

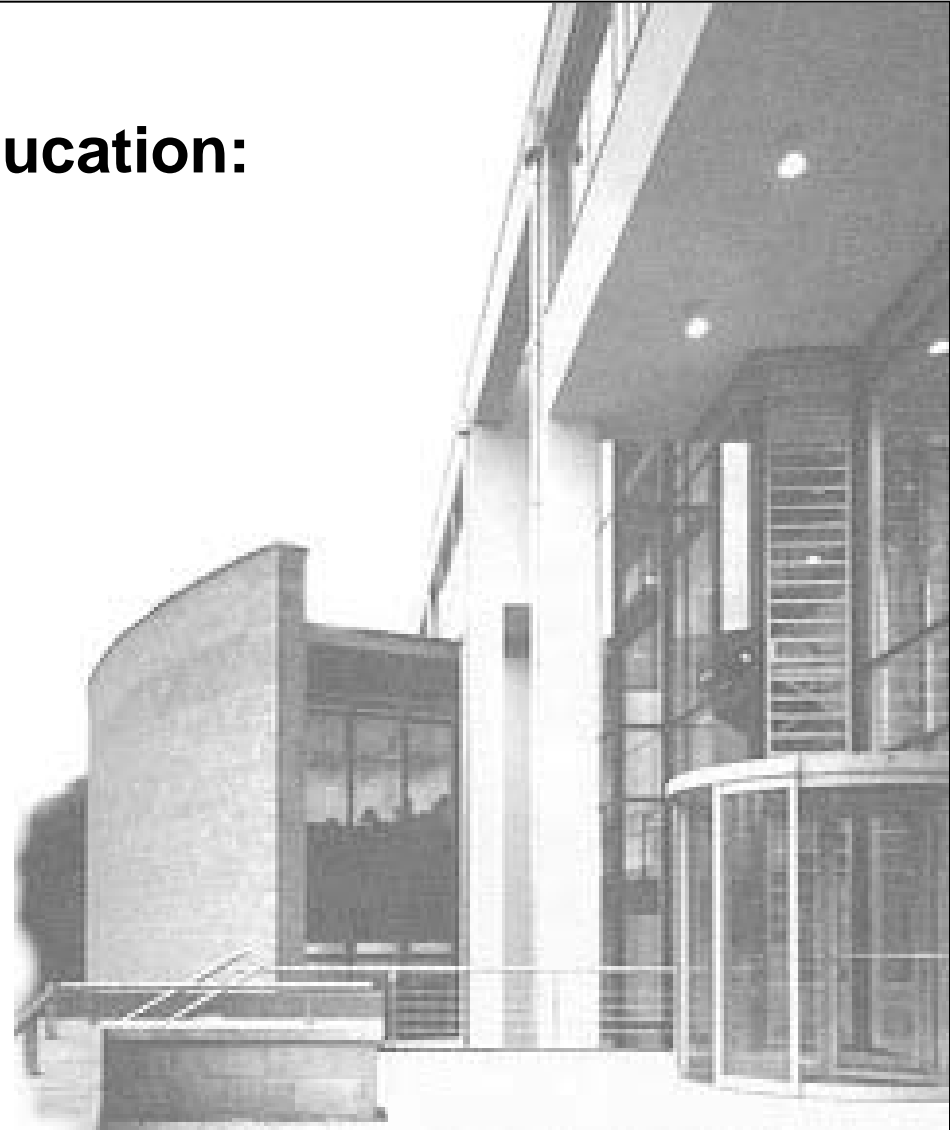
# Vocational and academic education: friends, foes or strangers?

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VU University Amsterdam

EAN Conference 2011

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1. Background and Research Question
2. Berufswertigkeit Concept and Survey Details 2009
3. Description and Interpretation of BWI Results
4. Survey Results about RPL and Outcome  
Implementation in German HE 2010
5. Conclusions

# 1. Research Question: Background

- **Germany:** Two thirds of an age cohort in vocational and one third in academic education <<< demographic change and LLL
- **EQF/NQF: Outcome orientation**, necessity and comparability of course and competence **evaluation**
- Concept and survey **Berufswertigkeit** as objective output-oriented competence measurement tool with empirical foundation (2006-2009)
- **Empirical survey** among German business schools 2010: implementation of **RPL processes** and outcome orientation in HE
- Implementation “**hot spots**”: Access evaluation and “rights”; RPL; didactics in HE; “bundling” of vocational and academic education

# 1. Research Question: Examples

## Educational Question:

How can the value of education / qualification be analyzed?

Has a vocational degree the same “value” as an university degree?

Michael Sülzer, Dipl.-Ing. (FH),  
Awardee FH Köln, self-employed

Patrick Pahmeyer, KFZ-Technikermeister,  
Awardee HK Düsseldorf, Audi AG



## 2. Background Survey 2009

- Mission: Comparison between vocational education and higher education on the basis of the ***Berufswertigkeit concept***
  - Based on **relevant requirements in professional practice**,
  - Focused on **comparable - not similar - qualifications**.
- Objectives of the survey 2009 (n=767): KFZ-Technikermeister / academic course ***engineering*** and Handelsfachwirt / academic course ***business administration***; survey with **graduates** and **executives** > effect of informal learning (self-assessment, n=767)
- Expectations: **Comparative value** of **specific** vocational and higher education - *background*: constitutional possibility of introducing a title “bachelor professional” for vocational further education degrees

## 2. Requirements of Berufswertigkeitsindex (BWI)

### Field: "Personal requirements"

- Efficiency
- Independence and own initiative
- Flexibility and adaptability
- Work virtues
- Stress resistance
- Motivation and ability to lifelong learning and maintain to own competence profile
- Coordinate the work- and lifetimes
- Creativity
- Loyalty
- Risk-taking
- Charisma

### Field: "Communication"

- Ability to write and speak in German
- Knowledge for foreign language
- Ability to apply modern information- and communication technologies (work place)
- Communication and rhetoric
- Assertiveness
- International and intercultural competence
- Customer focus

## 2. Requirements of Berufswertigkeitsindex (BWI)

### “Operational service production”

- Skills in mathematics and statistics
- Preparation of cost estimates and quotations
- Planning, implementation and documentation of orders and projects
- Negotiations capacity
- Analytical problem-oriented work
- Quality management (optimization of processes and products or service quality)
- Conceptual and strategic implementation of industry-specific knowledge and experience

### “Long-term planning and management”

- Identification with the company
- Strategic orientation, determine / control the complete company
- Understanding solutions of complex technical problems
- Basic knowledge of business administration
- Perception of functions of management and organization
- Conceptual working in immediate workplace
- Planning and control procurement and logistics processes
- Staff requirements and staff mission planning / staff development
- Team, staff and leadership
- Improving responsible care
- Legal knowledge on workplace

## 2. Calculation of the Berufswertigkeitsindex (BWI)

- Coding the BW-Categories (36 professional requirements)  
Grade scale: 1 „very good“ / 5 „inadequate“
- **BWI interpretation: Proportion of possible points in %**
- 100 percent: Evaluation of all BW-Categories with very good  
0 percent: Evaluation of all BW-Categories with inadequate

$$\text{BW-Index} = \left[ 5 - \left[ \frac{\text{Summation all reviews}}{\text{Quantity of BW-Categories}} \right] \right] * 25$$

Index of sum:  
 range of values like starting scale (1-5)

Recoding of range of values :  
 0 = „inadequate“ / 4 = „very good“

Standardization  
 of percent:  
 25 =  $\frac{1}{4} * 100$

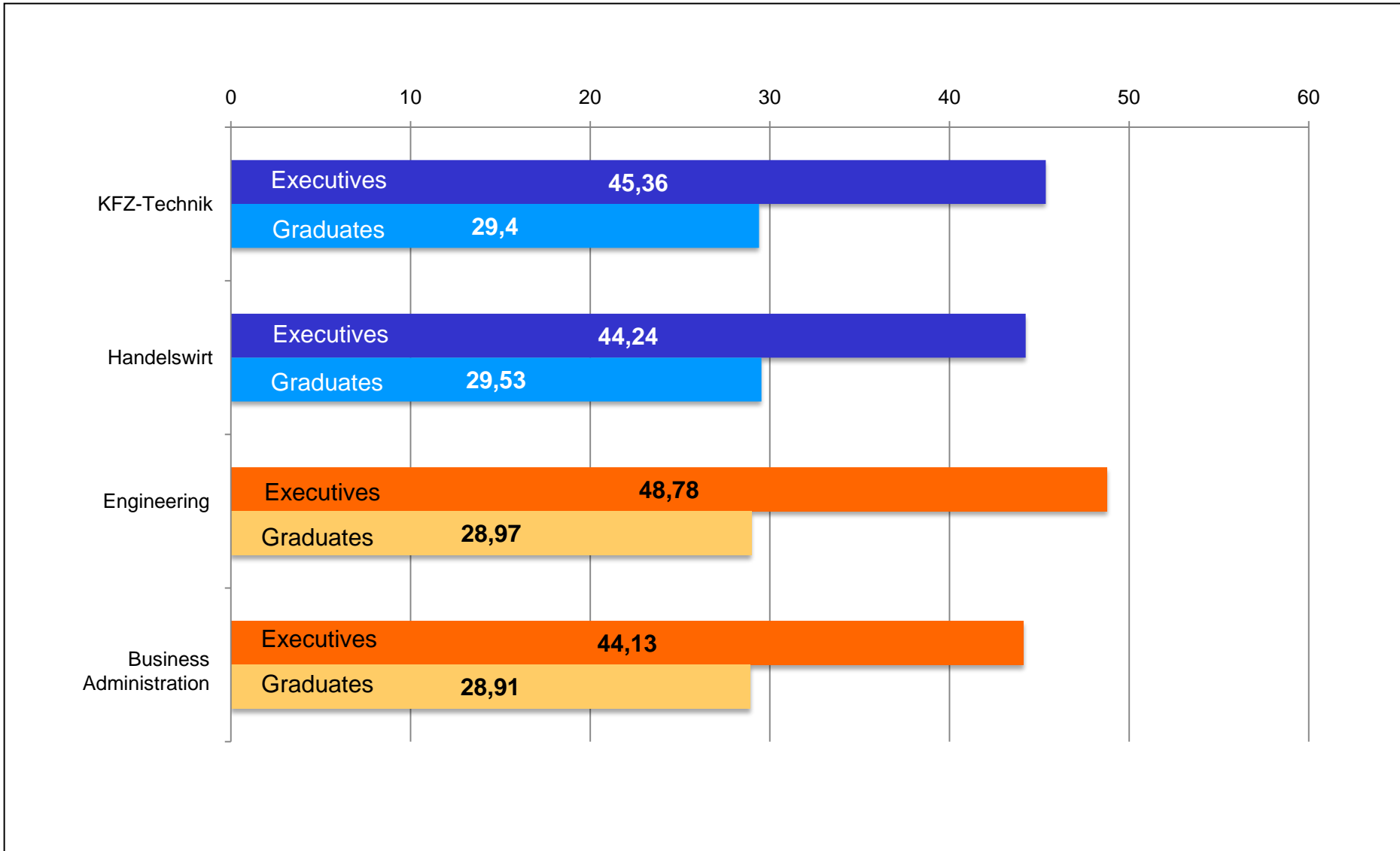
## 2. Testing Design

Number of Participants

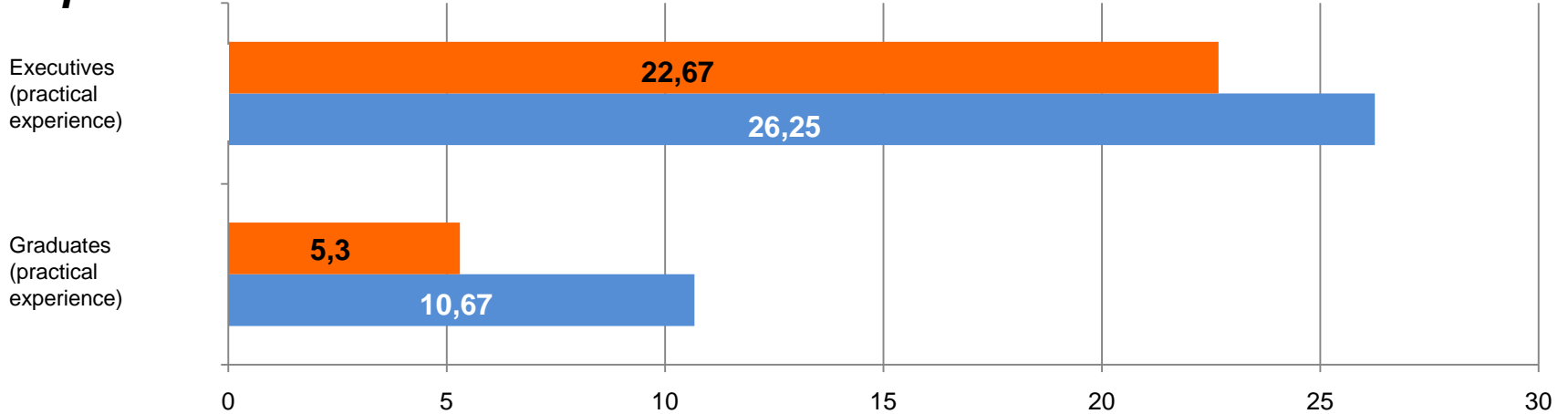
<i>Vocational degree</i>	KFZ-Technik		Handelsfachwirt	
	Graduates	Executives	Graduates	Executives
Planned	200	100	200	100
Realized (without Missings)	184	94	107	51
<i>Higher education degree</i>	Engineering		Business Administration	
	Graduates	Executives	Graduates	Executives
Planned	200	100	200	100
Realized (without Missings)	37	92	99	103

## 2. Testing Design

Average Age (Years)

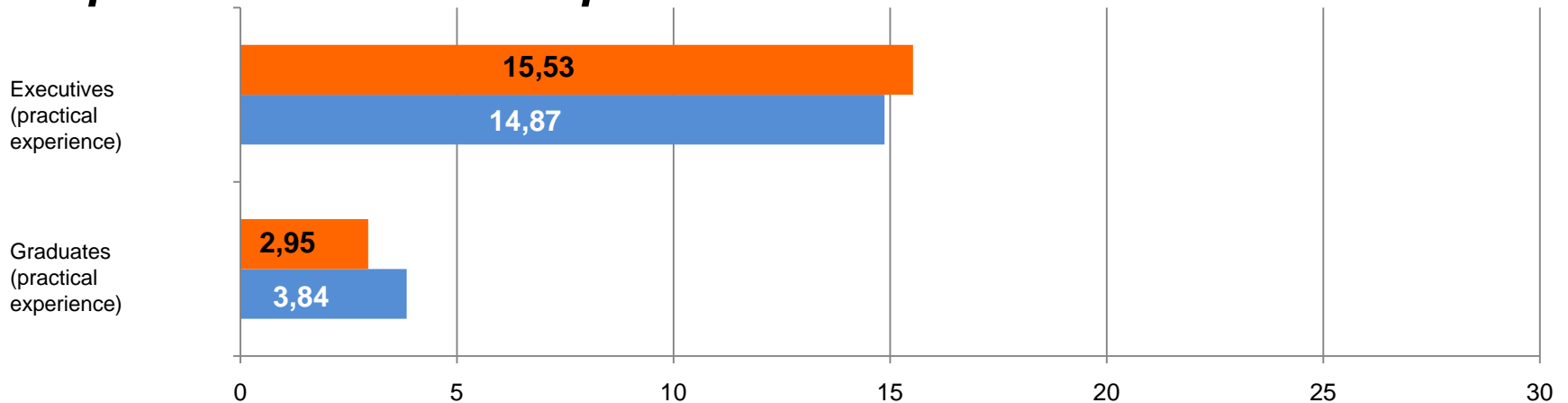


### Experience in Practice

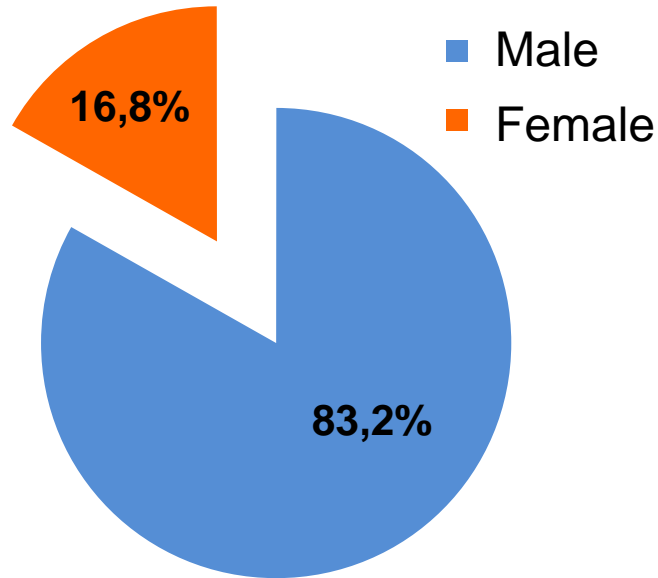


■ academic    ■ vocational

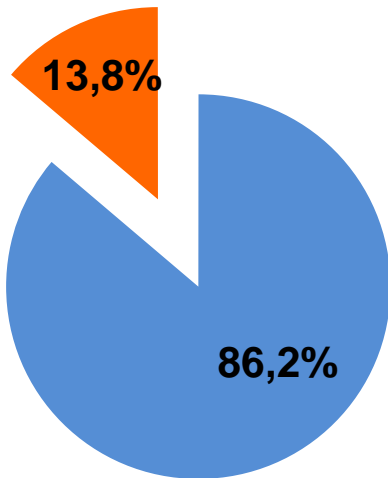
### Experience in Leadership



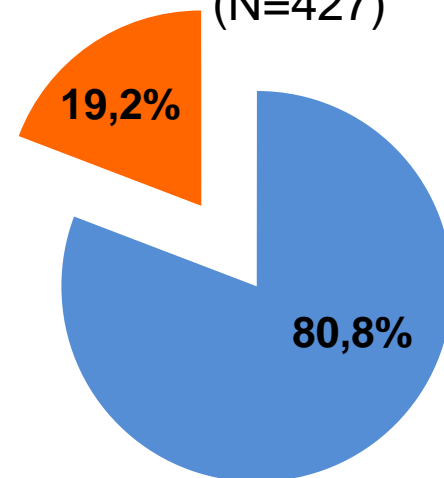
**Complete**  
(N=767)



**Executives**  
(N=340)

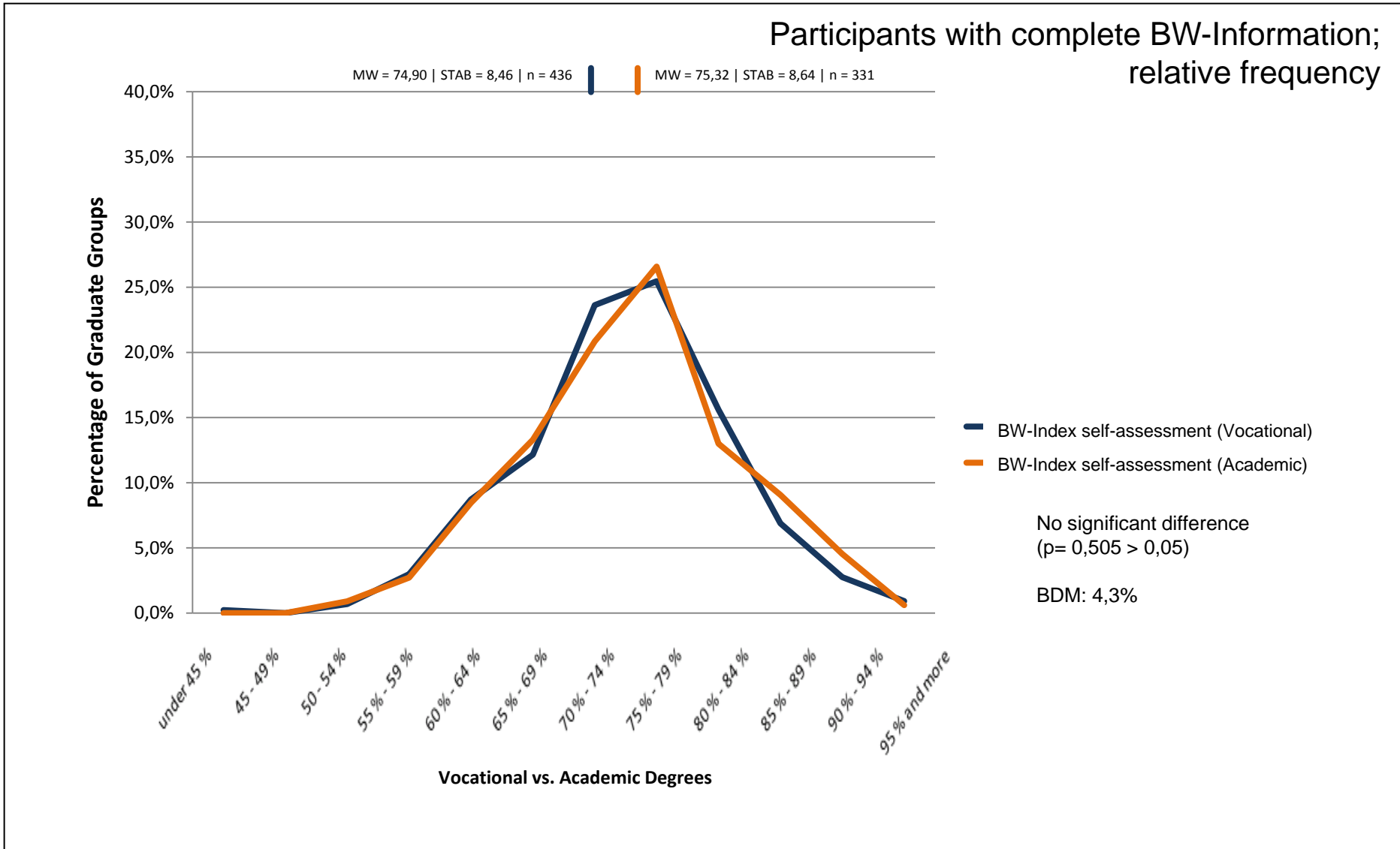


**Graduates**  
(N=427)



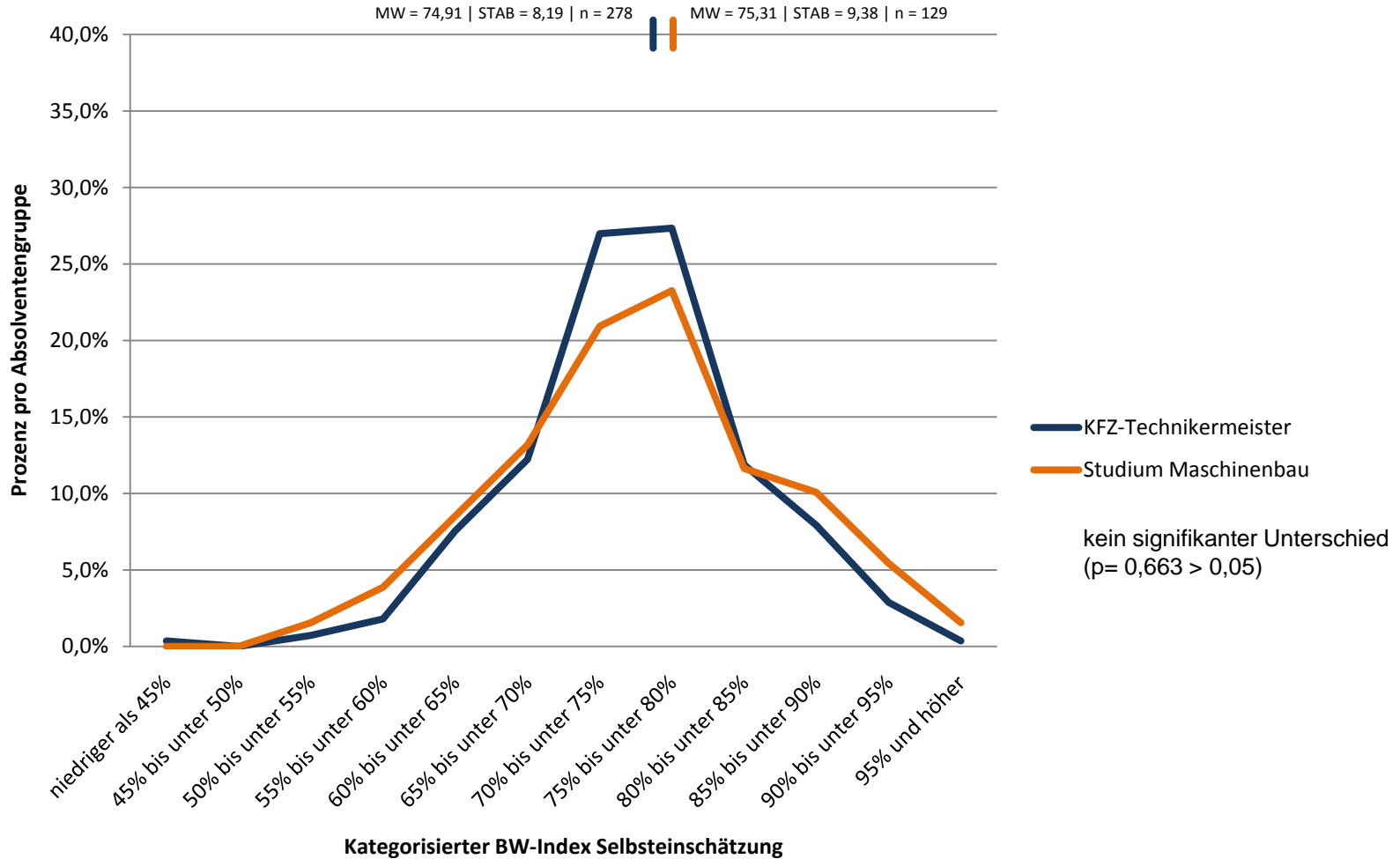
# 3. Berufswertigkeit Results 2009

Vocational vs. Academic Degrees



# 3. Berufswertigkeit Results 2009

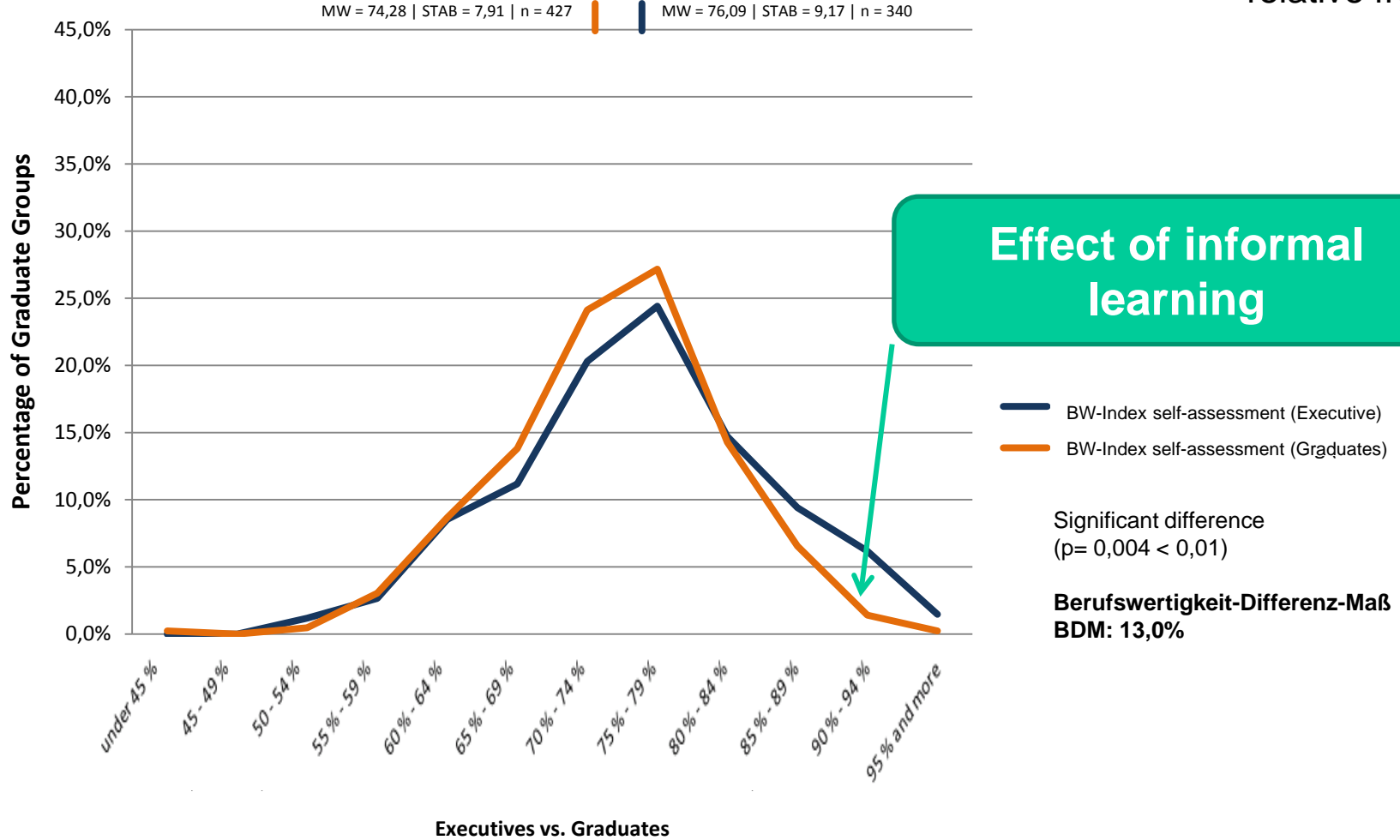
Vocational vs. Academic Degrees: Engineering



# 3. Berufswertigkeit Results 2009

Graduates versus Executives

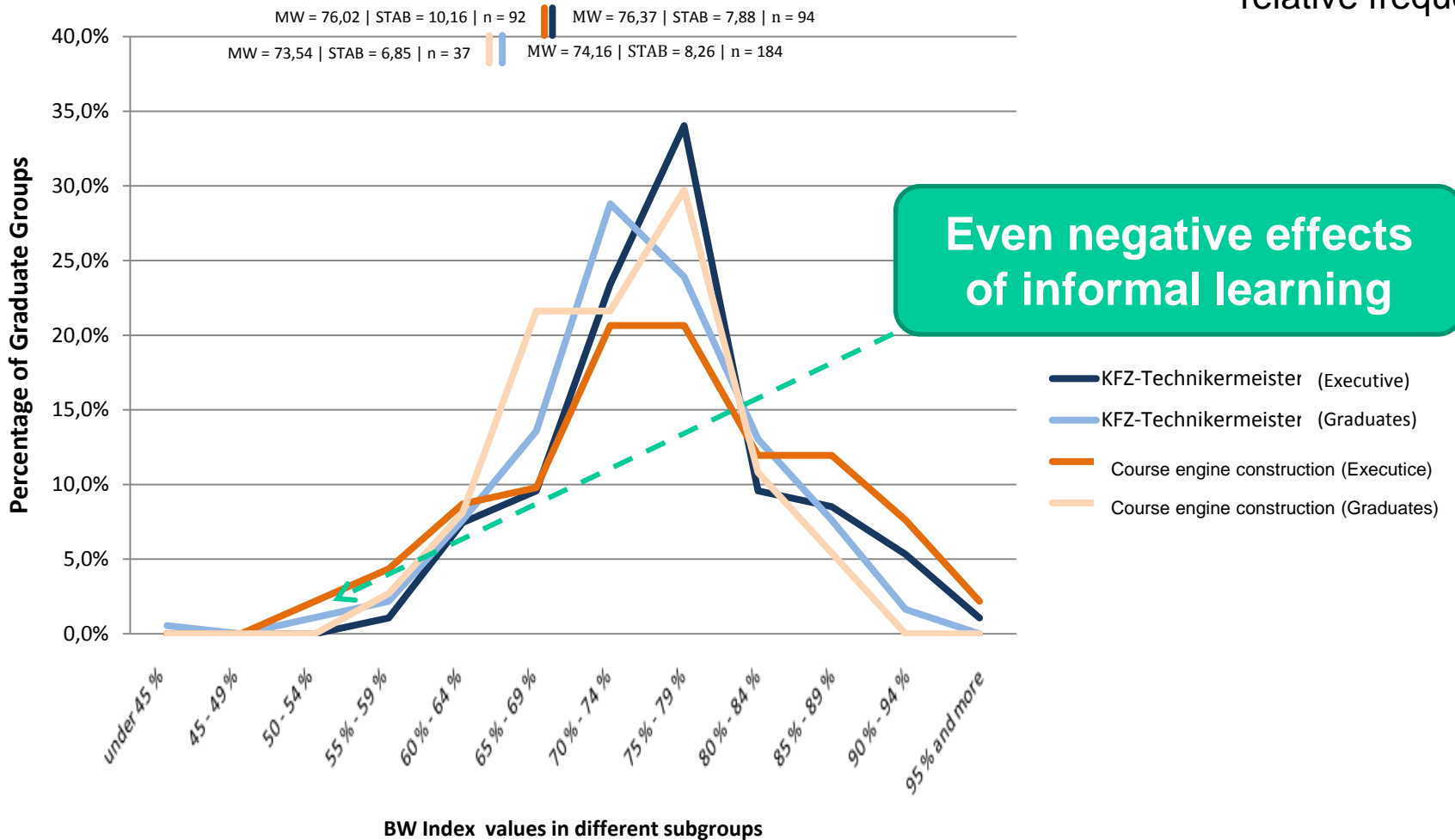
Participants with complete BW-Information;  
relative frequency



# 3. Berufswertigkeit Results 2009

Graduates versus Executives by Subject

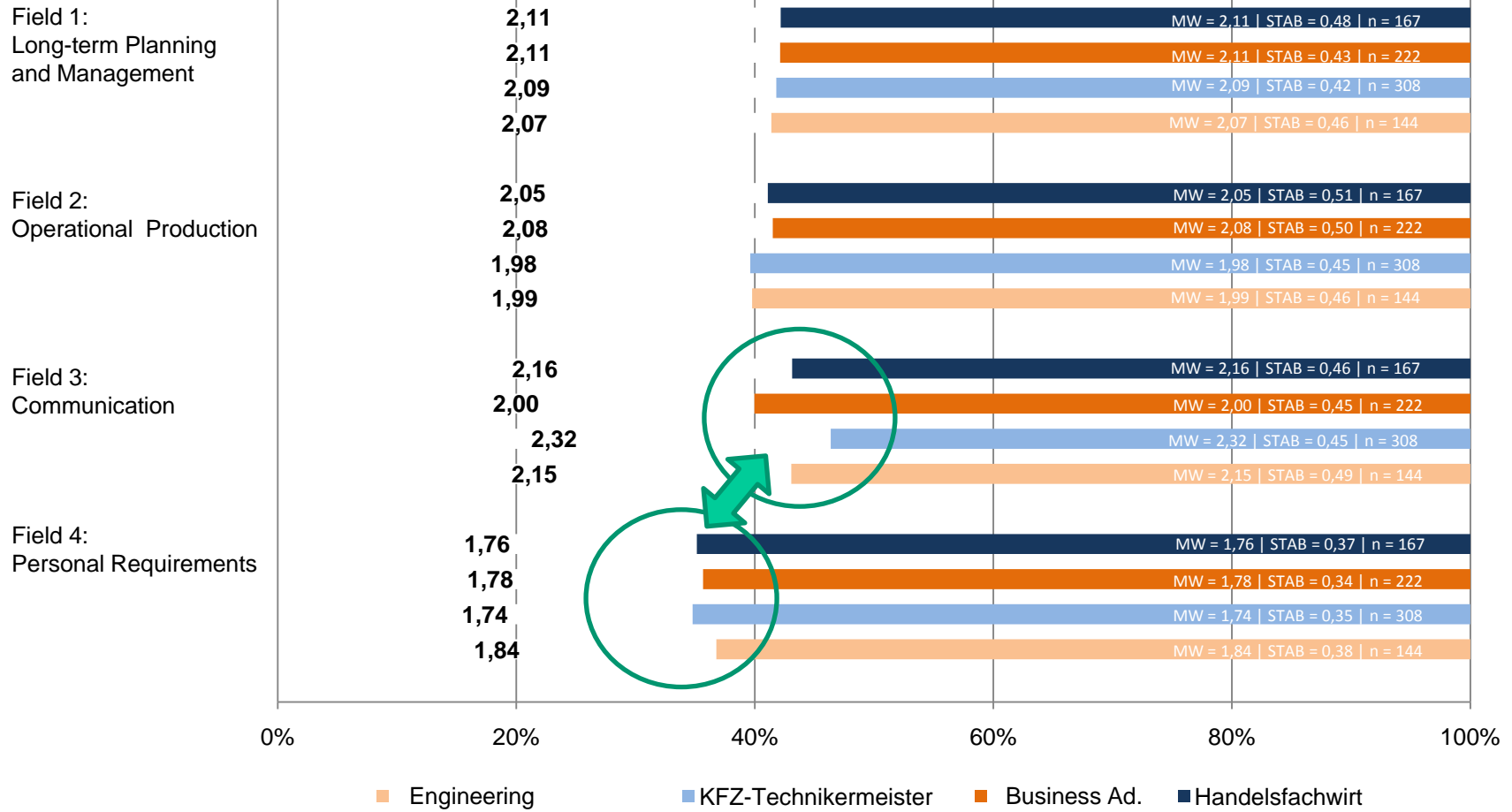
Participants with complete BW-Information;  
relative frequency



# 3. Berufswertigkeit Results 2009

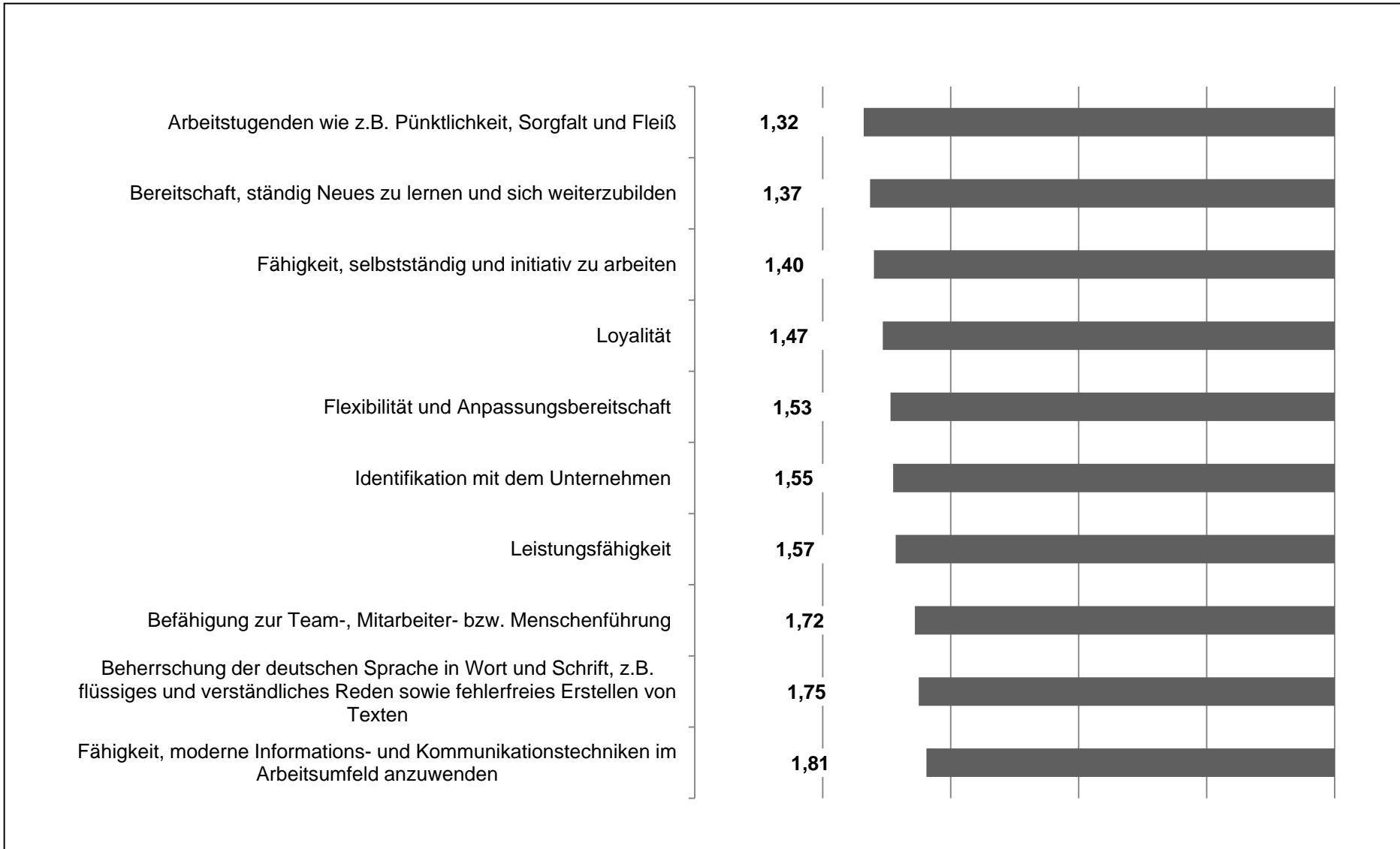
Specific Competences / Requirement Fullfillments

Participants with complete BW-Information;  
relative frequency



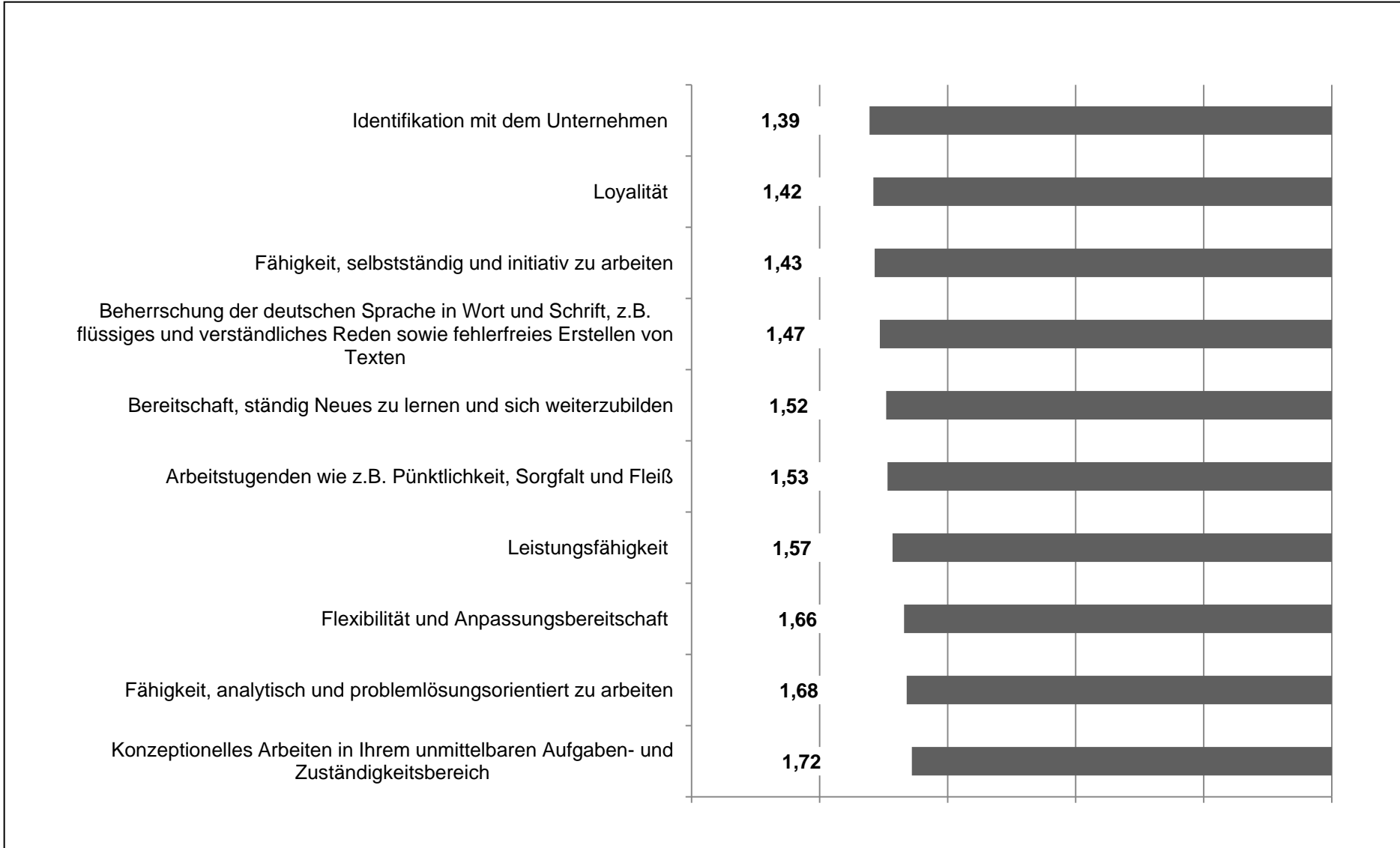
# 3. Berufswertigkeit Results 2009

Specific Competences / Requirement Fulfillments: Vocational



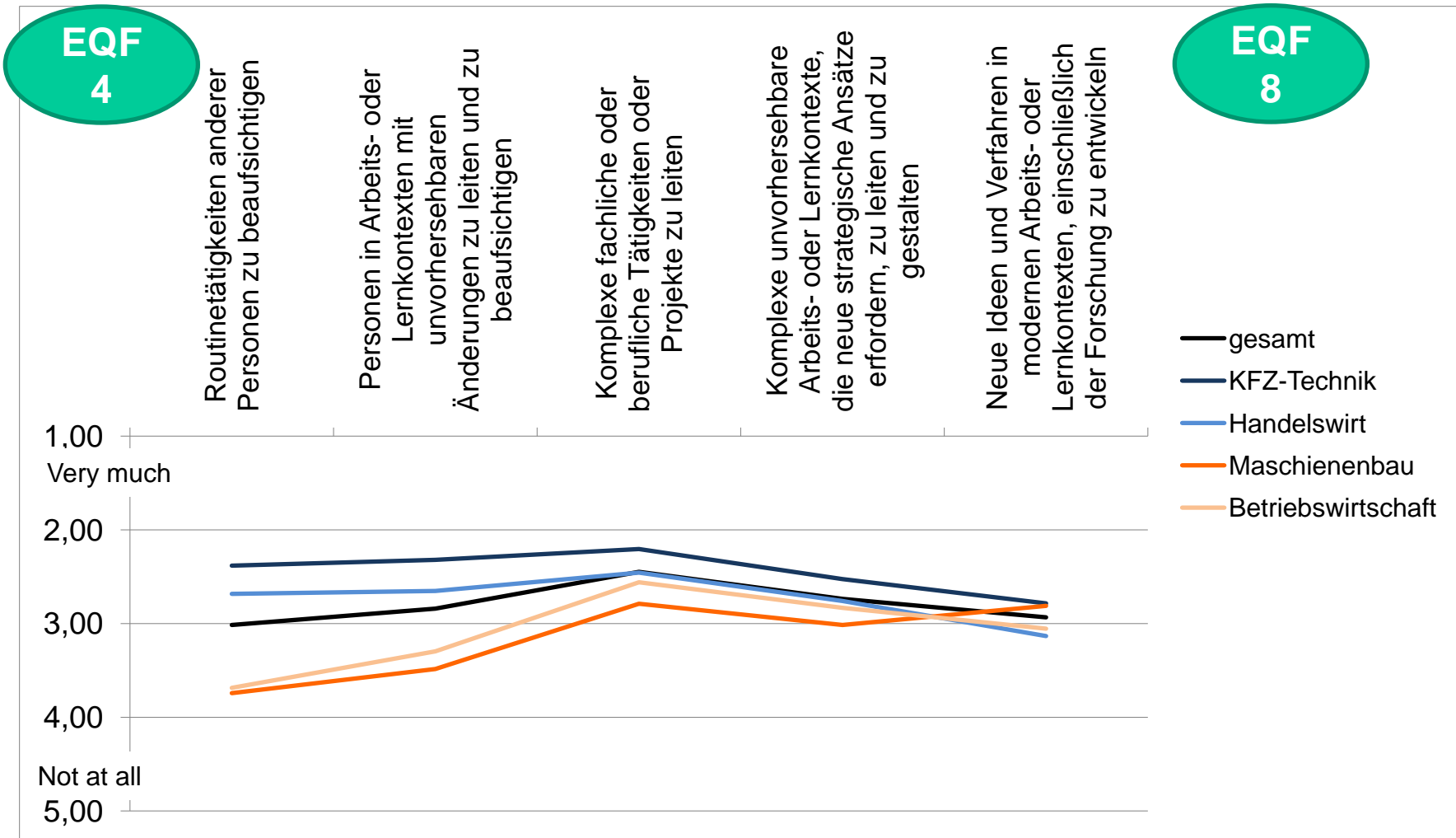
# 3. Berufswertigkeit Results 2009

Specific Competences / Requirement Fullfillments: Academic



# 3. Berufswertigkeit Results 2009

EQF Levels for Vocational and Academic Education

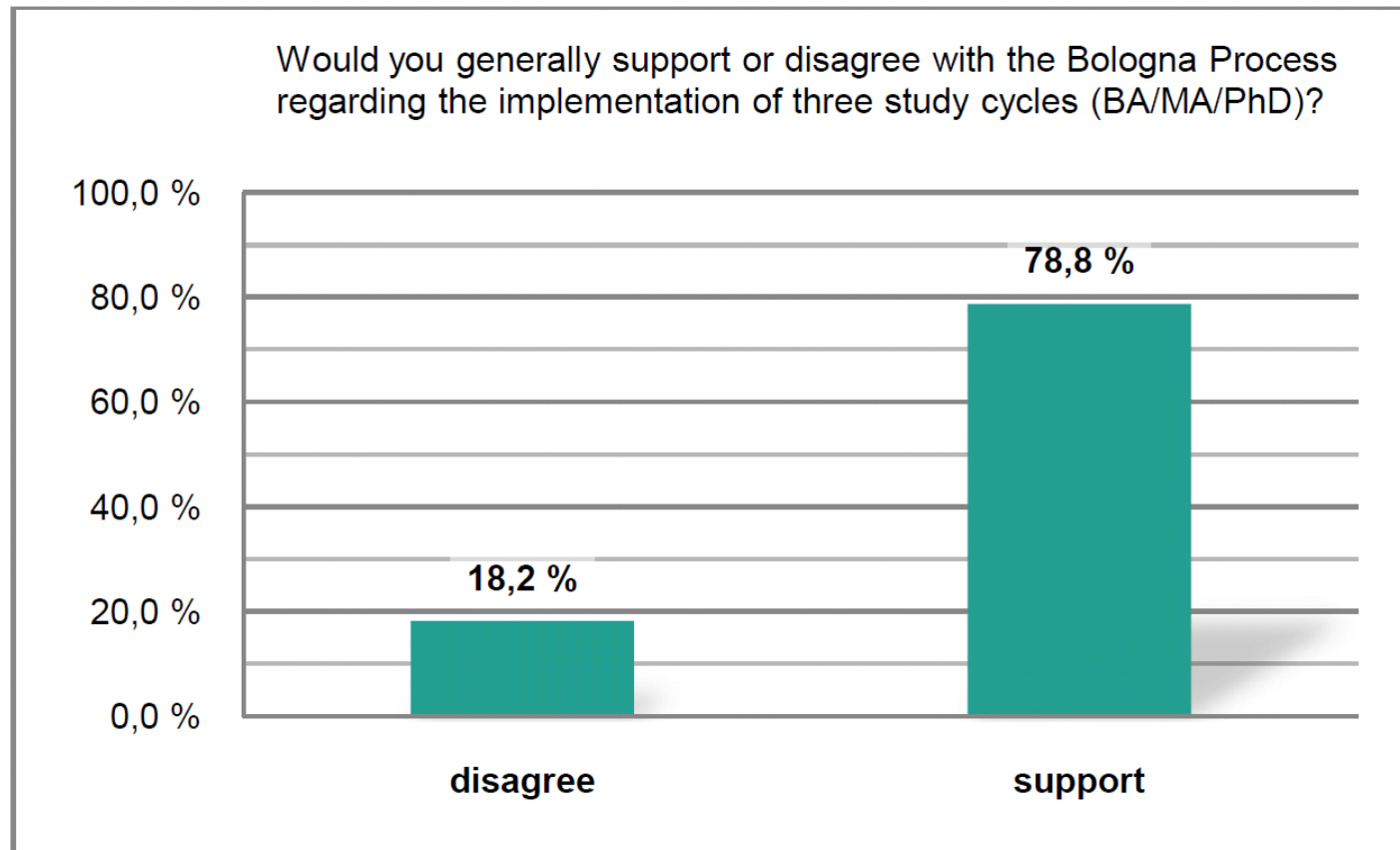


### 3. Berufswertigkeit Interpretation

- A **comparison of qualifications** for academic and vocational education is possible (objective output measurement)
- However, these groups are **different in their skill profiles**, complicating comparisons and especially access questions (RPL)
- **Business practice** is demanding (a) a specific skill profile and (b) a mix of skills addressed by vocational and academic education, *therefore*
  - Both education sectors (SQF) have to “converge”
  - Combinations and sequences have to be established (e.g. German Universities of “Co-operative” Education - former BA – with alternating learning phases every three months)
  - Regulation gap (Germany) degrees, access > NQF implementation

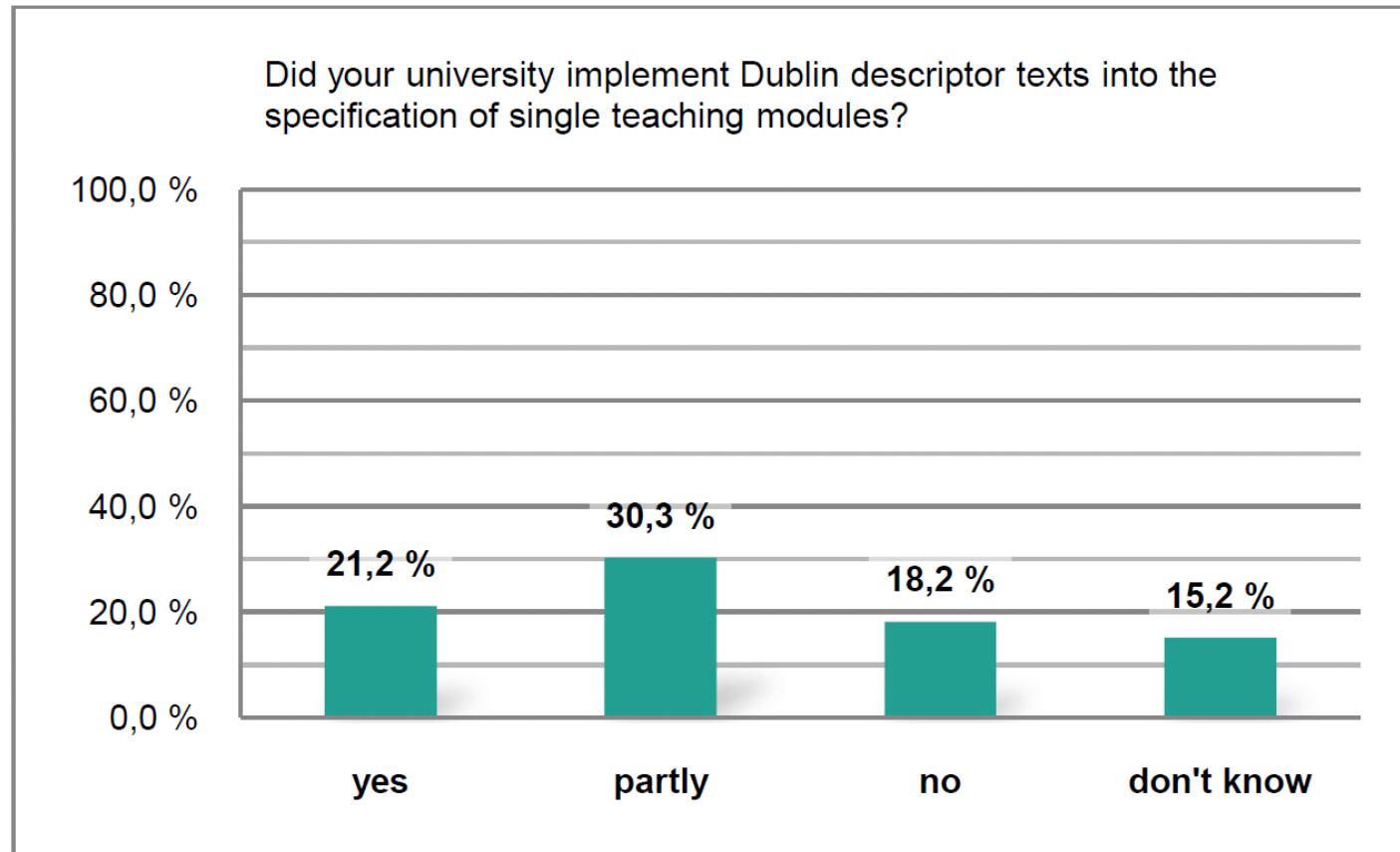
## 4. HE Survey Standards (2010)

- Survey addressing 230 universities (business administration) in Germany (August-December 2010) with 54 responses, 33 usable.



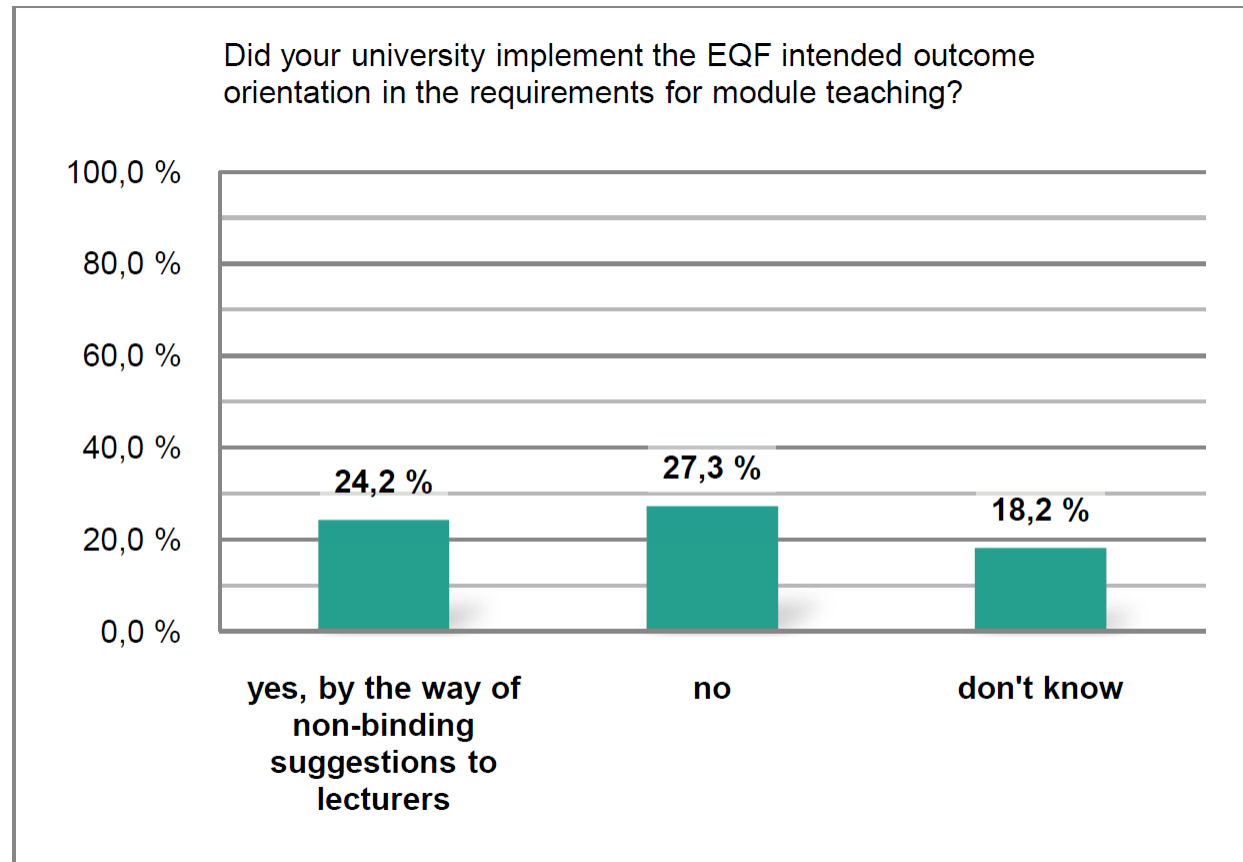
## 4. HE Survey Standards (2010)

- On the module level standards implementation as e.g. the Dublin Descriptors are still scarce.



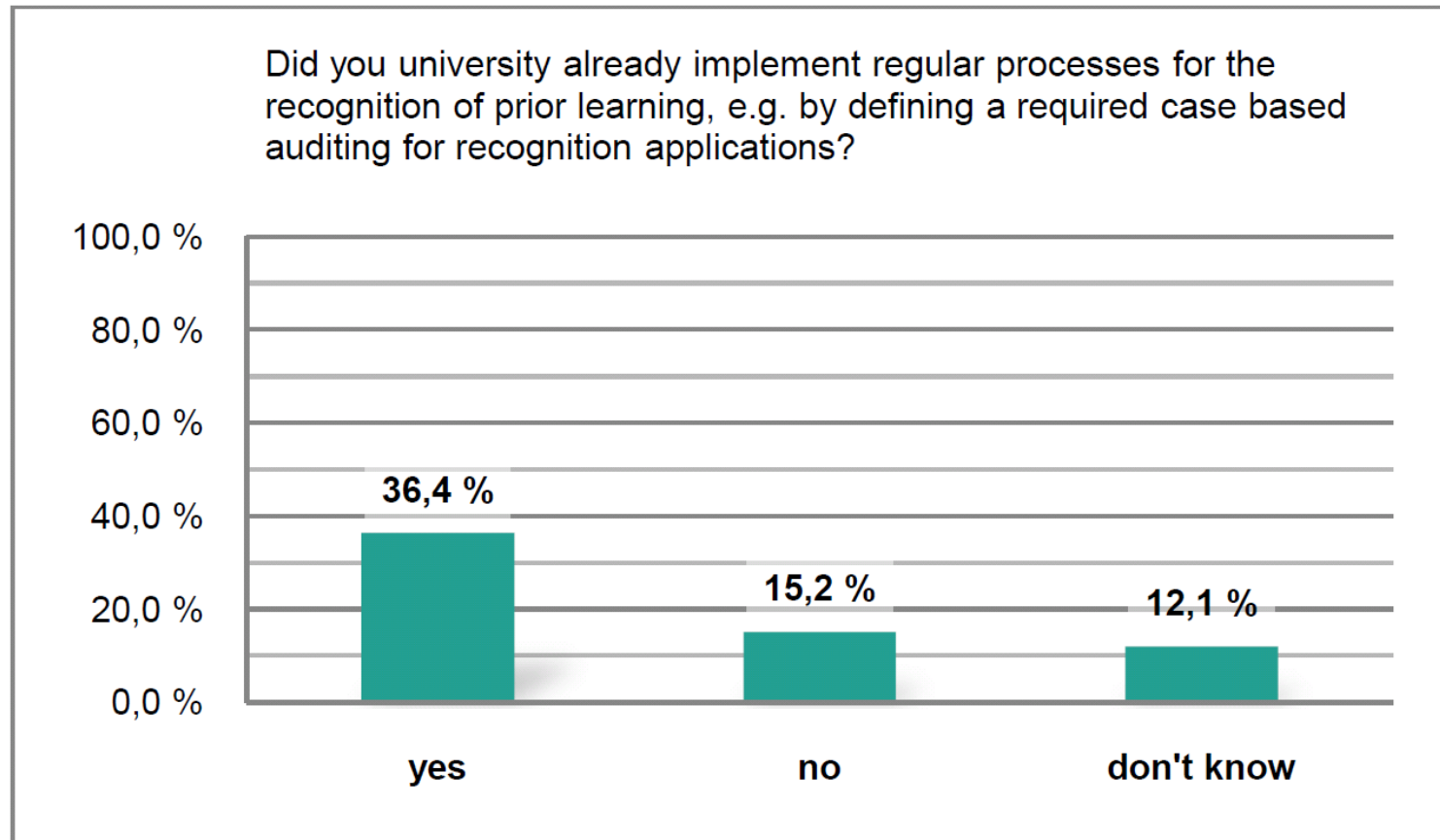
## 4. HE Survey Standards (2010)

- The EQF principle of outcome orientation is hard to transfer to day-to-day classroom teaching.



## 4. HE Survey Standards (2010)

- Recognition of prior learning is an important topic but only one third of all universities have standardized processes therein.



- This analysis with BWI & standards surveys in Germany illustrates **developments for life-long learning and HE Management:**
  - Vocational and academic education lead to different competence profiles but comparable competence levels
  - Informal learning and output orientation are major trends and challenges for HE institutions
  - Demographic changes and LLL imply the necessity for broader ways and groups of vocationally trained persons entering higher education
  - RPL questions are (still) an important field of development in (German) HE: ***“Strangers” have to become “friends”***
  - New concepts of support for vocational trained persons in HE needed, e.g. „LOG.LAB“ at FOM Duisburg, Germany (BMBF project)

# Vocational training and academic studies: friends, foes or strangers?

**Thank you for your kind attention.**

Matthias Klumpp

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EAN Conference 2011

21<sup>st</sup> of June 2011

