

Impact of Precocity in Mathematics and Reading on the Transition from Compulsory to Post-Compulsory Education and Beyond

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Definitions

*Nichts ist weniger verheissend
als Frühreife. Die junge Distel sieht
einem Baum viel ähnlicher als die
junge Eiche.“*

Marie v. Ebner-Eschenbach



“Precocious Readers and/or Mathematicians” ...

...refers to pupils who could already read German and/or knew mathematics when they started compulsory school-going. They were one year or more ahead of their peers.

“Gifted” ...

...refers to persons who scored in several IQ-tests (CFT-20) an average of 130 or above.

Objective of the Study



The aim is...

...to characterize how precocity (whether in reading or in mathematics, or in both) and giftedness affect performance/achievement in the academic and professional environments young persons encounter after their compulsory education (*i.e.*, in high-school and in vocational training)

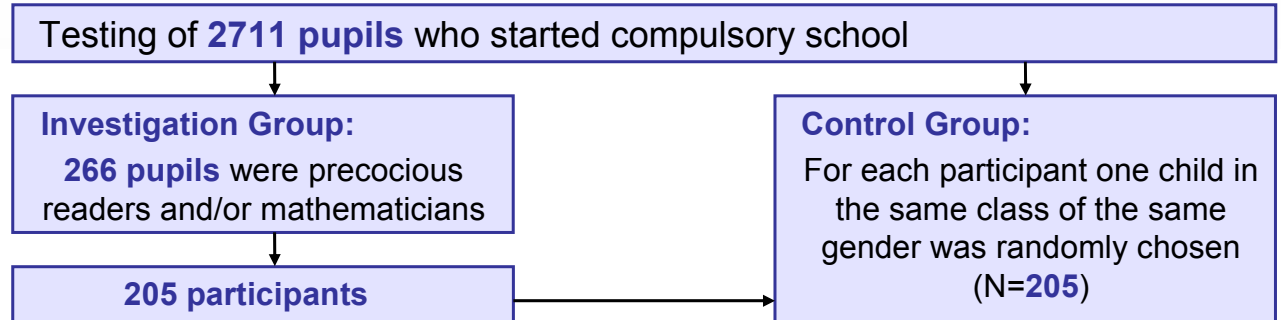
Research Questions



- What are the career choices of the precocious readers and/or mathematicians of the young persons with high cognitive skills after compulsory education? Do they differ from their non precocious or non gifted peers'?
- How well do they perform academically and professionally (in VET)? What do they achieve?
- In what other ways (if any) do they differ from their peers (in VET)?

Research and Sample Design

t1: Fall 1995



t2: 1996 (middle of 1st grade) → questionnaires for teachers and parents

t3: 1998 (3rd grade) → questionnaires for participants, teachers, parents

t4: 2000 (5th grade)

t5: 2003 (8th grade) → IQ-Tests

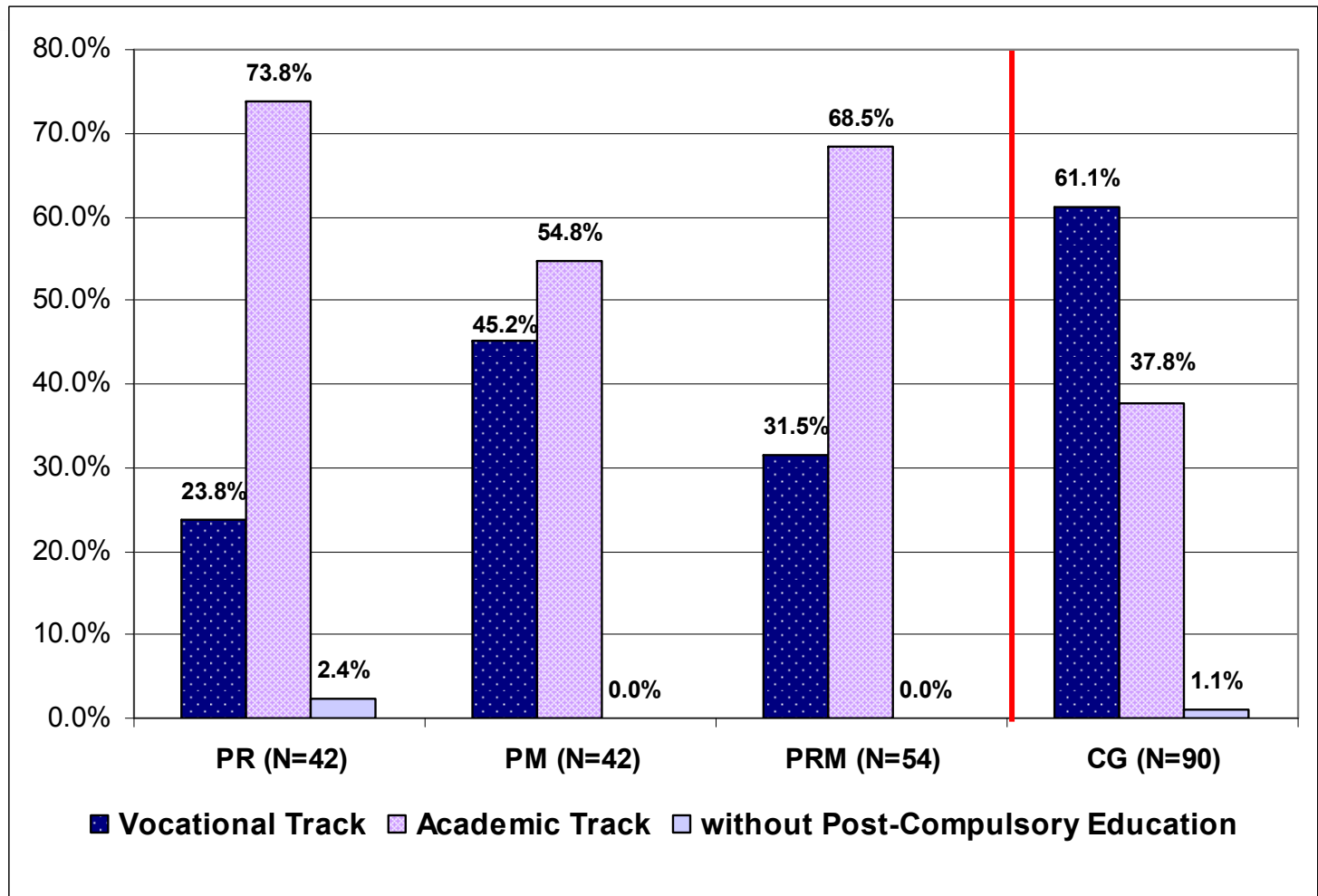
t6: End of 2006 (Post Compulsory Education)



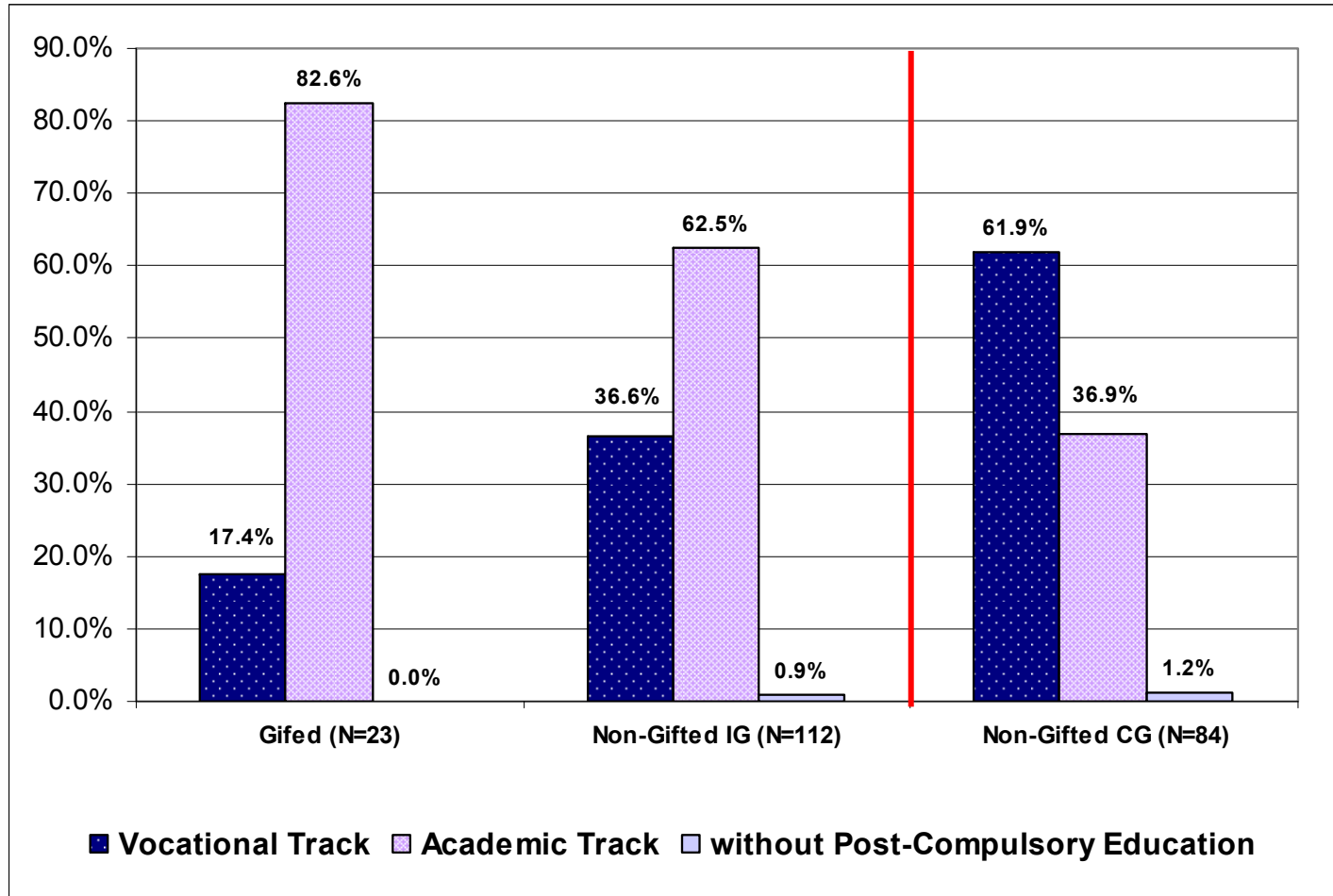
t7: June of 2008 (Higher Education and Professional Life)



Results – Career Track after Compulsory Education



Results – Career Track after Compulsory Education



Results – Achievement during Post-Compulsory Education

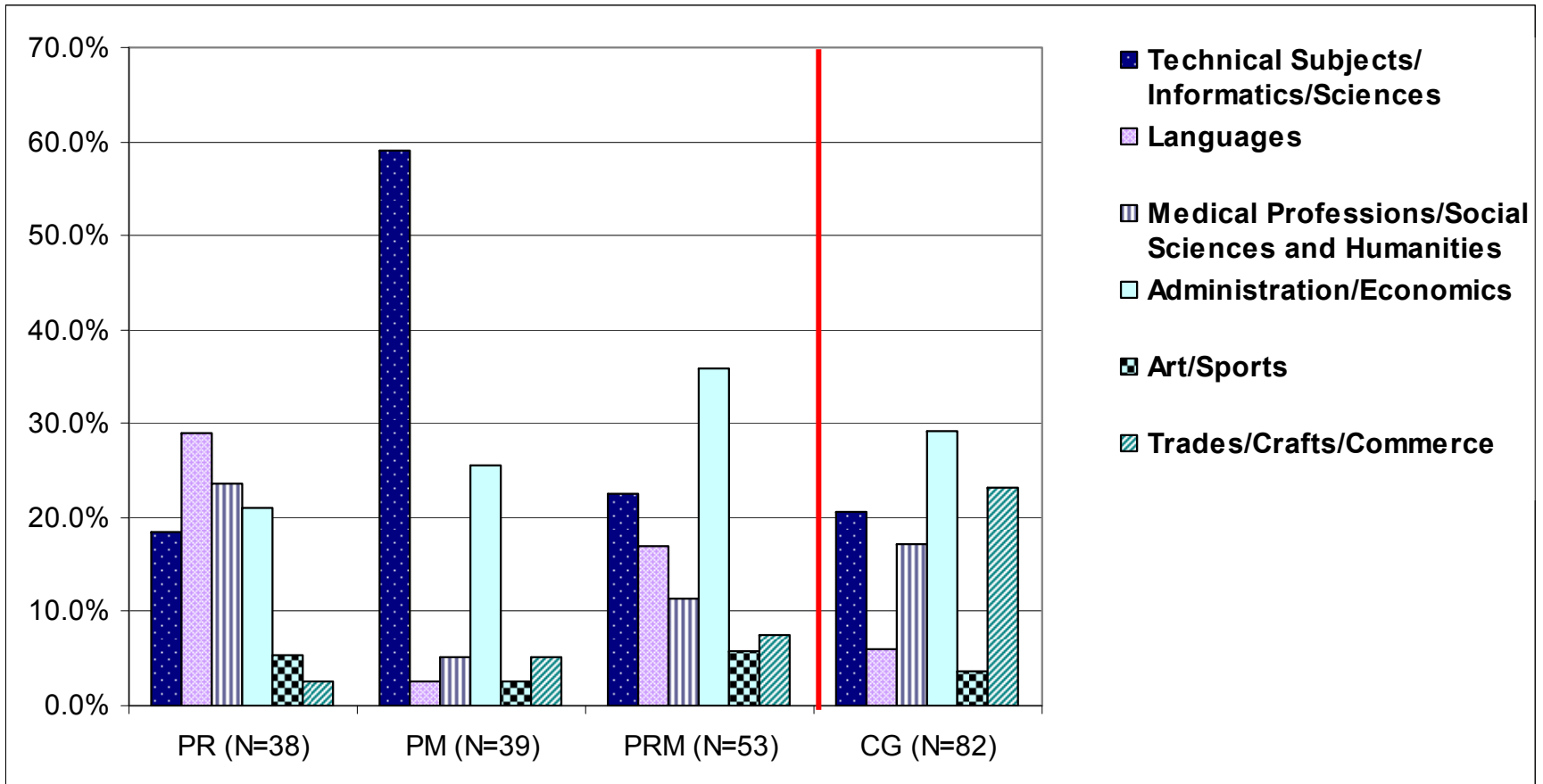
<i>Achievement</i>	<i>PR</i> (N=10)		<i>PM</i> (N=17)		<i>PRM</i> (N=12)		<i>CG</i> (N=52)		<i>F-Test</i>
	M	S	M	S	M	S	M	S	
Vocational Training									
German	2.9	0.6	2.3	0.6	2.3	0.5	2.4	0.4	**
Mathematics	2.0	0.8	2.6	0.5	2.0	0.7	2.1	0.6	*

M=Mean, min=1, max=4; S=Standard Deviation; *=p≤.05; **=p≤.01;***=p≤.001

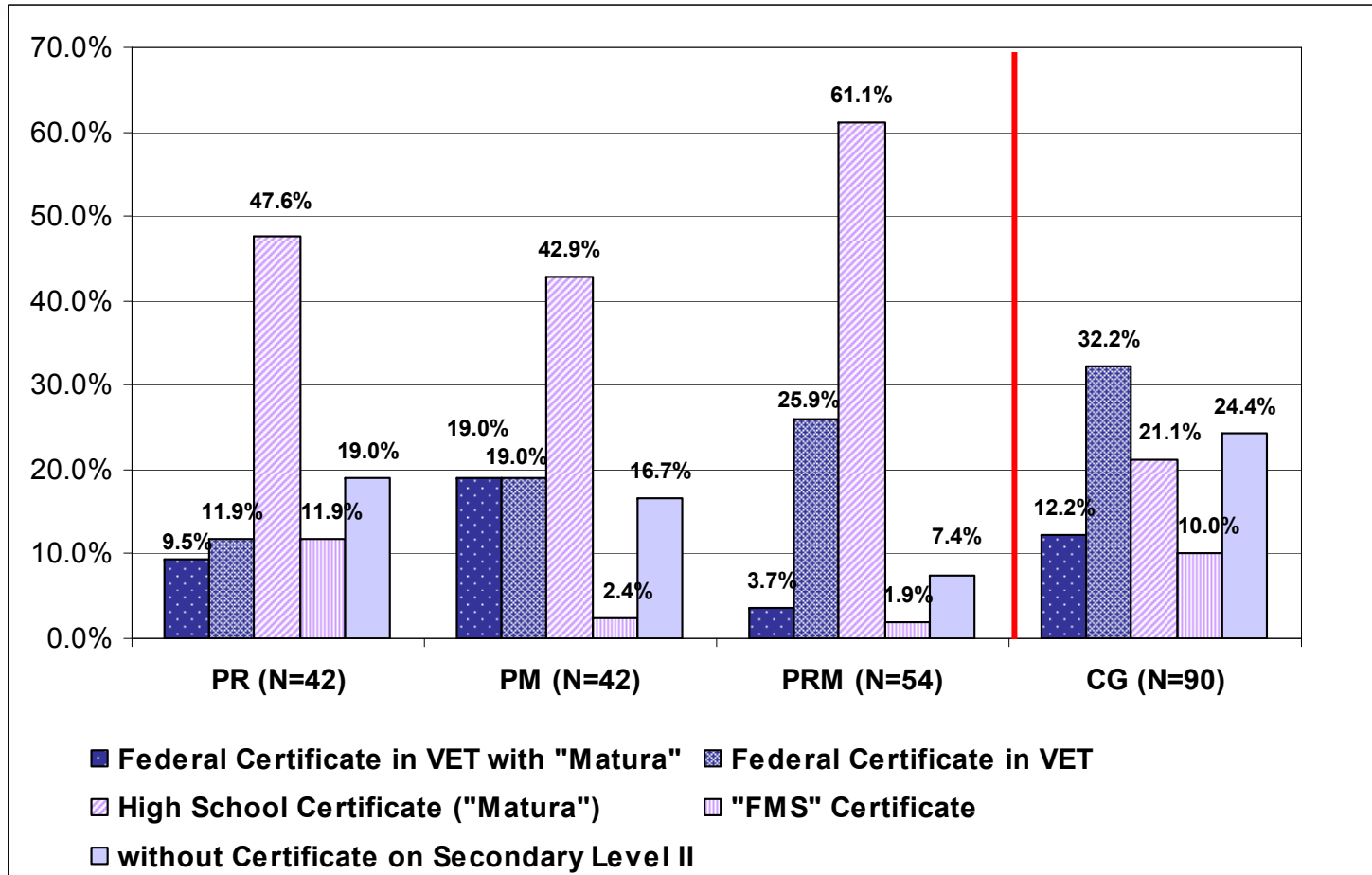
<i>Achievement</i>	<i>PR</i> (N=27)		<i>PM</i> (N=15)		<i>PRM</i> (N=27)		<i>CG</i> (N=22)		<i>F-Test</i>
	M	S	M	S	M	S	M	S	
Academic Track									
German	2.7	0.4	2.5	0.6	2.8	0.4	2.5	0.7	n.s.
Mathematics	2.1	0.7	2.6	0.8	2.6	0.8	2.2	0.6	*

M=Mean, min=1, max=4; S=Standard Deviation; *=p≤.05; **=p≤.01;***=p≤.001

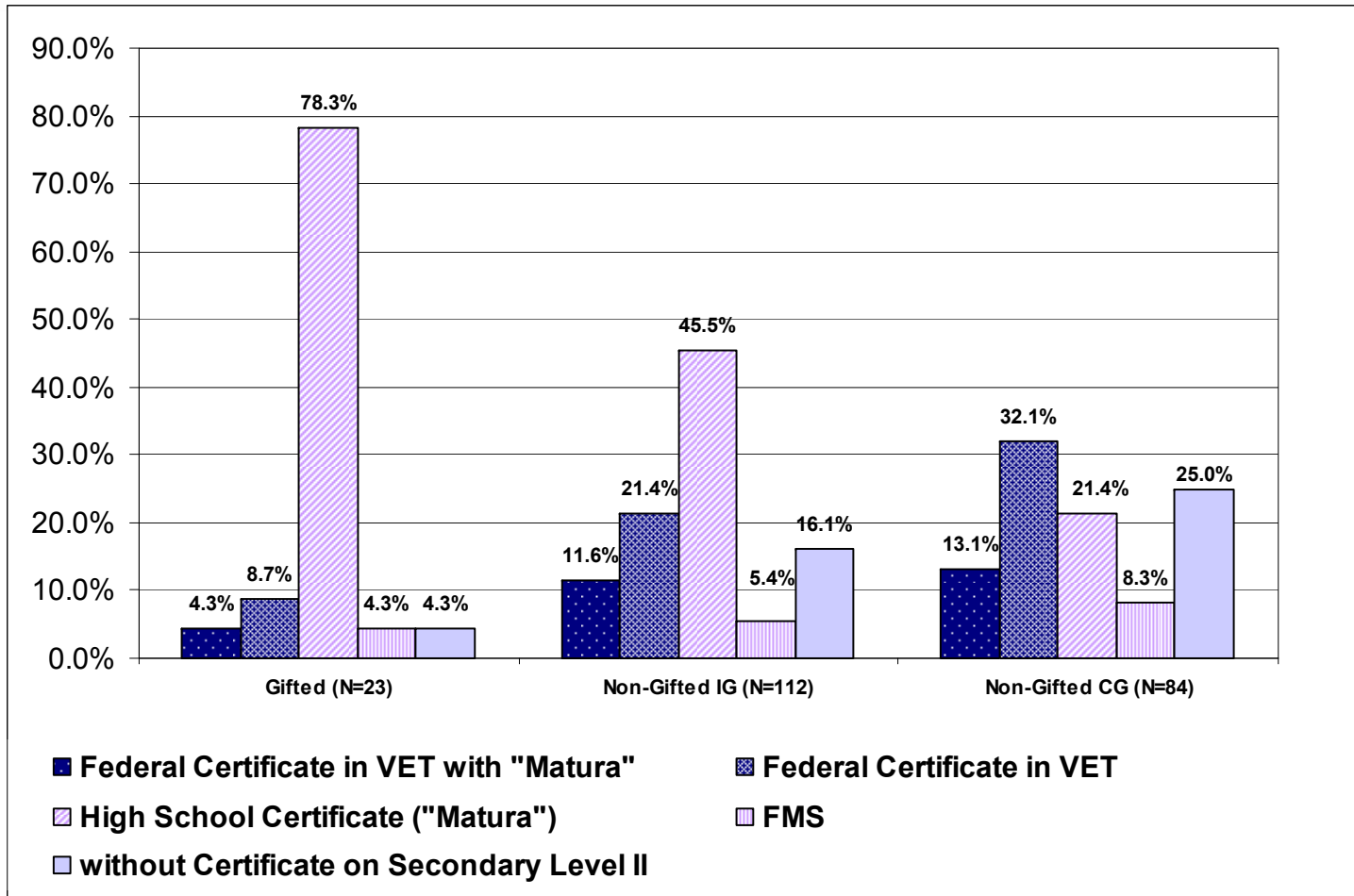
Results – Domain-Specific Precocity and Professional Affinities



Results – Degrees at the End of the School Year 2007/2008



Results – Degrees at the End of the School Year 2007/2008



Summary and Conclusions



- The fraction of precious and/or gifted young persons in VET is small, but if they were precocious in just one domain they outperform their peers in that domain
- The 25% PR in VET are often highly articulate women who gravitate toward professions like secretary or nursery/social work.
- In VET there is a higher proportion of the PMs than of the PRs. They are mostly male, show their talent in the field of informatics, and tend to achieve a “Berufsmatura”.
- PMR in VET lost their advantage and do not differ in their achievement from their peers. The reasons for this still have to be found.

Thank you
for your attention!

Publications are to be found: <http://www.unifr.ch/pedg/>

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