

Quantitative Information about sex and gender issues in the Austrian National Education Report - overview and assessment

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Input to conference

“8th European Conference on Gender Equality in Higher Education”

Vienna University of Technology, Vienna, September 3 – 5, 2014

Agenda

- Quantitative information about sex and gender issues in Austrian education
 - Segregated participation in vocational education
 - Differences in interest and achievement
 - ‘Feminization’ of teachers
 - Segregated ‘cultures’ in occupational fields
 - Systemic issues

- Discussion
 - Quality of the reporting with respect to sex and gender
 - Some explanatory questions and hypotheses

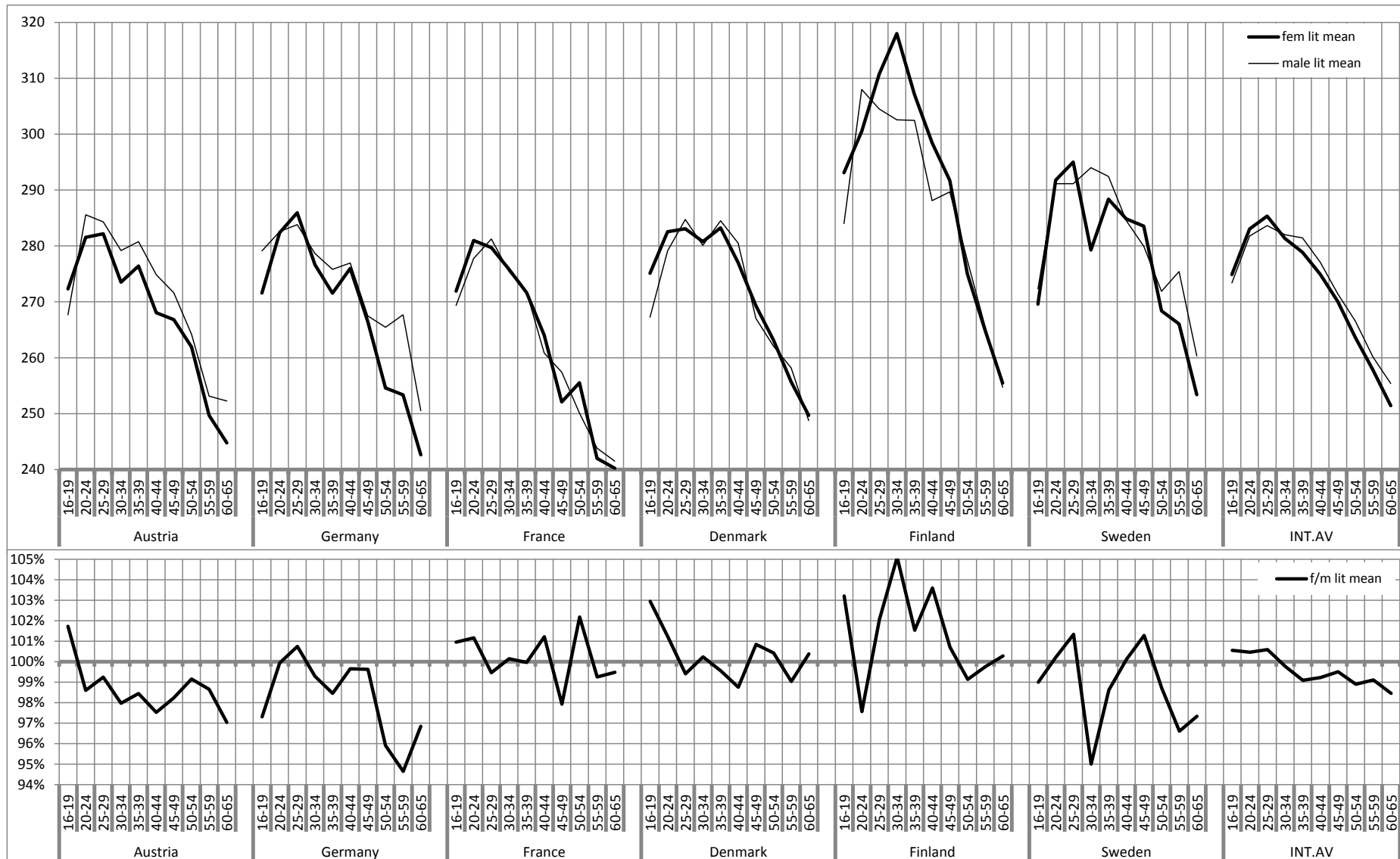
National Report Education

- National Reporting about education in Austria
 - about three years' cycle established 2009, 2012 second report
 - commissioned by the ministry of education to state institute ,Bifie'
<https://www.bifie.at/>
 - Bifie commissioned expert group to provide the report
 - Steering group of researchers
- 3 volumes: (1) data, (2) analytic, (3) summary (also english)
 - (1) https://www.bifie.at/system/files/buch/pdf/NBB2012_Band%201_gesamt_0.pdf
 - (2) https://www.bifie.at/system/files/buch/pdf/NBB2012_Band2_gesamt_0.pdf
 - (3) engl. https://www.bifie.at/system/files/dl/NBB_en_Band_3_web.pdf
- Main underlying topic this time: multilingualism
- This presentation based on vol.1 and chapter about vocational education
 - (German) <http://www.equi.at/dateien/nbb-berufsbildung.pdf>
 - Background report (German): <http://www.equi.at/dateien/nbb-hintergrund.pdf>

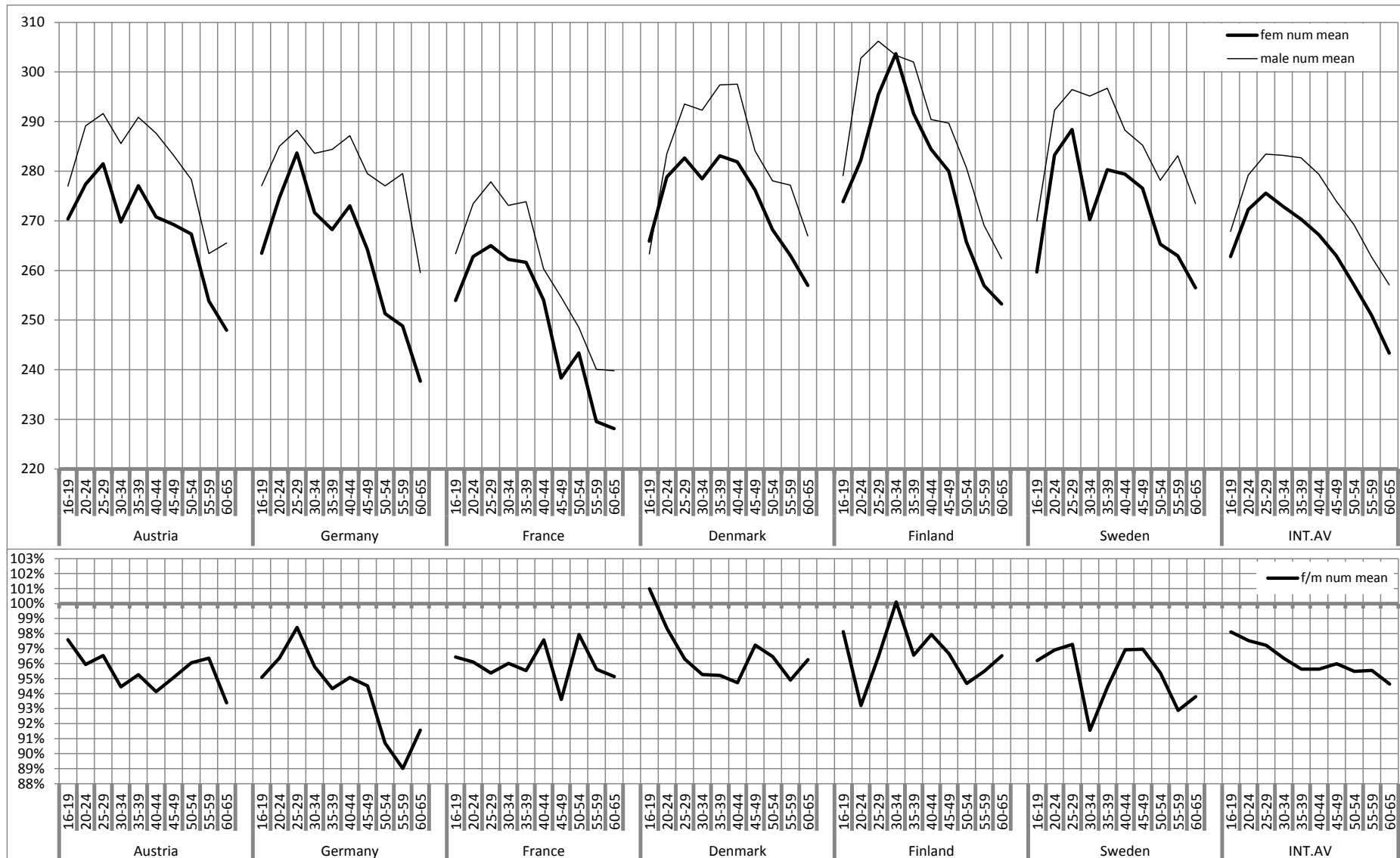
Segregated participation in vocational education

- Overall development: catch-up of females...
 - females have caught up in participation, older cohorts less qualified
 - females perform better in terms of achievement and progression/completion
 - thematic differences (e.g., PISA): 15y.females better in language, worse in math
 - Austrian education standards 4th, 8th grade: females advance in language, catch up math*
 - However in population (PIAAC): men still performed better in all domains*

PIAAC Literacy mean score by gender and age (upper panel), index female/male score (lower panel)



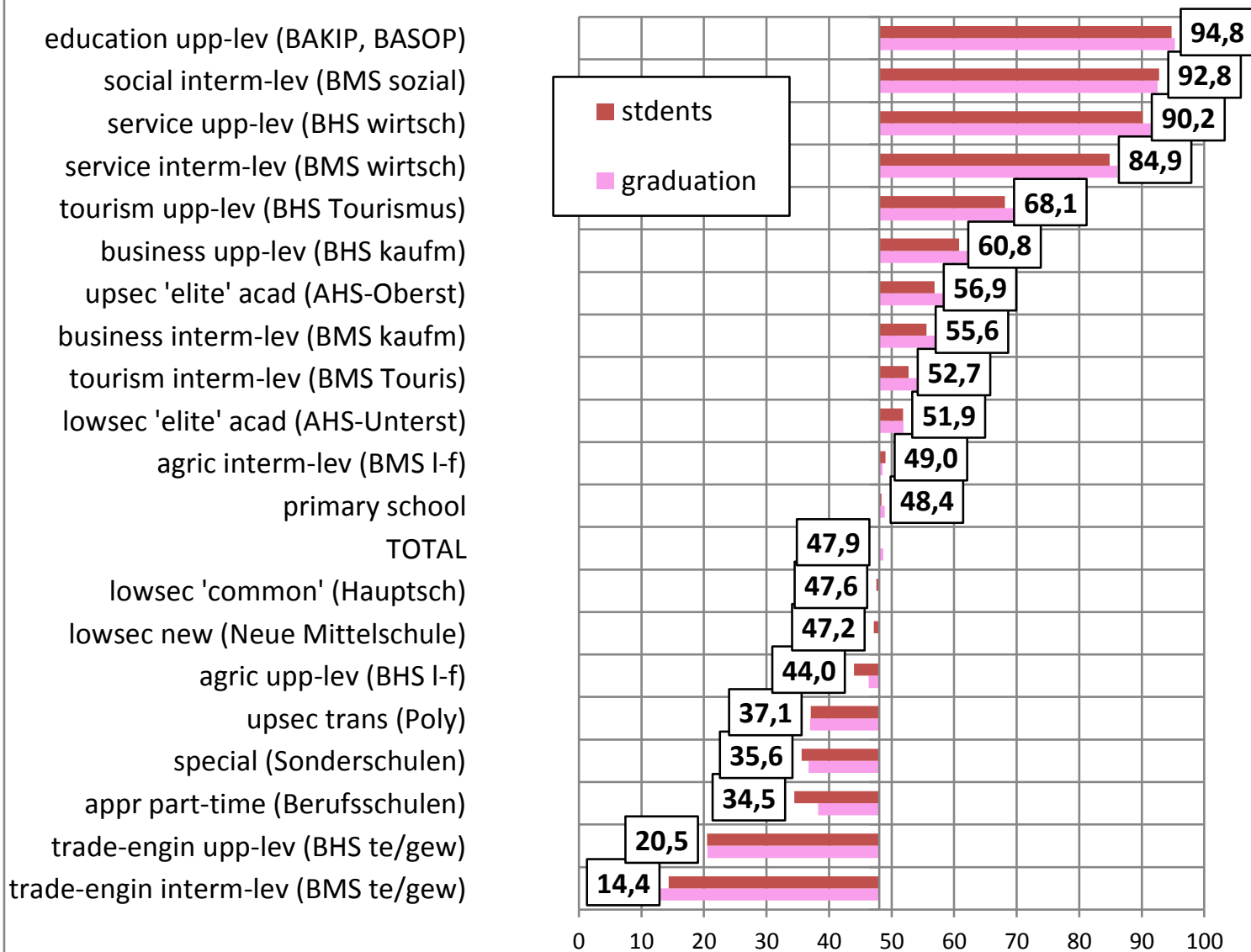
PIAAC Numeracy mean score by gender and age (upper panel), index female/male score (lower panel)



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 - Austrian education standards 4th, 8th grade: females advance in language, catch up math*
 - However in population (PIAAC): men still performed better in all domains*
- ...but persistent segregation in vocational education
 - different measures, not very instructive classifications of programmes
 - % female between 95% (early childhood ed.) and 14% (trade and engineering)
 - distribution of gender-specific or balanced programmes
 - Used as a policy indicator*

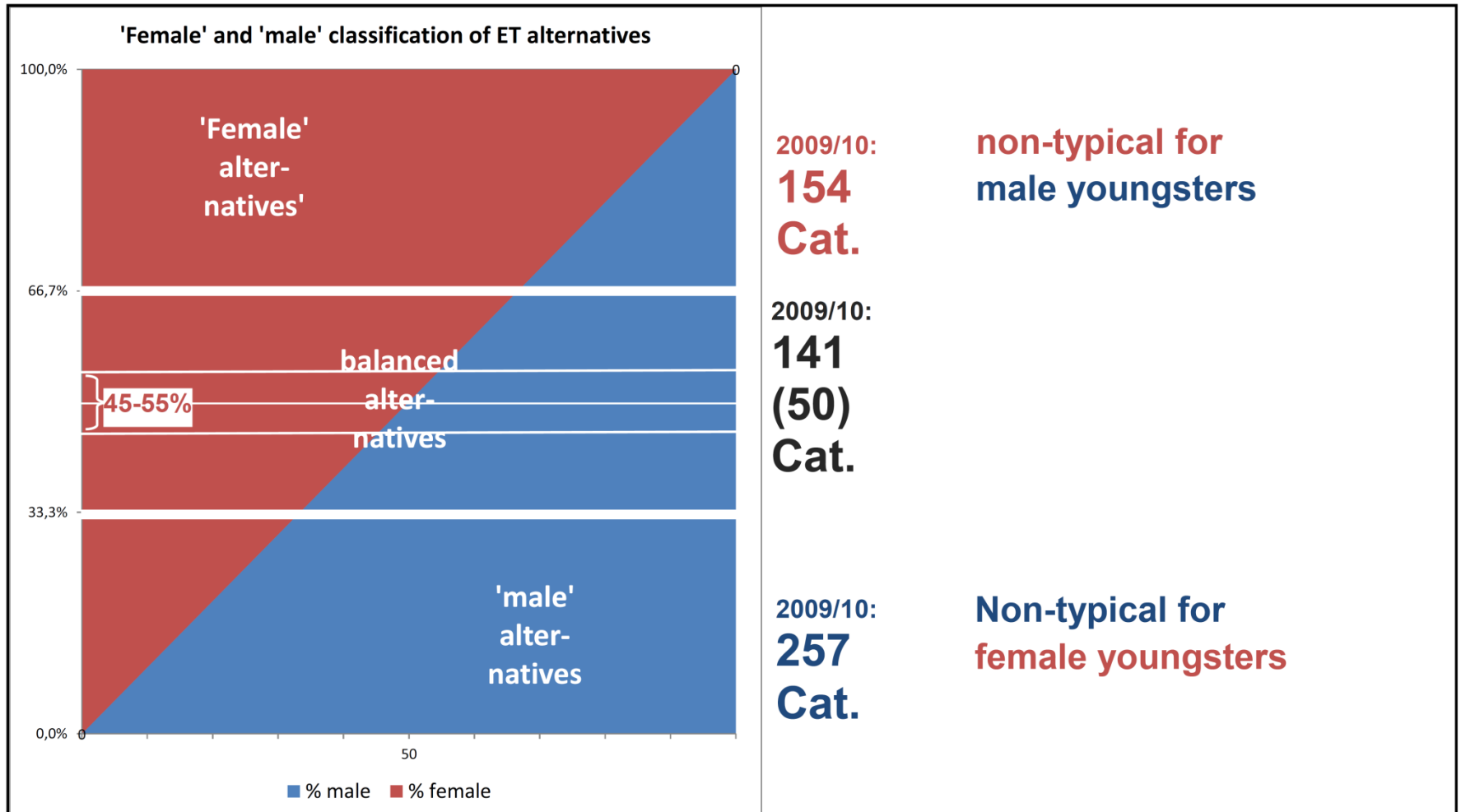
% female of students and graduation/completion (2010)



Students by programme

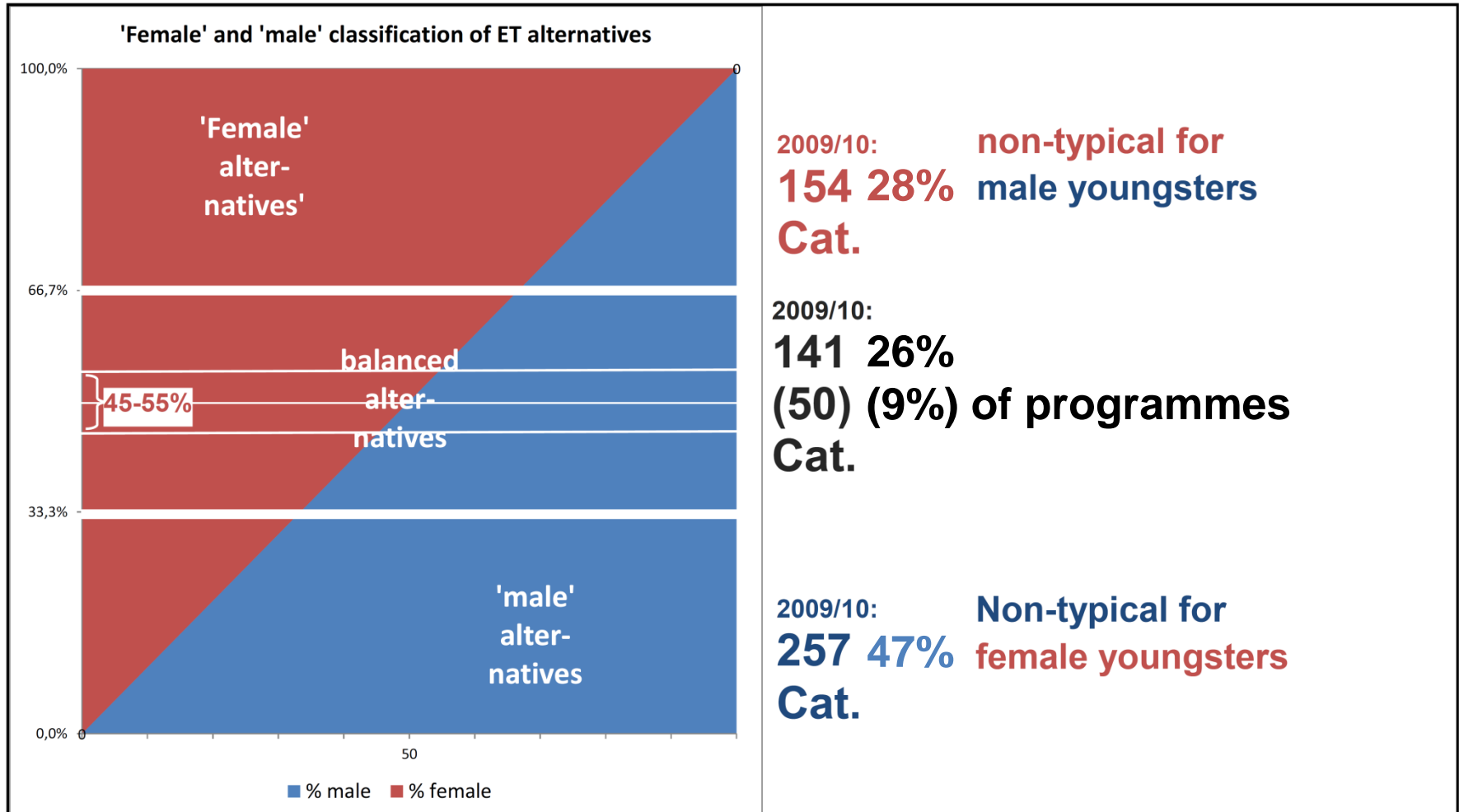
Strong and persistent segregation in Austria

- Classification of ET alternatives at grade 10 by gender
Number of programme categories (552 categories),

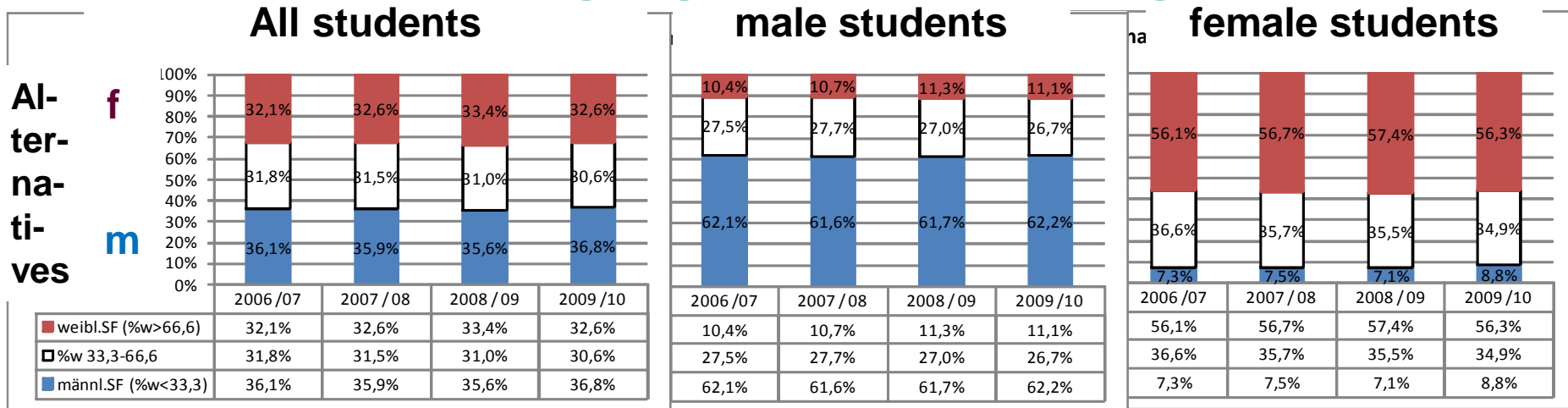


Strong and persistent segregation in Austria ,male', ,female' and ,balanced' programmes

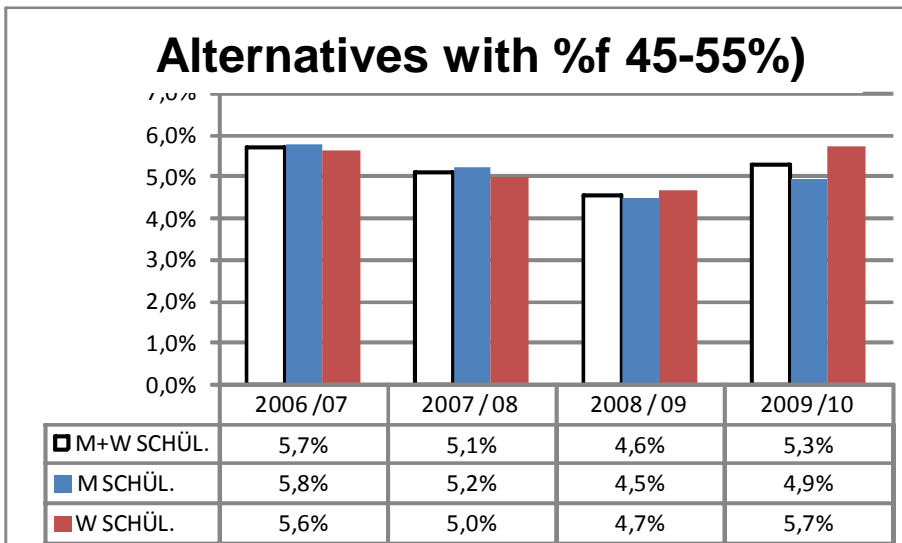
- Classification of ET alternatives at grade 10 by gender
% of programme categories (552 categories = 100%)



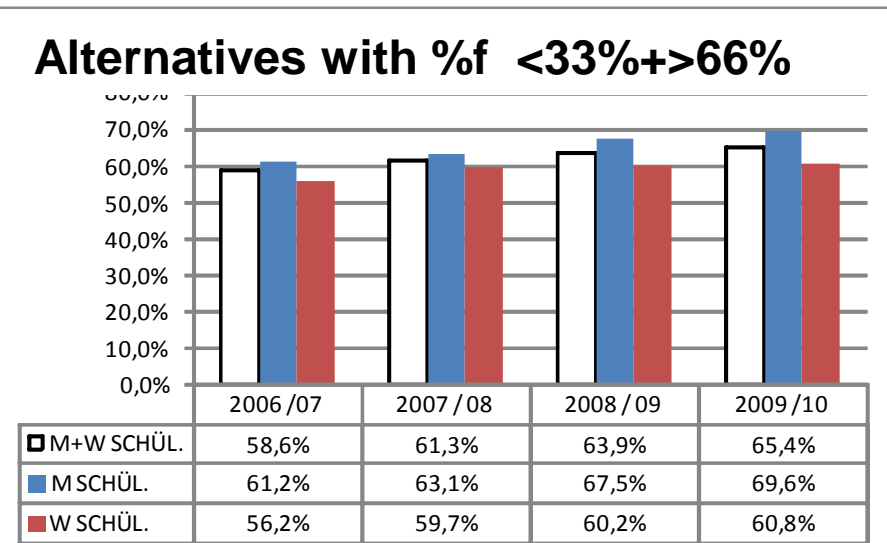
Persistent segregation 2006-09, grade 10



Students by sex in **female**, **male** and **balanced** alternatives (33%, 66%)



Students in **balanced** progr.



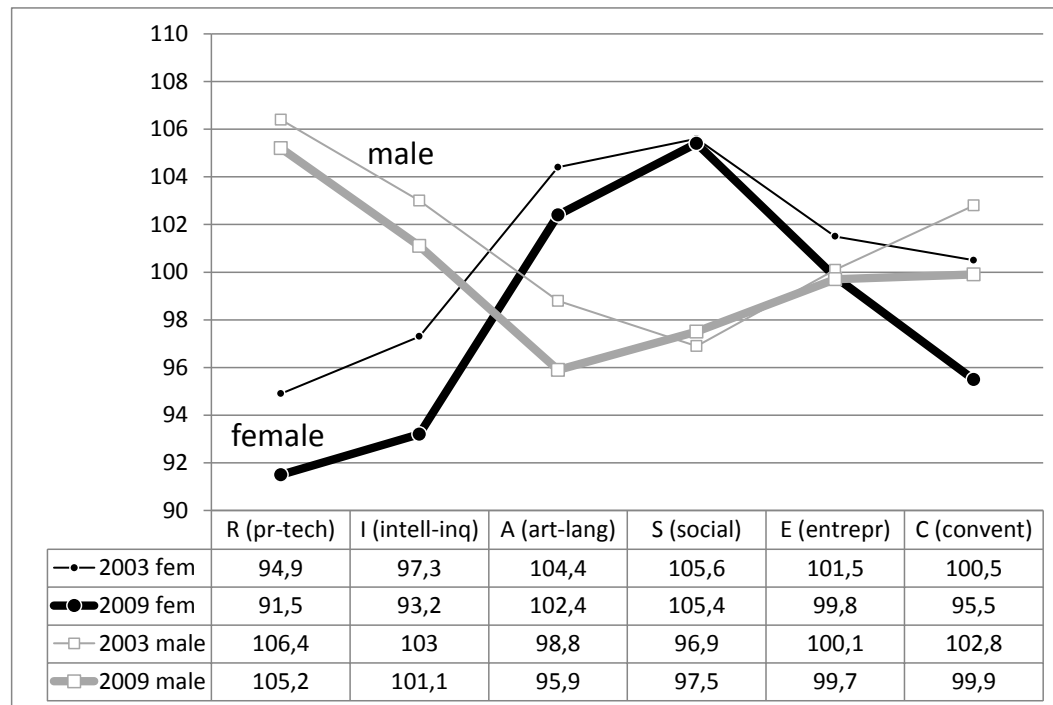
Students in **segregated** progr.

Differences in interest (15y.)

- Males: practical technical & intellectual-inquiring; females: social

- How far
,produced‘
by education?

Interest-profiles of 15-year old female and male youths based on PISA 2003 and 2009

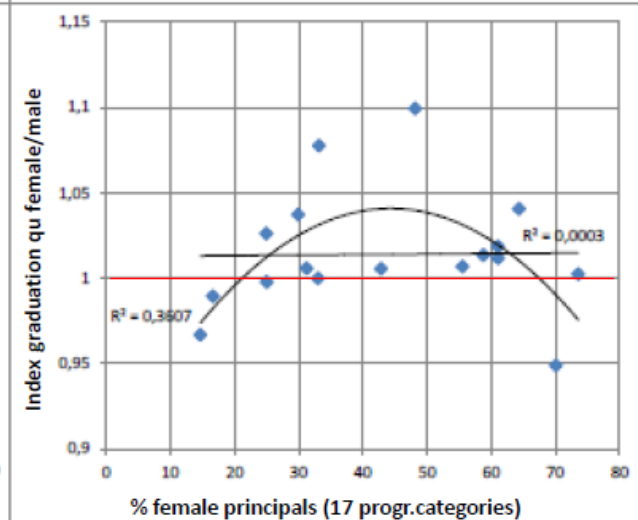
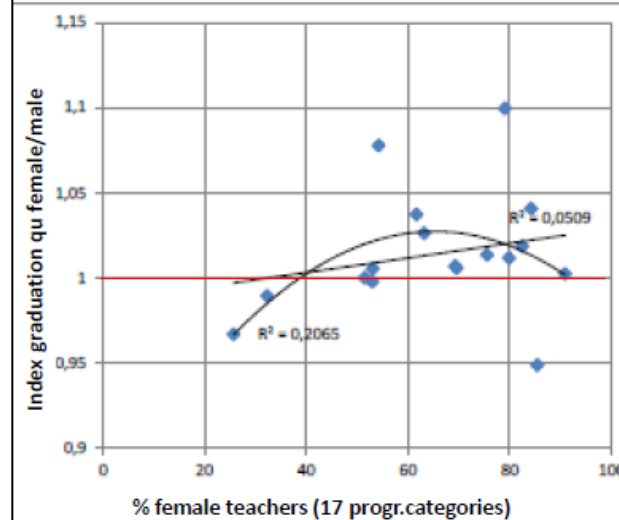
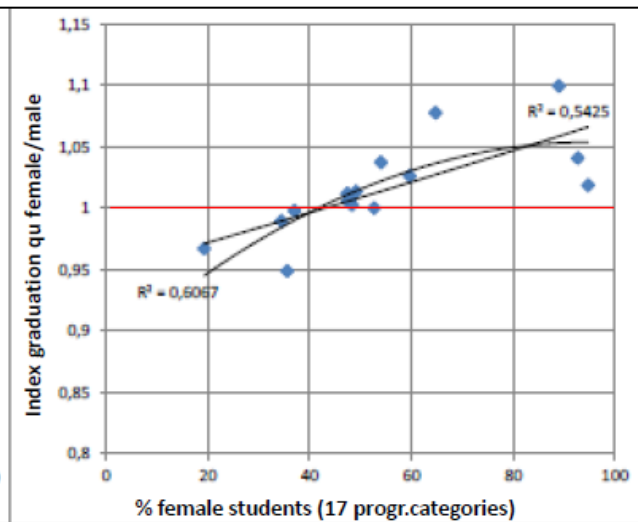
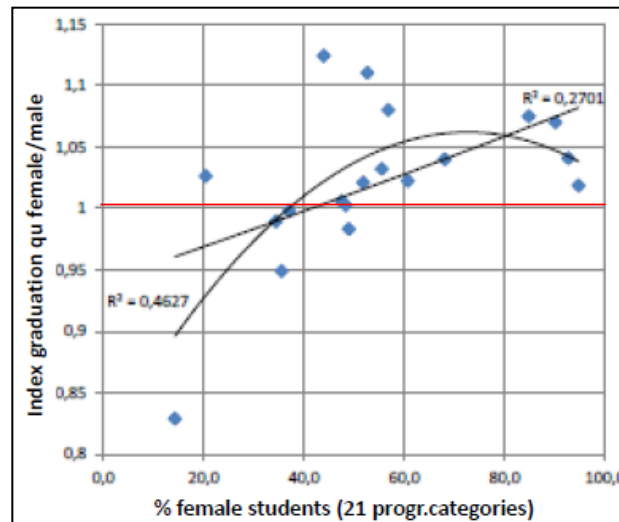


Legend: R - practical-technical interest; I - intellectual-inquiring interest; A - artistic-language interest; S - social interest; E - entrepreneurial interest; C - conventional interest

Source Eder 2012, p.17 (translated from German by authors)

Differences in achievement by student, teacher, principal composition

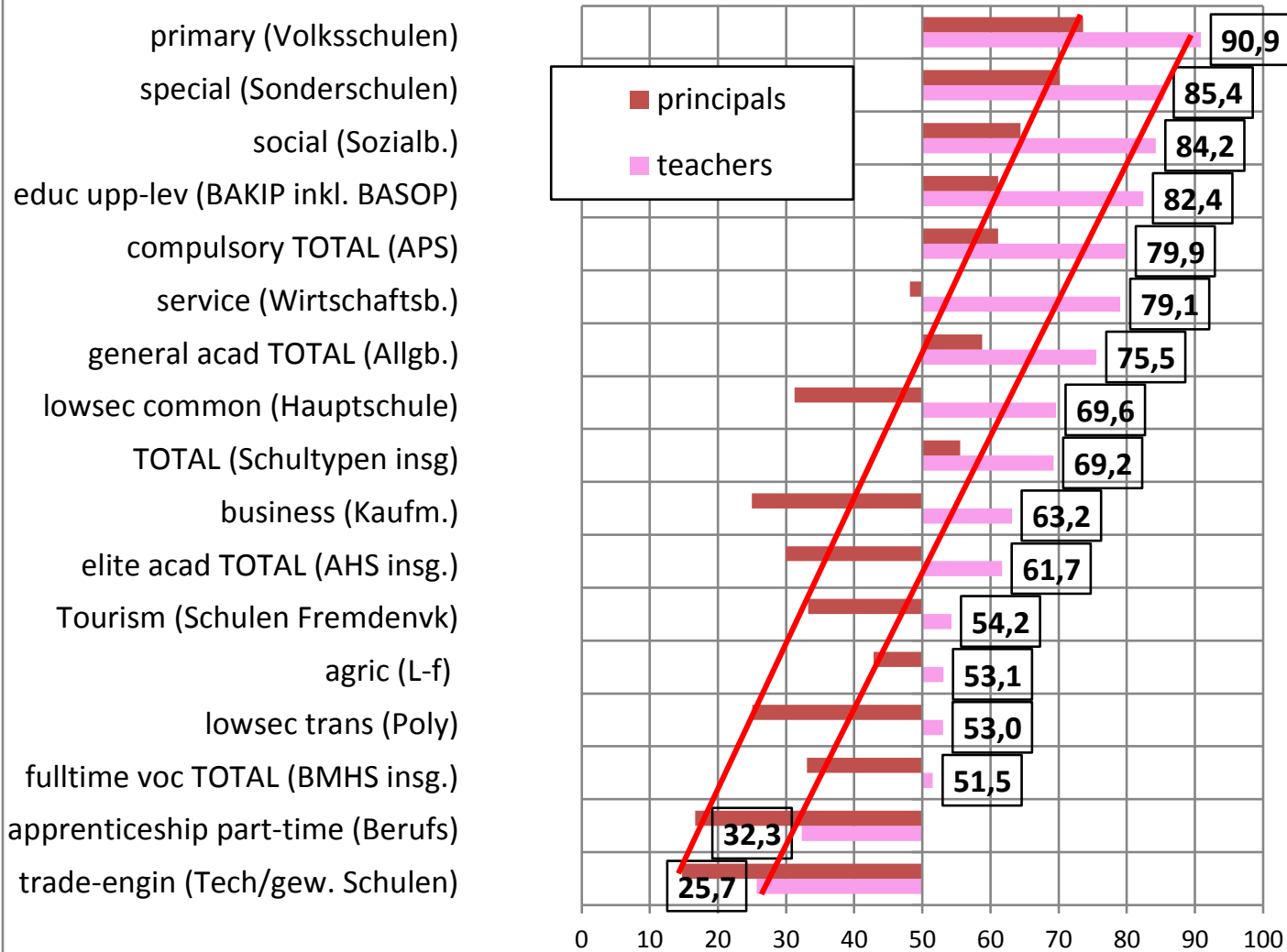
- females might perform rel. better in balanced environments
 - students and teachers/principals
- female students seem not to profit from feminization or segregation



'Feminization' of teachers

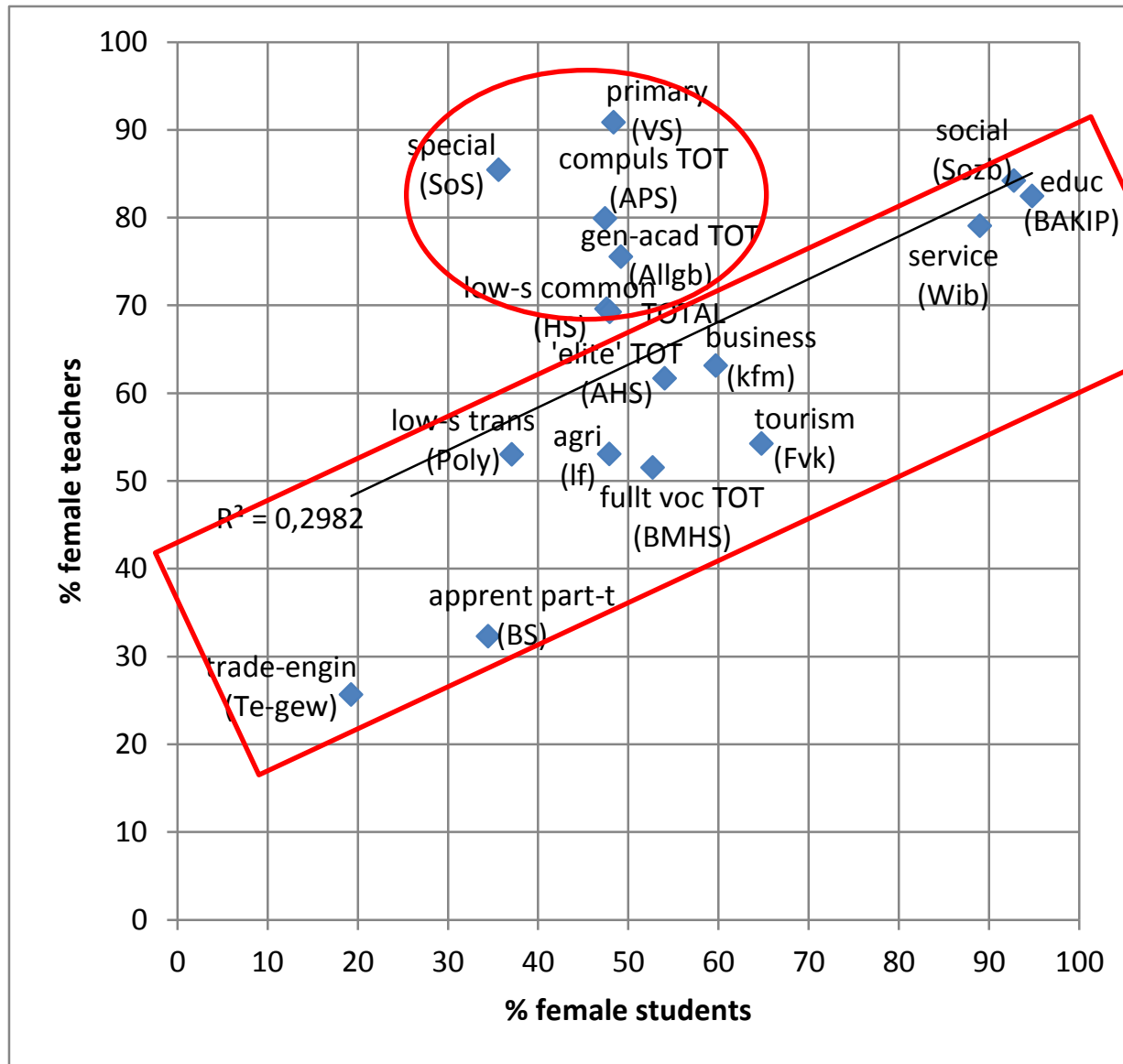
- Total 70%, compulsory education 80% female,
 - very high in primary education (90% fem)
 - less in lower secondary (70%) and academic general AHS (60%)
- Range in vocational education between 82% (early childhood ed.) and 26% (trade and engineering)
- Compared to students
 - difference highest in general education (students ~50%)
 - in vocational education % female teachers higher than % female students

% female teachers and principals (2010)

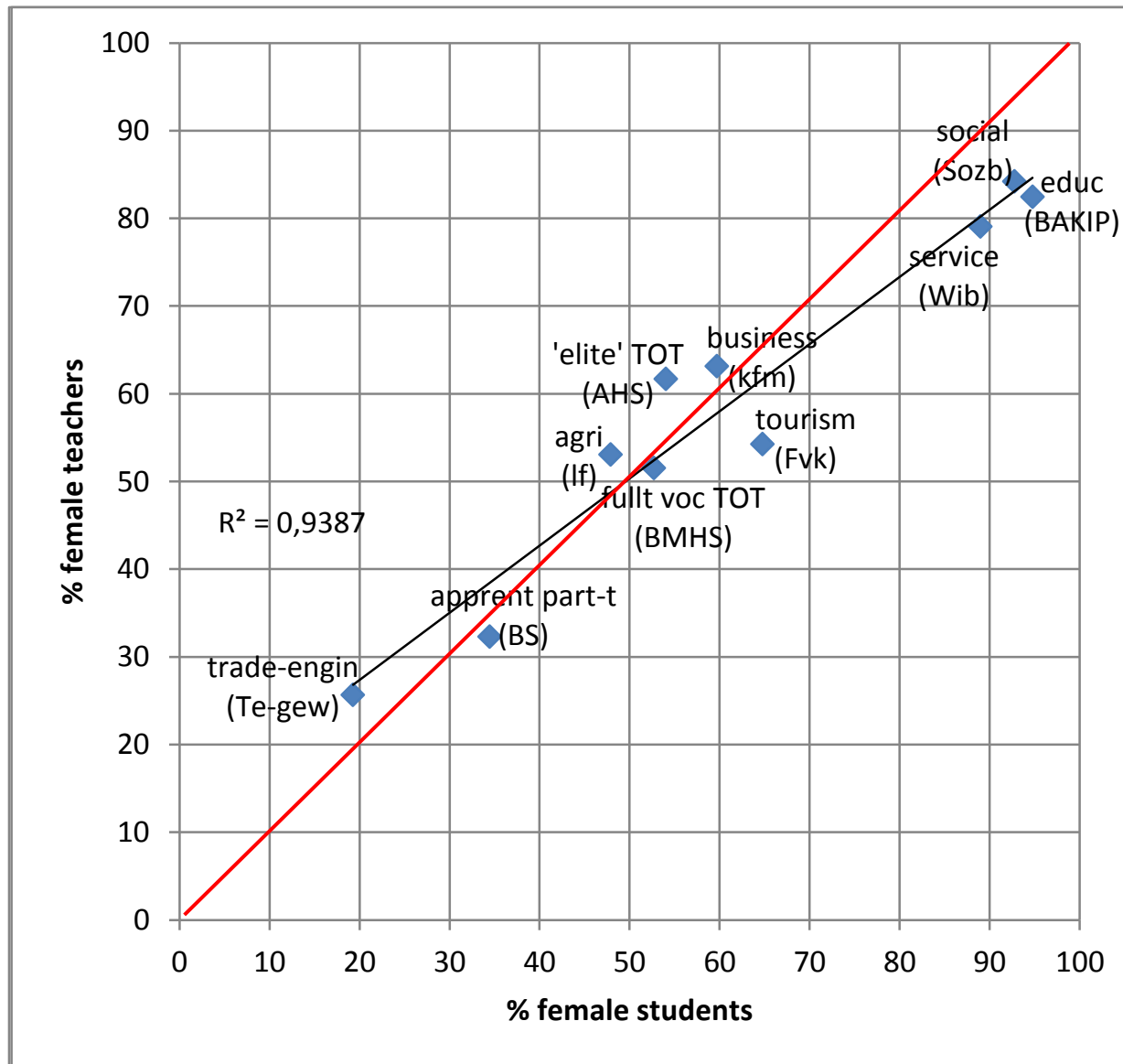


Teachers and principals by programme % female

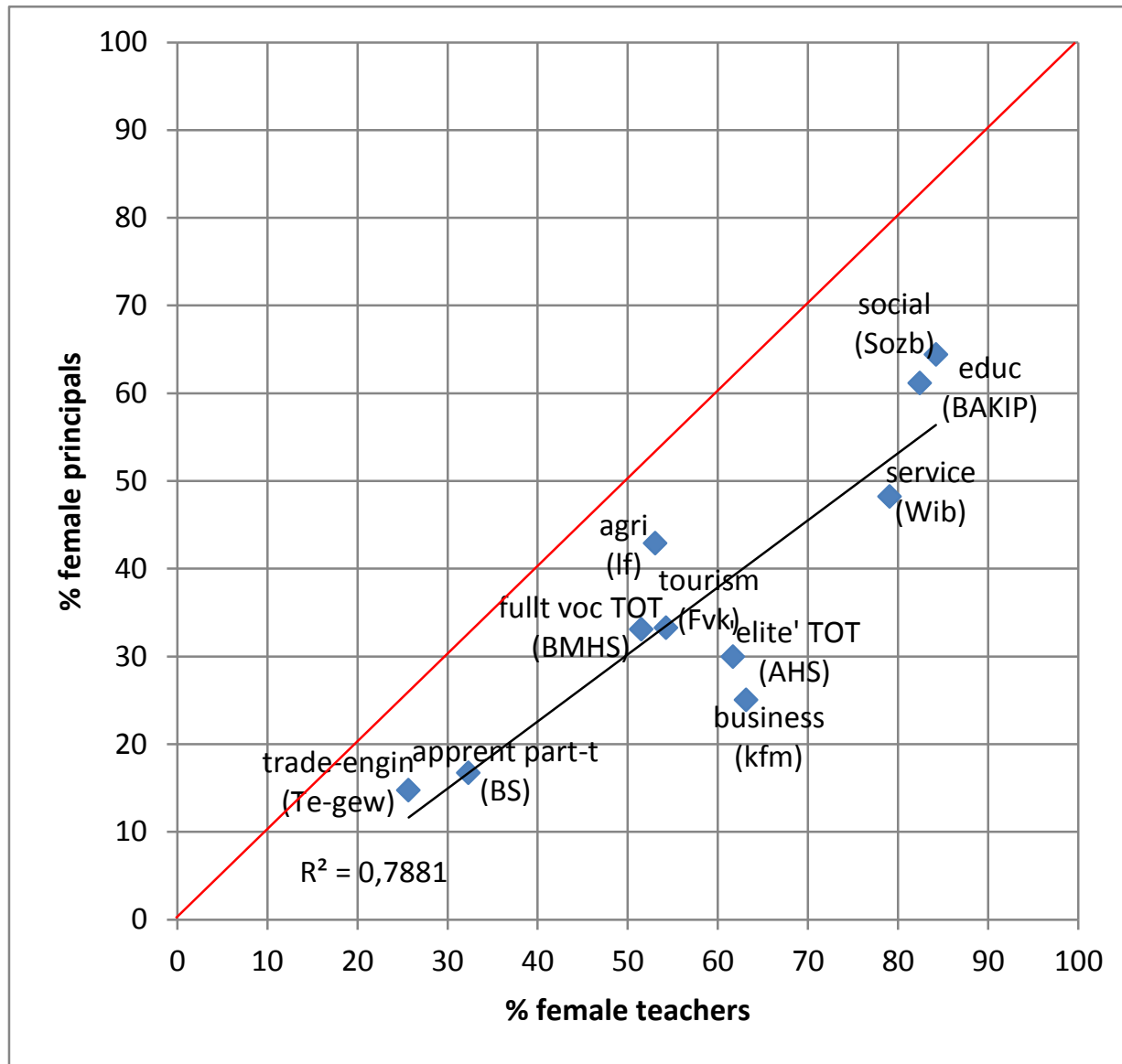
% female students X teachers different pattern general vs. vocational



Vocational programmes: teachers bit less segregated than students



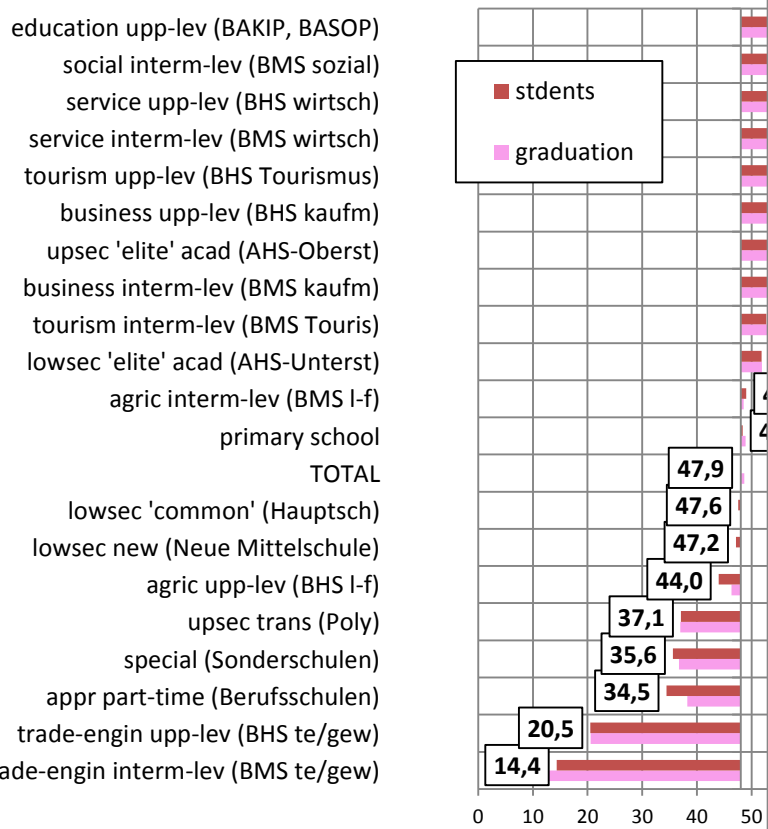
Less female principals (-10 to -30%pts.) vocational education (similar gen.ed.)



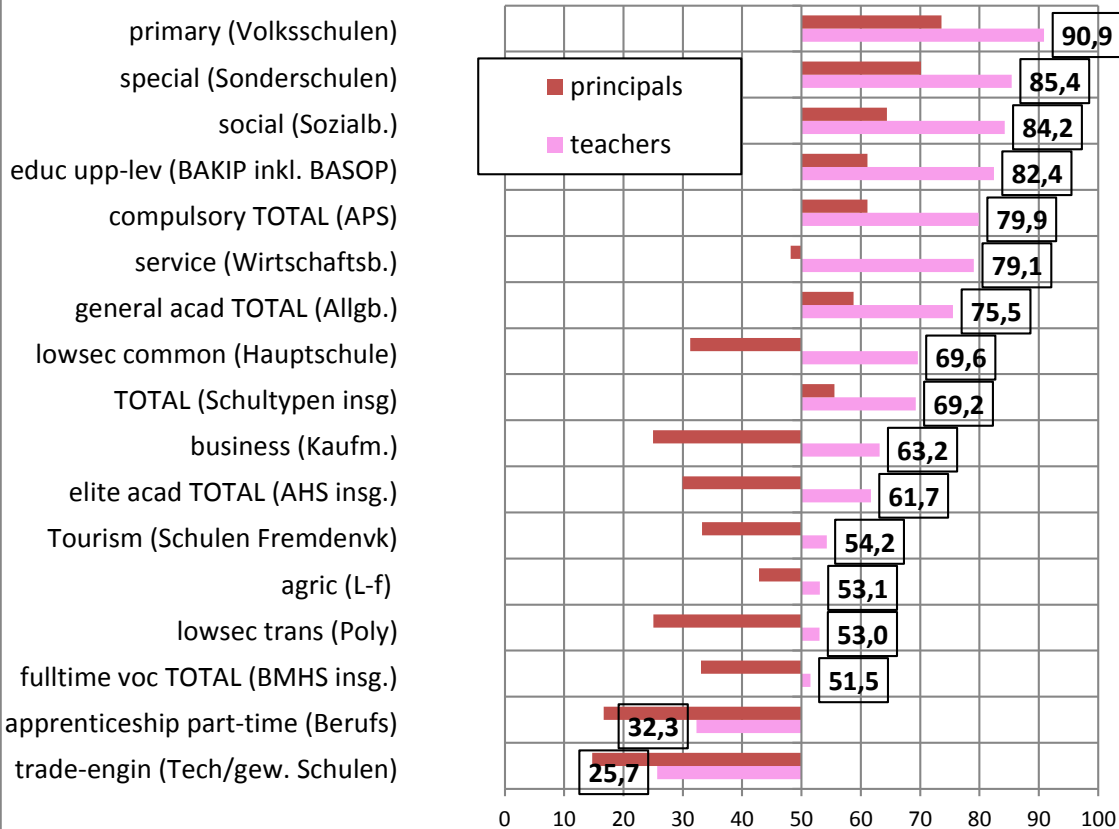
Segregated 'cultures' in occupational fields: Comparison students and teachers/principals

- Corresponding bias among students and teachers in vocational, not in general education;
 - Categories in vocational education different, teachers combined by levels

% female of students and graduation



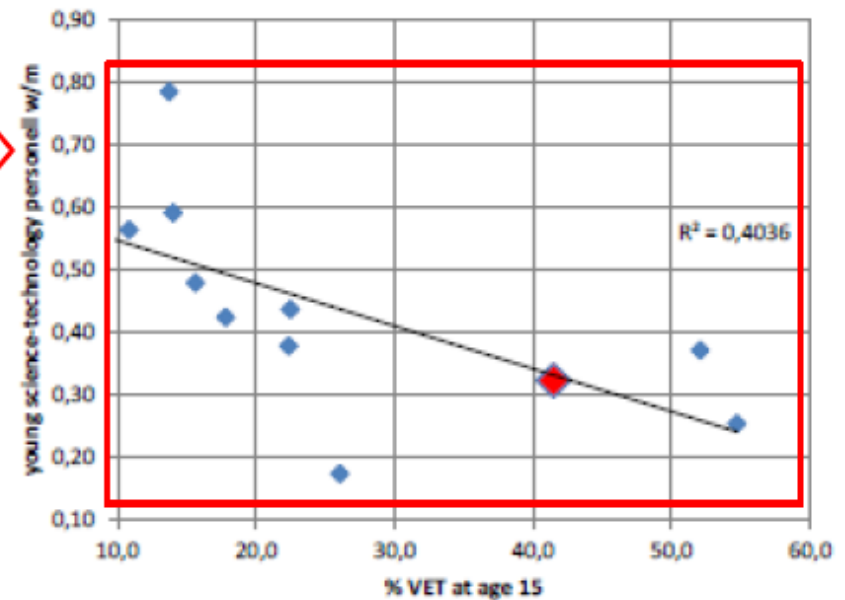
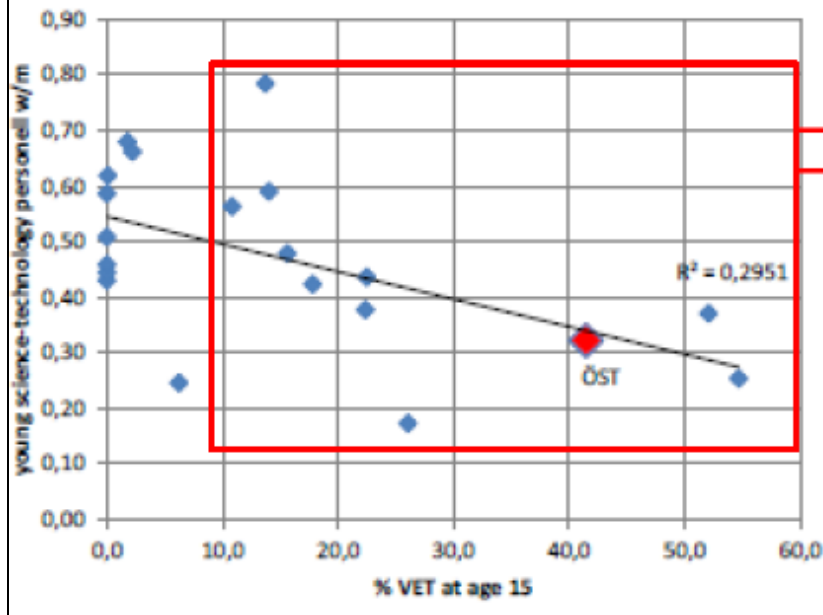
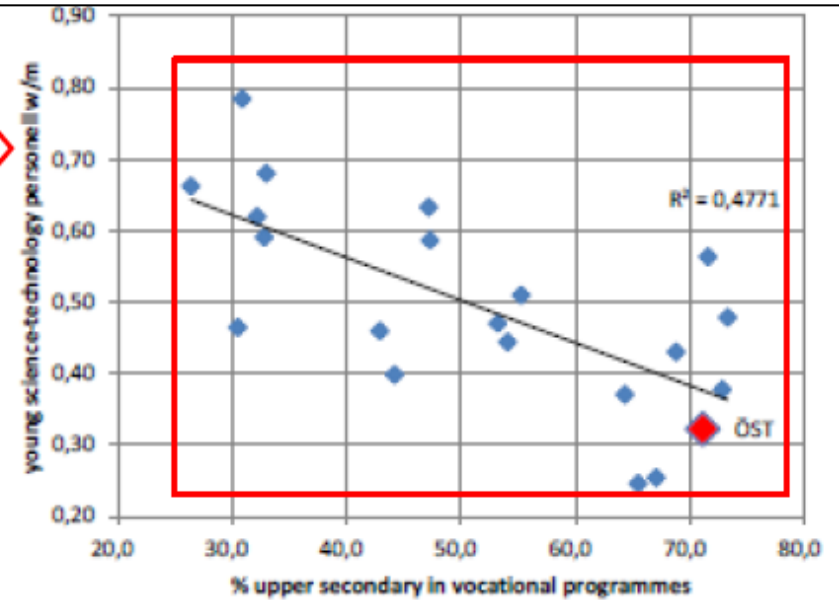
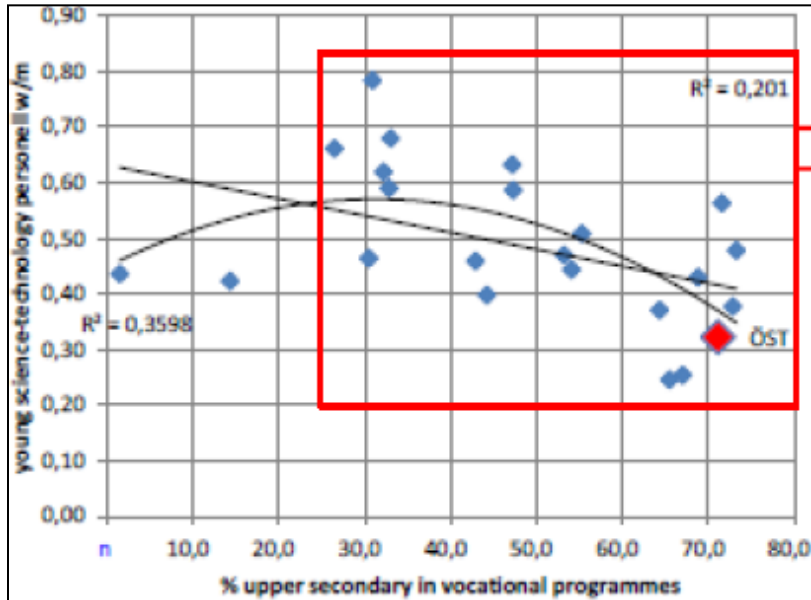
% female teachers and principals (2010)



Systemic issues

- High participation in vocational education seems to increase sex/gender-segregation in science and technology graduates...
- ...thus earlier choice might increase segregation...
- ...and earlier choice influences later choice
- This would deserve more and deeper research
- Figure shows correspondence of participation in vocational education with segregation in science-technology graduates by OECD countries
 - correspondence very marked in Austria (red point)

Correspondence of voc.ed & segr. scitech



Quality of the reporting with respect to sex and gender

Breakdown by sex/gender

- one third of figures/tables include breakdowns, proportion increases substantially towards the outcome measures
- breakdowns mostly one-dimensional, thus issues of intersectionality are mostly not covered (migration, or special schools)
- on several occasions sex/gender specific data not available (e.g., in the figures/tables about international comparisons), sometimes not feasible (e.g. aggregate demographic, or economic indicators)

Table 1: Breakdowns by sex/gender in Vol.1 report

	Sum	Breakdown sex/gender	%	One dim. breakdown	%
A context	15	0	0%	0	0%
B input	28	2	7%	0	0%
C process	43	13	30%	4	9%
D output	35	17	49%	1	3%
E transition	9	6	67%	3	33%
F outcome	13	8	62%	0	0%
Figures total	143	46	32%	8	6%

Source: own classification based on the Excel-Table of Vol.1

https://www.bifie.at/system/files/buch/pdf/NBB2012_Band1_Grafiken.xlsx

Suggestions, ideas for improvement

- we know more about the sex/gender specificity of results than about the factors that contribute to the results
 - input very little specific information; question of breakdowns (e.g., teacher education; pupils per class, or pupils per teacher unconventional)
 - financial figures: questions of gender budgeting
- process dimension related to the issues of gender sensitive teaching
 - abstract indicators, half about progression
 - Offenders/victims of aggression (females caught up at both sides)
 - Female teachers little bit more ‘constructivist’ teaching modes giving students a more active role than ‘traditional’ teaching
- specific summary about what the indicators can tell about sex- and gender-specific differences or inequalities feasible
 - bringing different kinds of information together
 - show gaps in information
 - give a balanced picture about the issues of ‘male’ and ‘female’ disproportions.

Some explanatory questions and hypotheses

- Why segregation problem?
 - Future technological development and mathematical-technical-ICT-competences and preferences?
- Early sex/gender specific choices ,real‘ choices or discriminatory?
 - embedded in overall system of biased/traditional preferences
 - supported by social security system and structures of childcare
 - recent published study results in Austria already known since 2000s*
 - in effect destruction of women’s competences (Paula Principle)
- Specific issues/questions
 - effects of structures vs. day-to-day-practices?
 - segregated structures and achievement: long-standing or more recent phenomenon?
 - shadow of wider social structures?
 - male vs. female advantages and disadvantages?

“Ich konnte mein eigenes Geschwätz und das meiner Kollegen nicht mehr hören, dass wir Vielfalt und Gleichstellung forcieren; aber passiert ist nichts. Ich habe mich geschämt für meine Profession und für mich selbst.”

T.Sattelberger, Dt.Telecom



Source: "Die Presse", Print-Ausgabe, 17.11.2012;

<http://diepresse.com/home/wirtschaft/international/1313828/Maenner-skrupelloser-im-Ergreifen-von-Karrierechancen>

“I didn't want to hear my own babble and that of my colleagues any more about forcing diversity and equalisation; but nothing happened. I felt ashamed for my profession and for myself.”

T.Sattelberger, Dt.Telecom



Source: "Die Presse", Print-Ausgabe, 17.11.2012, translation by author;
<http://diepresse.com/home/wirtschaft/international/1313828/Maenner-skrupelloser-im-Ergreifen-von-Karrierechancen>

Material

