

# **Wirkungsevaluation von Qualitätsmanagement im Hochschulbereich.**

## **Ein Beitrag zur nachhaltigen Qualitätsentwicklung in der Wissens- und Lerngesellschaft**

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- **Wissensgesellschaft und Wirkungsanalyse**
- **Weshalb Wirkungsanalyse von (externer) Qualitätssicherung?**
- **Methodologie** der Wirkungsanalyse von (externer) QS in Hochschulen
- Das europäische **IMPALA-Projekt**
  - Partner, Fallstudien und Ziele
  - Forschungsdesign
  - **Vorläufige Ergebnisse**
- **Schlussfolgerungen**

## Wissensgesellschaft

- Peter Drucker: „the **knowledge economy**“ (*The Age of Discontinuity*, 1969)  
“The next society will be a **knowledge society**. Knowledge will be its key resource, and knowledge workers will be the dominant group in its workforce” (Drucker 2001).
- **permanente Innovation: lebenslanges Lernen, Wissensentwicklung, Wissensteilung**
- **permanente Ex- und Intensivierung von Bildung und Ausbildung:** “higher education for all”; zunehmende Komplexität von (Aus-)Bildung; zunehmende Diversität von LernerInnen
- Wissen ist **vernetzt, dezentral, interdisziplinär, transdisziplinär**
- Wissen als **strategische Ressource** in Produkten und Dienstleistungen
- effektive Nutzung von Wissen ist entscheidender **Wettbewerbsfaktor**

## Wissensgesellschaft

- **Hochschulen** (und Schulen und andere Bildungseinrichtungen) wichtiger denn je als **Leistungsträger** in den globalen **Wissensökonomien**
  - basal für permanenten **Fluss von Menschen, Wissen, Information, Technologien, Produkten, Finanzkapital** (vgl. Marginson 2006)
  - als **Produzenten von Innovationen und neuem Wissen** entscheidend für Konkurrenzfähigkeit von Nationalstaaten
- ergo: **Wissensorganisation** (z.B. Bibliotheken; Medialisierung; Digitalisierung) und **Wissensökonomie** (Mischung aus: kommerzieller Markt wissensintensiver Produkte und frei generierte und verfügbare Wissensgüter) **von zentraler Bedeutung**

# Wissensgesellschaft, Wissensorganisation, Wissensökonomie

- ergo: **Qualitätsmanagement – Qualitätssicherung und Qualitätsentwicklung – von hochschulischen Leistungen** (Studium und Lehre; Forschung/ Wissens- und Technologieinnovation; Wissens- und Technologietransfer; Weiterbildung/LLL; Nachwuchsausbildung; ...) **von zentraler Bedeutung**
- ergo: **systematisches evidenzbasiertes QM** erforderlich
- ergo: **Wirkungsanalyse von QM** (als Interventionen) **erforderlich**



## (Why) Impact of (External) Quality Assurance

- More than two decades of (external) **quality assurance**, further **extensification and intensification**
- (Some) HEIs complain about **high evaluation workload** and **evaluation costs** and **need effective and efficient QA** procedures (e.g., massification; economy measures in HE; national and global competition)
- (Some) governments complain about **high evaluation costs**

BUT

- Rather **few** and **only ex-post impact analyses of EQA**
- **No simultaneous impact analyses** (accompanying EQA)
- **Students, teachers, QA staff not considered** [focus on institutional leadership opinions (and peer assessments)]
- **Need for competence development** in **impact analysis** and **meta-evaluation** in **QAAs** and **HEIs** (**effectivity; efficiency; strategy; innovation**)



## 5 Haupt-Wirkungsbereiche

- **Studium und Lehre**
- Forschung
- Third Mission
- Internationalisierung der Hochschulbildung
- Inter- und Transdisziplinarität der Hochschulbildung
- **institutionelles Management**
- nationales Hochschul- und Qualitätssicherungssystem
- **Zufriedenheit mit Qualitätssicherungsprozessen**

## Stakeholder

- **Studierende**
- **akademisches Personal in Lehre und Forschung**
- GutachterInnen
- ArbeitgeberInnen
- Qualitätssicherungsagenturen
- **Studienprogrammmanager**
- **Hochschulmanager**
- Regierungen
- Gesellschaft
- Internationale Gemeinschaft



## Methodological elements of impact analysis of QA in HEIs

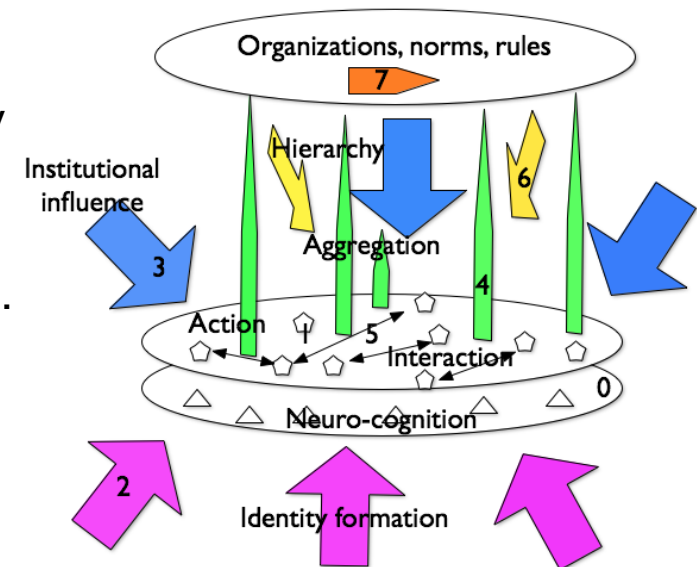
- **Before-after comparison design** (and *ex-post analysis*)  
Allows to analyse **if** and **when** and **how** an effect has been achieved
- **Causal mechanism hypotheses** (cf., e.g., Leiber et al. 2016)  
Allow to analyse how effects are achieved
- **Assessments of intervention effects** by participants, key informants, expert (e.g., via **standardised surveys** and **structured interviews** with **different target groups** such as academic staff, students, QA staff, leadership etc.)  
Allow to analyse goals, processes, structures, preferences, actions and institutional & programme change
- **Counterfactual self-estimation of participants** (Mueller et al. 2013)  
Allows to analyse change of personal variables (intentional states) related to preferences, decisions and actions (relevant to institutional & programme change)
- **Document analyses/observations**  
Allow to analyse goals, processes, structures, actions and institutional & programme change





# Causal social mechanisms

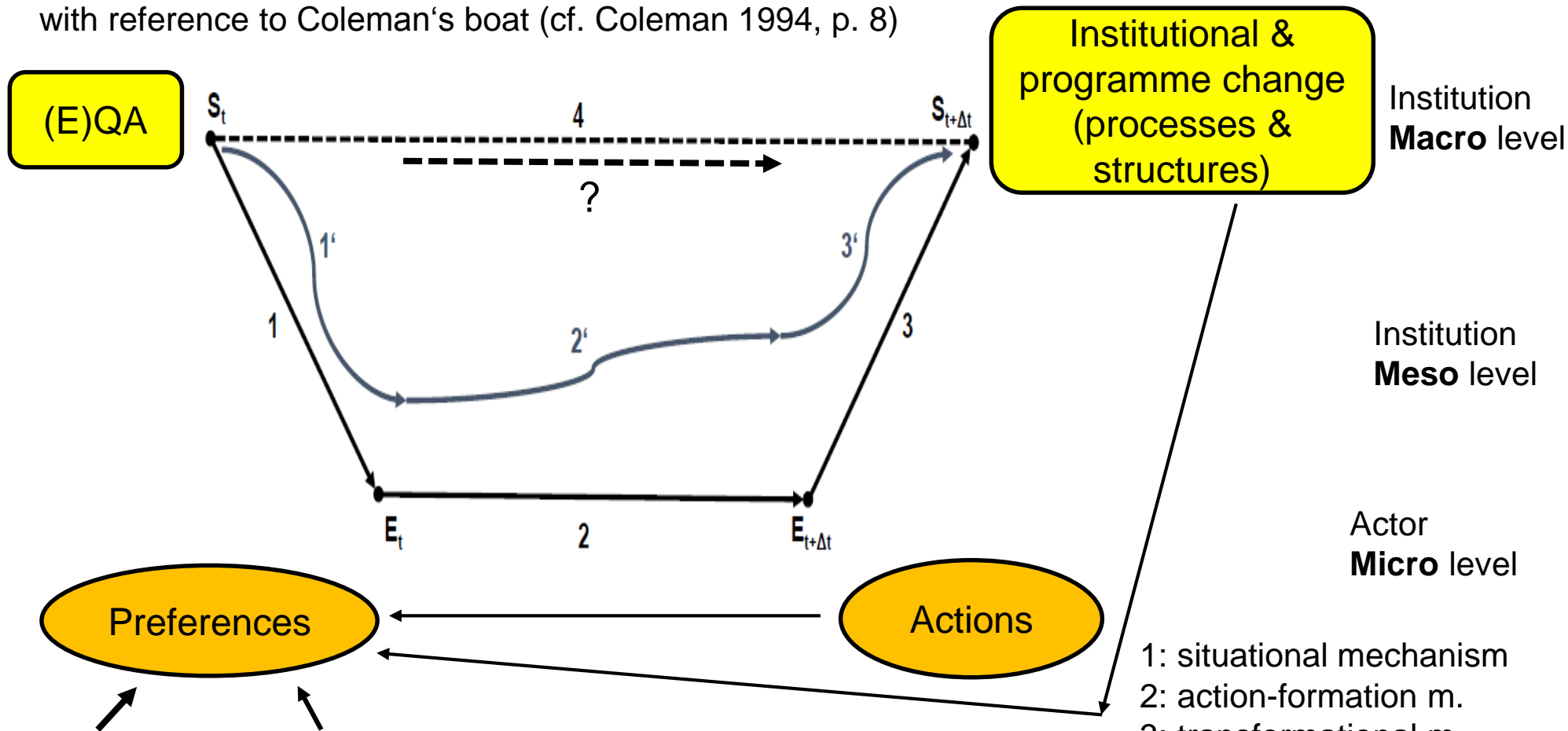
- “That we explain **not** by evoking universal **laws**, or by identifying **statistically relevant factors**, but by **specifying [causal] mechanisms that show how phenomena are brought about**” (Hedström, 2005, p. 24).
- “Social mechanisms are complexes of interacting individuals, [bodies and institutions] usually classified into specific social categories that generate causal relationships between aggregate-level variables. A mechanism will be said to be from the variable *X* to the variable *Y* if it is a mechanism through which *X* influences *Y*” (Steel, 2004, p. 59).
- In a nutshell, a causal social mechanism is “the [social] pathway or process by which an effect is produced or a purpose is accomplished” (Gerring, 2007, p. 178).



from: Daniel Little, **Classifying mechanisms by location**, August 02, 2014, [http://www.google.de/imgres?imgurl=http%3A%2F%2F2.bp.blogspot.com%2F-HAluvk5b-5U%2FUMFIPAu\\_uR1%2FAAAAAAAG\\_Q%2FWcWfXnK2In%2Fs1600%2FScreen%252BShot%252B2012-12-06%252Bat%252B8.34.41%252BPM.png&imgrefurl=http%3A%2F%2Ffundsoc.org%2Ftag%2Fmechanism%2F&h=325&w=477&tbid=VaTiYnxYjldJGM%3A&docid=ygBUSB19425hWM&ei=fwzwVa6RDYqtU9zdoAP&tbm=isch&iact=rc&uact=3&dur=170&page=1&start=0&ndsp=43&ved=0CCEQrQMwAGoVChMI7szA1eHpxwVlYUCh3cbgj-](http://www.google.de/imgres?imgurl=http%3A%2F%2F2.bp.blogspot.com%2F-HAluvk5b-5U%2FUMFIPAu_uR1%2FAAAAAAAG_Q%2FWcWfXnK2In%2Fs1600%2FScreen%252BShot%252B2012-12-06%252Bat%252B8.34.41%252BPM.png&imgrefurl=http%3A%2F%2Ffundsoc.org%2Ftag%2Fmechanism%2F&h=325&w=477&tbid=VaTiYnxYjldJGM%3A&docid=ygBUSB19425hWM&ei=fwzwVa6RDYqtU9zdoAP&tbm=isch&iact=rc&uact=3&dur=170&page=1&start=0&ndsp=43&ved=0CCEQrQMwAGoVChMI7szA1eHpxwVlYUCh3cbgj-)

# Causal social mechanisms model

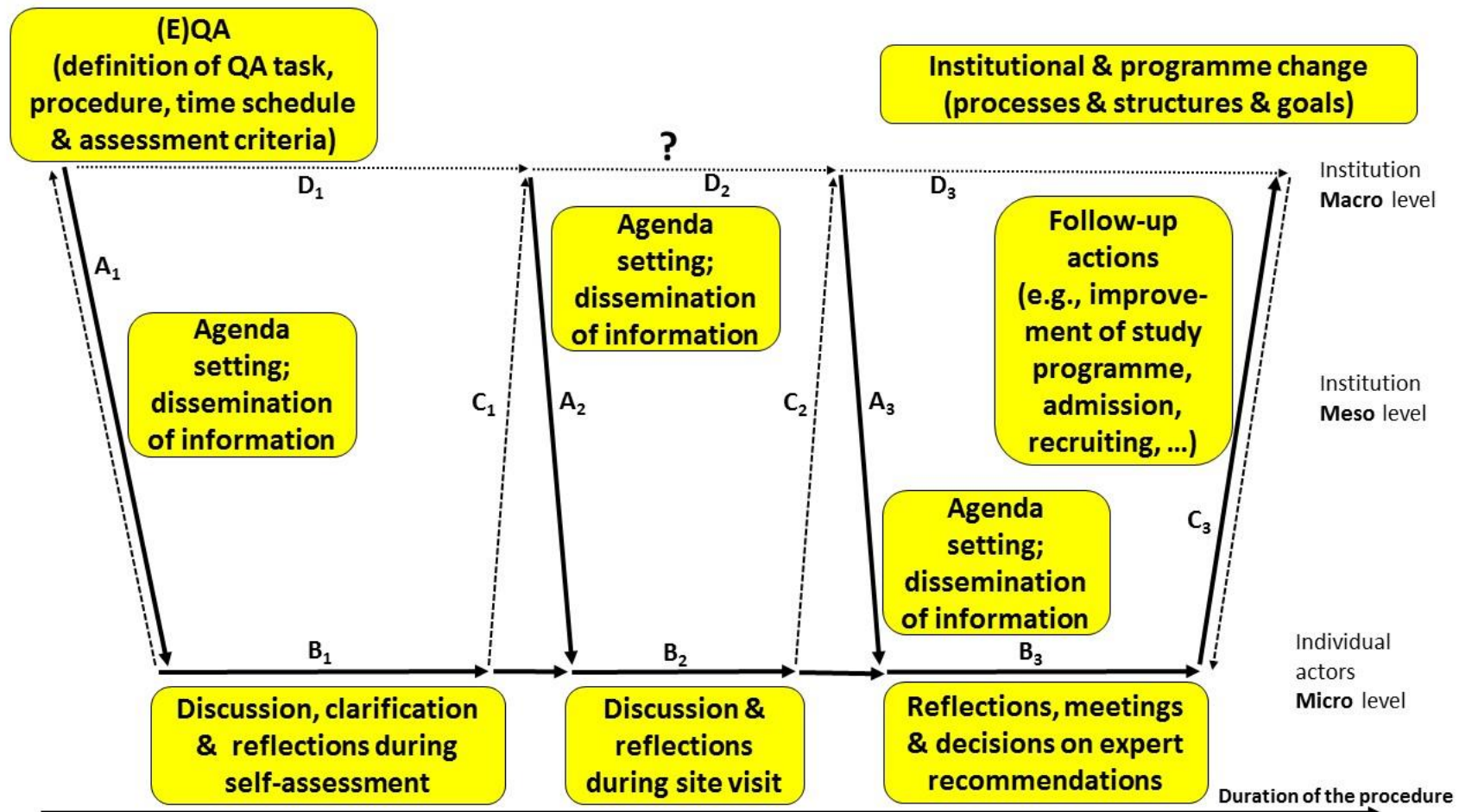
with reference to Coleman's boat (cf. Coleman 1994, p. 8)



- 1: situational mechanism
- 2: action-formation m.
- 3: transformational m.
- 4: statistical correlation only

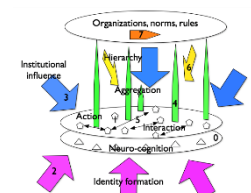
e.g., other QA processes; any HEI-internal & HEI-external influences (e.g., HEI policy)

Basic model of mechanisms underlying “QA meets HEIs” inspired by (Astbury & Leeuw 2010)  
(A<sub>i</sub>: situational mechanism; B<sub>i</sub>: action-formation m.; C<sub>i</sub>: transformational m.; D<sub>i</sub>: statistical correlation only; i = 1, 2, 3)



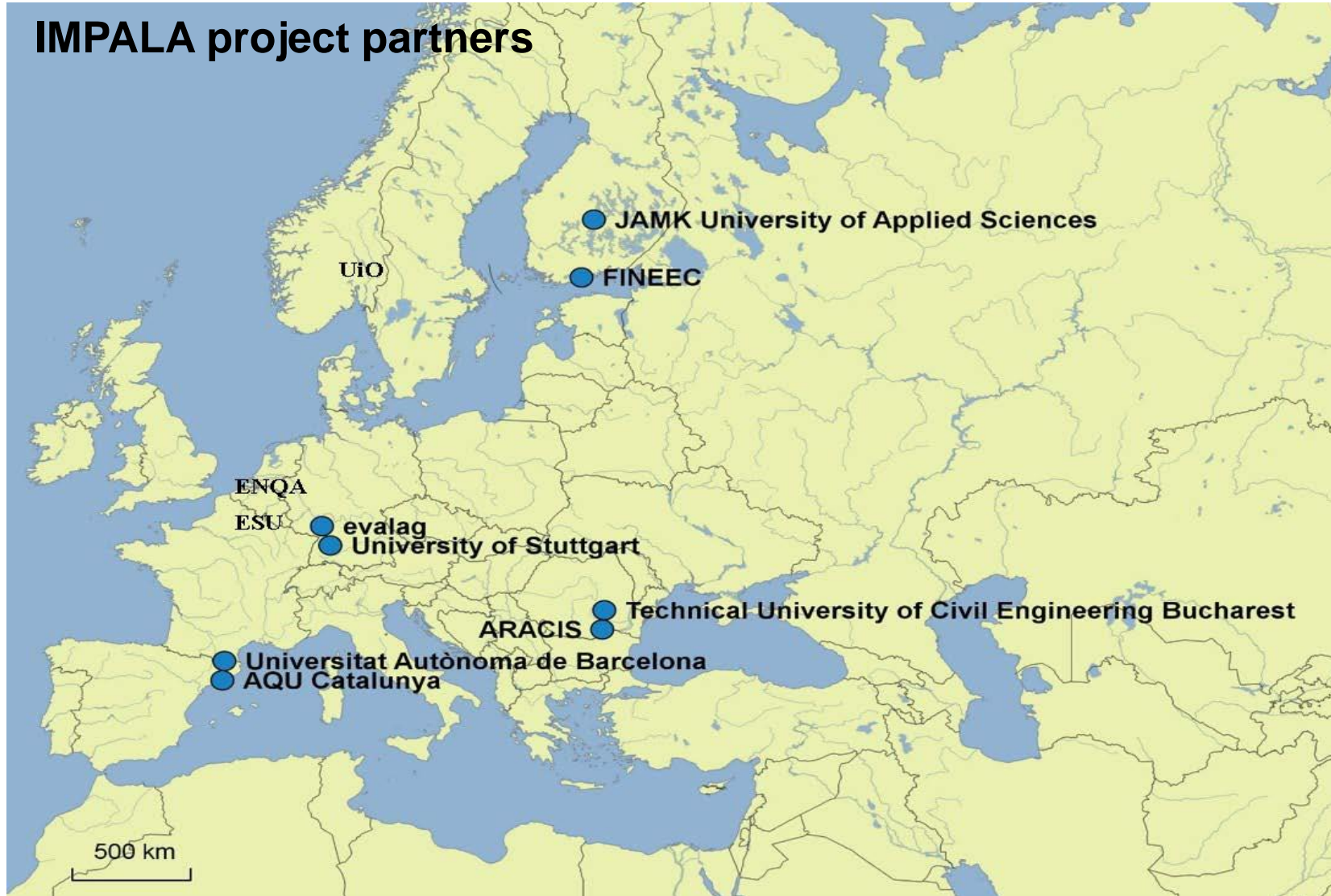
## Advantages and challenges to causal mechanisms approaches

- **“What we need is intelligent discussion of plausible causal mechanisms, which should be subjected to empirical testing to the extent that is feasible. What we should appreciate is that this objective is rarely fully achievable** when one is dealing with distal causal relationships, and it is often unnecessary (in the sense of being trivial) when dealing with proximate causal relationships” (Gerring, 2010, pp. 1518-1519).
- Moreover, **sometimes black-box QA** (which refrains from deeper analyses of causal mechanisms) **may be even necessary “when no theory [or knowledge of mechanisms] is available or needed, or when getting the relevant expertise would take resources of time or money we do not have”**, since “[i]t is a very practical point to avoid doing what is expensive and not needed” (Scriven, 1998, p. 59).

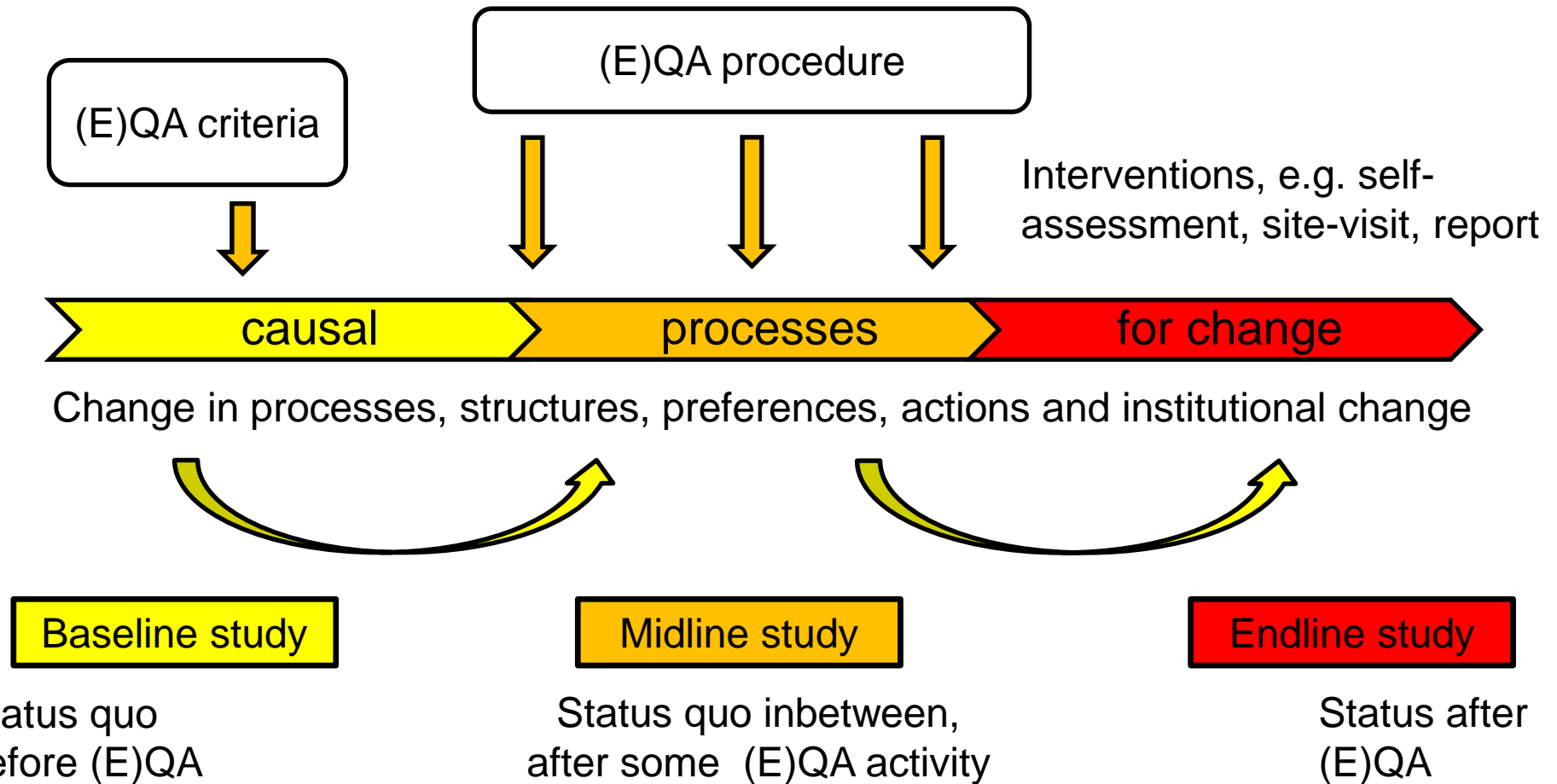




## IMPALA project partners



# IMPALA research design



# IMPALA research design

(E)QA procedure

## Baseline study

Before procedure

- Online questionnaires
- Structured interviews
- Document analysis/ observations

## Midline studies

During procedure

- Online questionnaires
- Structured interviews
- Document analysis/ observations

## Endline study

After procedure

- Online questionnaires
- Structured interviews
- Document analysis/ observations

Comparison of base-, mid- and endline study

Comparison of different baseline studies

Comparison of different baseline studies

Comparison of different baseline studies

# IMPALA online questionnaires

- **Questionnaire items (common)**
  - Course types in study programmes
  - QA instruments used in programmes
  - Alignment of examinations and learning objectives
  - Frequency of development discussions of study programmes
  - Observability of QA effects and quality improvements
  - Transparency of responsibilities
  - Attitude towards internal QA
  - Attitude towards external QA
  - Perceived attitude of leadership towards QA
  - Assessment of cost/benefit ratio of QA
  - Plans for major programme changes
  - Suggestions for QA improvement
- **Questionnaire items (individual)**

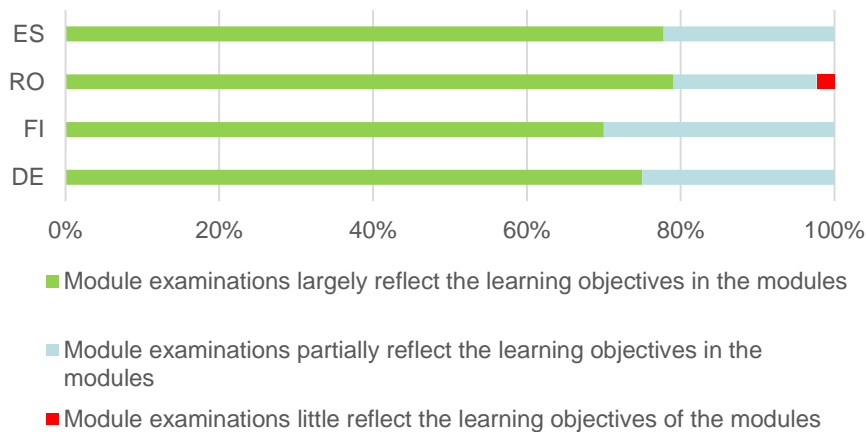




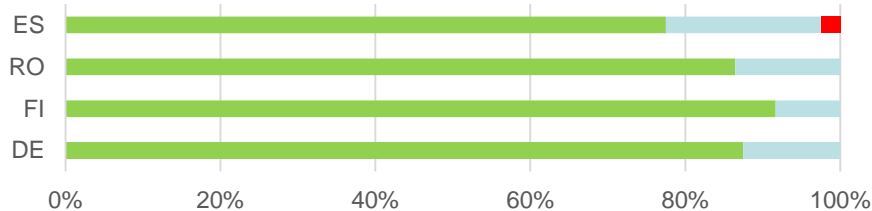
# IMPALA sample results (baseline, students & teaching staff)

How the examinations relate to the learning objectives in the module handbook of the study programme?

## Students



## Teaching staff



**General:** Alignment of examinations to learning objectives **assessed quite sufficient** (70-90 % see large fit)

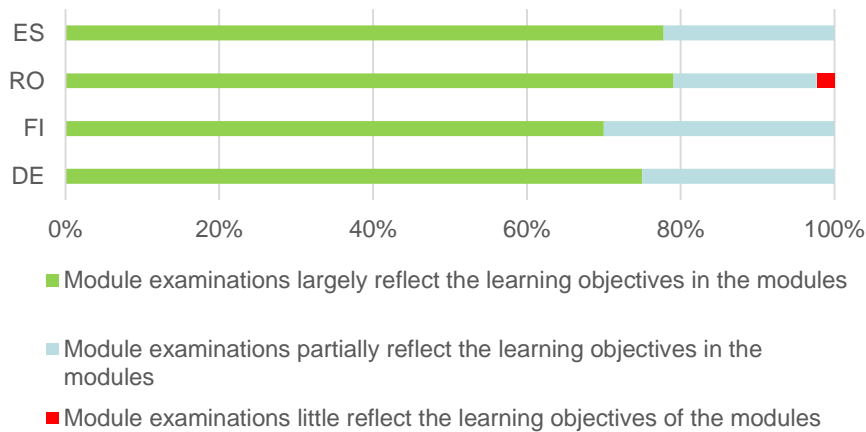
Romanian, Finish and German case: **teachers see greater degree of alignment** (87-92 % see large fit) **than students** (70-79 % see large fit) (further investigation needed for substantiation)



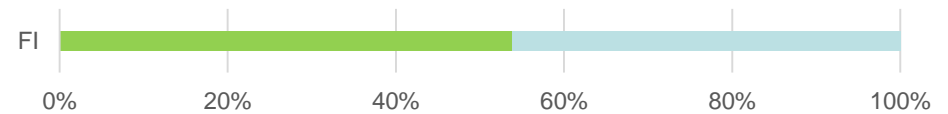
# IMPALA sample results (baseline & midline, students & teaching staff)

How the examinations relate to the learning objectives in the module handbook of the study programme?

Students, baseline

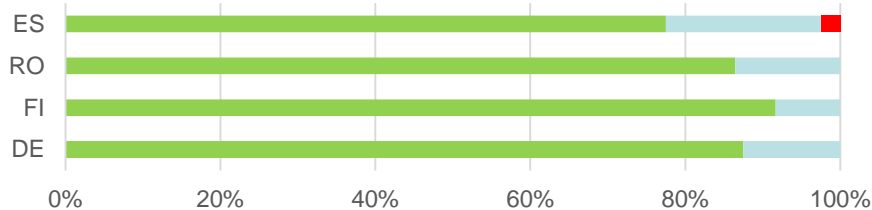


Students, midline



Alignment assessment decreases: knowledge gain, conceptual differentiation, ...?  
(further investigation needed for substantiation)

Teaching staff, baseline



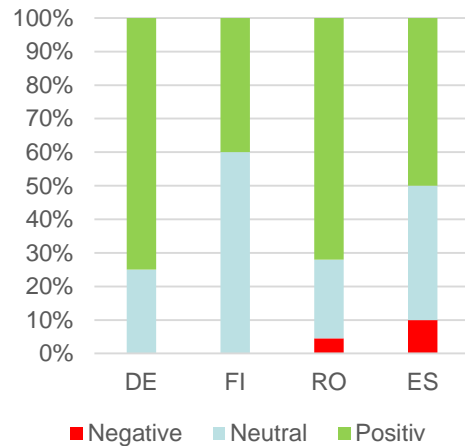
Teaching staff, midline



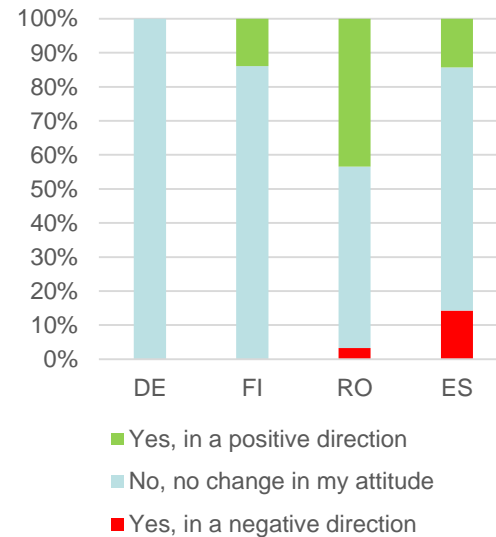


# IMPALA sample results (baseline, students & teaching staff)

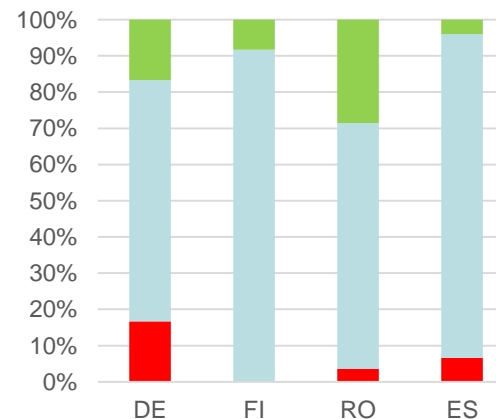
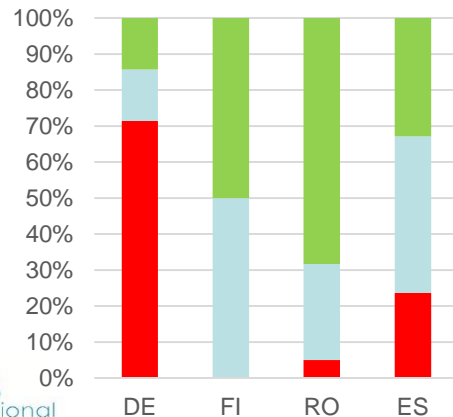
## Students' attitudes towards QA?



## Changes in students' attitude?



## Teachers' attitudes towards EQA?



## Changes in teachers' attitude?

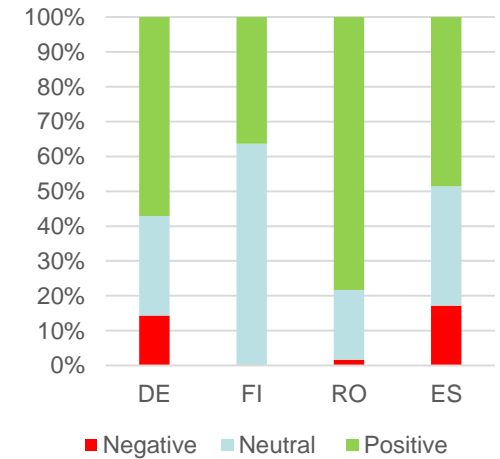
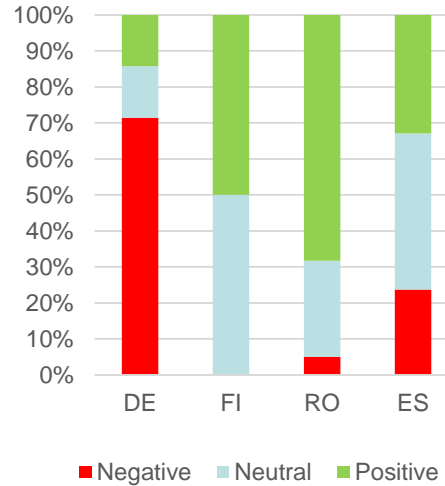
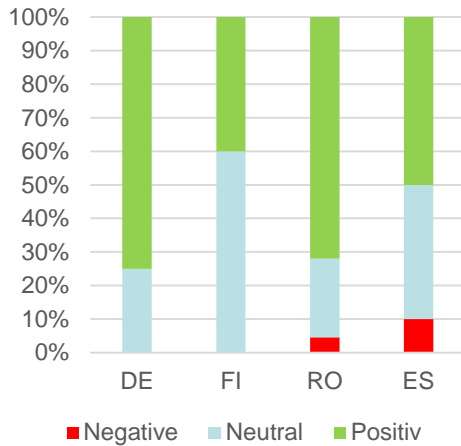
## IMPALA sample results (baseline and midline, students & teaching staff)



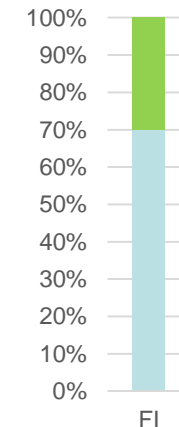
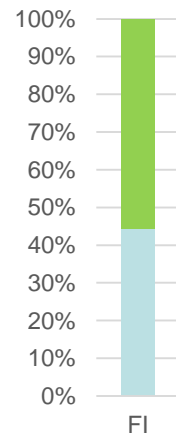
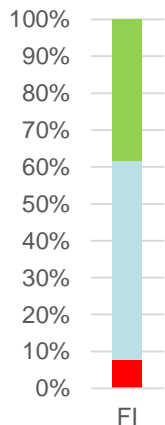
Students' attitudes towards QA?

Teachers' attitudes towards EQA?

Teachers' attitudes towards internal QA?



baseline

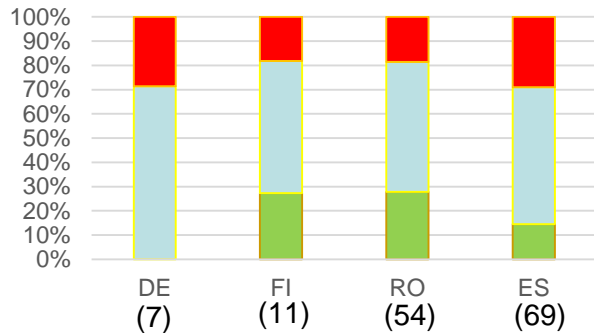


midline



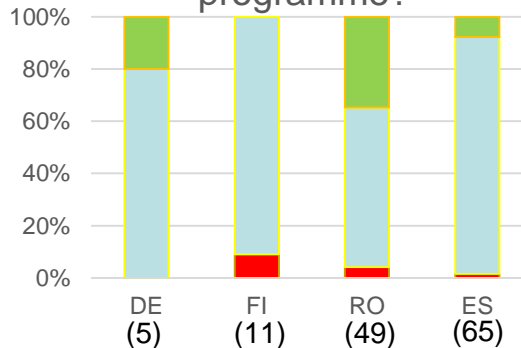
# IMPALA sample results (baseline, teachers)

How often do teachers of your study programme meet in order to discuss the further development of the study programme?



- Less than once a year
- At least once a year
- At least once every three months

Have you in the last year seen a change with respect to the frequency of teachers' meetings for further developing the study programme?



- Yes, the meetings became more frequent
- No, no changes
- Yes, the meetings became less frequent

Who or what initiated the change?	
Frequency of responses	
<b>RO</b>	
- students	1
- teaching staff	13
- HEI management	7
External QA (e.g., accreditation)	2
Internal QA (e.g., surveys)	6
Legal requirements	0
External Stakeholders	0
<b>ES</b>	
- students	0
- teaching staff	2
- HEI management	2
External QA (e.g., accreditation)	2
Internal QA (e.g., surveys)	0
Legal requirements	1
External Stakeholders	0

German case: lowest meeting frequency

Meeting at least once year or more often: 70-80 %

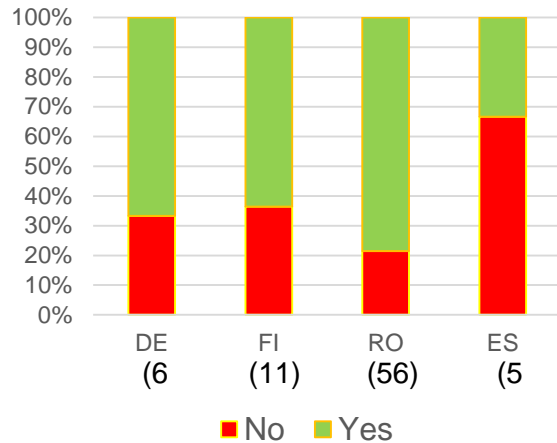
Most changes in Romanian case, towards higher frequency

Changes mostly initiated by teaching staff, HEI management and QA



# IMPALA sample results (baseline, teachers & students)

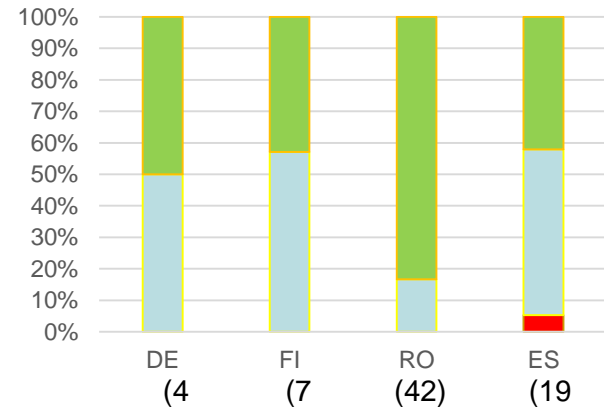
Teachers: Do QA procedures in L&T in your HEI, have effects which are observable for you?



Most negative answers in Spanish case; most positive answers in Romanian case

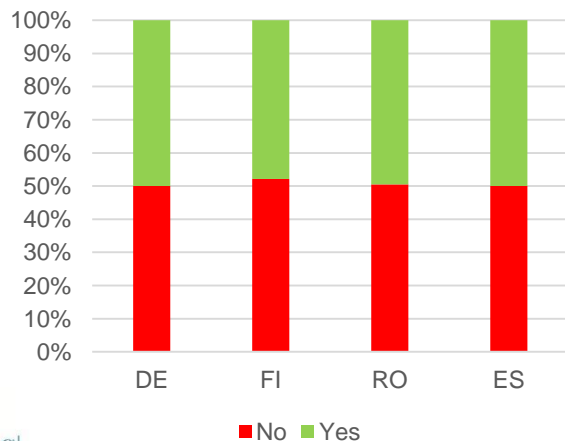
Most positive changes in Romanian case; most negative changes in Spanish case

Teachers: In your view, have these effects changed in the last year?

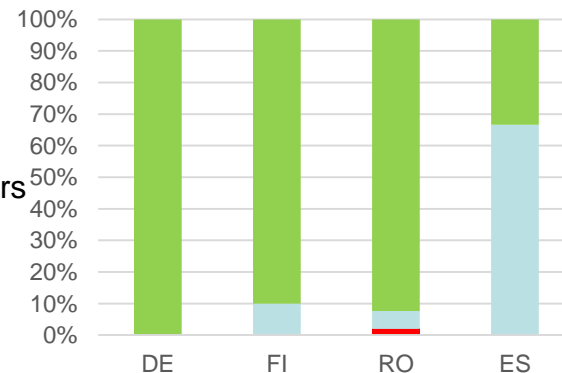


- Yes, in a positive direction (increasing effectivity)
- No, no change
- Yes, in a negative direction (decreasing effectivity)

Students



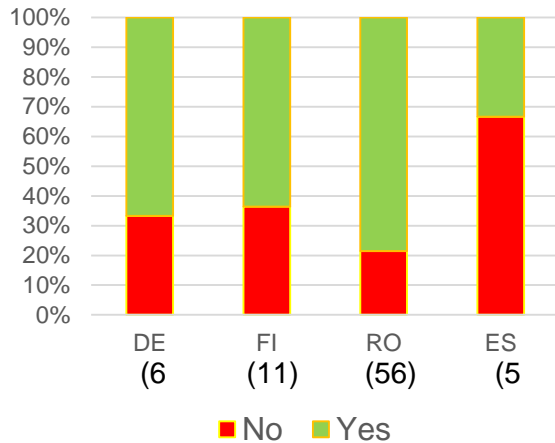
In all cases almost same distribution of negative and positive answers; Ca. 50 % of students do not observe QA effects; Mostly more negative answers as compared to teachers – exception: Spain



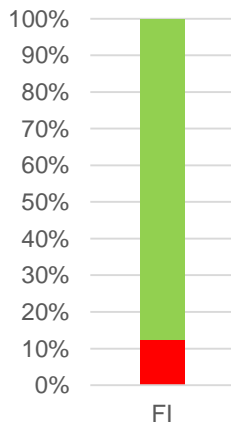
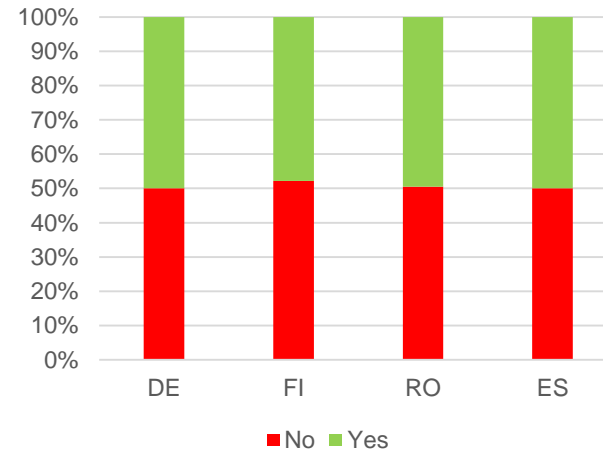


## IMPALA sample results (baseline & midline, teachers & students)

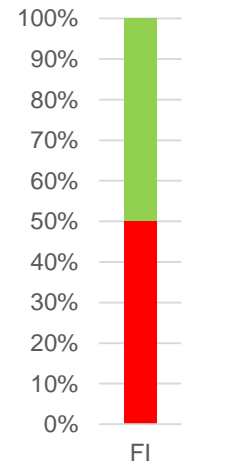
Teachers: Do QA procedures in L&T in your HEI, have effects which are observable for you?



Students



“Observability“  
increases  
(further investigation needed)

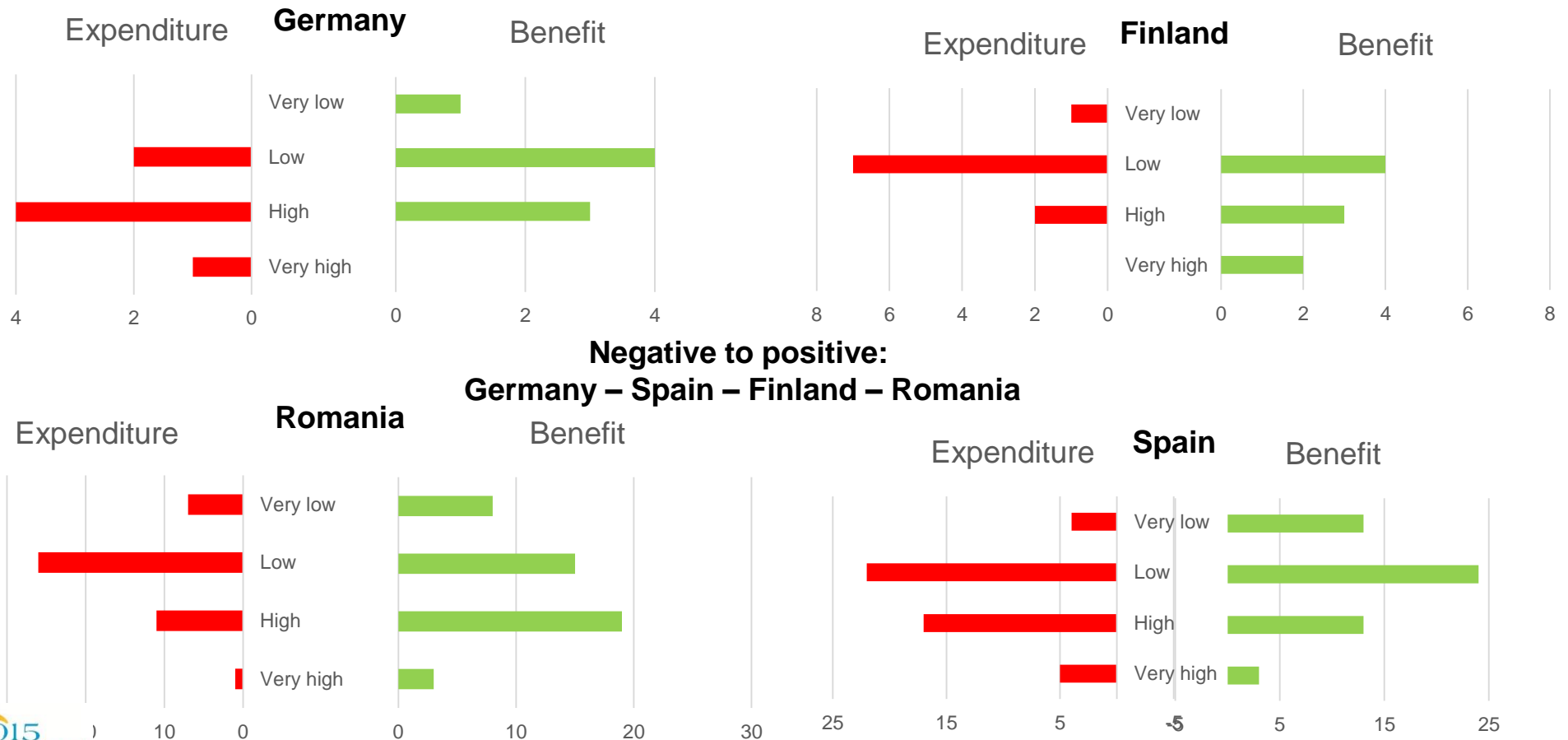


“Observability“  
is constant  
(further investigation needed)



# IMPALA sample results (baseline; teachers)

How do you assess the expenditure and benefit of QA and quality development?







## Conclusions

- Impact analysis (of QA in HE) is complex
- Baseline data of case studies demonstrate that
  - General attitudes towards (E)QA reported by stakeholders seem to be markedly different in different countries (e.g., more positive in Finland and Romania as compared to Germany and Spain)
  - (E)QA effects observed by stakeholders recently are not at all classified as negative (recently QA is increasingly assessed positive by majority)
  - Teachers assess alignment between learning goals and examinations higher than students
  - Benefits and efforts: Efforts for QA are assessed too high as compared to its benefits (positive desired effects)
- Further research, further midline and endline data and a more detailed look at the available data is necessary

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