

International Conference Jan 20 - 21, 2014, Essen, Projekt nexus der Hochschulrektorenkonferenz
Education and Training for European Teachers:
Competence Models, Curricular Objectives and Harmonizing Theory and Practice
Workshop 2. From Lecture Hall to Classroom?

Teacher Training: From Practice to Theory. From Moral Competence to Test Scores

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Abstract: From Practice to Theory ...

After many years of research into, and experience with, teaching in various educational institutions, I am convinced that the frequently quoted ‘theory-practice-problem’ is a spurious problem. I noticed that it disappears when we turn teaching to its feet: namely from practice to theory. I felt that my teaching became much more effective, when I started to design my courses on the basis of experimental pedagogy (rather than on untested didactic theories), and when I picked up teacher students from where they are, and how they learn. Their attention and quality of work increased considerably. I had no “lazy” students anymore.

From this experience and from research, I have learned that ‘from practice to theory’ has several implications, namely ...

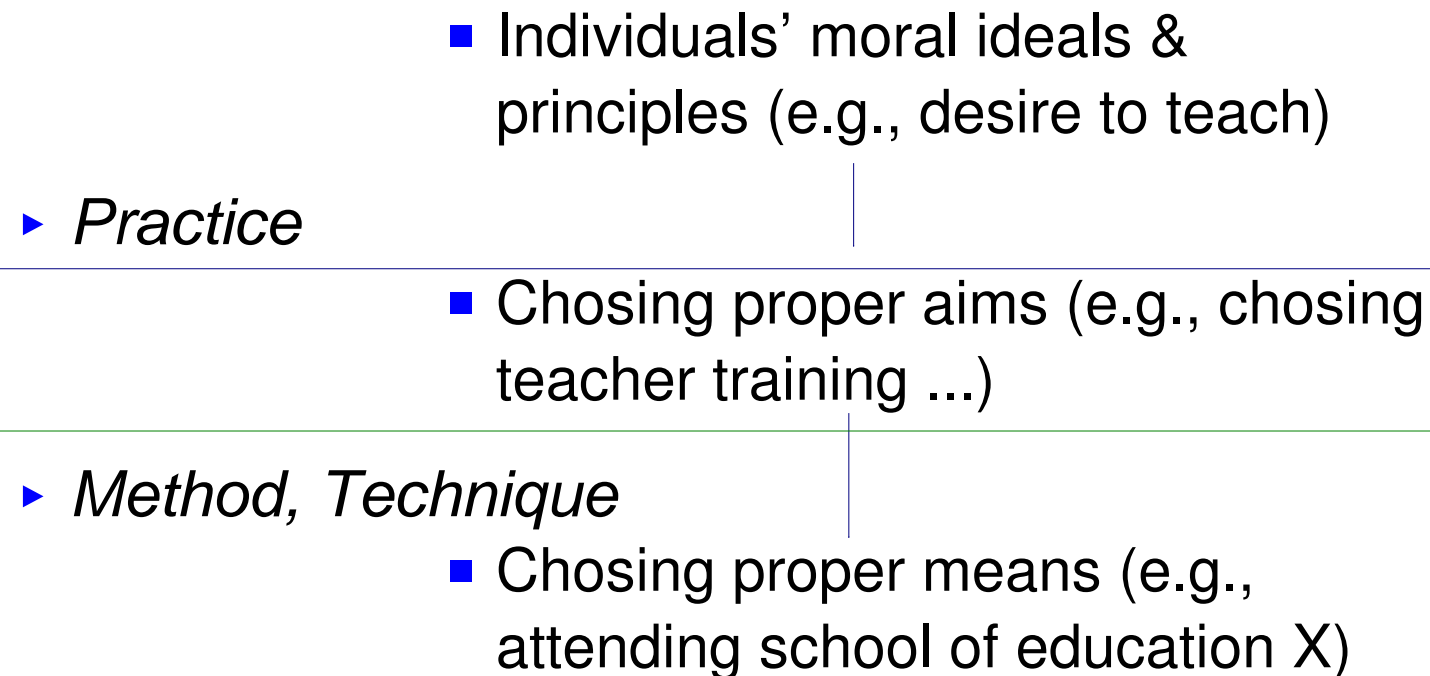
- that understanding requires assimilation of new information to existing structures of cognition and behavior,
- that most, if not all, students are intrinsically motivated to learn, and this motivation should not be undermined by force and humiliation through grades and high-stakes tests;
- that information should not be spilled on the learner but adequately dispensed,
- that teachers and learners should continuously self-evaluate their work, and
- most importantly, that learning should be facilitated by fostering moral -democratic competence of the learner and the teacher. Therefore, moral-democratic competence education should be an integral part of teacher training and schooling.

Internal versus external standards

- When we speak about ‘effective methods’ of teaching and learning, *standards* of efficacy in the area of academic achievement and moral competence are usually defined *externally*, that is, by the society, but the individuals (teachers and students), and their practice are hardly taken into account in the teaching-learning-process.

Clarification: Practice & Technique

The Aristotelian model of individual action



Teaching *methods*: From (un-)pedagogical force to psychological methods*

	r	d
Wait-time-rule	.41	.90
Focusing	.27	.55
Practical work of the students	.27	.55
Variation of application with different contents	.25	.51
Asking questions	.23	.47
Use of audiovisual methods	.09	.18
Grading	-.07	-.15

* Meta-Analysis of studies of effects of interventions on achievement test scores.

Source: Fraser, B.J., Walberg, H.J., Welch, W.W. & Hattie, J.A. (1987). Syntheses of educational productivity research. International Journal of Educational Research 11, 145-252.

Bad *methods*: *Threatening* students with high-stakes tests lowers their achievement

Level of school sanctions for low test achievements in mathematics in 8th grade (NAEP)

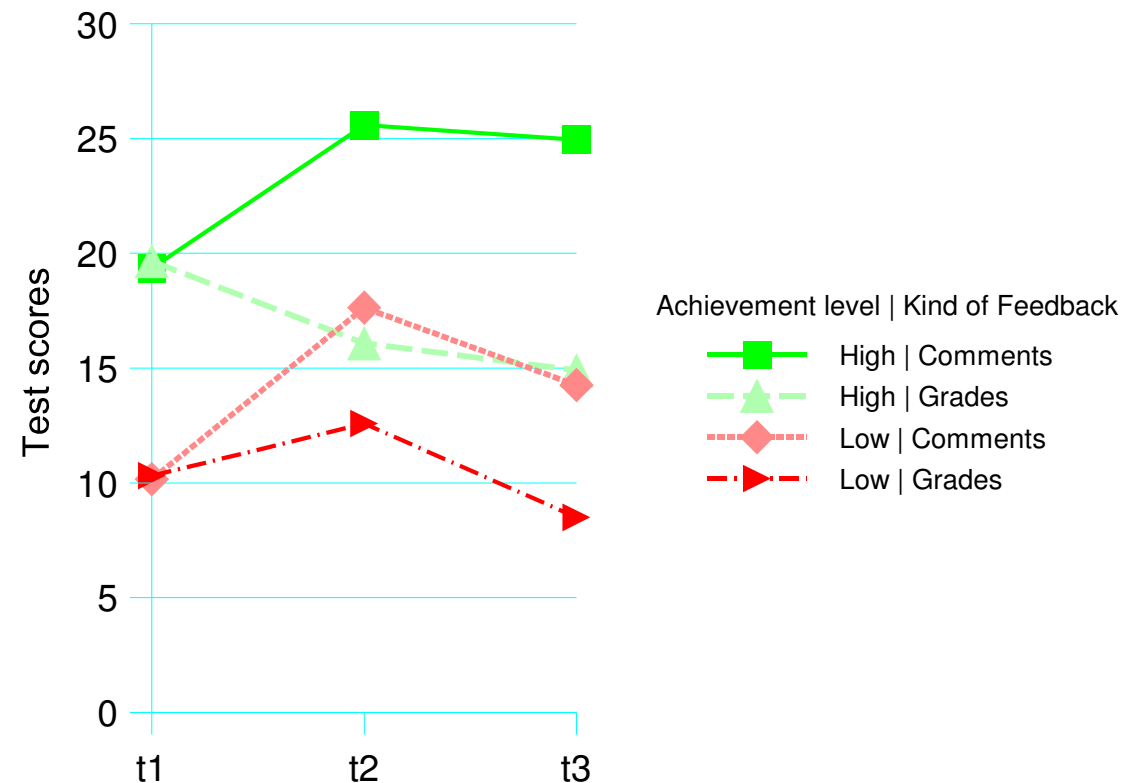
Percentage of US States ...	Low (n = 14)	High (n = 18)
below >	7,0 %	56,0 %
above >	64,2 %	11.0 %

the national average

Source: NAEP-data. Cited in: Sacks (2000). Standardized minds. The high price of America's testing culture and what we can do to change it. Cambridge, MA: Perseus Publishing, p. 89

Bad *methods*: Threatening students with grades lowers their achievement

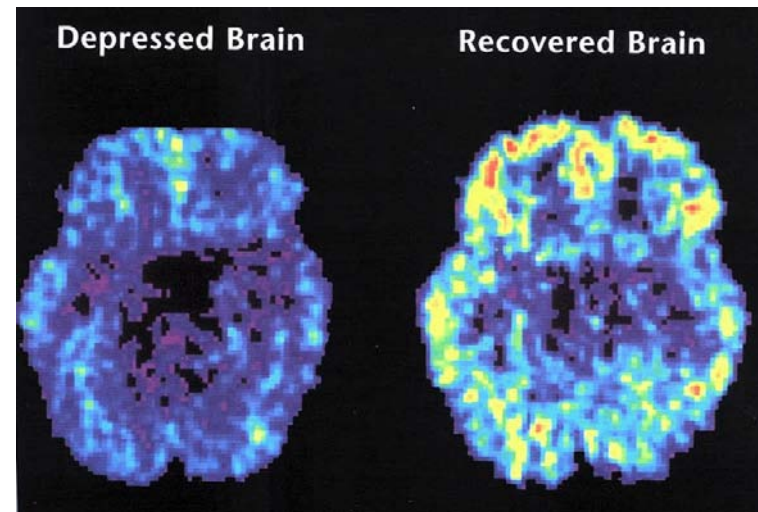
- Experiment by Butler (1988)
- Intervention: Feedback through comments vs. grades
- Effect: Test scores
- N = 132; 5th and 6th graders, Israel; demanding tasks.
- Sub-groups with achievement level:
 - ▶ *high* = best 25% (■▲);
 - ▶ *low* = worst 25% (■▲) students.
- Re-tests after two (t2) and four days (t3)



Butler, R. (1988). Enhancing and undermining intrinsic motivation: The effect of task-involving and ego-involving evaluation on interest and performance. *British Journal of educational Psychology*, 58, 1-14.

Fear hinders learning

- "Extremely strong and lasting stress has negative effects on the memory ... Chronic stress can result in a destruction of brain cells ... and, therefore, is unfavorable for learning and behavior of students." (Spitzer 2002, p. 171)



Source: Spitzer, M. (2002). Lernen. Gehirnforschung und die Schule des Lebens. Heidelberg: spektrum., p. 171 (my translation).

See also: Hüther, G. (1997). Biologie der Angst, Vandenhoeck & Ruprecht Göttingen.

Good *methods*: Rules for effectively dispensing information to students



< Teacher Endless Speak
spills much information

Teacher Wait Time
dispenses it effectively >



Good *method*: Wait-time-rules

- Rule “1”: Wait 3 seconds before a new information is dispensed or after a question is asked!
 - ▶ Psychology: Time for focusing of *all students’ attention* in the class.
- Rule “2”: Wait 3 seconds after a new information is dispensed or a questions is answered!
 - ▶ Psychology: Time for cross-linking of information in the brain (thinking).
- Benefits found in studies:
 - ▶ More facts are remembered and
 - ▶ better understood
 - ▶ Students ask more questions
 - ▶ Attention and discipline increase tremendously ...
- Expense for teacher training:
 - ▶ Some effects already after first instruction; full effects after about four weeks of training with peer-supervision

Good teaching *practice*: Moral-democratic competence

- *The ability to solve dilemmas and conflicts of aims through thinking and discussion on the basis of (shared) principles rather than through violence, deceit, and abuse of power.*

Sources:

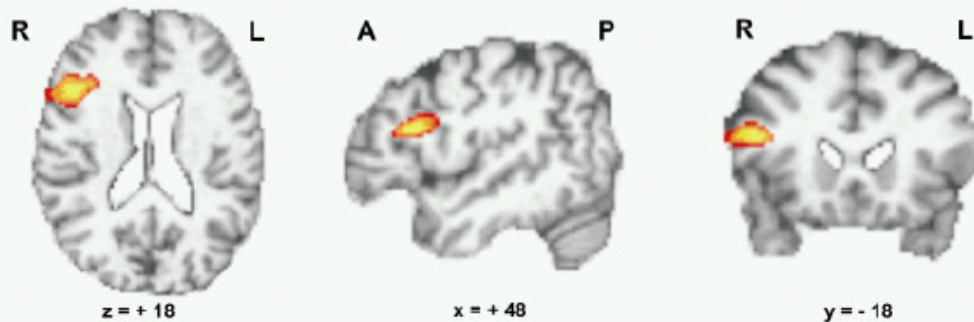
Lind, G. (1979). Moral development — A new issue in higher education research. 3rd International Congress of the European Association of Research into Higher Education (EARDHE). University of Klagenfurt, Jan. 2 - 6, 1979.

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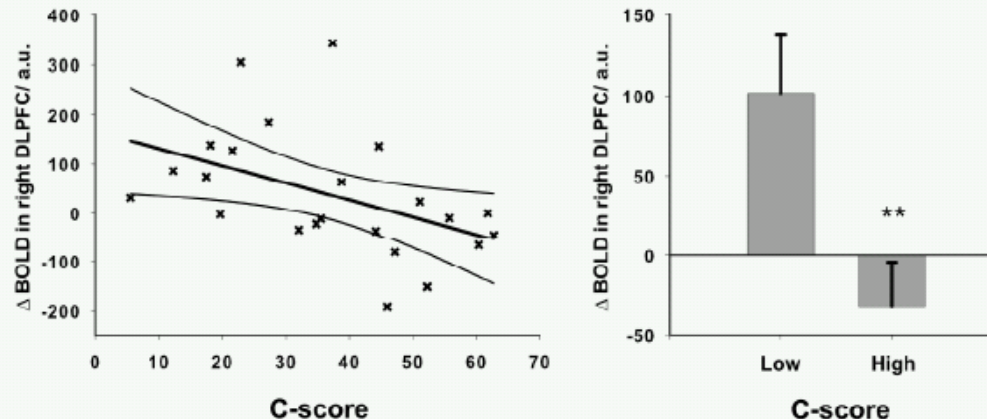
Lind, G., Hartmann, H. A. & Wakenhut, R., eds. (2010). *Moral judgment and social education. Studies in the psychology and philosophy of moral judgment and education*. Edison, NJ: Transaction Publisher.

Moral-democratic competence is highly correlated with brain activities in the right dorso-lateral prefrontal cortex

a) Covariation of C-scores with BOLD responses in right DLPFC



b) Socio-normative judgments



The Experiment by Prehn (2013)

N = 23 women

Dependent variable: Indicator for activity in the right dorso-lateral prefrontal cortex (DLPFC)

Method: fMRI

Independent variable

a) Moral task: Judgments on the norm-conformity of statements

b) Moral Competence (C-Wert, MJT)

Finding

Persons with high C-score could solve the moral task with less activity in the right DLPFC than persons with low C-scores. Effect size $r = -.45$ $d = -1.00$

The higher moral-democratic competence, the more knowledge is acquired (experiment)

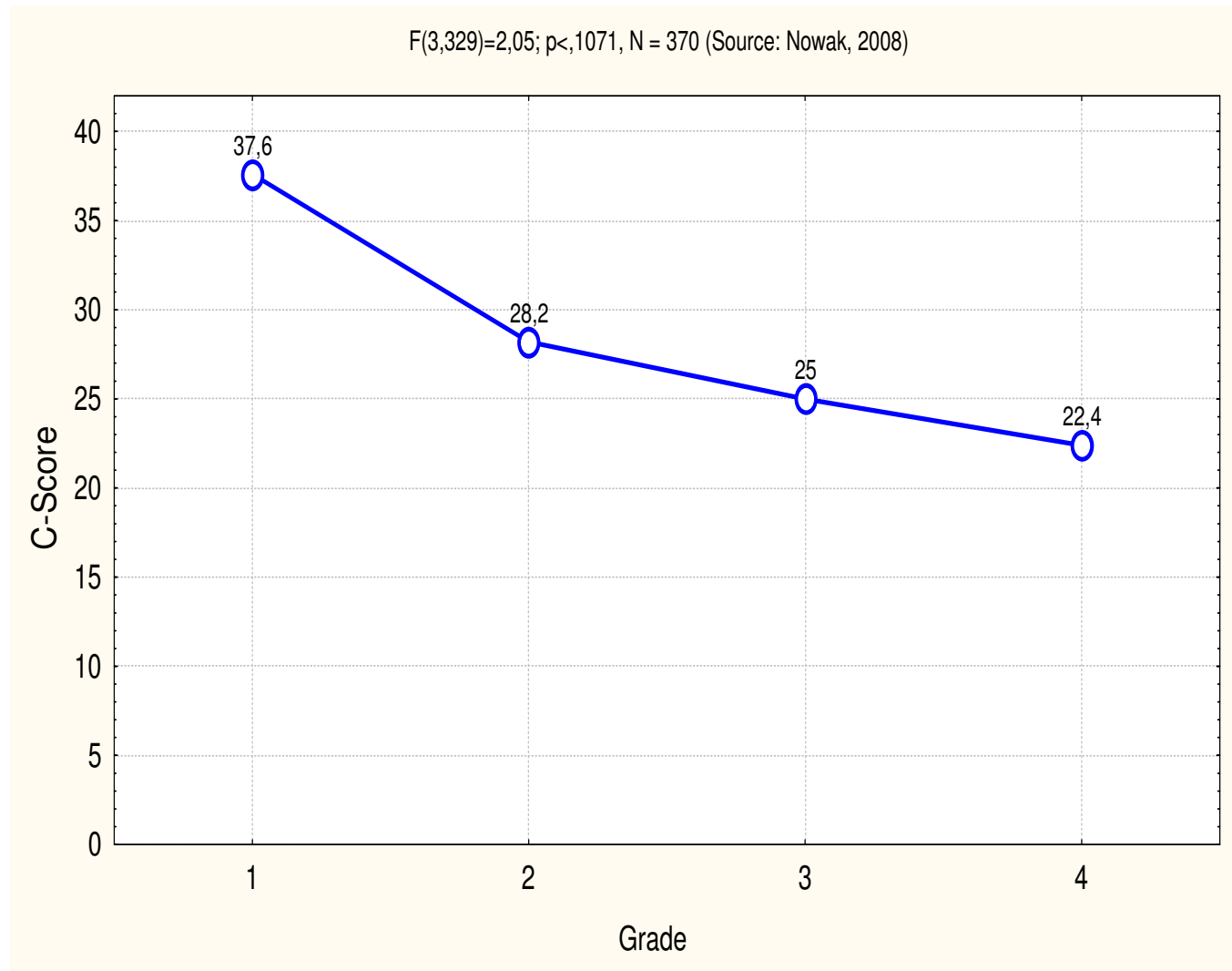
Correlations between C-score (*Moral Judgment Test*, MJT), cognitive complexity (Paragraph Completion Test, PCT) and knowledge about organ transplantation before and after watching a teaching video:

Knowledge:		Pretest	Gain
MJT	- Moral competence	0.25 **	0.22**
	- Opinion agreement	-0.03	-0.31**
PCT	- Cognitive complexity	0.41**	0.26**

n = 140; ** p < 0.01

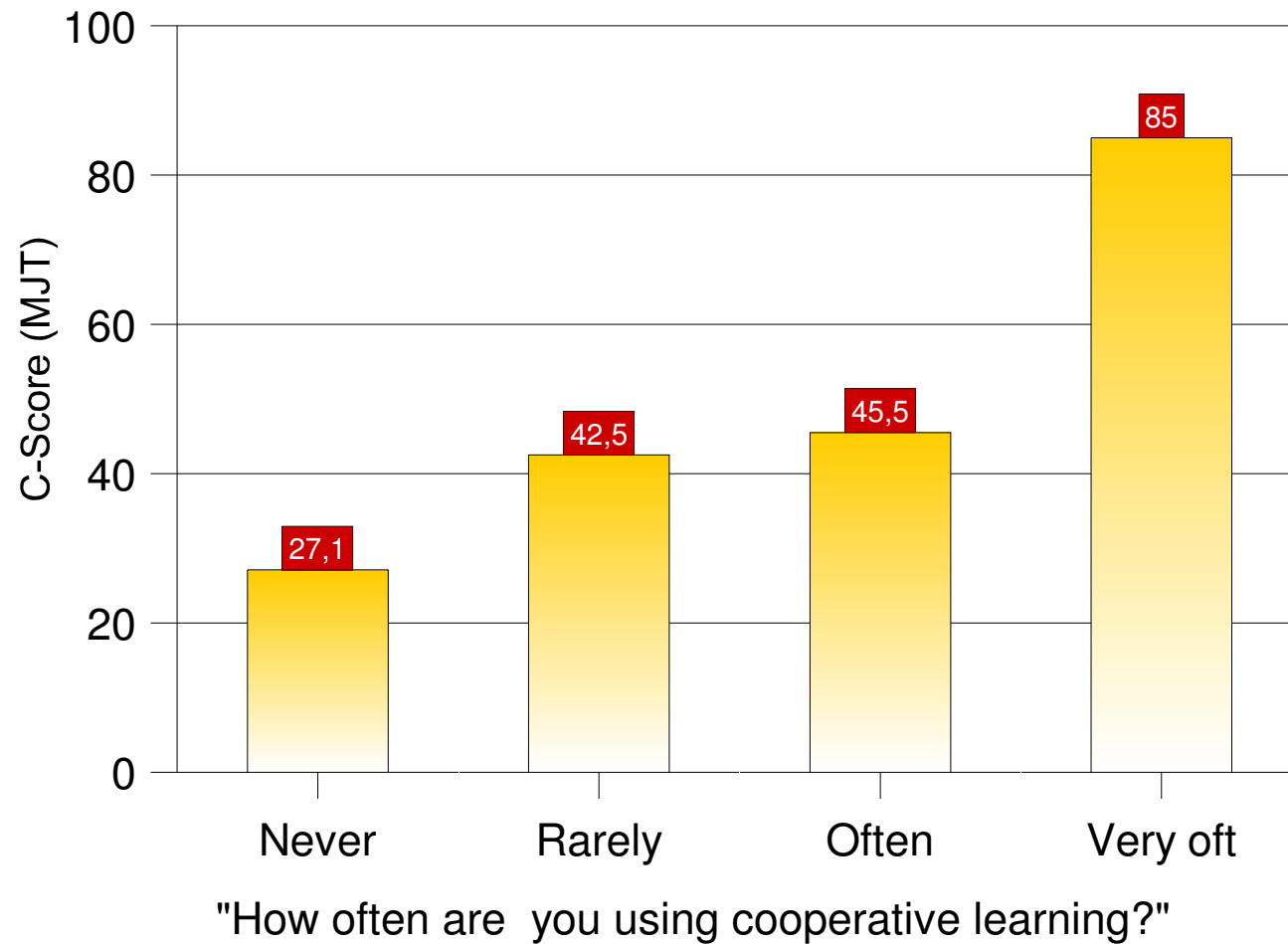
Source: Heidbrink, H. (2010). Moral judgment competence and political learning. In: Lind, G., Hartmann, H. A. & Wakenhut, R., eds., *Moral judgment and social education*, pp. 259 - 271. New Brunswick, NJ: Transaction Publisher.

Related benefits: Better grade average in the final examine of high school



Source: E. Nowak,
personal communication,
2008. Polish high school
graduates

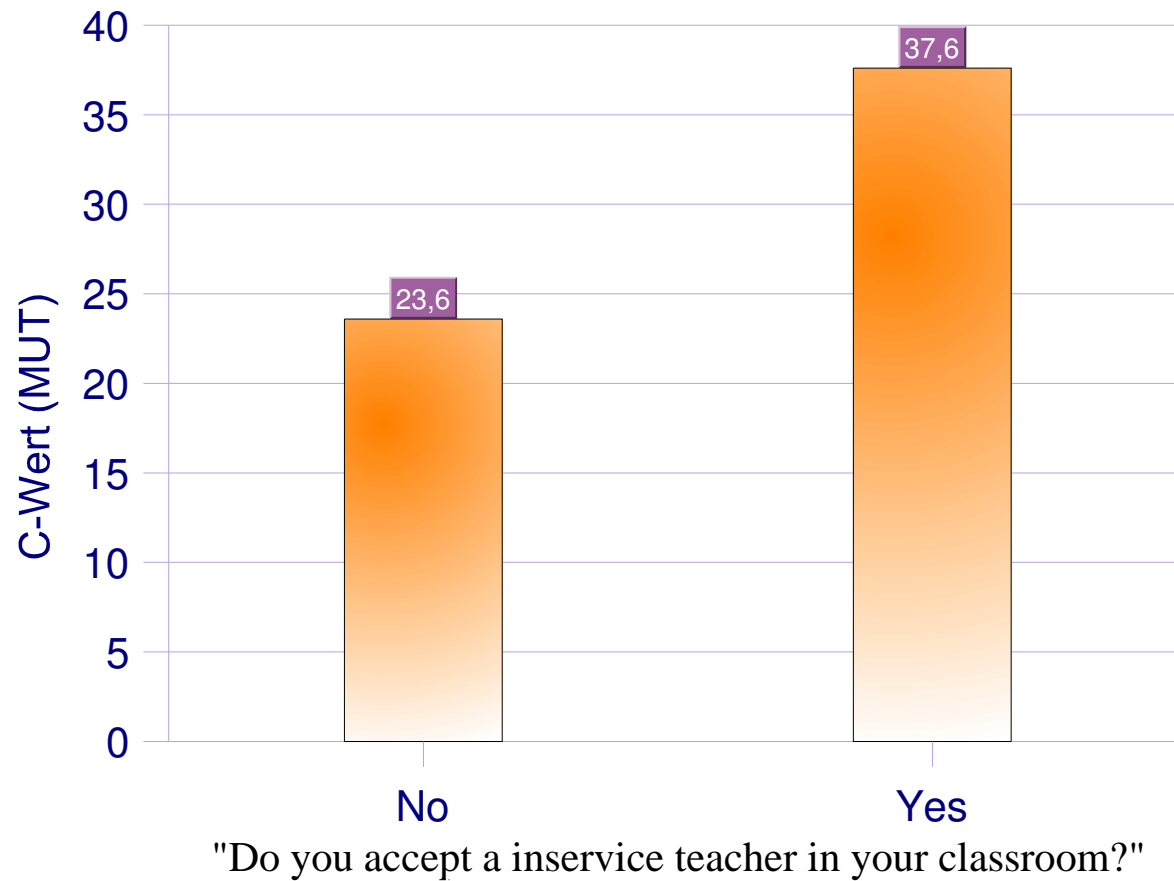
Better teaching: Use of cooperative learning method...



Survey of 15 teachers

Source: Own data

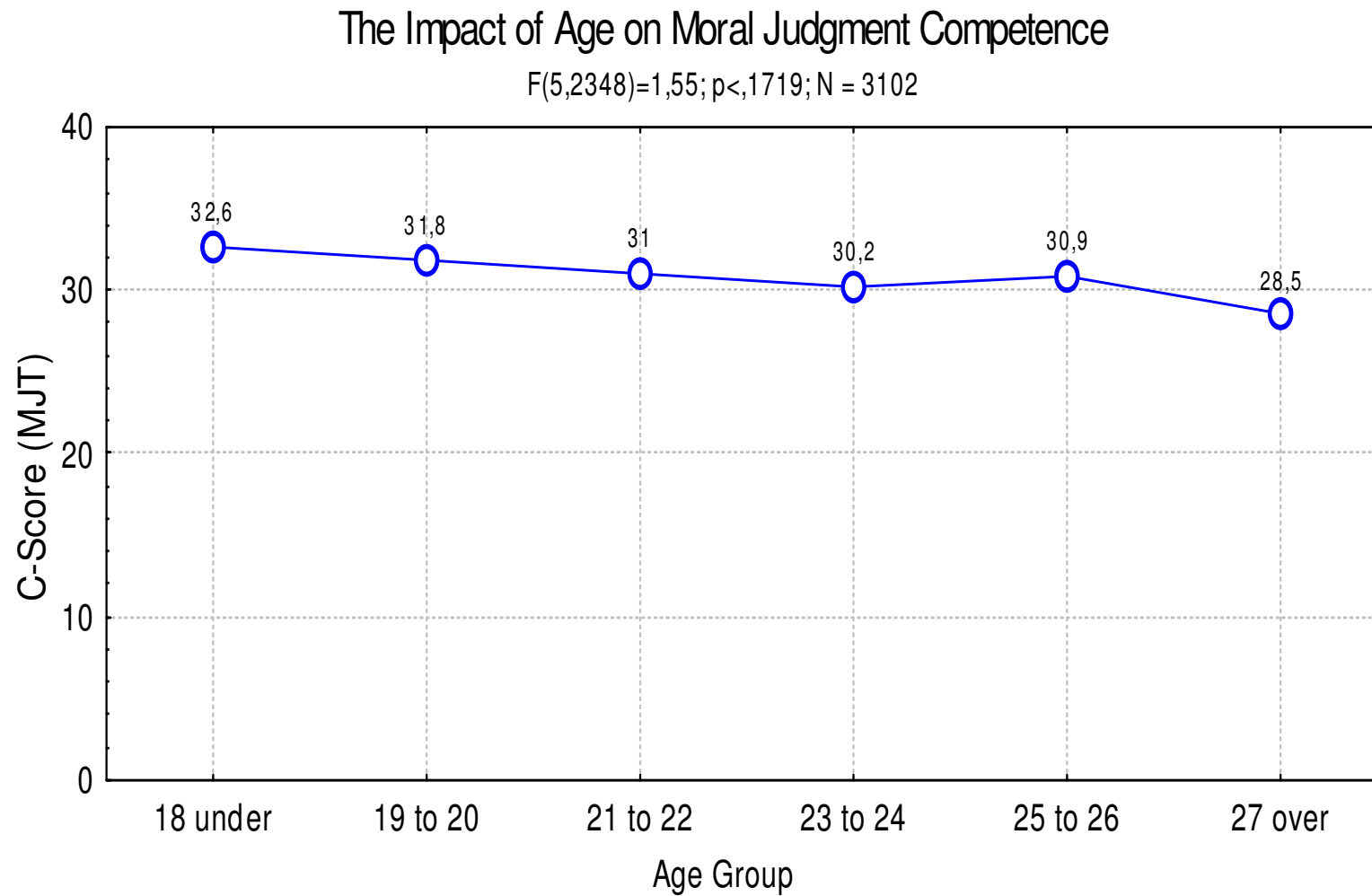
and acceptance of collegial supervision in the classroom



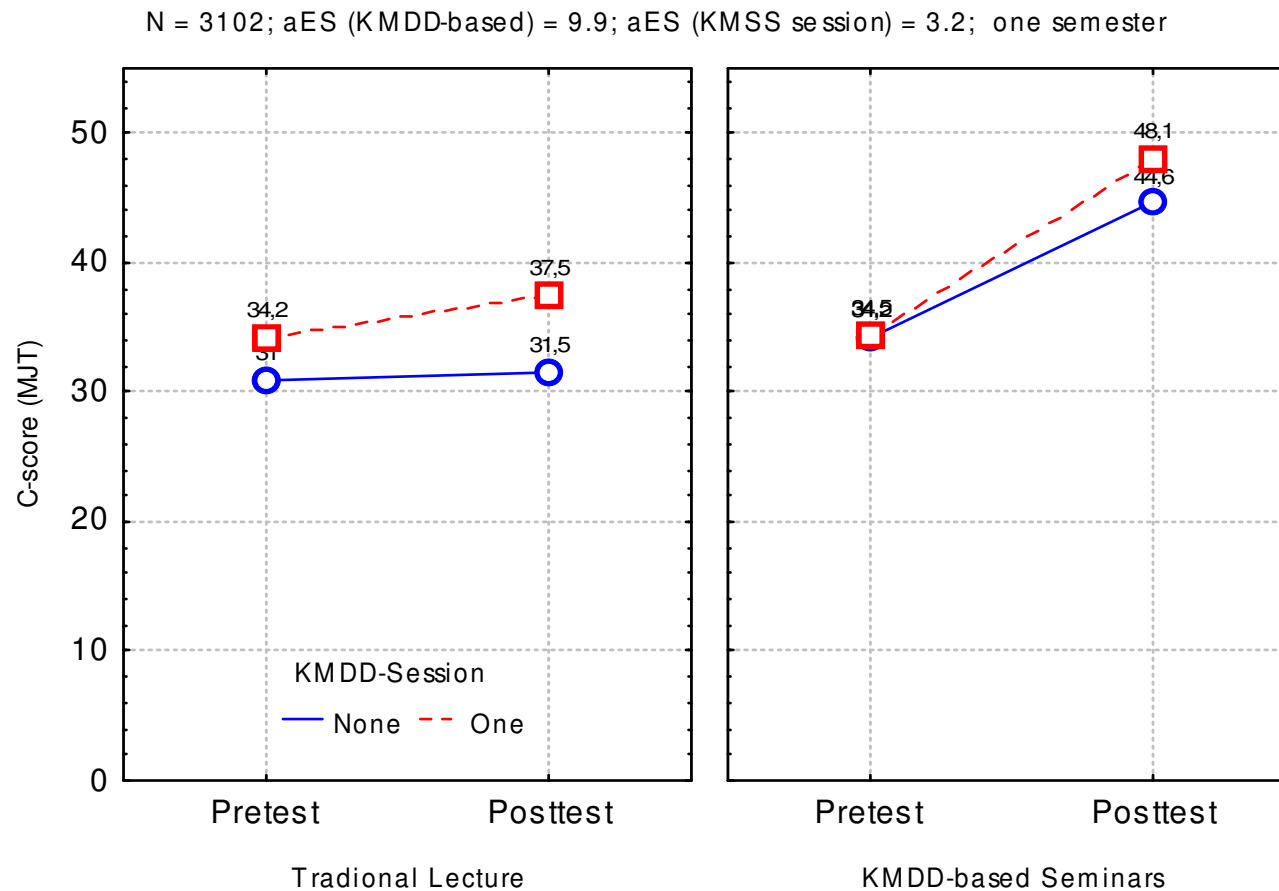
Survey of 15 teachers

Source: Own study

Moral-democratic competence does not come with age



Eight year study: The KMDD multiplies the effect size of teacher education with little time expenditure



Lind, G. (2009). Favorable learning environments for moral development – A multiple intervention study with nearly 3.000 students in a higher education context. Paper presented at the annual meeting of AERA in San Diego, April 13 -17, 2009.

Images of moral-democratic competence training

with



Konstanzer Methode der
Dilemma-Diskussion (®)

<Grade school

University>

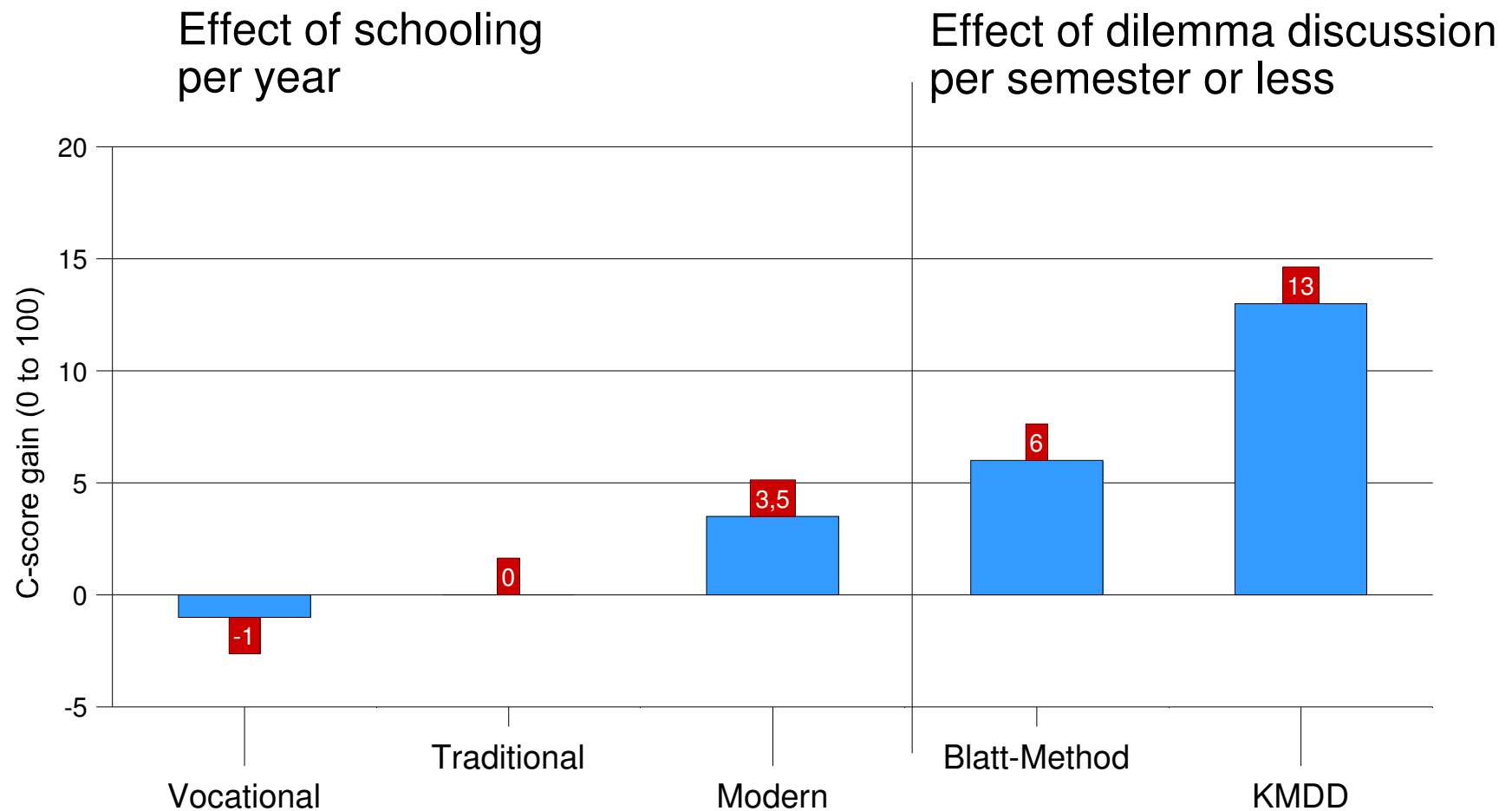
<Prison

Army>

& secondary schools,
professional training,
vocational schools,
elderly homes ...



Estimated absolute effect size of the KMDD



Expenses for *KMDD-Teacher* training: About 120 hours for full effect-size

Study	Training Level	Teacher	N Students	Pre-Test	Post-Test	Gain
Koszinoffski 2006	0	(control) *	20	14,0	14,2	0,2
Koszinoffski 2006	1	A	19	21,4	13,2	-8,2
Koszinoffski 2006	1	C	18	18,7	13,9	-4,8
Koszinoffski 2006	1	D	19	16,4	17,2	0,8
Koszinoffski 2006	2	B	8	12,4	24,1	11,7
Koszinoffski 2006	2	E *	9	13,8	31,4	17,6
Kang 2012	0	(control)	26	31,5	19,4	-12,1
Kang 2012	1	L	26	23,4	21,0	-2,4

* Time interval 4 weeks; else approx. 8 month.

Level of Training:

0 = No education; 1 = Workshop-seminar (40 hrs.); 2 = plus intensive training on the job (80 hrs)

Sources: Koszinoffski, R. (2006). Überprüfung der pädagogisch-didaktischen Lehrkompetenz von Lehrpersonen bezüglich der Konstanzer Methode der Dilemma-Diskussion. Diplomarbeit, FB Psychologie, Universität.

Kang, Lei (2012, Guandong University of Foreign Studies; personal communication).

Conclusion

- Teacher training should not focus only on improving the teachers' methods but also the individuals' practices (plural!).
- In order to solve the dilemmas and conflicts arising in the teacher-student-interaction, moral-democratic competence is needed.
- This competence, which is well defined and researched, has shown to be an important factor for good teaching and learning.
- Its lack hampers achievement and creates deceit and corruption.
- > Moral-democratic competence education must become part of teacher training in all phases.
- > A master program 'Moral-democratic competence education' is much needed.

References & contact: <http://www.uni-konstanz.de/ag-moral/>

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