



# **Training Needs Analysis in Economic Teaching.**

## **On the suitability of the Test of Economic Literacy (TEL)**

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# TNA in Economic Teaching

1 Aim of the pilot study

2 Method

2.1 The tool: TEL (WBT)

2.2 Sample and strategy

3 Selected Results

4 Discussion



# 1 Aims

## Final goal:

Development of a tool for self-assessment  
in further training needs for teachers in EEd

## Approach:

Does the TEL/ WBT fit?

Status of teachers' knowledge: Is there any measure for it?  
Is further teacher training required at all?

## Relevance to V.E.T.:

Qualities in economics and financial teaching *are* important,  
both in general and in vocational education!



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## 2.1 The Tool

### Test of Economic Literacy (TEL/ WBT)

originally designed by J.C. Soper & W.B. Walstad (1987)  
for student assessment

adapted by K. Beck und V. Krumm (1998),  
implemented in a number of studies

requires some adaptations (GDP – GNP, € - DM etc.):  
no substantial changes (problem of representation)



## 2.1 The Tool

Forms A and B: 46 items (MC); 15 anchor items)

- Basics (scarcity, productivity, opportunity, system)
- Micro-economics  
(prices, offer/ demand, concurrence, distribution of inc.)
- Macro-economics (GDP, unemployment, inflation, policy)
- Globalisation (international relationships)



## 2.1 The Tool

III. Macro-economics	cognitive level acc. to Bloom et al.					$\Sigma$ 14
	I	II	III	IV	VI	
13. GDP	26 <sup>a</sup>					1
14. total offer		27				1
15. total demand		28		29 <sup>a</sup>		2
16. unemployment				30		1
17. inflation/ deflation				31, 32		2
18. money policy		34 <sup>a</sup>	35		38	3
19. fiscal policy	36			33,37 <sup>a</sup>		3

(Form A)



## 2.2 Sample and Strategy

independent variables:

gender (2fold nominal scale)

topic of studies (4fold – nominal scale)

studies in pedagogy (2fold nominal scale)

participation in further teacher training (3fold nominal scale)

professional experience (4fold – ordinal scale)

age (3fold ordinal scale)

subjects taught (4fold – nominal scale)

place of enquiry (3fold nominal scale)





## 2.2 Sample and Strategy

### Sample:

N = 176      m: 51,7%, f: 48,3 %      A/B: 50% each

Teachers in General Education, 3 regions:  
Chemnitz (76), Essen (73), Kiel (27)

Problems: Subject taught - Economics vs. ‚near‘ subject  
Subject studied - Economics vs. ‚near‘ vs. ‚distant‘

Problems: System Change / pressure of political reforms



## 2.2 Sample and Strategy

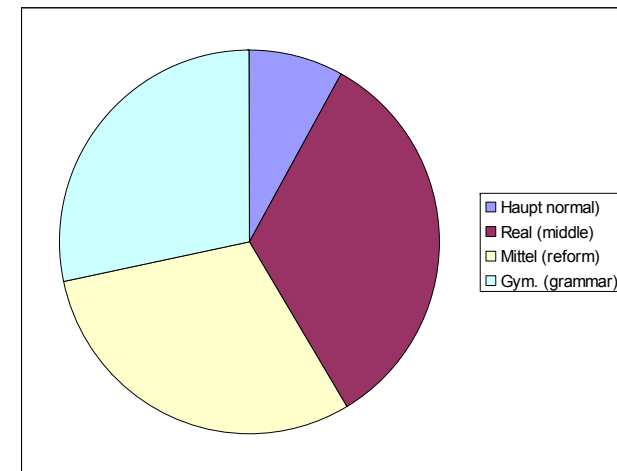
### Sample:

Teachers without any specific vocational experience: 85,2%

Teachers without economics further training: 58,5%

### Distribution to schools:

- Hauptschule (main)	8,0%
- Realschule (middle)	32,4%
- Mittel/Regional/ Stadtteilschule (reform)	29,5%
- Gymnasium (grammar)	27,8%





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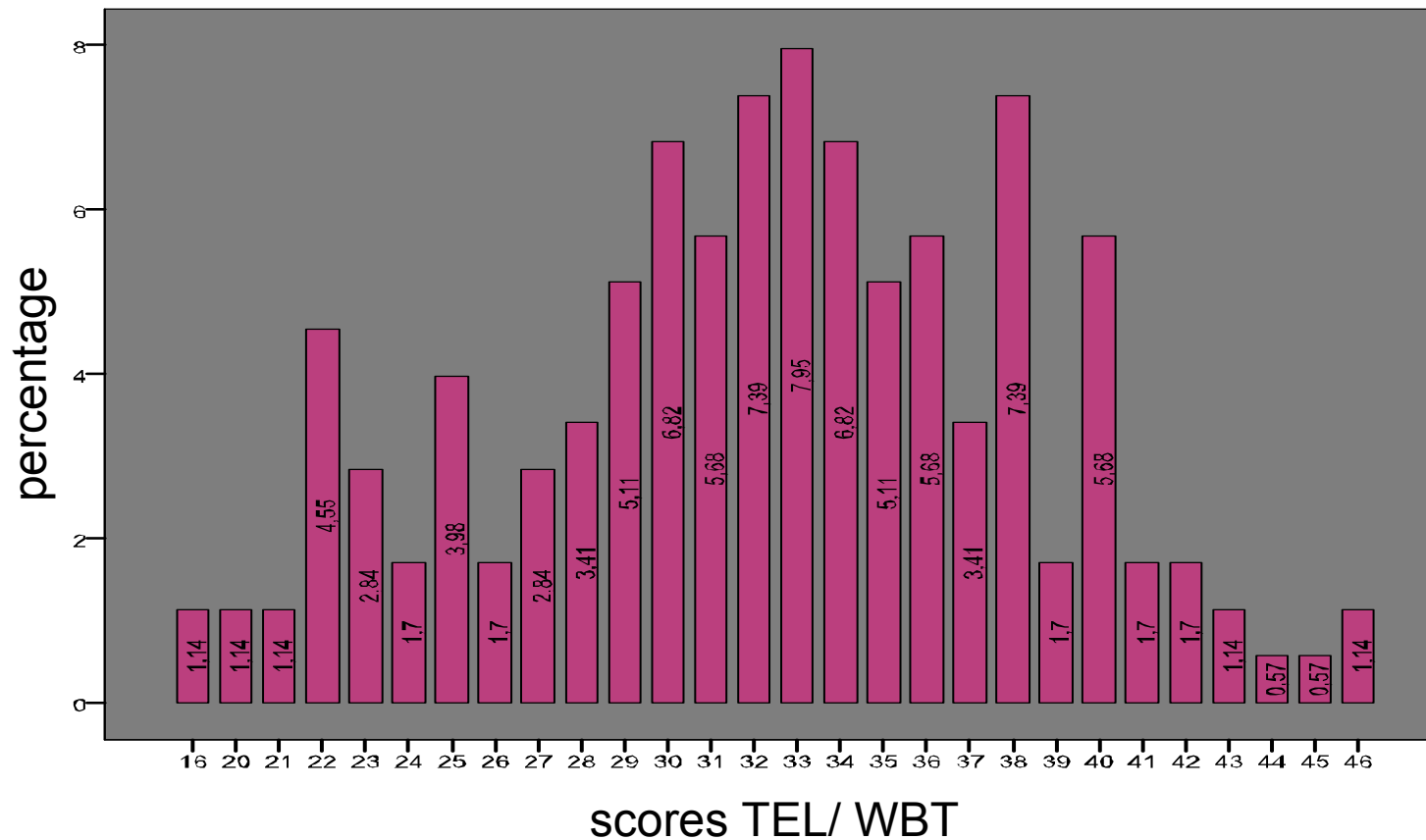
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## 3 Selected Results





## 3 Selected Results

### Analysis of the testing tool:

lack of discriminance (A: 8 items  $< 0.2$ ; B: 10 items)

weaknesses of distractors

(A: 11 items; B: 20 [= 44%!], 2 [= 15%!] of which are anchor items!)

statistical independence of items is given



## 3 Selected Results

### Hypothesis 'Former Studies':

expectation:

Those who studied economics should score better than others!

method:

paired comparison of grouped scores

result:

a) No significant differences

between economics/ ,near' / social sciences.

b) Significant differences between economics/ ,far'



## 3 Selected Results

Hypotheses 'Region':

$H_0$  :

$\bar{X}$  teachers Essen/Kiel  $\approx$   $\bar{X}$  teachers Chemnitz

level of significance: 5%

result: hypothesis must be rejected.

$\bar{X}$  west: 33,7     $\bar{X}$  east: 30,3

supplement (region X age):

to be rejected for the younger than 40!



## 3 Selected Results

Hypotheses 'Gender':

$H_0$  :  
 $\bar{X}$  teachers (m)  $\approx$   $\bar{X}$  teachers (f)

level of significance: 5%

result: hypothesis must be rejected.

$\bar{X}$  m: 34,0       $\bar{X}$  f: 30,4

supplement (gender X taxonomy): no significant differences

supplement (gender X content): no significant differences





## 3 Selected Results

Hypothesis differential participation in further training:

$H_0$  :

$\bar{X}_T(\text{no fT}) \approx \bar{X}_T(\leq 6 \text{ days fT}) \approx \bar{X}_T(> 6 \text{ d. fT})$

level of significance: 5%

result: hypothesis must be rejected.

$\bar{X}_{0WB}: 32,2$     $\bar{X}_{\leq 6}: 35,4$     $\bar{X}_{> 6}: 30,2$

=> does participation indicate interest in teaching?



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## 4 Discussion

teacher training/ knowledge:

- there **are** training needs! (16/46 p.!)
- natural developments will equalize differential demographic traits!

diagnostic tool:

- certain problems with validity
- for the purpose of self-assessment  
no sufficiently different topics



## 4 Discussion

teacher training/ knowledge:

- ∃ training needs! positive intergenerational change

diagnostic tool:

*=> for purposes of self-assessment and TNA  
an entirely new set of diagnostic tools?*

- problem of quantity (partial diagnostic tools?)
- problem of standardisation
- problem of inclusion to international research
- problem of curricular development of further teacher training!



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**WIEKIE!**  
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