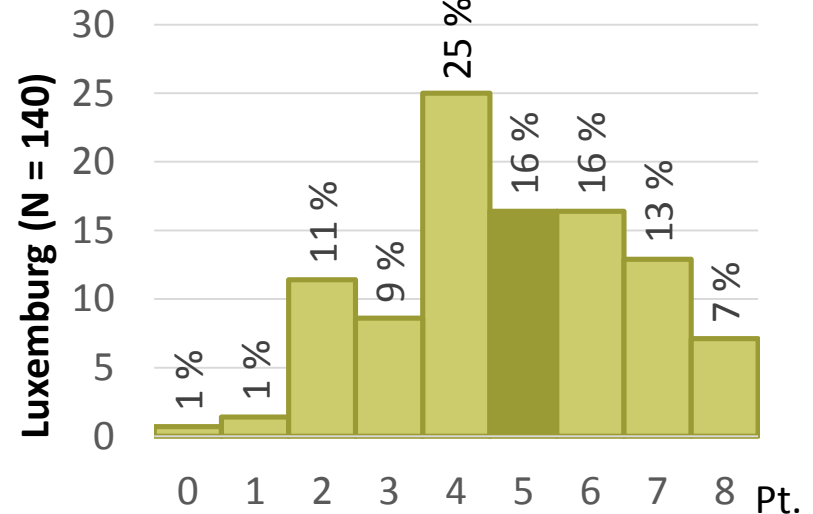
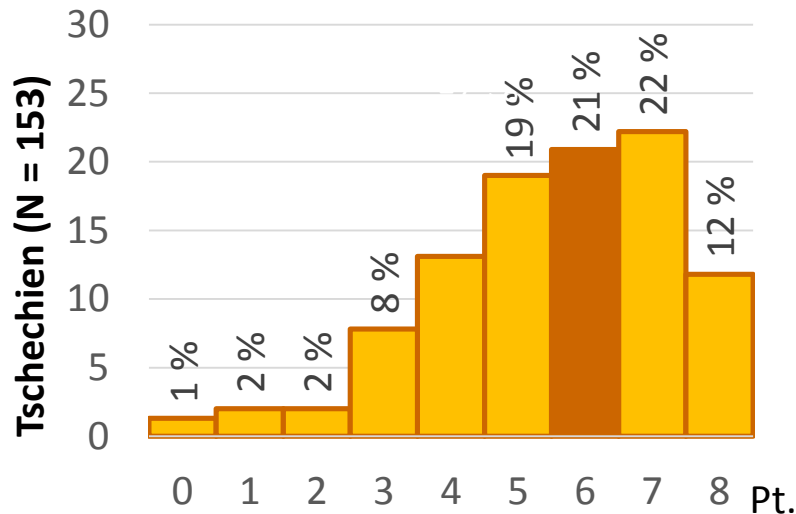
# 3. Results

## Descriptive Statistics

Object-control



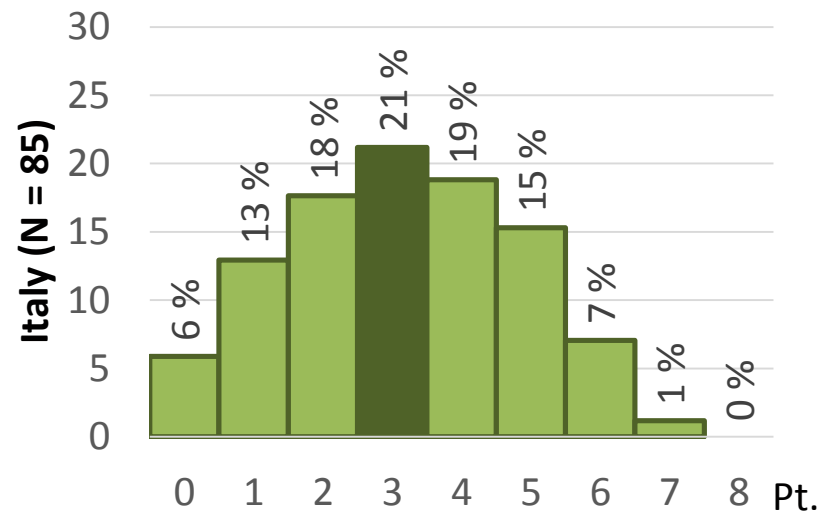
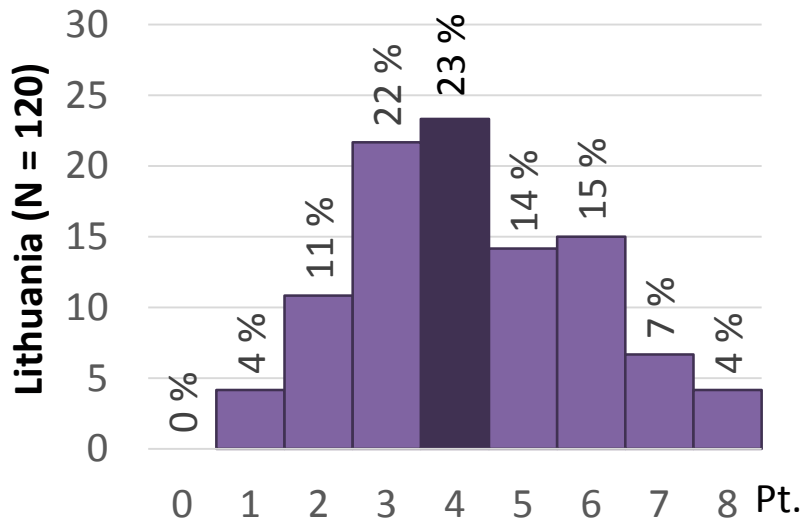
Locomotion



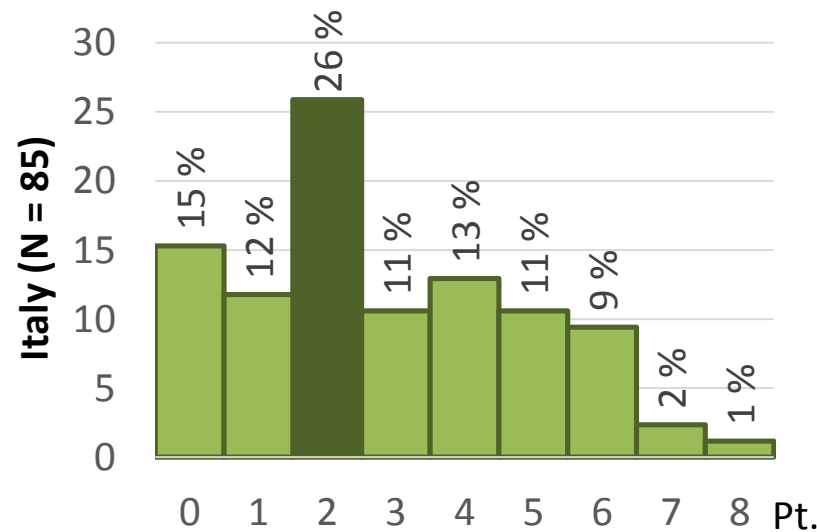
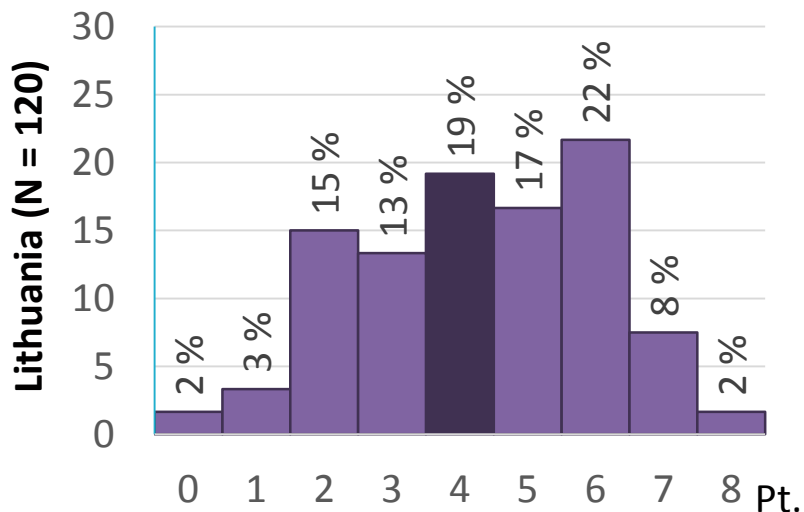
# 3. Results

## Descriptive Statistics

Object-control



Locomotion

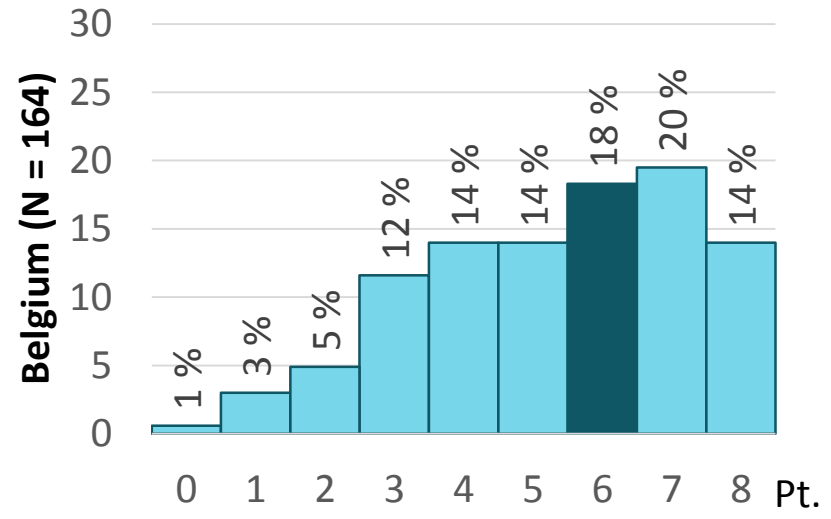
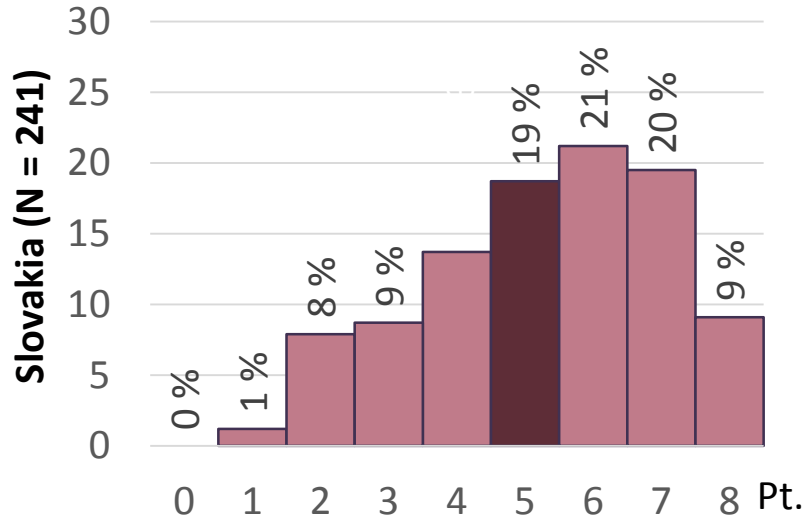


# 3. Results

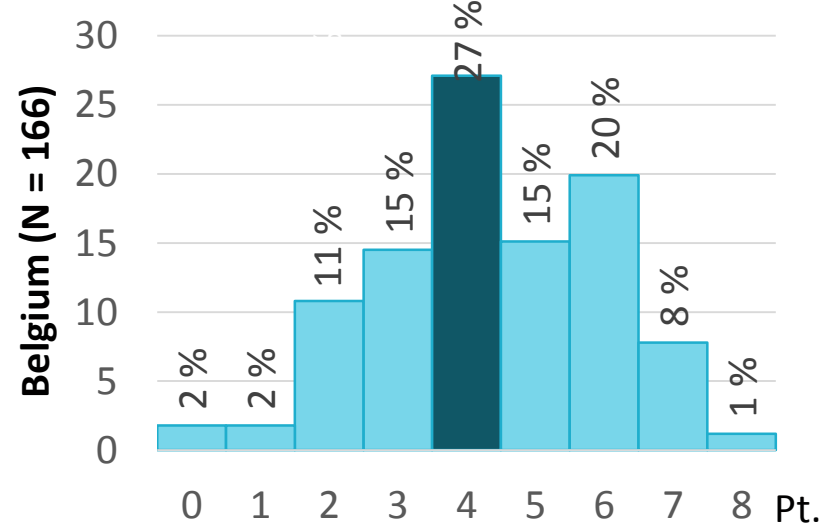
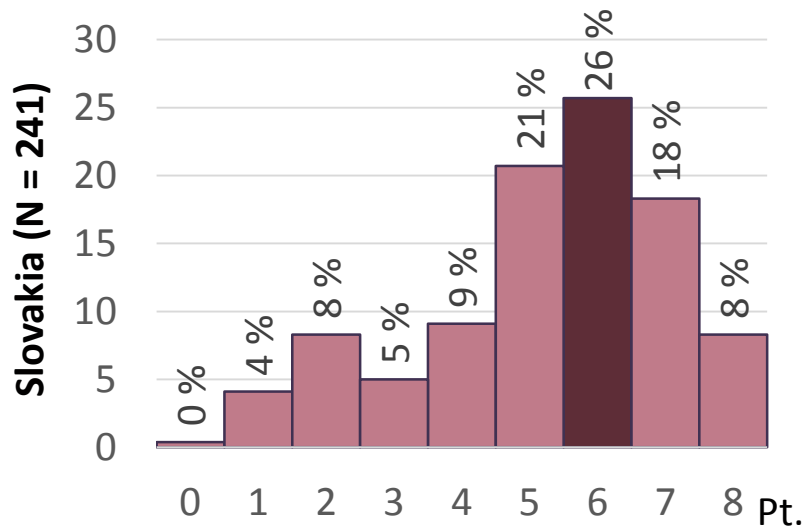
## Descriptive Statistics



Object-control



Locomotion



# 3. Results

## Descriptive Statistics



	N	Locomotion		Object-Control	
		M	(CI 95)	M	(CI 95)
<b>Switzerland (Zurich)</b>	<b>138</b>	5.48	(5.18-5.78)	4.67	(4.36-4.99)
<b>Germany (Frankfurt)</b>	<b>1091</b>	4.37	(4.26-4.48)	4.02	(3.90-4.14)
<b>Czech Republic (Brno)</b>	<b>153</b>	5.52	(5.23-5.80)	4.38	(4.06-4.69)
<b>Luxembourg</b>	<b>134</b>	4.80	(4.48-5.11)	4.59	(4.24-4.94)
<b>Lithuania (Kaunas)</b>	<b>120</b>	4.29	(3.97-4.62)	4.25	(3.94-4.56)
<b>Italy (Foggia)</b>	<b>84</b>	2.82	(2.37-3.27)	2.44	(2.08-2.80)
<b>Slovakia (Trnava)</b>	<b>241</b>	5.24	(5.01-5.48)	5.28	(5.05-5.50)
<b>Belgium (Liège)</b>	<b>164</b>	4.38	(4.13-4.63)	5.32	(5.02-5.62)
<b>Total</b>	<b>2127</b>	<b>4.59</b>	<b>(4.50-4.67)</b>	<b>5.01</b>	<b>(4.93-5.10)</b>

**ANCOVA (age)**

F(7, 2185)=28.28,  
p < .001,  $\eta^2 = .083$

F(7, 2176)=38.01,  
p < .001,  $\eta^2 = .109$

# 4. Conclusion

## Model

- **Two factors** consisting of four items each were found
- The related CFA (CFI =.95; RMSEA=.044) revealed **good model fit indices**.
- The first factor “**Locomotion**” represents body movements (e.g., balancing), the second factor “**Object-control**” represents ball control (e.g., catching)

# 4. Conclusion

## Locomotion

- The mean in the first factor “Locomotion” of the total sample is **4.59**, varying between **2.82 (Italy)** and **5.52 (Czech Republic)**.
- The students in the sample from **Switzerland, Czech Republic, Luxembourg and Slovakia** perform above-average in “Locomotion” (median above 4).
- The students in the sample from **Italy** perform below-average in “Locomotion” (median below 4).

## Object-control

- The mean in the second factor “Object control” of the total sample is **5.01**, varying between **2.44 (Italy)** and **5.32 (Belgium)**.
- The students in the sample from **Switzerland, Luxembourg, Slovakia and Belgium** perform above-average in “Object-control” (median above 4).
- The students in the sample from **Italy** perform below-average in “Object-control” (median below 4).

# 5. Outlook

## Project BMC-EU



### Basic Motor Competencies in Europe – Assessment and Promotion



Erasmus+ Sport

#### **Concern:**

Improve the promotion of basic motor competences in school sports

#### **Objectives:**

1. International analysis of basic motor competences in school sports
2. Development of a support-toolkit for teachers/coaches in physical education and school sports for the promotion of basic motor competences
3. Development and testing of a workshop-concept to train teachers/coaches in physical education and school sports to apply des support-toolkit
4. Dissemination/implemtation of the support-toolkit – Europe-wide

#### **Structure:**

1. phase: MOBAK-study (international study in 12 countries)
2. phase: Development and implementation: support-toolkit & workshop-concept
3. phase: Documentation, presentation and dissemination of the project results, Evaluation



# 5. Outlook

## Project BMC-EU



**University of Potsdam**

E. Gerlach, J. Sallen

Coordination, evaluation, dissemination

**Universität Basel**

C. Herrmann, H. Seelig, U. Pühse

Lead phase 1:  
MOBAK-Study

**University of Luxembourg**

C. Scheuer, A. Bund

Lead phase 2:  
Workshop concept  
Support-toolkit



EUPEA & ISCA  
Consultants  
Networking

**Partner organisations**

- Implementation of the MOBAK-study
- Application of the workshop-concept
- Dissemination of the support-toolkit

Universität  
Basel



# 5. Outlook

## Project BMC-EU

### Partner organisations

- **University of Salzburg (Austria)** G. Amesberger, B. Niederkofler
- **University of Liège (Belgium)** M. Cloes, B. Jidovtseff
- **Masaryk University Brno (Czech Republic)** P. Vlcek, J. Vrbas
- **Goethe-University of Frankfurt (Germany)** C. Heim, F. Ennigkeit
- **National and Kap. University of Athens (Greece)** I. Kossyva, E. Adamakis
- **University of Foggia (Italy)** D. Colella, C. Simonetti
- **Lithuanian Sports University (Lithuania)** A. Emeljanovas, B. Mieziene
- **Hanze University Groningen (Netherlands)** R. Mombarg, B. Moraal
- **University of Lisbon (Portugal)** M. Onofre, A. Quiterio
- **University of Trnava (Slovakia)** D. Masarykova, J. Labudova

# Stay connected with us

## From MOBAK-Europe to MOBAK-World?

### Contact:

claude.scheuer@uni.lu

### For more information:

<http://www.dsbg4public.ch> (search for “MOBAK”)

