Linkages between education and research – a theoretical approach

Strong legal and policy support

- Focal point in Government bill on higher education

- Legal support in Higher Education Act and Higher Education Ordinance (all courses and programmes shall be based on scientific knowledge, national qualitative targets on skills and abilities closley related to the research process)

- Strong support from HEIs on all levels (not without complications)

- Assessed in Swedish national QA system for higher education on programme and institutional level

- In addition UKÄs extended government assignment (including research and collaboration)

UKÄ SWEDISH HIGHER EDUCATION AUTHORITY

Hindrances for creating linkages between research and education

- Funding streams separate research and education thereby creating a gap

- Academic positions are not fulltime, instead researchers are dependent on external grants for their livelihood

- Career incentives: tenure tracks and models for promotion favour research activities above teaching
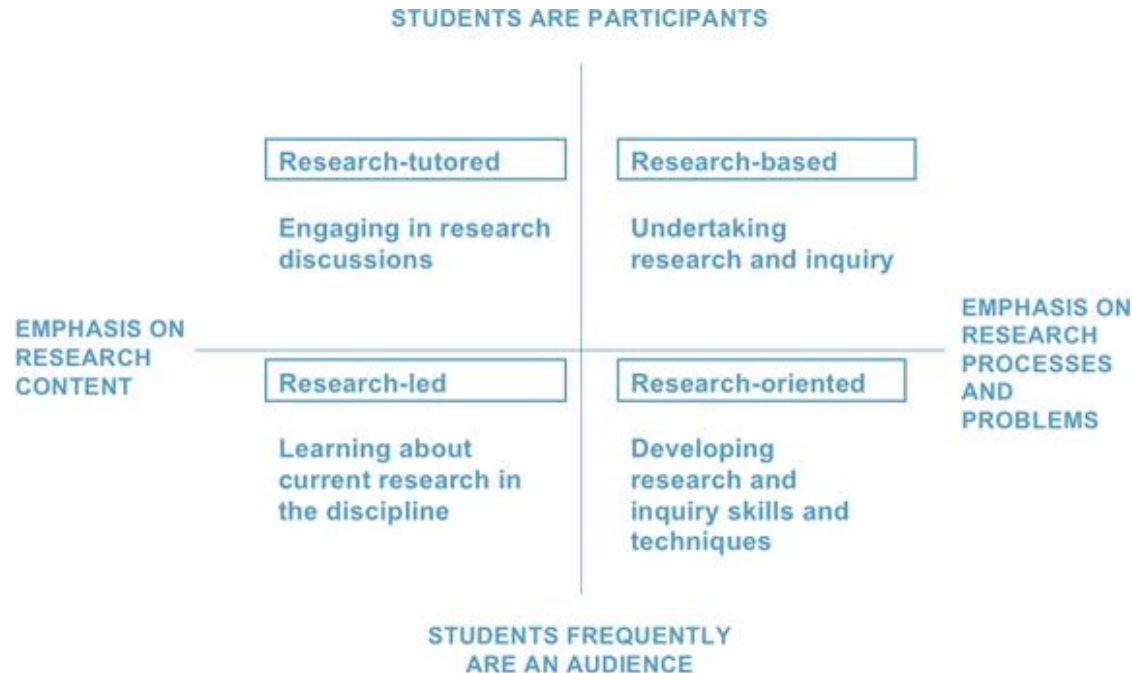
What is meassured in QA-procedures at a programme level?

- Literature lists (is current research used in courses?)

- Assessment of achieved learning outcomes for research related skills and abilities

- Teacher competence (how many of the active teachers have a PhD? How many are professors? etc)

- The amount of time teachers spend at research and teaching (do they do both to an equal degree?)

- The programme setting (is the programme connected to a research intensive environment?)

QA of linkages version 2.0

- Empirical research shows that there is no automatic correlation between research of high quality and education of high quality

- Having an active researcher teaching a course does not in itself guarantee linkages nor does having a programme in a research intense environment

- Instead linkages are the result of a conscious effort and continuous work on behalf of the faculty involved

- Can QA procedures support and enhance efforts to create and maintain linkages?

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The Healey model – a suggestion for a QA tool to analyse linkages

STUDENTS ARE PARTICIPANTS

Research-tutored

Engaging in research discussions

Research-based

Undertaking research and inquiry

EMPHASIS ON RESEARCH CONTENT

Research-led

Learning about current research in the discipline

Research-oriented

Developing research and inquiry skills and techniques

EMPHASIS ON RESEARCH PROCESSES AND PROBLEMS

STUDENTS FREQUENTLY ARE AN AUDIENCE

Topics for discussion

1. How shall linkages between education and research best be described and understood? Can theoretical models such as the Healey model be useful as a tool to characterize teaching content in courses and analyse linkages between education and research? Are there other models that are more suitable?

Topics for discussion

2. What role might quality assurance procedures play in strengthening linkages between education and research? How can the quality of these linkages best be analysed and assessed? What measures should be used and what effects might measuring in itself have?

3. What effects can stronger linkages have for the quality of both higher education and research? Is there a possible downside? Can linkages between education and research become too strong?

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Thanks for participating!

Kristina Tegler Jerselius

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Quality assurance of research-based education in the NOQA countries

Finland, September 6th 2018

Danmarks
Akkrediteringsinstitution

Agenda

- Overview
- Operationalization
- Implementation
- Development
- Research evaluation

Overview – based on Hyllseth

Research based education/teaching (Hyllseth)	DENMARK	ESTONIA	FINLAND	ICELAND	LATVIA	LITHUANIA	NORWAY	SWEDEN
1: …. in accordance with the most recent research results							1) (p. 61)	
2: The programme is linked to a research environment								
3: … is offered by full time employed teachers with research competencies							1) (p. 61)	
4: Research based teaching is offered by active researchers in the discipline		Phd (p. 15)					(p. 61)	
5: … that students take part in training in scientific method in		Phd (p 15)						(p. 66) 2)

Overview – based on Hyllseth

Operationalisation of research based education

- diverse operationalisation in the 8 countries
- Typical – input factors
  - in accordance with the most recent research results
- - … is offered by full time employed teachers with research competencies
- Fewer stress student perspective (students take part in training in scientific method in cooperation with a practicing researcher)

Operationalisation

- Which approach to quality assurance of research-based education has been adopted in your country?
    - Key figures
    - Strategy, policies and procedures
    - Practice (programme) level
    - Student perspective
- Have major changes taken place?
- *[3 minutes with colleagues]*

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Implementation

- Has the approach adopted been useful?
  - Strength and weaknesses
  - Added value – for whom?
    - students
    - HEI
    - teachers/researchers
    - society

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Development

- How can the quality assurance of research based education be developed?
    - Stronger student-centred learning perspective
    - How can this be assessed?

Students as audience or participants

STUDENTS ARE PARTICIPANTS

Research-tutored	Research-based
Engaging in research discussions	Undertaking research and inquiry

EMPHASIS ON RESEARCH CONTENT ——— EMPHASIS ON RESEARCH PROCESSES AND PROBLEMS

Research-led	Research-oriented
Learning about current research in the discipline	Developing research and inquiry skills and techniques

STUDENTS FREQUENTLY ARE AN AUDIENCE

Research evaluation

- Combining research evaluation and quality assurance of research-based education
    - How is it combined?
    - What has been/will be the benefit
    - For whom?

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Tak for nu! - Thanks for now! - Kiitos nyt!

?

Følg os:
Skriv dig op til vores nyhedsbrev på akkr.dk/nyhedsbrev
På Twitter: @akkreditering
På LinkedIn

Lars Pedersen - lped@akkr.dk

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Workshop:
Assessment of quality systems for research

6 Sept. 2018 at 13.30-14.30

At the end of the workshop, participants will be able to:

- Differentiate between methods of
  1. evaluating management of research
  2. evaluating research productivity and social impact of research

- Generate evaluation questions related to QA of quality systems for research

- Compare and contrast different approaches to QA of quality systems for research

Workshop Structure

13:30-13:35 Introduction to workshop

13:35-13:45 Tutorial on concepts related to quality systems for research

13:45-14:15 Group Work: Development of mock review questions and methods of assessment related to quality systems for research

14:15-14:25 Discussion of outcomes of Group Work

14:25-14:30 Wrap-up and summary of take-home points

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FINNISH EDUCATION
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Concepts related to quality systems for research

- A tutorial -

Sigurður Óli Sigurðsson

QB Secretariat
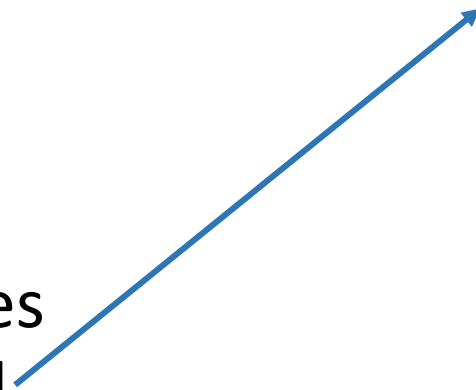
sigurdur.sigurdsson@rannis.is

Overview

- Quality as bibliometric data
- Quality as (societal) impact
- Quality systems for research management

Quality as bibliometric data

- Measures of research productivity, dissemination, and prestige
  - Productivity
    - Number of peer-reviewed publications (e.g., journal articles and edited books)
    - Number of peer-reviewed publications in a given data-base
      - *Institute for Scientific Information* (ISI)
      - *Directory of Open Access Journals*
  - Dissemination
    - Citation rates (may be field-normalized)
    - Impact factor of a journal (the frequency with which the average article in a journal has been cited in a particular year)
    - H-index (combination of a researcher's productivity and citations)
    - Altmetrics ("mentions" in social media, online news media, online reference managers)
  - Prestige
    - Number of articles in "top-tier" journals, as defined by peer judgment
- These data can be collected at the individual, programme, department, school and institutional level
- Framework examples
  - Commercial CRIS Systems: CONVERIS, PURE, ELEMENTS
  - State-run: CRIStin

Quality as (societal) impact

- Measureable change outside the university walls, verified by externals
  - Examples:
    - Policy
    - Practice
    - Health metrics
    - Economic metrics
    - Patents, startups
    - Altmetrics (?)
  - Impact ≠ Activity

- Framework examples
  - Academy of Finland
  - REF (Research Excellence Framework) Impact Studies in UK

- Human understanding and world view
- Wealth and prosperity
- Basis for decision making
- Practice development

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Quality systems for research management

- Issues of *research mission, research strategy,* and *strategic execution*
  - Can be conceptualized (to a degree) as "ESGs applied to research"
    - Policy for quality assurance
    - Design and approval of programmes
    - Student-centred learning, teaching and assessment
    - Student admission, progression, recognition and certification
    - Teaching staff
    - Learning resources and student support
    - Information management
    - Public information
    - On-going monitoring and periodic review of programmes
    - Cyclical external quality assurance

Group work at 13.45-14.15

1. What are the broad themes that should be covered in a review of institutional quality management system for research?

2. What are the key interview questions that should be asked? (From whom?)
   - *You can draw inspiration e.g. from ESG or previously heard presentations.*

3. What kinds of evaluation activities/methods could you use?

Broad themes	Key questions	Methods of assessment
Research strategy		
Roles and responsibilities related to research management, processes and support services		
Research funding		
Research activities		

Broad themes	Key questions	Methods of assessment
Research publication activities		
Dissemination of research results		

Wrap-up and summary of take-home points

Assessment of quality systems for research – Case Finland

Mira Huusko and Sirpa Moitus
FINEEC
September 6, 2018

Finnish context: roles of different actors

Ministry of Education and Culture

- **<u>Core funding model of universities: research indicators 33%</u>**
  - PhD degrees 9 %, scientific publications 13 %, competed research funding 9 %, nationally competed research funding and corporate funding 6 %, international teaching and research personnel 2%
  - *Publication Forum: Rating of publications Level 0 (coefficient 0.1), Level 1 (1), Level 2 (3) and Level 3 (4)*

- **<u>Universities of Applied Sciences, core funding model (15 %)</u>**

Academy of Finland

- **Funding of researchers and research teams on a competitive basis**
  - Including a review process
  - Researchers are encouraged to consider effects and impact of research in the applications

- **University profiling**: Competitive funding to strengthen university research profiles
- **Centres of Excellence**
- **Strategic Research Council and Funding**

Universities' own research evaluation exercices

- Often in 6 years intervals

- Targets, criteria, methods and panels chosen by HEIs

Finnish Education Evaluation Centre (FINEEC)

- QM or research embedded in the Audit model as described

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FINEEC's audit model of quality systems 2012-2018

In the first and second cycle audit models, quality assurance of research was a separate audit target:

- Quality management of the higher education institution's basic duties, including essential services supporting these:
  a) Degree education
  b) Research, development and innovation activities, as well as artistic activities
  c) The societal impact and regional development work
  d) Optional audit target (will not be taken into an account when evaluating whether the audit will pass)

Audit manual included e.g. following key audit questions:

What goals have been set for the operations and what are the key quality management procedures used to achieve them? How do different parties (personnel groups, students, external stakeholders) participate in the quality work and how is participation supported?

FINEEC's audit model of HEIs 2018-2024

Quality management of research is **integrated** in Evaluation area II titled as **Higher education institute promotes impact and renewal:**

- assesses the procedures used to manage and improve societal interaction,
- strengthen the impact of the HEI's research, development and innovation as well as artistic activities, and
- support an experimental operational culture.

Guidelines set in the manual

- The **research findings, development work, innovations and artistic activities** of the higher education institutions contribute to reforming the society. The HEI has functioning procedures for **promoting the use of open data and research in society** at large.
- Targets have been set for the **impact** of the HEI's research, development, innovation and artistic activities. The achievement of the targets is monitored in a systematic manner.
- The HEI collects relevant information regarding the impact of research, development, innovation and artistic activities, and the information is used in the development of these activities.

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Self-evaluation's sub-questions in audit model 2018-2024

- What procedures does the higher education institutitions have to promote the impact of research, development and innovation activities and/or artistic activities in the society?

- How do you develop and monitor the societal interaction and impact of RDI and artistic activities?

- How are research findings, artistic activities and innovation results communicated to the society?

- How does the higher education institutes ensure the link between RDI, artistic activities and the overall strategy?

Assessment of quality systems for research – Case Iceland

Sigurður Óli Sigurðsson

QB Secretariat

Management of Research at Unit Level

- Research Strategy

- Management of Research Outputs

- External Support

- Impact

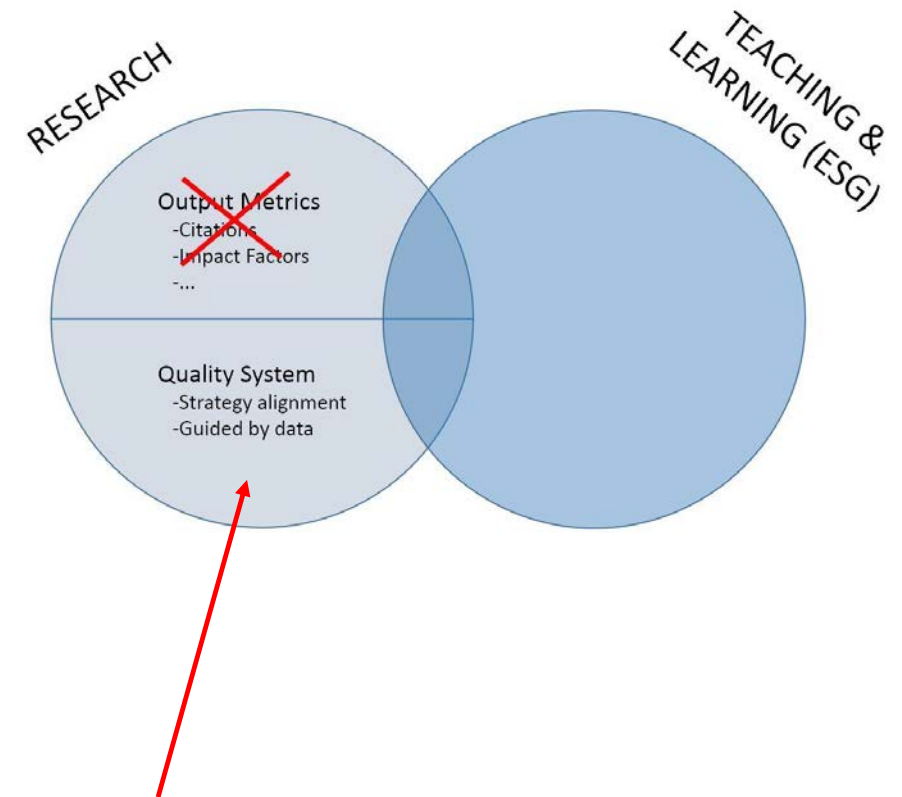- Exceptional Blue-skies Research
  - Optional review target
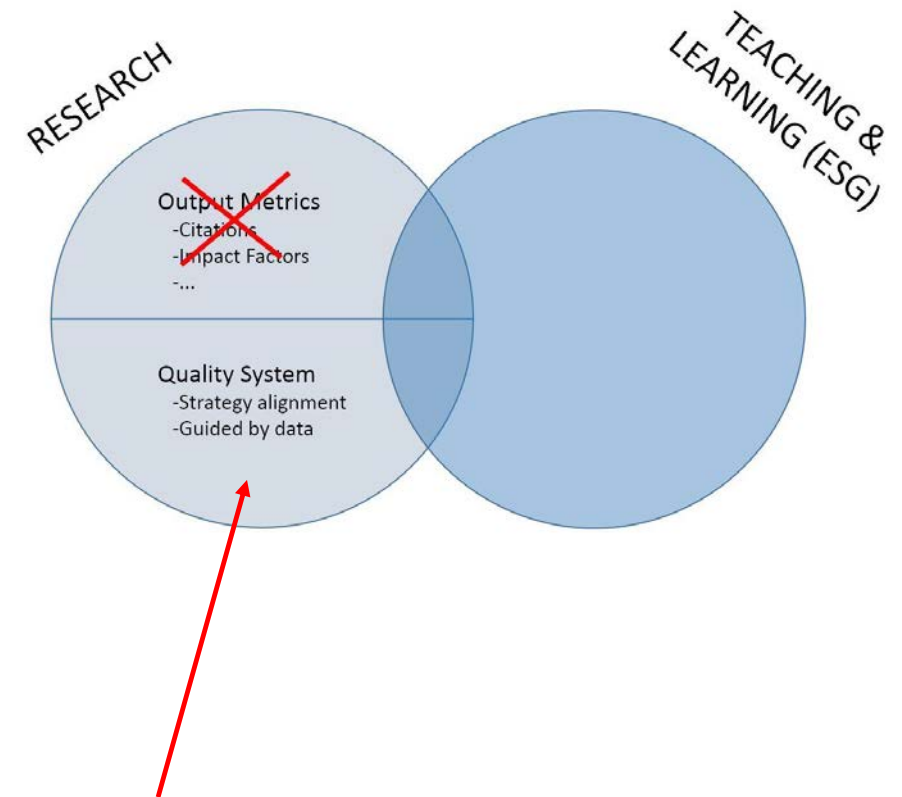
Research Strategy

- Does the unit have a research strategy?

- How realistic is the strategy?

- Does the strategy link research to teaching?

- Is strategy effectively monitored?

- Is the research environment designed to support the strategy?

- Does the research strategy take account of issues of equality, including gender?
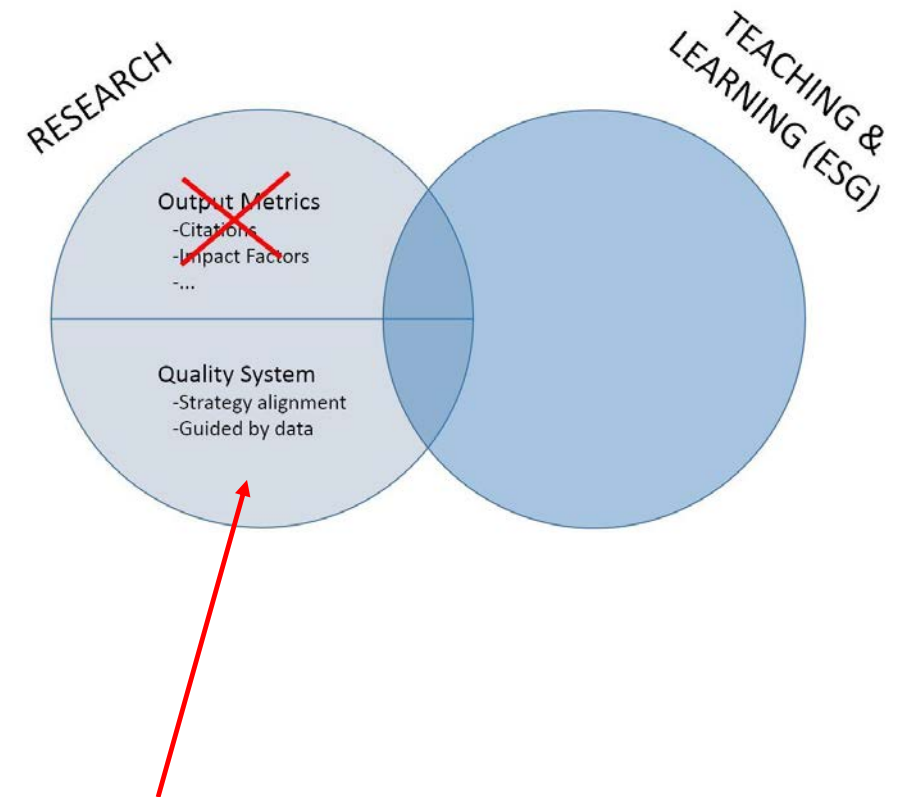
Management of Research Outputs

- How do academic units evaluate and manage the quality of their research output?
  - How do units know that their outputs are of sufficient quality?
  - Can be based on peer-review or reviews by users of outputs who are in a position to make informed professional judgements of quality

RESEARCH

TEACHING & LEARNING (ESG)

Output Metrics
-Citations
-Impact Factors
-...

Quality System
-Strategy alignment
-Guided by data

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External Support

- How do units seek external support in line with their research strategy?
  - Additional state funding for research outside of block funding
  - Competitive funding
  - Commercial funding
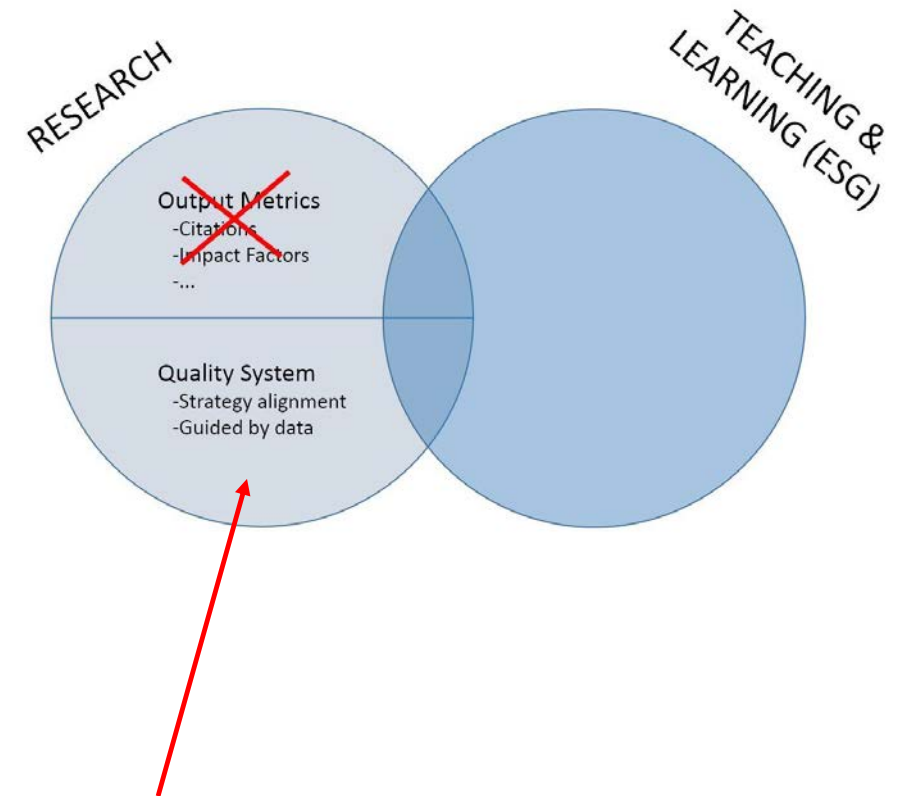
Impact

- What is the reach and significance of the research output of the unit?
  - Impact is to be interpreted broadly to include impact on: the subject area; on policy and practice related to the subject area; on significant developments in culture; and, importantly, on the local or national economy or society more generally
  - Local, national and international dimensions should be considered
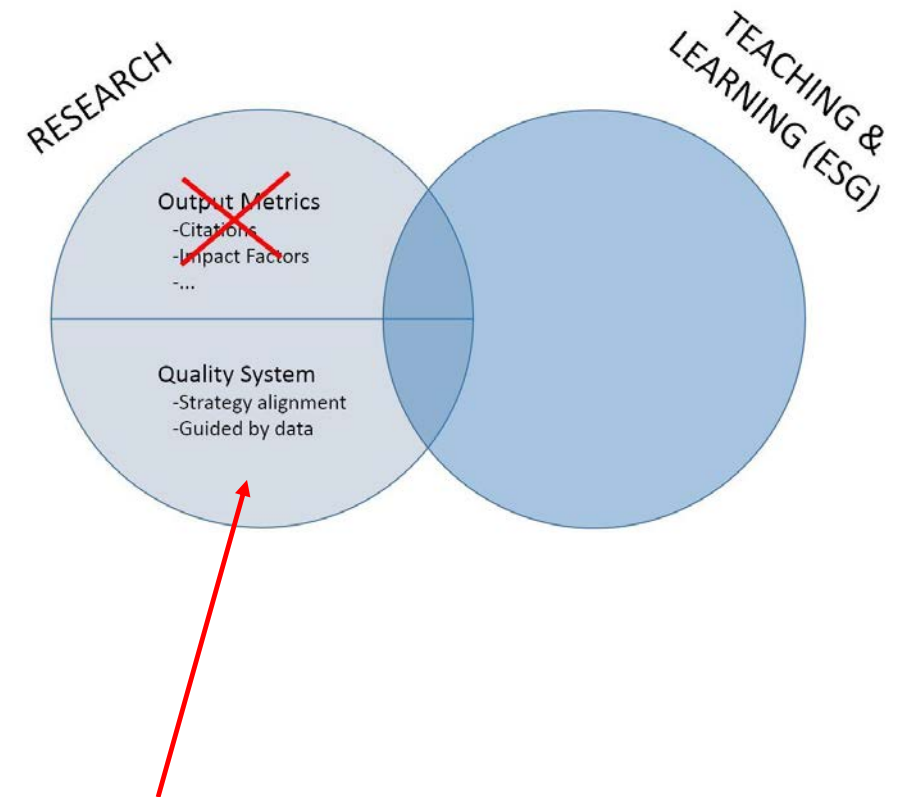
Example: Link between SLR and IWR

Subject-Level Review Action Plans

- Clear goals
- Milestones
- Accountability
- Performance indicators
- Resourcing

Institution-Wide Review

- Is the institutional follow up of action plans arising from Subject- Level Review:
  - supported by feedback loops?
  - systematic?
  - effective?

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