



University of Natural
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Bicycling Skills of Children – nothing ventured, nothing gained



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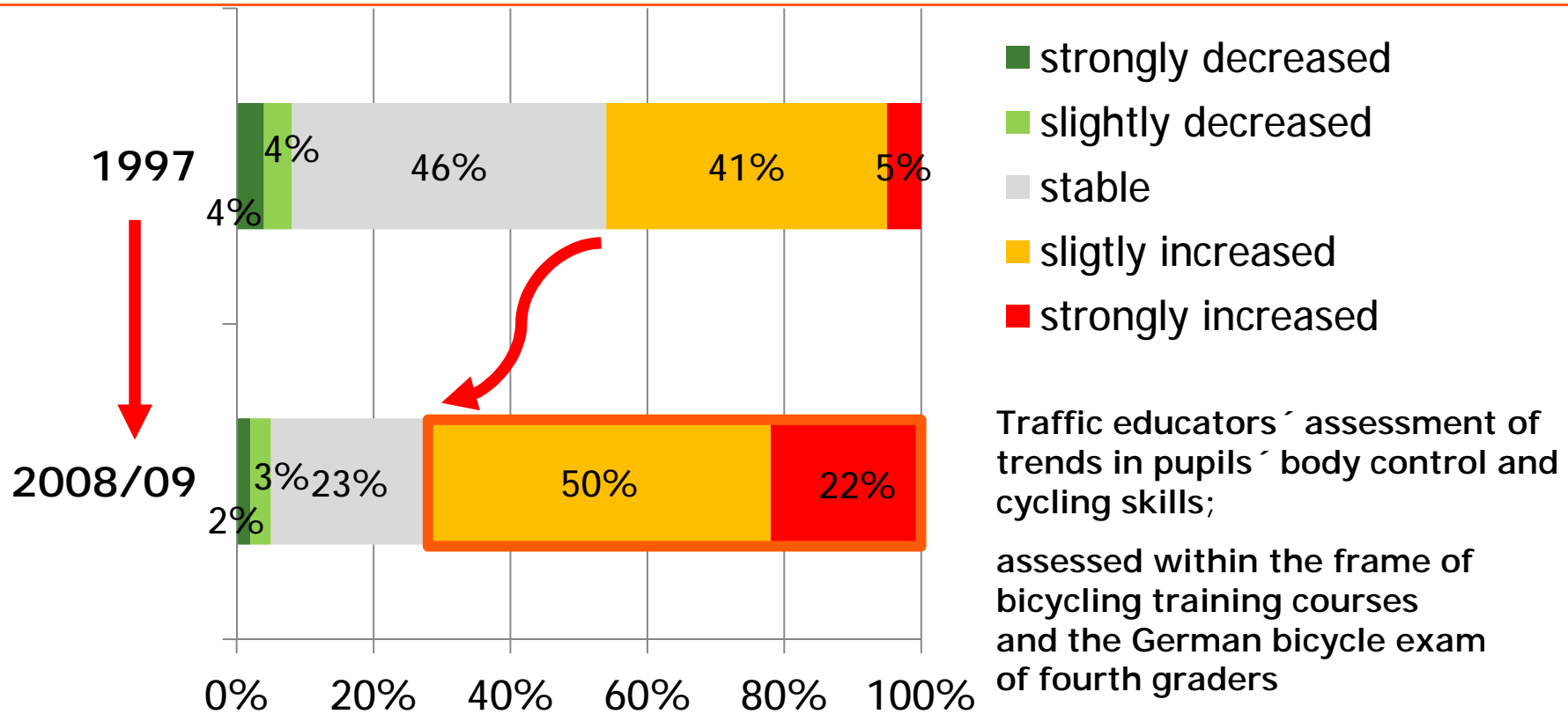
Children stop being physically active (PA)

Sex	Age-groups (years of age)				Mean
	11	13	15	17	
Girls	27.5%	14.6%	6.1%	5.2%	12.5%
Boys	34.1%	29.2%	16.6%	9.5%	23.2%
Mean	30.7%	21.8%	10.4%	7.0%	17.4%

Proportion of pupils fulfilling the WHO's recommendations of at least one hour physical activity per day.

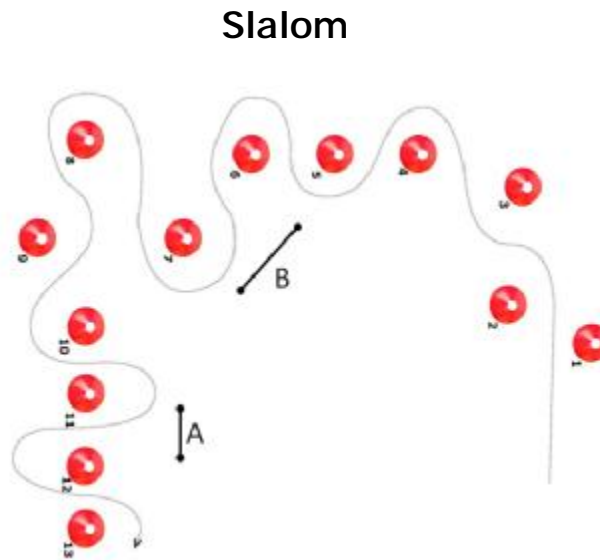
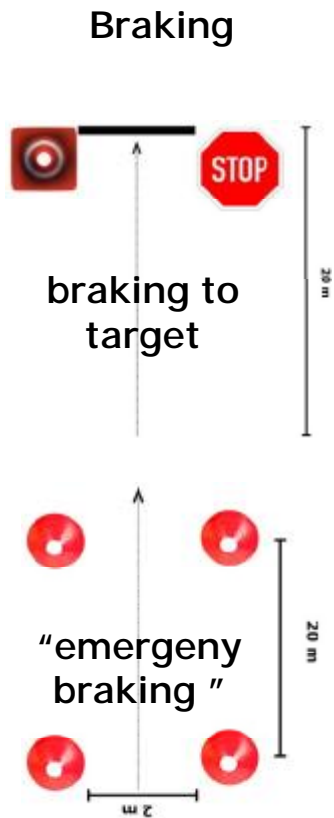
Figures based on the WHO-HBSC-Survey 2014 with 5,600 Austrian pupils, structured by sex and age-groups (Ramelow et al., 2015)

Psychomotor deficits of children on the rise



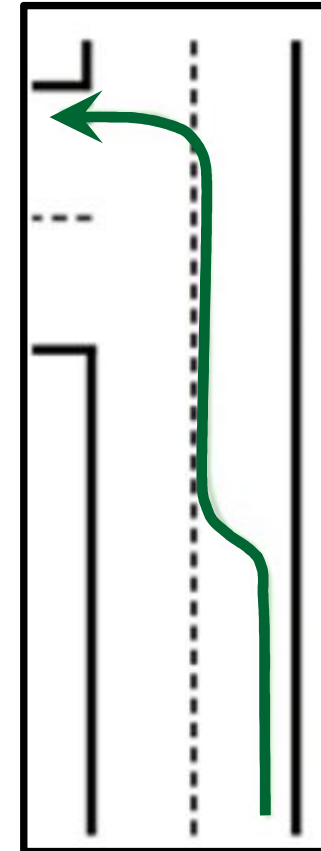
GÜNTHER, R.; DEGENER, S. (2009): Psychomotorische Defizite von Kindern im Grundschulalter und ihre Auswirkungen auf die Radfahr-Ausbildung. UDV.

Cycling test stations that caused difficulties



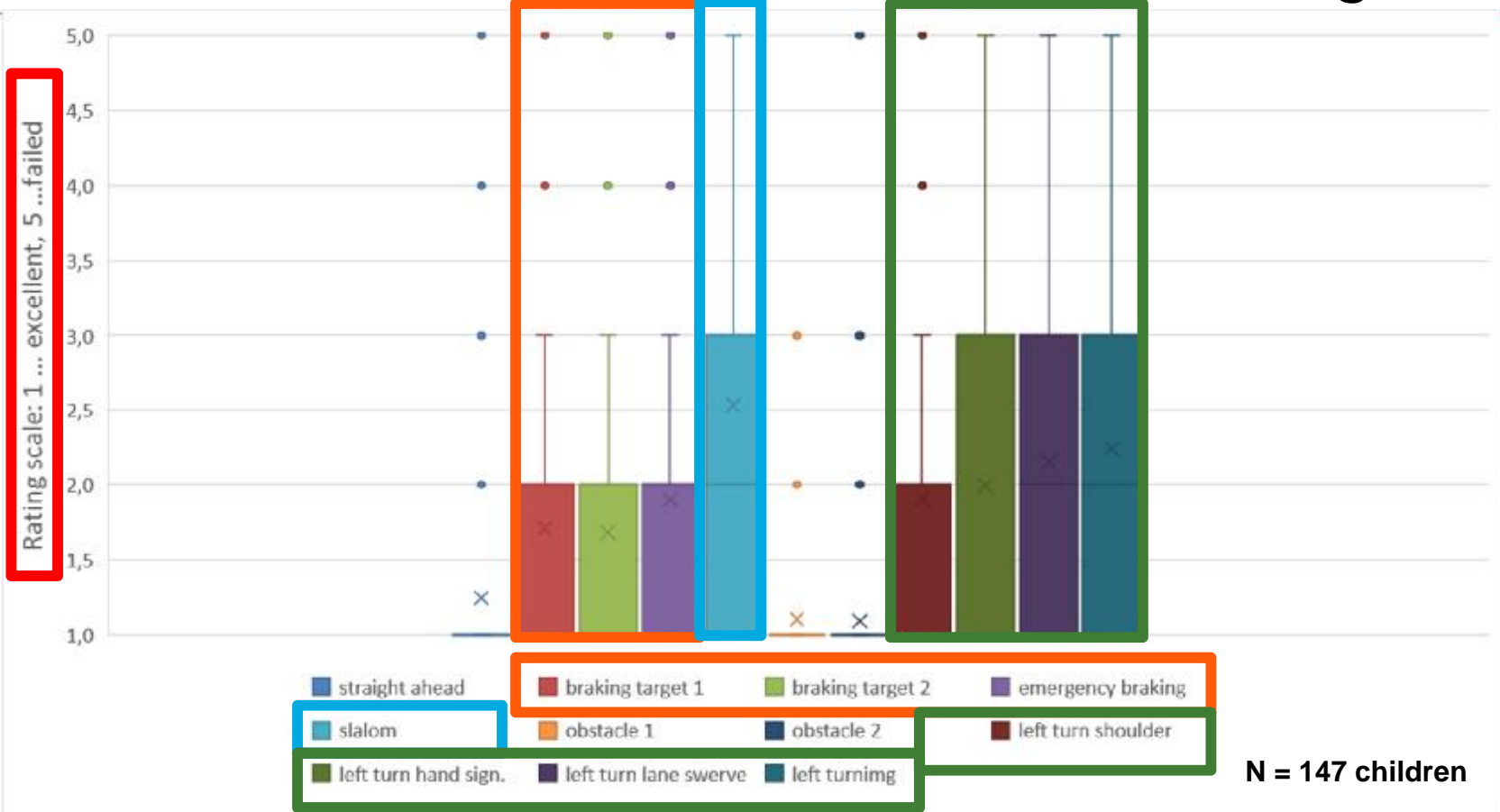
N = 147 children, fourth-graders

Left turn



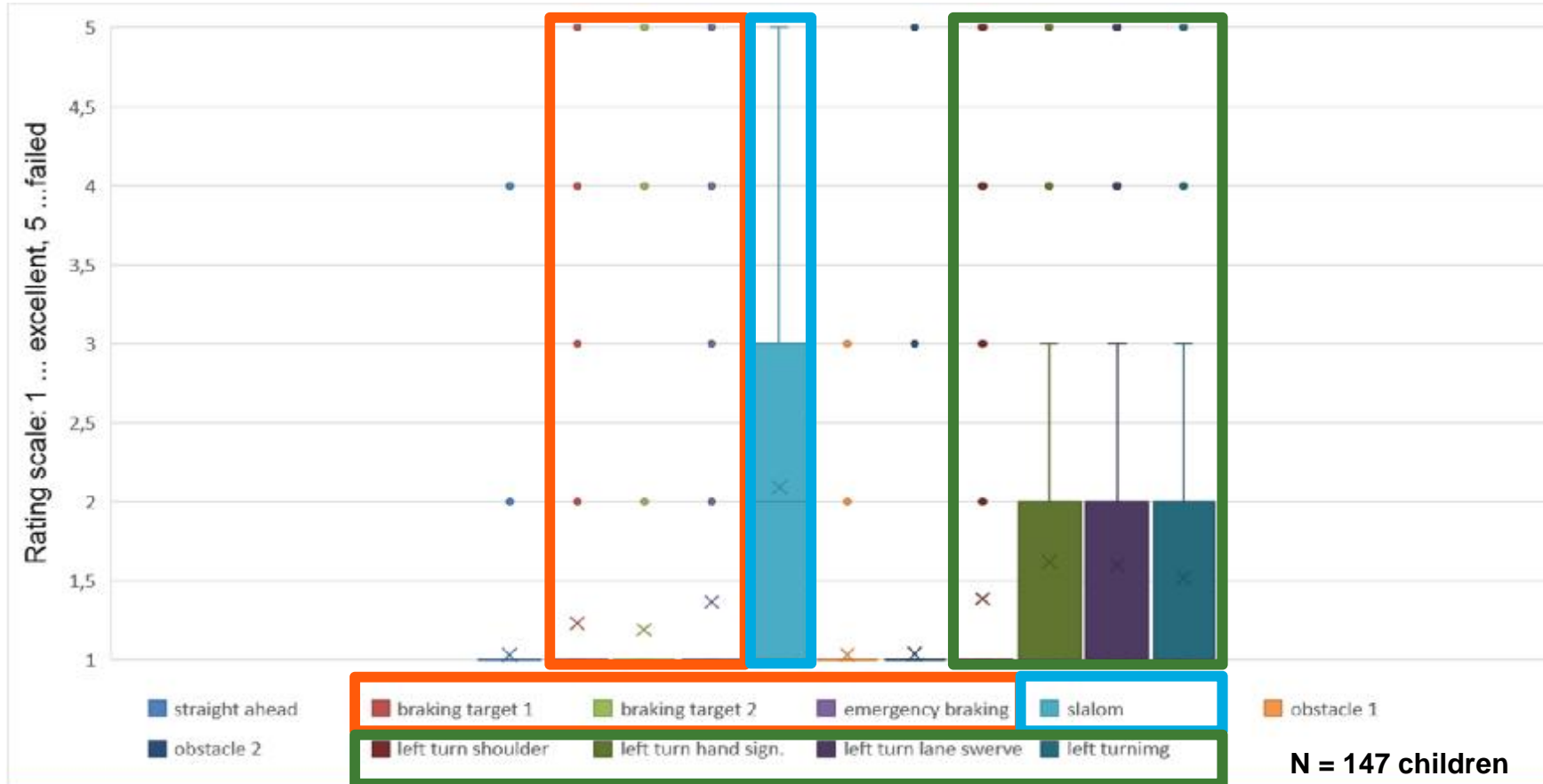
Kalteis, Bernhard (unpublished). Bicycling skills of children and active mobility [Fahrradbeherrschung von Kindern im Alter von 8 bis 10 Jahren]. Master thesis, Institute for Transport Studies, University of Natural Resources and Life Sciences Vienna, Austria .

Children's bicycling skills BEFORE training



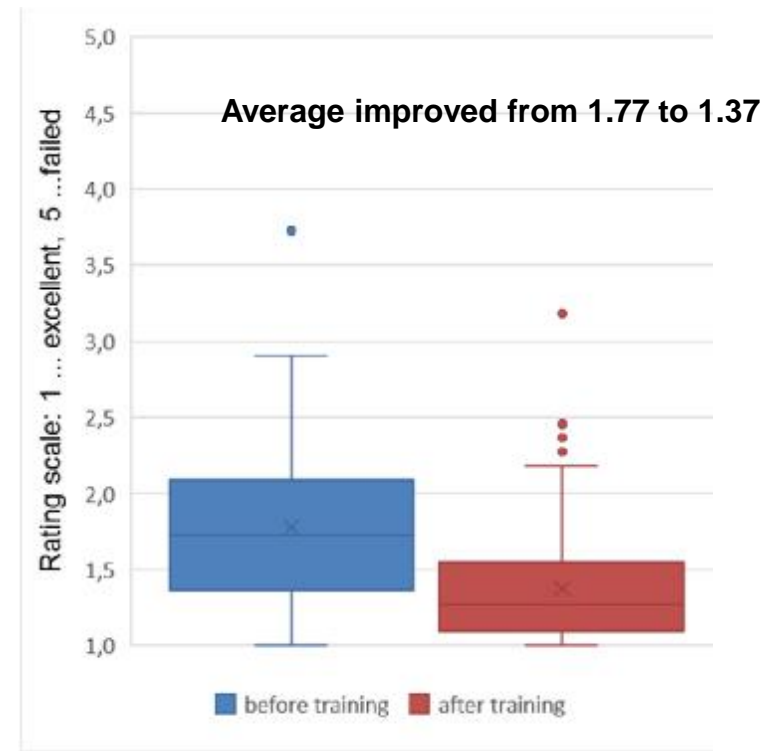
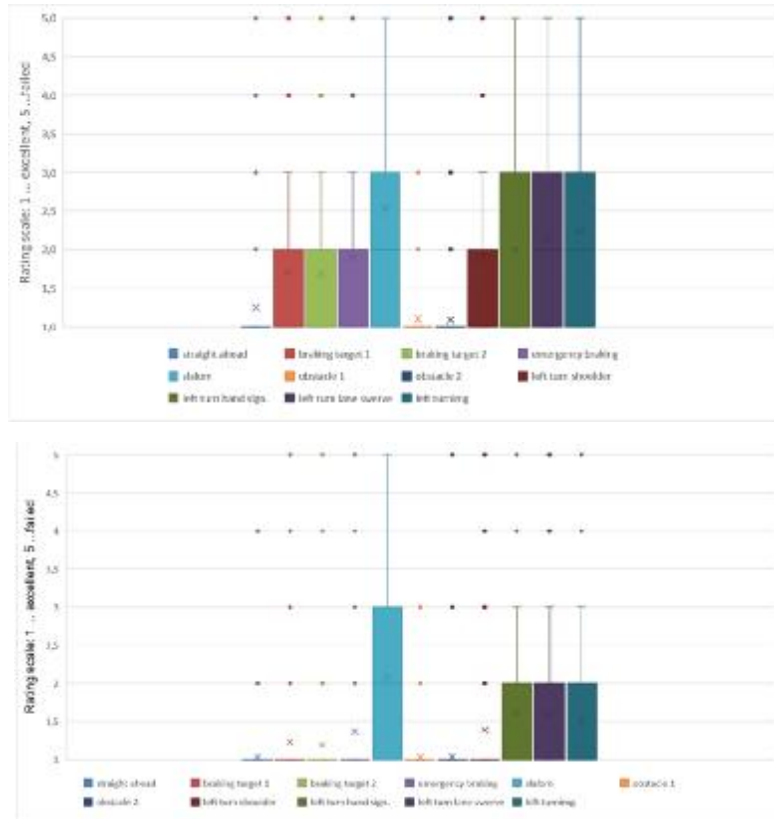
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Children's bicycling skills AFTER training



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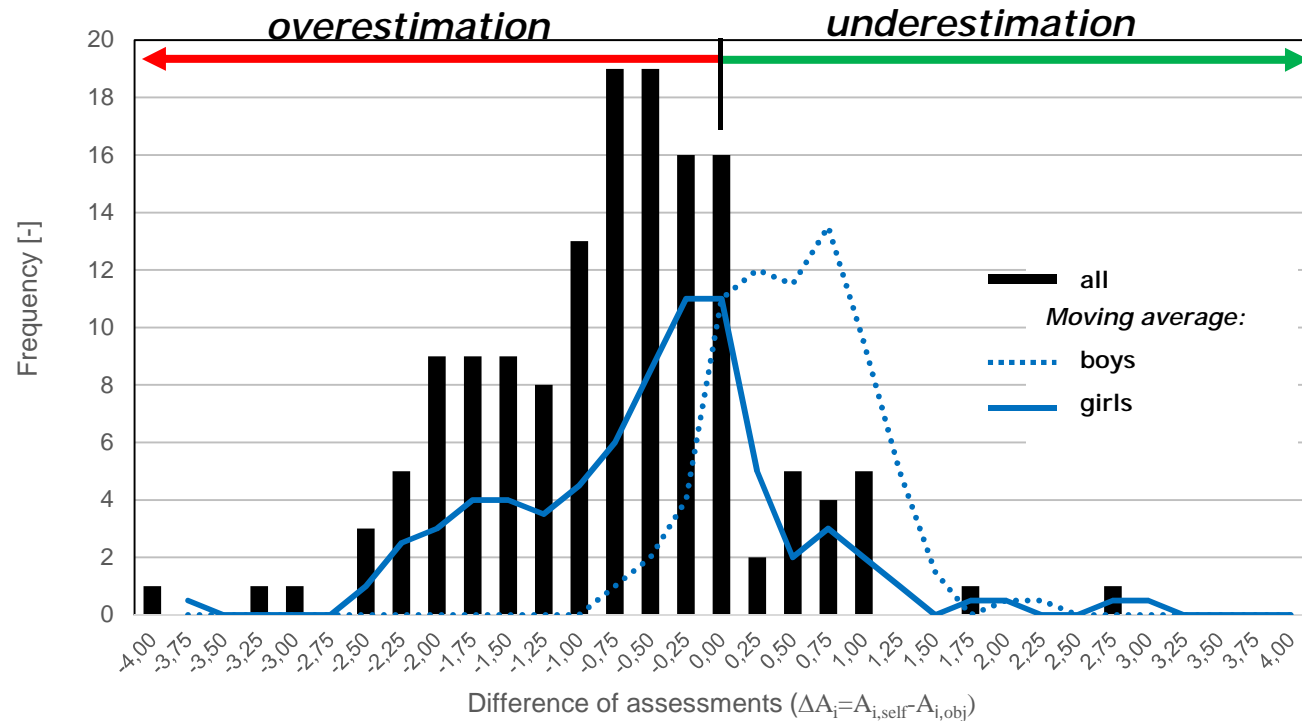
Children´s bicycling skills before - after



N = 147 children

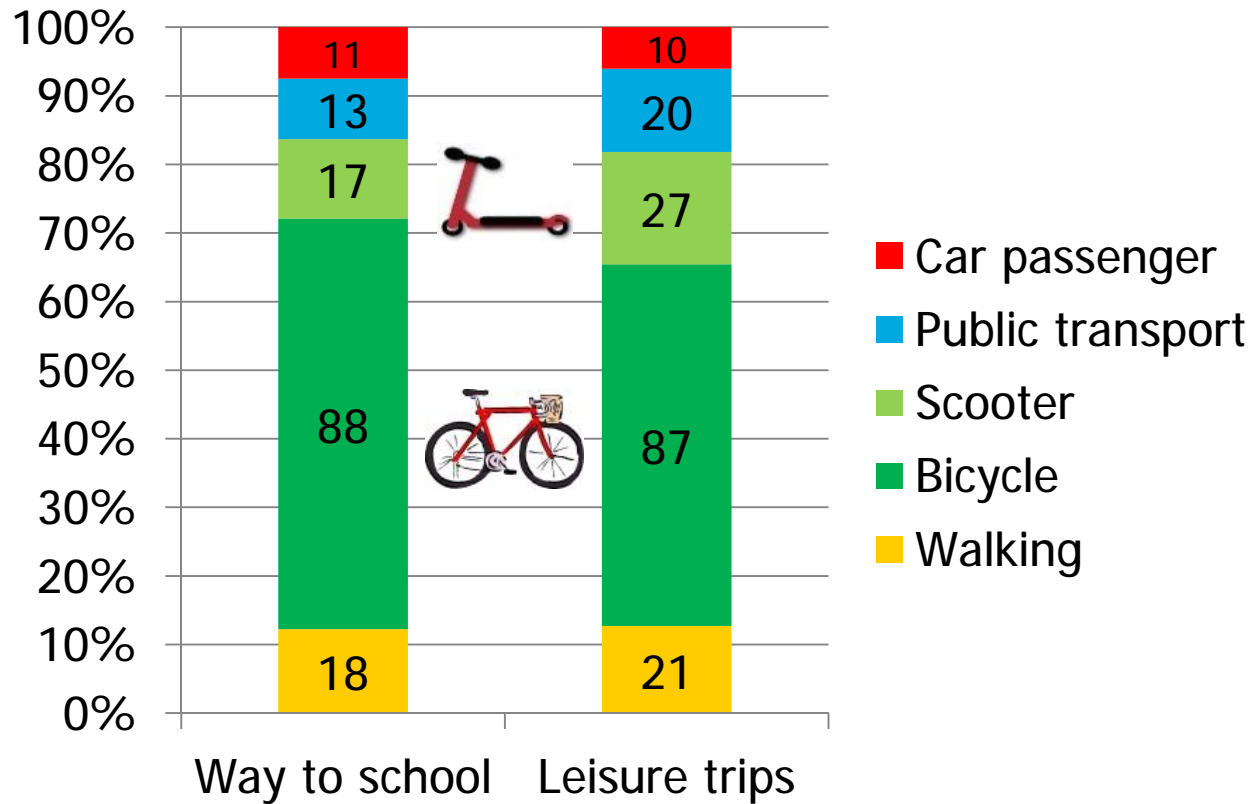
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Children`s self assessment of cycling skills



Frequencies of differences in the assessments of cycling skills (five-point scale from 1 = high skills to 5 = low skills). $A_{i,self}$ = self-assessment of child i , $A_{i,obj}$ = objective assessment of child i while passing the cycling course (N all = 147)

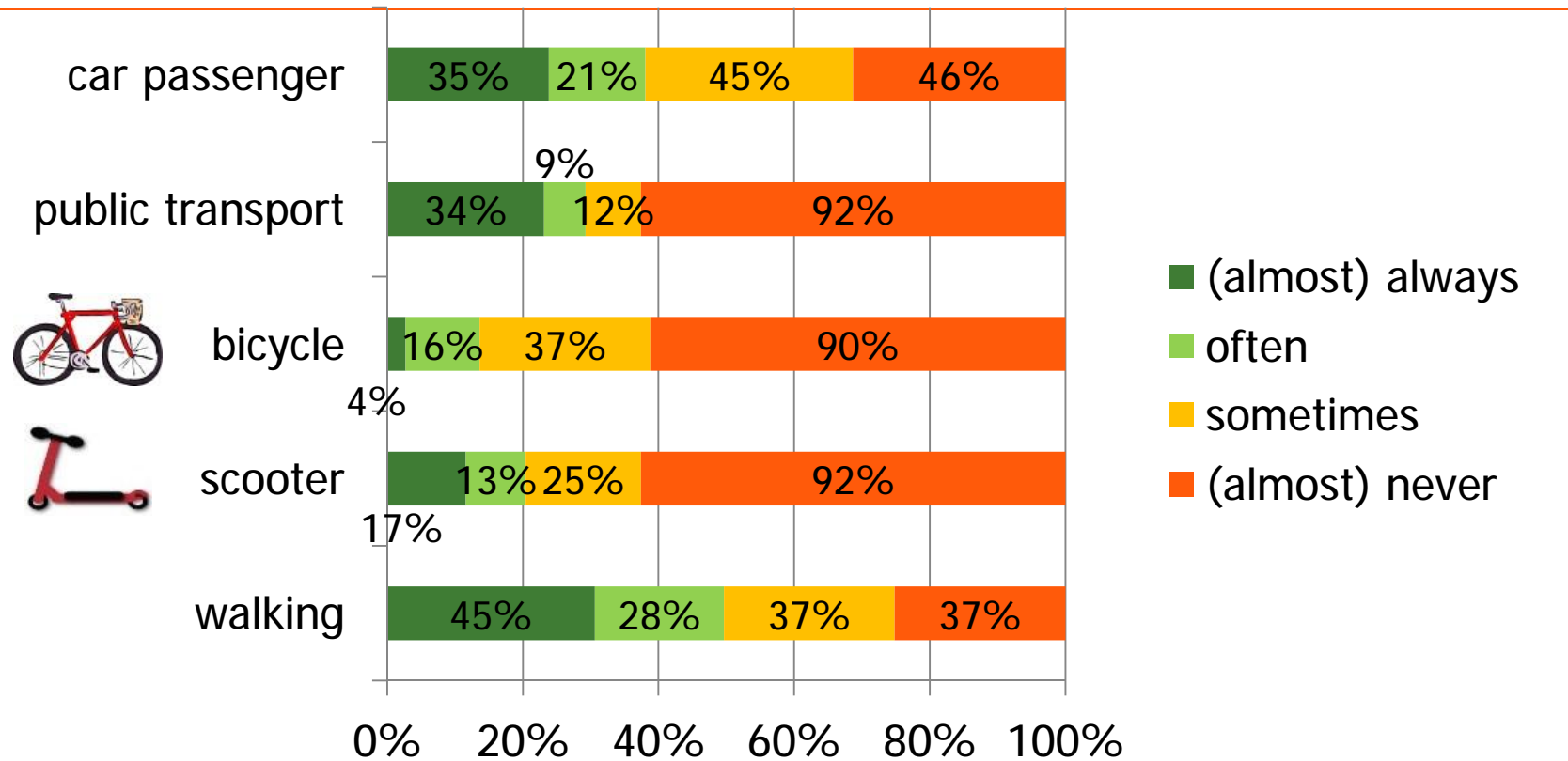
Mobility preferences of pupils



N = 147 children

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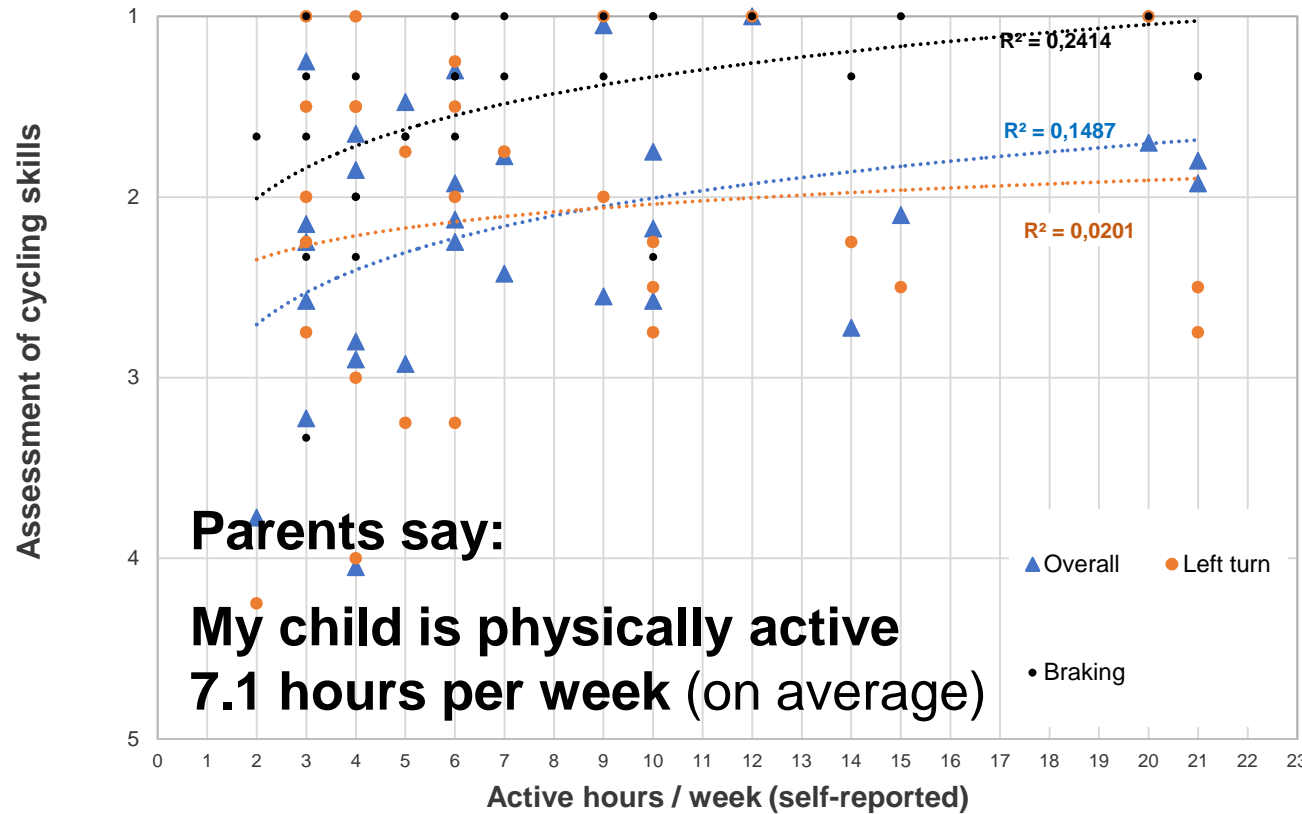
Children's mode choice on their regular way to school



N = 147 children

Kalteis, Bernhard (unpublished). Bicycling skills of children and active mobility [Fahrradbeherrschung von Kindern im Alter von 8 bis 10 Jahren]. Master thesis, Institute for Transport Studies, University of Natural Resources and Life Sciences Vienna, Austria.

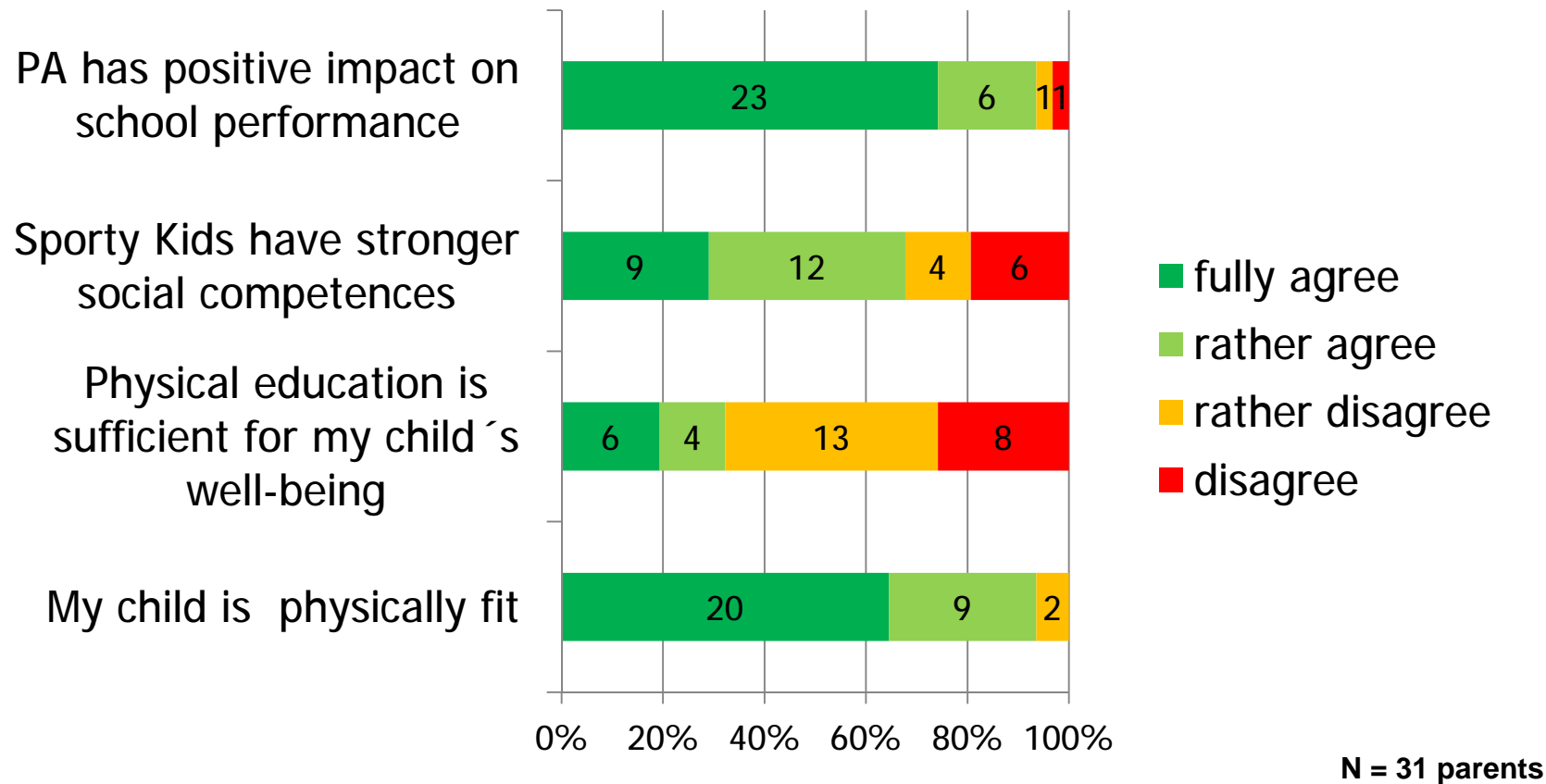
Active hours per week versus cycling skills



Scatter diagram of physical activity PA (hours per week) and cycling skills (1 = high skills) of primary school children, stated by parents (N=31) and logarithmic trend lines with coefficients of determination (overall = mean values of all observations at test stations; braking = mean values of criteria stopping accuracy, stopping velocity, emergency braking; left turn = mean values of criteria looking back, hand sign, lane change, curve).

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How important is children's PA for their parents?



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Why parents do not allow autonomous cycling?

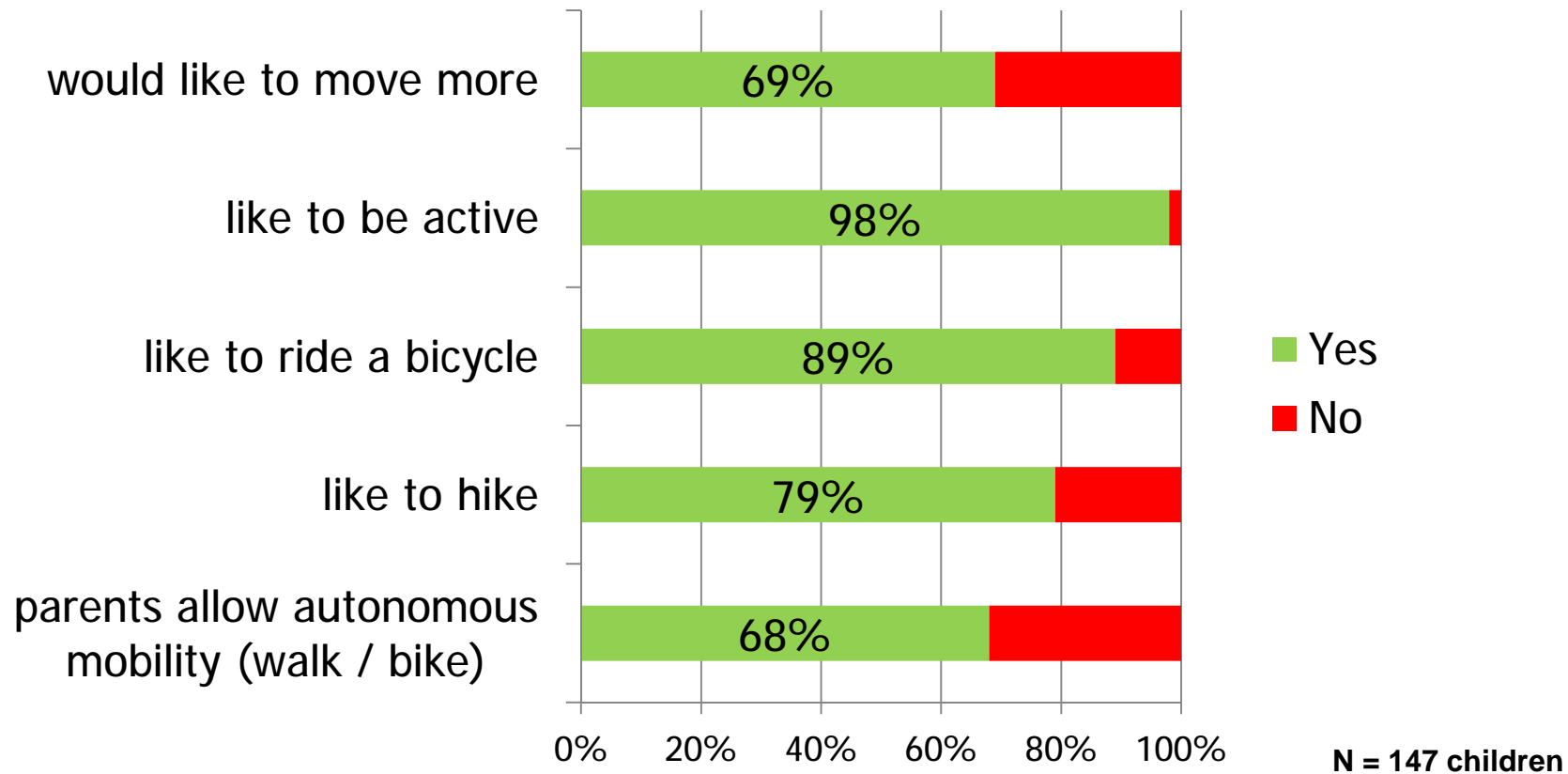


Multiple answers from N = 31 parents

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Children´s mobility – physical activity



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Bicycling skills of children – SUMMARY



Institute for Transport Studies, BOKU Vienna

Psychomotor performances of children decline as bicycling skills decline, too – resulting from decreasing practice

Parents regard cycling in road traffic as too dangerous and do not allow unaccompanied cycling – still they believe their children being fit and PA ...

Evaluation results of fourth-grade children preparing for the Austrian Cycle Exam (from 10 years) show self-overestimation of cycling skills

Some children cannot cope with road traffic