Insights into evaluation of research "quality": what role for the researcher?

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Agenda

- The **role and responsibilities of the researcher** in the research evaluation system
  - <u>reflective role</u> → researcher part of a scholarly community
  - <u>active role</u> → editor of a journal
- emerging definition of 'quality' of research

- academic research plays a pivotal role in the national and regional level development of a country.

- numerous countries have implemented research evaluation systems aiming to balance the relationship between research and public goals and to highlight the complexity of the concept of quality of research (Gläser and Whitley, 2007).

- the need for governments and agencies to monitor and assess the scientific research delivered by universities has led to a system based on rankings (Hazelkorn, 2015) thanks to the feeling of certainty given by bibliometric indicators.

- such indicators have taken the spotlight in defining 'quality' and 'impact' in research evaluation and research policy (Moed, 2005; Holden, Rosenberg, et al., 2005; Carlsson, 2009; Cabezas-Clavijo, Robinson-García, et al., 2013)

- however, the role of these indicators should be complementary to and mediate the shortcomings of peer assessments (Higgins, Chubin, et al., 1990; Aksnes, 2005)

some context on
research evaluation

Theoretical Framework

the researcher – reflective practitioner:

- Correy (1953, p. 6) says it is **a process in which practitioners study problems scientifically,** in such a way that they can be evaluated and improved

- Hopkins (2001, p. 32) and Ebbutt (1985, p. 156) claim that it is the combination of action and research that makes this action **a form of disciplinary research whose goal is to understand, advance and reform the practice of** [research evaluation]

- The development of a practitioner develops throughout one's professional practice as a **result of interaction between a person and their environment** (Coldron & Smith, 1999, pp. 711-726).

Passive

research evaluation system

Active

Reflective
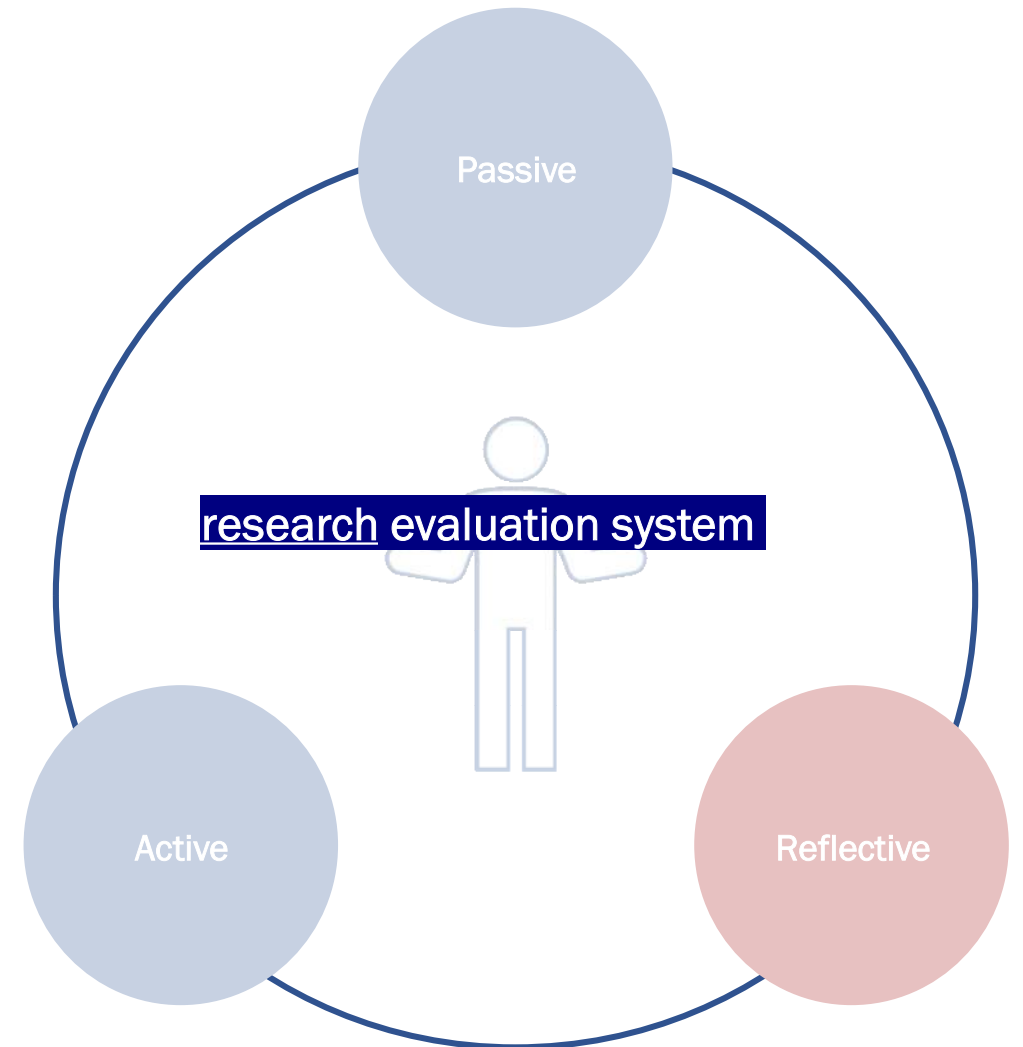
Theoretical Framework

<u>the researcher – active role in the "machinery of evaluation"</u>

- *"Evaluation research can be defined as a type of study that uses standard social research methods for evaluative purposes"* (Powell: 2006, p.102)

- The **lines** between the role of the evaluator and that of the researcher can **blur** because **many researchers also conduct evaluations**

- **inherent in the role of evaluation** are the **values held by the evaluator and researcher** that **influences** the process of making decisions (Skolits, Morrow, & Burr, 2009) on the **quality of research**
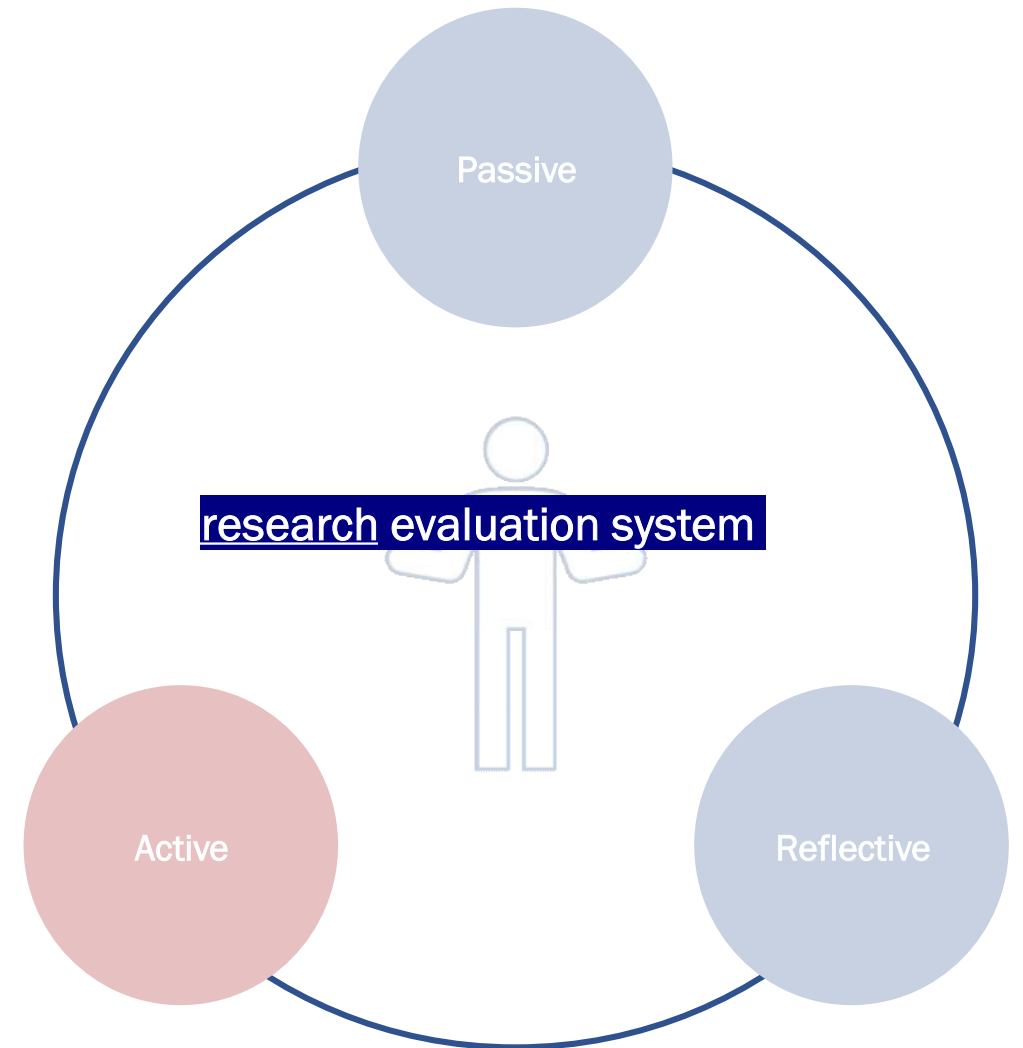
Reflective Role*

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contributing to the discourses on research evaluation from their community's perspective

Methodology

Aim: trace the contribution of the different disciplines on research evaluation focusing on the concepts of quality and impact of research

Method: Systematic Literature Network Analysis (Strozzi, 2012)

Time span: 1987-2020 (i.e., 33-year period)

Database: Scopus

Keywords: (("academic" OR "scientific" OR "work") AND {research evaluation} AND ("impact" OR "quality"))

Selection Criteria:
- field: only "Title-Key-Abs"
- document type: articles and conference papers
- language: English

Final database: 284 documents, 2 biggest connected component
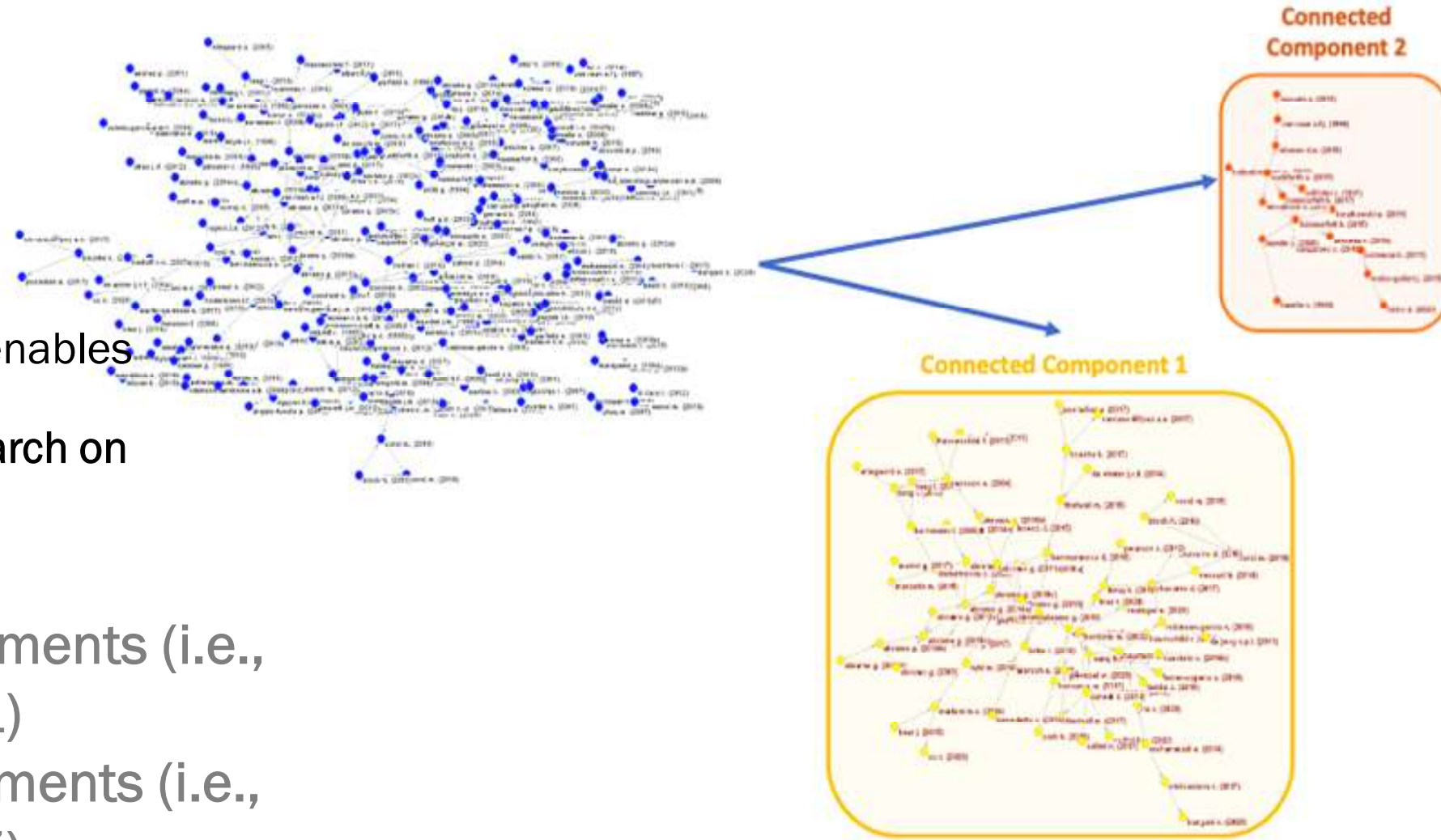
Software: Pajek, VOSviewer

Analysis: Citation Network Analysis (Communities) + Author's Keywords Co-occurrence

> The network analysis enables us to understand the **influence of past research on subsequent studies.**

73 documents (i.e., cluster 1)
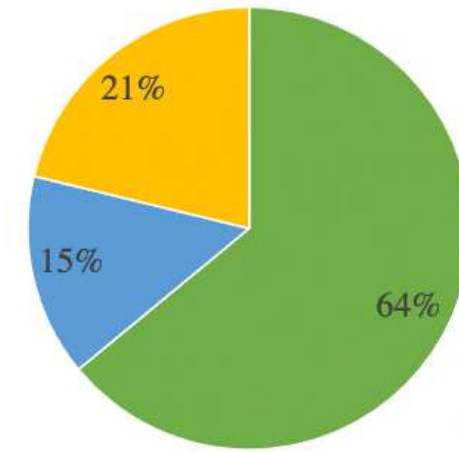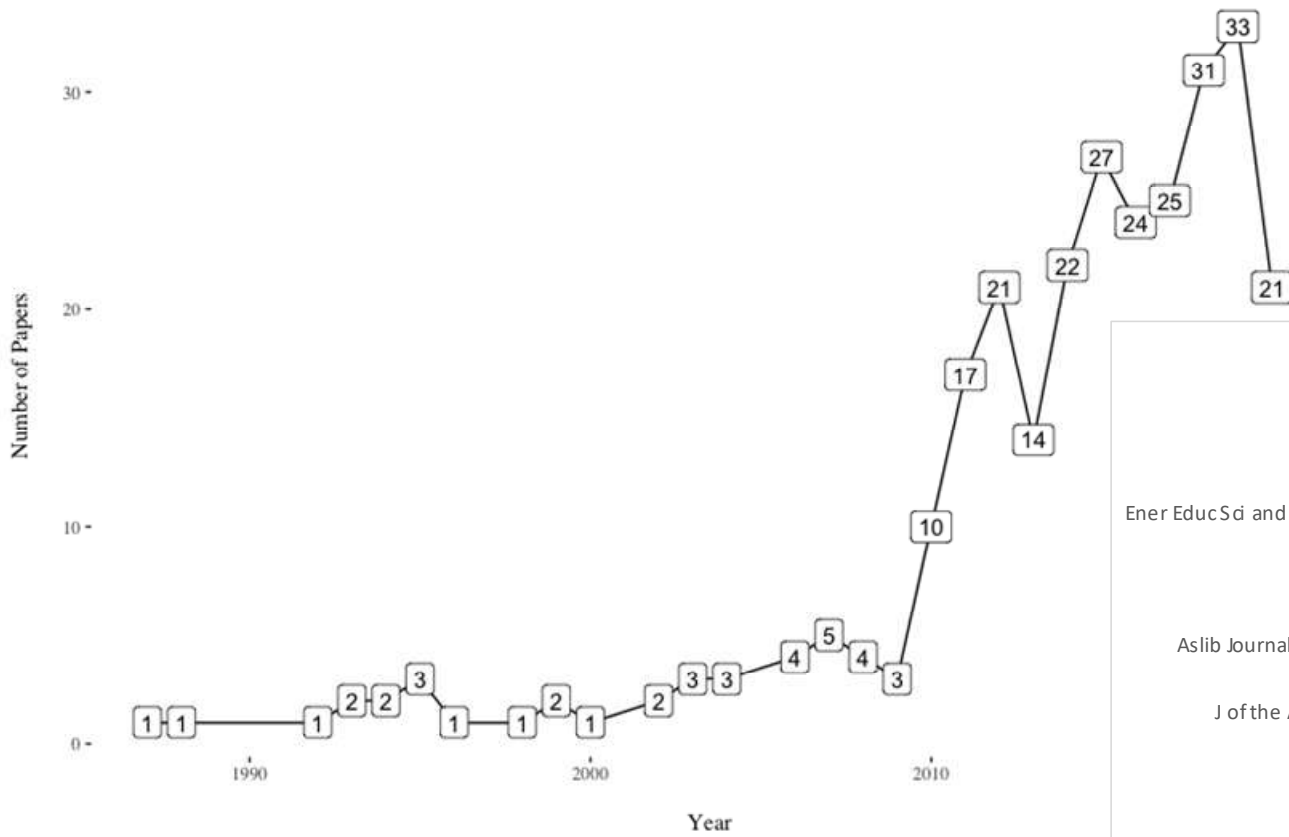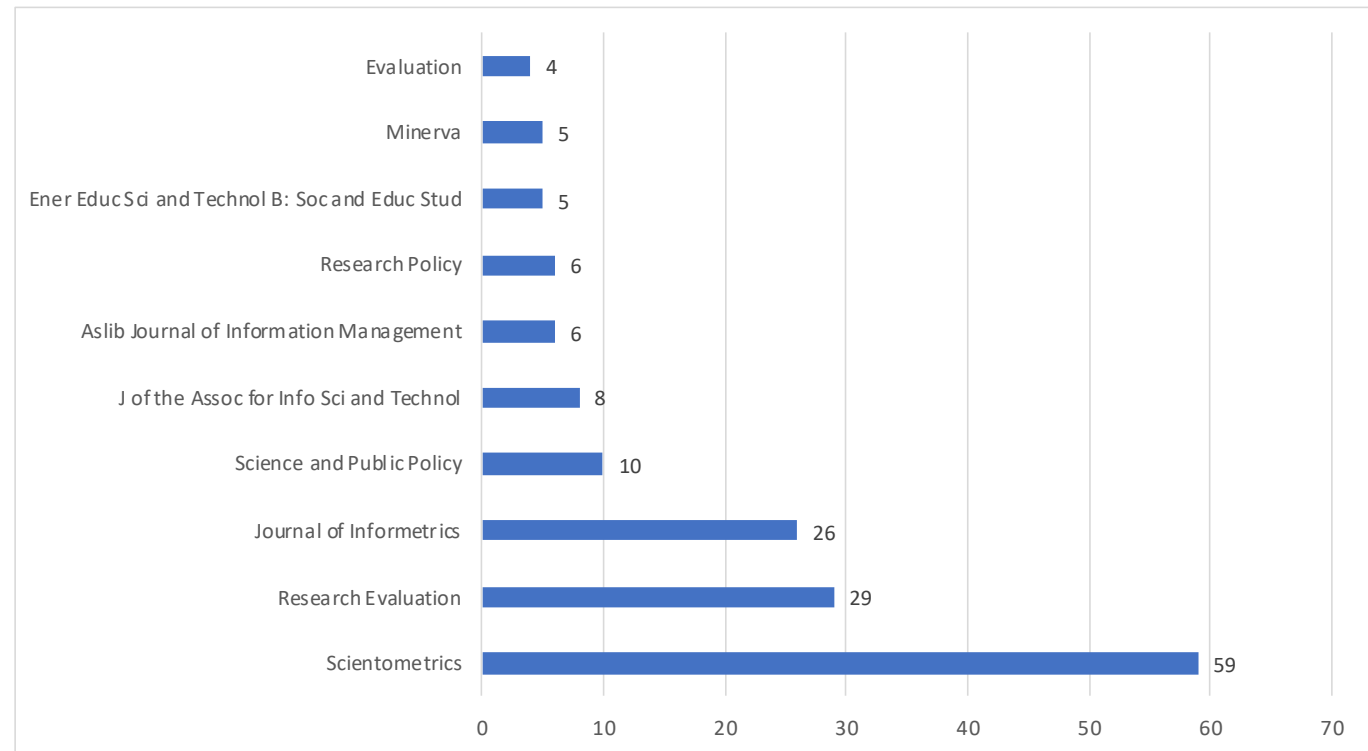17 documents (i.e., cluster 7)

What was the result?

Preliminary findings

Trend in Publications 1987-2020

Keyword Distribution

- Keyword "Research Evaluation"
- Keyword "Quality"
- Keyword "Impact"

Theme 1: The scope of altmetrics in measuring the societal impact of research

Topic 1
glänzel w. (2020)
aung h.h. (2019)
park h. (2018)
hassan s.-u. (2017)
thelwall m. (2017)
salimi n. (2017)
costas r. (2015)
zahedi z. (2014)

Topic 4
bangani s. (2020)
sedighi m. (2020)
liu x. (2020)
shrivastava r. (2017)
mohammadi e. (2014)

Topic 8
herrmannova d. (2018)
kousha k. (2017)
pooladian a. (2017)
serrano-lÃ'pez a.e. (2017)
thelwall m. (2015)
de winter j.c.f. (2014)

Topic 10
regan a. (2019)
lemke s. (2018)
ferrer-sapena a. (2018)
haunschild r. (2018)
haustein s. (2016a)
haustein s. (2016b)

Topic 2
reategui e. (2020)
tran t. (2020)
bordons m. (2002)

Topic 6
miersch e. (2020)
brito r. (2019)
benedetto s. (2016)
abramo g. (2010)

Topic 7
corsi m. (2019)
robinson-garcia n. (2018)
corsi m. (2018)
chavarro d. (2018)
chavarro d. (2017)
vessuri h. (2014)
de jong s.p.l. (2011)
bloch h. (2010)

Topic 9
pearson s. (2012)
hiruy k. (2019)

Theme 5: The role of the journal impact factor: a peripheral view of quality and looking beyond bibliometrics

Theme 4: Issues of the Italian research evaluation and National Scientific Qualification

Topic 3
demetrescu c. (2020)
marini g. (2017)
abramo g. (2015b)
marzolla m. (2015)
abramo g. (2014c)

Theme 2: Attempts in overcoming the biases of bibliometric indicators in the research evaluation

Topic 5
xu s. (2020)
giuffrida c. (2019)
mariani m.s. (2016)
kaur j. (2015)
nykl m. (2014)

Topic 11
abramo g. (2019b)
ellegaard o. (2015)
tang l. (2013)
albarrán p. (2011)
franceschini f. (2011)
tang l. (2011)
bornmann l. (2008)
persson o. (2004)

Topic 12
abramo g. (2019c)
abramo g. (2019a)
abramo g. (2018)
abramo g. (2016b)
lorenz d. (2015)
abramo g. (2011a)

Topic 13
abramo g. (2017)
abramo g. (2015a)
abramo g. (2014b)
abramo g. (2014a)
abramo g. (2012c)
abramo g. (2011b)
abramo g. (2009)

Theme 3: Research productivity, research efficiency and their role in the Italian evaluation process

- discourses led by **informatricians**

- main topics: quantitative indicators (citations, JIF, altmetrics), productivity, 'quality' as impact

- the Italian context and its National Scientific Qualification topic emerges due to the specialisation of a group of Italian researchers that have created their own network

- concepts of impact and quality are frequently interchangeable or overlapping
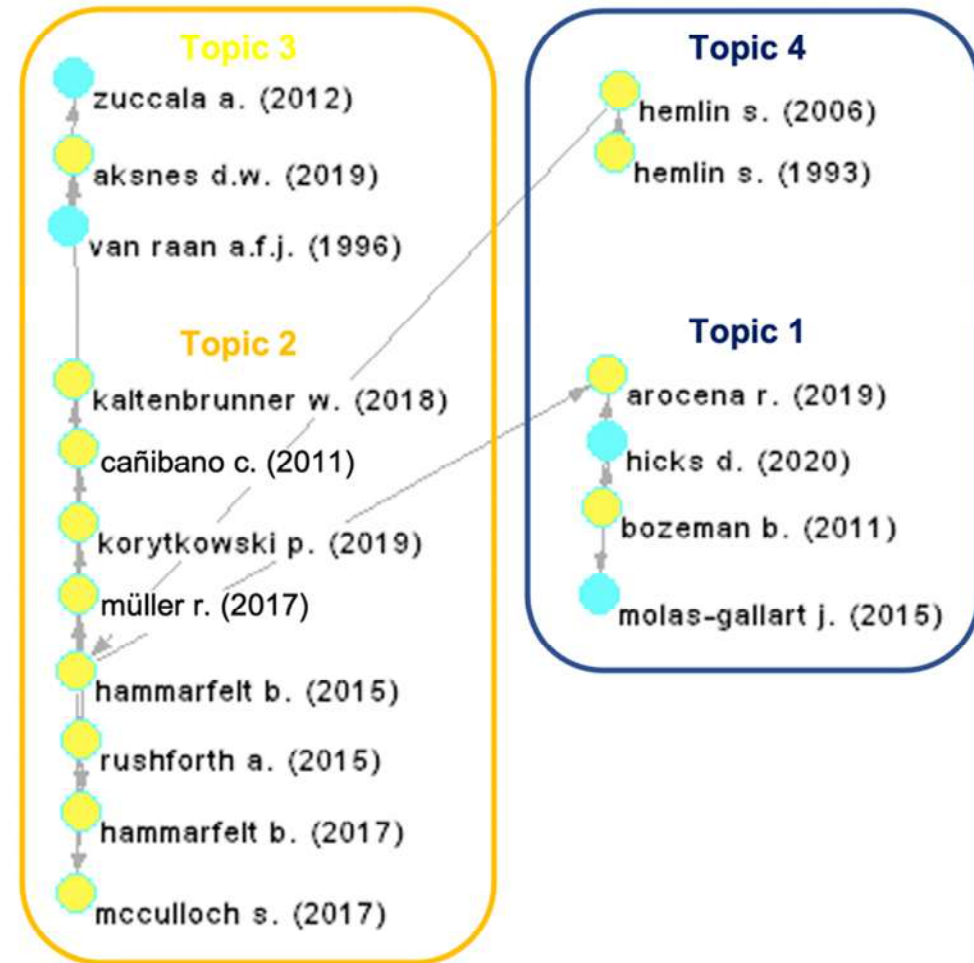
irst set of communities

Community	Definition 'quality'	Definition impact	Discourses	References
The scope of altmetrics in measuring the societal impact of research	• N/A	• Societal impact • Knowledge transfer across disciplines (interdisciplinary impact)	• provide an integrative evaluation of research in the digital era by complementing the peer review and bibliometrics in capturing all the dimensions of a research output through time	Haustein, 2016; Mohammadi and Thelwall, 2014; Hassan, Imran, et al., 2017; Salimi, 2017; Park and Park, 2018; Aung, Zheng, et al., 2019; Bangani and Onyancha, 2021
Attempts in overcoming the biases of bibliometric indicators in research evaluation	• impact of a publication on a field • citation networks as a proxy for quality	• contribution to the advancement of knowledge	• improve the performance-based and quantitative approach that has been characterising the evaluation system of many countries	Franceschini and Maisano, 2011); Mariani, Medo and Zhang (2015) ; Nykl et al. (2014); Giuffrida, Abramo, et al., 2019; Ferrara, Menczer, et al., 2015
Research productivity, research efficiency and their role in the Italian evaluation process	• N/A	• to be distinguished from productivity	• the idea that productivity is defined by counting the number of publications, is limited, as not all publications are equal (i.e., impact of output) and productivity is not equal across fields of study	Abramo, D'Angelo and Di Costa, 2019b; Abramo, Cicero, et al., 2011a; Abramo and D'Angelo, 2014b, 2015
Challenges of the Italian research evaluation and National Scientific Qualification	• N/A	• N/A	• Increase awareness of the use of the same bibliometric indicators that can favour those disciplines that are heavily characterised by quantitative indicators, while the opposite is true for non-bibliometric disciplines	Demetrescu, Finocchi, et al., 2020
The role of the journal impact factor: a peripheral view of quality and looking beyond bibliometrics	• Journal Impact Factor as a proxy for quality (critical stand)	• N/A	• researchers' work is considered of quality only when they publish in mainstream journals, thus benefitting the elites • homologation of all research to respect the standardised concept of research quality	Abramo, D'Angelo, et al., 2010; Benedetto, Cicero, et al., 2016; Brito and Rodríguez-Navarro, 2019; Miersch, 2020; Bloch, 2010; Corsi, D'Ippoliti, et al., 2019; Chavarro, Tang, et al., 2017)

- discourses led by **social sciences**

- main topics: the effects of quantitative indicators on the research pratices and strategies of researchers

- the focus shifts on the multidimensionality of the concept of 'quality'

- impact is part of the concept of 'quality' and is of different types (e.g., societal, scholarly etc.)

- criticism towards the current system that is dominated by indicators which is not able to capture the 'quality' of research

Theme 1: The epistemic distance between research quality and performance-based research evaluation systems

Topic 3
zuccala a. (2012)
aksnes d.w. (2019)
van raan a.f.j. (1996)

Topic 2
kaltenbrunner w. (2018)
cañibano c. (2011)
korytkowski p. (2019)
müller r. (2017)
hammarfelt b. (2015)
rushforth a. (2015)
hammarfelt b. (2017)
mcculloch s. (2017)

Topic 4
hemlin s. (2006)
hemlin s. (1993)

Topic 1
arocena r. (2019)
hicks d. (2020)
bozeman b. (2011)
molas-gallart j. (2015)

Theme 2: A criticism to the quest for 'excellence' in research – the shortcomings of current evaluation systems

econd set of communities

Community	Definition 'quality'	Definition impact	Discourses	References
The epistemic distance between research quality and performance-based research evaluation systems	• multidimensionality and variety of the "research quality" • each epistemic field has their own approach in defining the quality of research, even when the same repertoires of indicators are being used • Assessed through peer-review	• trace the role of influence of works • Measured through quantitative indicators	• epistemic cultures should be considered in the context of knowledge production surrounding bibliometric indicators, thus, academics should concern themselves with the actual use (e.g., practices) and meaning that indicators might assume in day-to-day research	Hammarfelt, 2017; Aksnes, Langfeldt, et al., 2019; Hammarfelt and De Rijcke, 2015; Hammarfelt and De Rijcke, 2015; Hammarfelt, 2017;
A criticism of the quest for 'excellence' in research – the shortcomings of current evaluation systems	• Multidimensional concept	• Defined by the 'new social contract' to provide proof of economic and societal benefits to society	• lack of focus and tools to implement the concept of societal impact of science	Hemlin and Rasmussen, 2006; Molas-Gallart, 2015; Hicks and Holbrook, 2020; Arocena, Göransson, et al., 2019

merging definitions/characteristics of …

Statements	References				
	Research Quality	**Scholarly Impact**	**Societal Impact**	**Productivity**	**Publishing Regularity**
Measured through peer-review	Albert, Laberge, et al., 2012; Schmied, Byland and Lienhard (2018); Oviedo-García (2016);	N/A	N/A	N/A	N/A
Mesured thorugh bibliometric indicators	Chen, Tang, et al., 2015; Noorhidawati, Aspura, et al., 2017; Meho, 2019; Mariani, Medo, et al., 2015; Herrmannova, Patton, et al., 2018	Franceschini and Maisano, 2011; Abramo, D'Angelo, et al., 2011; Carpenter, 2014; Costas, Zahedi, et al., 2015	N/A	Franceschini and Maisano, 2011); Abramo, D'Angelo and Di Costa, 2019b; Abramo, Cicero, et al., 2011a; Abramo and D'Angelo, 2014b, 2015	Franceschini and Maisano, 2011)
Multidimensional Concept	Hammarfelt and De Rijcke, 2015; Hammarfelt, 2017; Aksnes, Langfeldt, et al., 2019; Mårtensson, Fors, et al., 2016	Robinson-Garcia, van Leeuwen, et al., 2018	N/A	N/A	N/A
Measured through economic and societal benefits - altmetrics	N/A	Mohammadi and Thelwall, 2014; Shrivastava and Mahajan, 2017	Haustein, 2016; Hemlin and Rasmussen, 2006; Molas-Gallart, 2015; Lemke, Mehrazar, et al., 2018	N/A	N/A
Knowledge transfer across disciplines	N/A	Mohammadi and Thelwall, 2014	N/A	N/A	N/A
Trace the influence of works – citation networks	Mariani, Medo and Zhang (2015) ; Nykl et al. (2014); Zuccala, 2012	N/A	N/A	N/A	N/A
Journal Impact Factor (JIF) as a proxy **(N.B:critical position)**	Chavarro, Tang, et al., 2017; Abramo, D'Angelo, et al., 2010; Benedetto, Cicero, et al., 2016; Brito and Rodríguez-Navarro, 2019; Miersch, 2020; Abramo, D'Angelo and Di Costa 2010	N/A	N/A	N/A	N/A

- increased awareness and acknowledgement of the role, responsibilities, and limits of each discipline in contributing to the research evaluation studies and in actual assessment processes, where no approach has a priori a preferred status
- two connected components, each representing a side, should work together in contributing to the research assessment process

- Informetricians should clearly state how their approach constitutes one side of how research is evaluated - technical approach
- social sciences should be contributing to the development of methods for evaluation and the definition of a framework for evaluation

emerging definitions of quality of research

- informetrics → quality and impact often interchangeable or overlapping concepts – the importance of measuring it through one indicator
- social sciences → focus on the multidimensionality of quality, where impact is one of its dimensions – recall focus on other dimensions of quality other than impact – that inability of one indicator to capture the complexity of research 'quality'

Active Role*

acting as a legitimising agent of the mechanism of evaluation and influencing scholarly communication

Active role of the researcher

«study the peer review as the process of selecting scientific manuscripts and the central role played by the editor in this process, in the attempt to uncover the underlying assumptions driving the editor to behave in a certain way during a peer review.»

Manuscript
Submission

Reviewer Selection
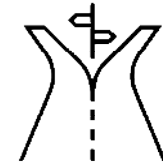
Final Editorial
Decision

Desk Rejection

Reviewer's Report
Intervention

Theoretical Background && Assumptions

Editors are the gatekeeper of scientific knowledge, as they determine which areas of research are under the spotlight, thus shaping the future of a discipline (Crane, 1967; Hollenbeck, 2008; Konrad, 2008; Aguinis and Vaschetto, 2011; Feeney, Carson and Dickinson, 2019).

The Editor is responsible for numerous activities, such as maintaining the standards of the journal, defining the strategic direction of the journal, leading the ethical standards of the journal, and selecting reviewers (Starbuck, 2003; Brinn and Jones, 2007; Hall, Hundley and van Teijlingen, 2015; Russell-Bennett and Baron, 2017).

Institutional Logics:

- **logics provide a basis for action**, while others provide **competing cognitive frames** for subsets of participants (Fligstein and McAdam, 2012), such assumption is central as it incorporates agency as a driver for the variation of multiple logics co-exist in the organization.

- **organizations often experience multiple logics** which can **influence** the organizational and **individual behaviour** (Greenwood et al., 2011)

- it is assumed that there is the **prevalence of some logics within an organization as these depend on the context** in which they operate (Thornton and Ocasio, 2012)

Academic Logic - focused on the intrinsic value of new knowledge in generating and communicating (Partha and David, 1994; Neumann, 1996; Brew, 2003). The foundation of this logic is found in the CUDOS principles: communalism, universalism, disinterests, and skepticism (Merton, 1973).

Market Logic - main goal is that of achieving its financial interests (Baffy et al., 2020) focuses on the external performance and indicators, that are outside academia, such as the governments or funders, delivering thus an approach to quality which is defined as measurable and quantifiable (Kallio, Kallio and Grossi, 2017)

Professional logic - related to the academic logic. It leans on the academic community when determining the quality of universities' outputs (i.e., research and teaching) (Kallio, Kallio and Grossi, 2017).

Bureaucratic logic - based on Weber's concerns about correctness, impartiality, and equal treatment (Meyer et al., 2014). This logic is discerned as it focuses on respecting the guidelines, policies, and standards. Closely related to the market-oriented logic as it aids in achieving the goals of the latter.

Data Collection && Methodology

Survey administrated to SECS P-10/B3 (OS) and MED33/MED34 (OSM) editors from journals ranked relevant by the Italian National Agency for Research Evaluation (ANVUR) → over 1500 surveys sent

Online survey piloted through six cognitive interviews → willing editors from the sample

Online Survey Design (8-point Likert Scale):
- potential characteristics of the manuscript
- technical aspects
- content aspects
- ethical aspects
- reviewers' characteristics
- reviewers' report

Items from literature and emerged from cognitive interviews

122 complete survey responses

Qualitative analysis and Exploratory Factor Analysis → SPSS

| Journal Discipline	No. of respondents	% female respondents	Current Position			Experience in years			
			Full time	Part time (>50%)	Part time (<50%)	less than 5	between 5 and 15	between 15 and 25	more than 25
Orthopaedics and Sports Medicine	55	12.7%	1.6%	8.2%	35.2%	9.0%	13.4%	16.4%	5.7%
Organisation studies	67	20.9%	2.5%	5.7%	46.7%	6.6%	25.4%	12.3%	10.7%
Total*	122	16.80%	2.05%	6.95%	40.95%	7.80%	19.40%	14.35%	8.20%
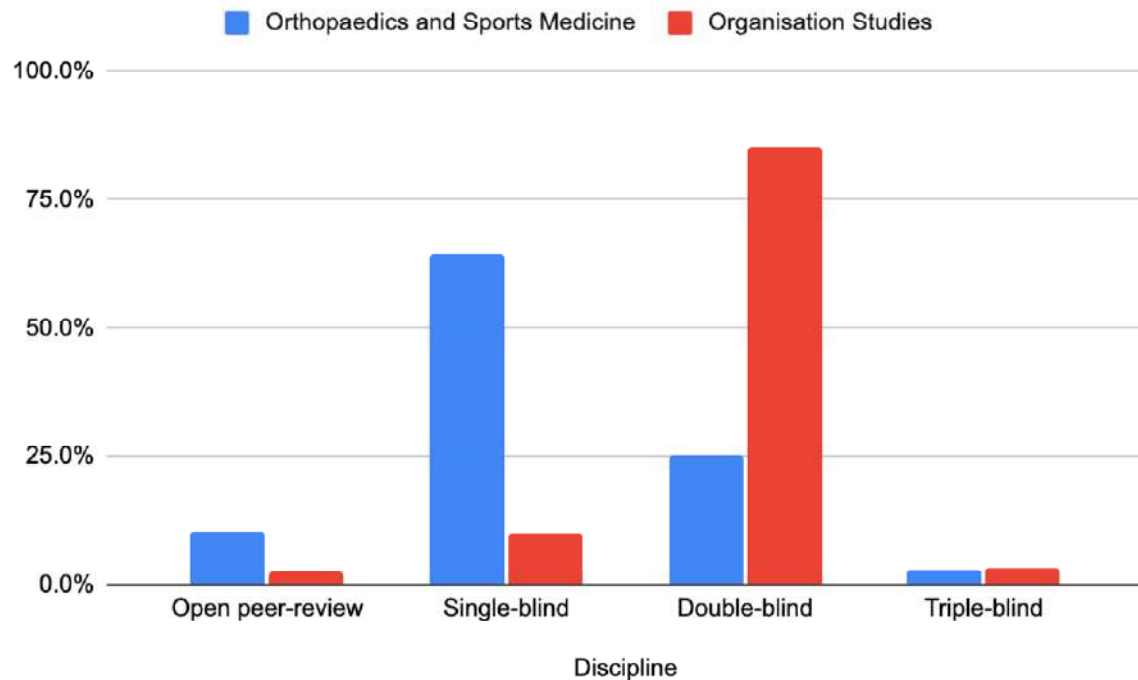
- some journals adopt more than one type of peer-review (2.04%)

- clear preference in OSM for single-blind (i.e., author's identity is disclosed)

- OS most of the time (85%) reviewers' and authors' identities are not disclosed

- more female editors in OS than OSM

- similar time dedicated to editorial decision between the two disciplines (part time <50%)

Opinions on the challenges and improvements of the peer-review
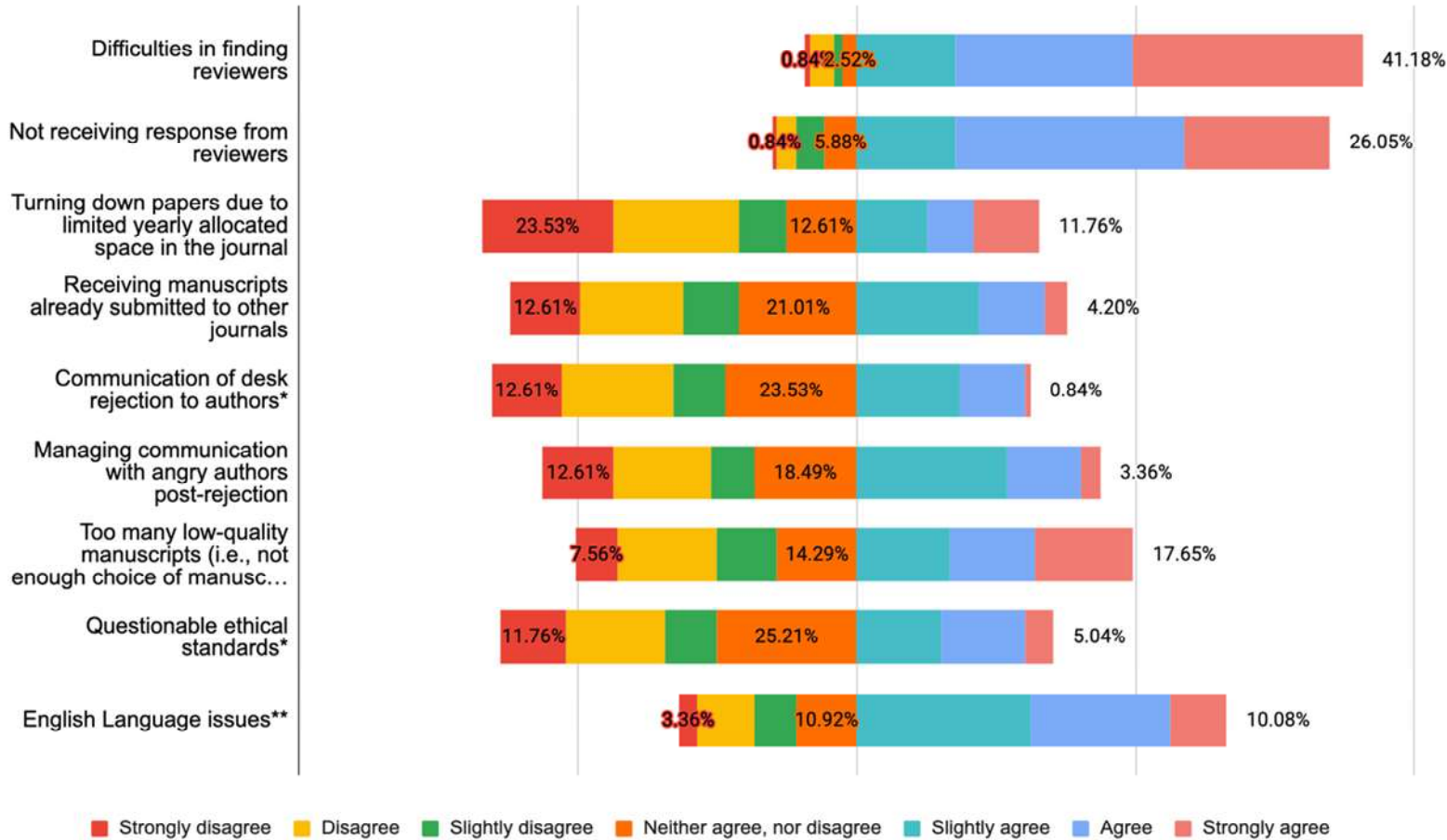
- both OS and OSM editors agree that **finding reviewers is difficult** (90.76% in the range of agreement) (Popkin, 1989)

- **OSM editors seem to be experiencing this difficulty more than their colleagues in OS** (i.e., mean 6.24, Rwg 0.65 vs. mean 5.6, Rwg 0.54)).

- **lack of response from reviewers** (84.87%) (Hall et al., 2015) which seems to be **equally** a problem in **both disciplines** (mean scores respectively 5.87 with Rwg 0.61, and 5.44 with Rwg 0.55)

- **English language issues** (66.39%)

Opinions on the challenges and improvements of the peer-review
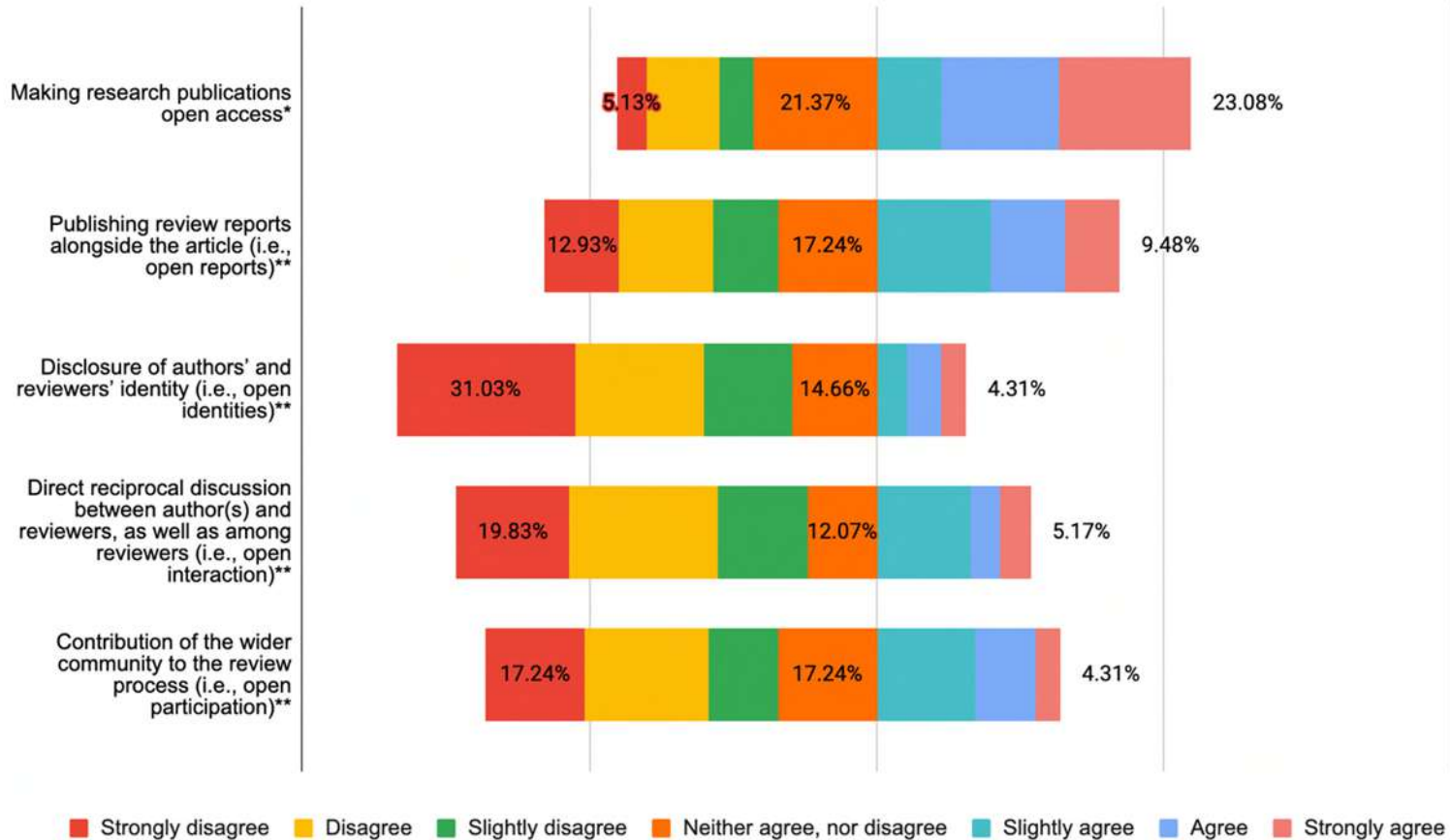
- most editors agree that making publications **open access is something that could improve the scholarly practice** (54.70% overall agreement)

- **open interaction and open identities are the least desired by OS editors** (means respectively 2.50769 and 2.92308)

- slightest **higher mean** in the OSM journal discipline, it might indicate **that life sciences are more prone to accept these practices** and see their potential value than OS journal disciplines

Items	Component*				Mean responses	
	market	professional	bureaucratic	academic	Orthopaedics and Sports Medicine editors	Organisational Studies editors
Hot Topic	**0.719**	0.033	0.103	0.105	5.0635	5.4058
Geographical Coverage	**0.71**		0.124	0.152	3.7581	4.7
Author Reputation	**0.688**	0.284	0.139	-0.075	4.0645	4.2143
Conference Connection	**0.661**		0.252	0.155	3.8413	4.0704
Content Accuracy		**0.783**	0.173	0.293	6	3.3857
English Clarity	0.139	**0.667**	0.508	-0.063	5.2742	6.3286
Life Span Article	0.555	**0.582**	-0.06	0.049	4.459	5.4429
Methodology Alignment	0.121	**0.55**	0.24	0.301	5.5645	4.8028
Reference Style	0.14	0.079	**0.783**	0.238	3.377	5.7183
Word Count	0.386	0.107	**0.643**		3.5246	3.2714
Title	0.048	0.268	**0.596**	0.105	5.5806	4.2143
Literature Referencing	0.117		0.404	**0.73**	5.4839	4.5797
Publication Meaning	0.074	0.214	0.088	**0.632**	6.2759	5.4928
Rigorous Methods		0.514		**0.617**	6.2623	5.9706
Topic Breadth	0.47	0.099	-0.083	**0.58**	5.4194	6.087

*corrected for multicollinearity in the manuscript factorial analysis by excluding the following items from the analysis:

conceptualisation, theoretical framework, justified conclusions, disclosure conflict, funding transparency, and global issues

(correlation value >0.7) (Field, 2005)

institutional logics manuscript

Cronbach's Alpha values:
- market 0.737
- professional 0.714
- bureaucratic 0. 623
- academic 0.646

- OS editors have scored higher on the market logic items

- both disciplines scored similarly on the professional logic

Items	Component				Mean responses	
	report content	manuscript requirements	editor-reviewer relationship (perception)	editor-reviewer relationship	Orthopaedics and Sports Medicine editors	Organisational Studies editors
Report does not correspond to the paper	0.871	0.071	0.1		6.5862	6.7231
Lack of understanding the study	0.845	0.092	0.144	0.097	6.1053	6.3692
Unconstructive, unethical, or defamatory comments	0.833	0.038	-0.048	0.168	6.3966	6.5455
Poor theoretical support of rejection	0.728	-0.069	0.165	0.067	5.8448	5.7612
Diversity (i.e., different perspective) between author and reviewer	0.049	0.765	0.128	0.15	4.3968	4.5915
Imminent deadline for review submission	-0.065	0.713	-0.099	0.14	4	4.0145
Representative of non-mainstream literature	0.143	0.657		-0.112	3.7581	4.2353
Coherence with my (editorial) perspective		0.596	0.125	0.088	4.3492	4.2464
Contradicting points with previous reviews	0.096	0.144	0.839		4.6724	3.8485
Strong subjective perspective of reviewer	0.049	-0.104	0.835	0.089	5.3793	4.7576
Incompatible suggestions with the journal's policy	0.419	0.222	0.579	0.116	5.6034	5.6061
Reviewer cited in the submitted paper		0.179	-0.183	0.731	4.6563	5.1408
My familiarity with reviewer's work (i.e., published articles)	0.145	0.081	0.128	0.706	5.1563	5.4085
Previous positive experience	0.131		0.255	0.683	5.8906	5.9014

relationship editor-reviewer
(reviewer's report rejection)

Cronbach's Alpha values:
- report content (0.852)
- editor-reviewer relationship (perception) (0.713)
- other two components values below acceptable

- editors of OSM tend to reject the reviewer's report when it has a strong subjective perspective on the manuscript (mean 5.37)

- OSM editors tend to reject the reviewer's report more often than OS when there are contradicting points with previous reviews (mean 4.67)

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- the emerging definition of quality is defined by two logics: **market and professional (basis for action)**

- **bureaucratic and academic provide the competitive cognitive schemes** for a subsets of participants (Fligstein & McAdam, 2012)

- higher chances of being published if the manuscript:

  - deals with a **hot topic**
  - increases the **geographical coverage** of the journal
  - is **connected with a conference**
  - has an author with a certain **reputation**
  - reports **high content accuracy**
  - is **well-written in English**
  - show a high **potential for its life span,**
  - is **aligned with the methodology** of the journal

- **editors (of this sample) seem to be aware of the dual role they hold** (Mullen et al., 2013) --> they are able to **separate their logics as an academic part of a scholarly community** (academic logic had a low Cronbach's Alpha)

Findings Implica

- **Market Logic** → preference articles which can increase the performance for the journal

- **Professional Logic** → aids to maintain the performance standards of the journal

- The emerging definition of quality → **focus on maintaining the performance-based evaluation mechanism**

- Understanding the emerging definition of research 'quality' has implications for the evaluation of manuscripts that are relevant for:

  - **career of the researcher,** especially early-stage career researchers (Nicholas et al., 2017; Zhang & Yu, 2020)

  - **influence the publication strategies and subsequently the type of discourses that define the scholarly communication.**

Conclusions

the role and responsibilities of the researcher in the research evaluation system && an emerging definition of quality

Reflective role: researcher of a scholarly community

Active role: editor of a journal

understand the role, responsibilities, and limits that their discipline has in contributing to the discourses on research evaluation and on the framework for research assessment

understand the complexity of the topic → not just one side

work collaboratively to improve not only the measurements of performance, but identify the effects that these evaluations have on research practices and strategies

understand the distinction between their role as a researcher and as an editor (evaluator)

balance between the organisational performance of the journal and the advancement of knowledge

be aware that their final editorial decisions are impactful for the: scholarly communication, future of their discipline, and the methods of evaluation

Emerging definition of quality?

- <u>need to contextualize the assumptions that lead to the various definitions of quality</u>

  - quality can take on different definitions based on the researcher's epistemic community

  - some perceive it as a multidimensional concept, while others do not differentiate between the concepts of quality and impact of research

  - some clearly state it is measured by peer-review, while others that it can be measured by quantitative indicators as well

  - the overlapping of concepts is due to the diversity of epistemic communities that contribute to the discourses on research evaluation → **need to understand the role, responsibilities and limits of each discipline to reach a common framework to which they contribute collaboratively**

- <u>need to balance the underlying assumptions (instituional logics) that legitimise the quality of published work</u>

  - the current logics are coherent with the performance-based evaluation system (market and professional)

  - **homologation of all research to respect the standardised concept of research quality**

  - no space for 'soul-touching' research → current logics aim to reach certain performance objectives

- <u>need to develop a framework to capture the multidimensionality of quality catering for the epistemic needs of each discipline</u>
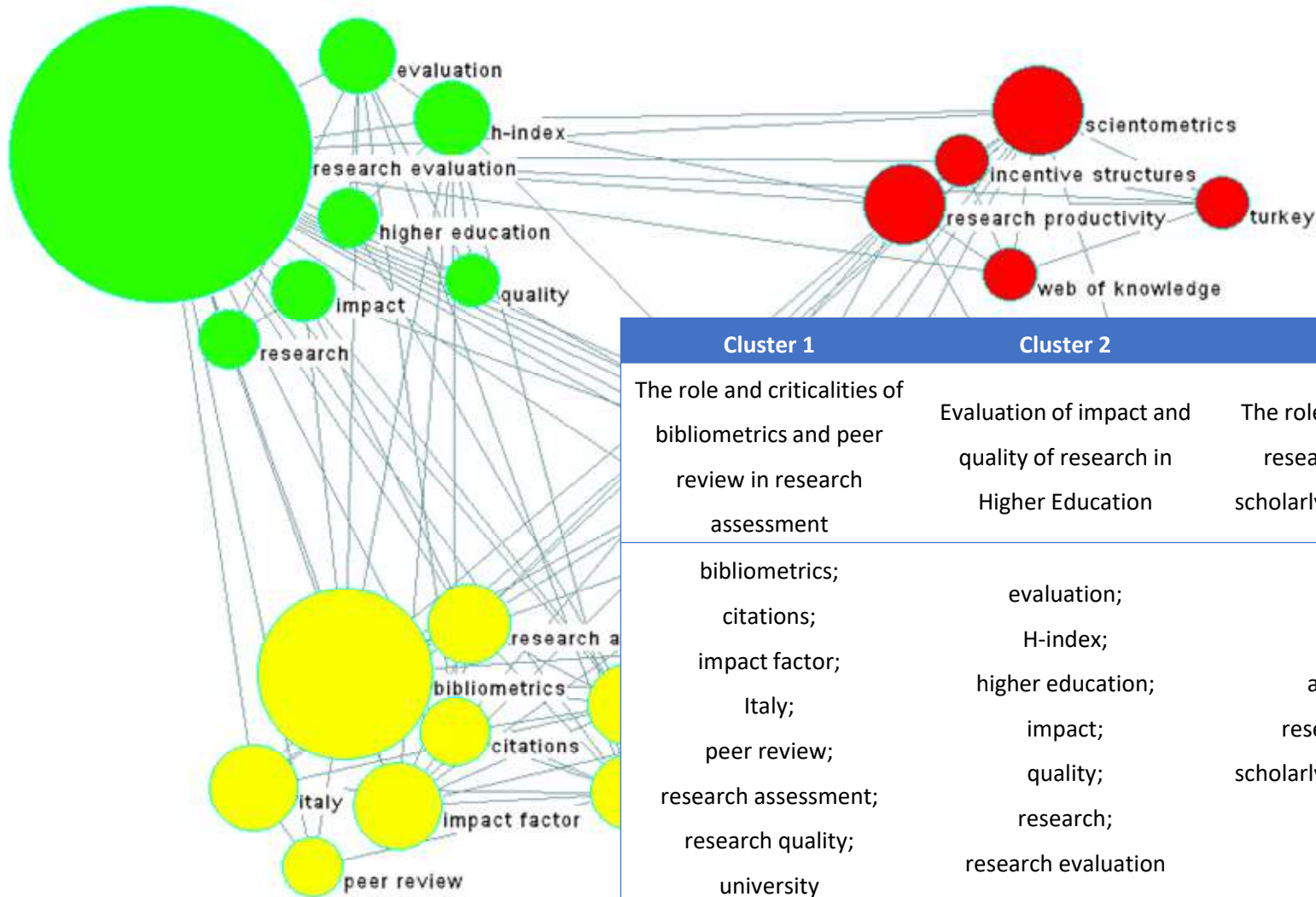
THANK YOU
FOR YOUR
ATTENTION
Any questions?

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Appendix

Author's Keywords Co-occurrence

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	The role and criticalities of bibliometrics and peer review in research assessment	Evaluation of impact and quality of research in Higher Education	The role of altmetrics in research policy and scholarly communication	Research productivity and scientometrics	Tracing the effects of science policy: citations and JIF
	bibliometrics; citations; impact factor; Italy; peer review; research assessment; research quality; university	evaluation; H-index; higher education; impact; quality; research; research evaluation	altmetrics; research policy; scholarly communication	incentive structures; research productivity; scientometrics; Turkey; web of knowledge	citation analysis; science policy; journal impact factor

Cluster	Definition 'quality'	Definition impact	Other definitions	References
The role and criticalities of bibliometrics and peer review in research assessment	• it is almost impossible to consider a single definition of quality, but quality should rather be viewed as a multidimensional concept given the plurality of disciplines and the governing paradigms of each of them.	• Measured by quantitative indicators (citations)	• N/A	Abramo, D'Angelo, et al., 2011; Mårtensson, Fors, et al., 2016; Noorhidawati, Aspura, et al., 2017
Evaluation of impact and quality of research in Higher Education	• Measured through peer review • JIF	• Measured by quantitative indicators (citations) • Multidimensional concept (scholarly and societal impact)	• N/A	Schmied, Byland and Lienhard, 2018; Oviedo-García, 2016; Meho, 2019; (Mariani, Medo, et al., 2015; Noorhidawati, Aspura, et al., 2017; Herrmannova, Patton, et al., 2018; Abramo, D'Angelo, et al., 2010; Vessuri, Guédon, et al., 2014; Benedetto, Cicero, et al., 2016; Brito and Rodríguez-Navarro, 2019; Miersch, 2020; Robinson-Garcia, van Leeuwen, et al., 2018
The role of altmetrics in research policy and scholarly communication	• N/A	• N/A	• societal impact – Almetrics introduce the challenge of redefining the concepts of research impact and academic identity of researchers due to the diverse concerns and opinions held by different actors on the new emerging metrics	Haustein, 2016; Regan and Henchion, 2019
Research productivity and scientometrics	• N/A	• N/A	• Research productivity - the number of publications per researcher. measure the overall impact of a researcher given their entire scientific production	Abramo, Cicero, et al., 2014; Demetrescu, Finocchi, et al., 2020
Tracing the effects of science policy: citations and JIF	• N/A	• N/A	• Meaningful research - research is dominated by performance metrics and does not leave space to "soul-touching research"	Tran, Hoang, et al., 2020; Trinh, Le, et al., 2019

Theoretical Framework

Categories	Institutional Orders			
	Academic	**Professional**	**Bureaucratic**	**Market-Corporation**
Basis of Mission	advance scholarly knowledge	meritocracy of peers	promote/publish ethical research	increase journal ranking
Sources of Legitimacy	scholarly reputation	personal expertise	ethical standards, rules, norms	rankings
Sources of Authority	scholarly community	editorial board	ethical committee	analytic companies (e.g. Clarivate), reputation
Basis of Attention	peers judgement	status in academic profession	relation to research ethics	status in academic publishing market
Economic System	paradigm-based	membership-based	bureucracy, rule compliance	performance-based

Table 1 Dimensions of Institutional Logics in academic peer-review
*Developed from the dimensions of Thornton et al. (2012:73), with inspiration from Canhilal et al. (2016:177) and Henningson and Geshwind (2021:7)

Reference	Items
Hamilton (2020)	Unconstructive, unethical, or defamatory comments
	Contradicting points with previous reviews
	Strong subjective perspective of reviewer
	Incompatible suggestions with the journal's policy
	Rigorous Methods
	Strong subjective perspective of reviewer
Ross-Hellauer et al. (2020)	Making research publications open access
	Publishing review reports alongside the article (i.e., open reports)
	Disclosure of authors' and reviewers' identity (i.e., open identities)
	Direct reciprocal discussion between author(s) and reviewers, as well as among reviewers (i.e., open interaction)
	Contribution of the wider community to the review process (i.e., open participation)
Northam (2010), Hing (2011)	Hot Topic
	Methodology Alignment
	Word count
	Title
	English Language issues
	Reference Style
	Literature Referencing
	Reviewer cited in the submitted paper
	Content Accuracy
	Incompatible suggestions with the journal's policy
	Imminent deadline for review submission
	Lack of understanding the study

Reference	Items
Cognitive Interviews with editors	Turning down papers due to limited yearly allocated space in the journal
	Communication of desk rejection to authors
	Managing communication with angry authors post-rejection
	Too many low-quality manuscripts (i.e., not enough choice of manuscripts to be published)
	English Clarity; Topic Breadth; My familiarity with reviewer's work (i.e., published articles)
	Previous positive experience
	Representative of non-mainstream literature
	Conference Connection
	Life Span Article
	Publication Meaning
	Poor theoretical support of rejection
	Geographical Coverage
Bravo et al. (2017)	Author Reputation
COPE (2020)	Receiving manuscripts already submitted to other journals
	Report does not correspond to the paper
Wager (2009)	Questionable ethical standards
	Diversity (i.e., different perspective) between author and reviewer
	Coherence with my (editorial) perspective
Donnellon, Cummings, & Frost (1986)	Difficulties in finding reviewers
	Not receiving response from reviewers
Mullen et al. (2013)	Contradicting points with previous reviews