

Relationship between the review quality of manuscripts, editors' and reviewers' decision to publish, and authors' opinion of their reviewed manuscripts

Peering into Peer Review from an Interdisciplinary Perspective

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Review reports



Reviewer 1

[— Revise](#)

— Reviewer 1

Please provide your rating as handling editor

How timely was the delivery of the review report? (give 5 if the report was submitted within deadline.):

* ★ ★ ★ ★ ★

Did you feel confident to follow the reviewer(s) recommendation for this article?:

* ★ ★ ★ ★ ★

Other comments or feedback:

Author's question:

How useful was the review report in terms of improving the quality of your manuscript?

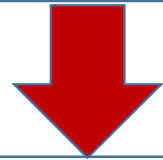
1 = poor, 2 =, 3 = fair, 4 = very good, 5 = excellent

Purpose



- 1) Assess the quality of review reports
- 2) Compare the quality of review reports to authors' satisfaction with review reports
- 3) Compare the quality of review reports to editor's opinion about the review

910 original Elsevier research manuscripts from May-December 2014



Authors and editors completed Internet-based surveys

Pilot study collected the single blind 1 st round reviews



- Agricultural Systems-
- Chemical Physics Letters-
- Journal of Catalysis-
- Computer Communications-
- Geothermics-
- Journal of Nuclear Materials-
- Journal of Quantitative Spectroscopy and Radiative Transfer-
- Nuclear Physics, Section B-
- Radiation Measurements-
- Pediatric Neurology-
- Journal of Materials and Design-
- Vacuum-

For this study

Review reports of manuscripts

Reviewer recommendations (Accept, etc.)

Editor & author review opinions

Evaluated Review Quality with the

Modified Review Quality Instrument (RQI) designed by van Rooyen et al. Each item assesses quality using a 5-point Likert scale from 1 (low) to 5 (high).

1. Did the reviewer discuss the importance (relevance, supportive, potential of the work, significance, scientific value, merit, benefits, usefulness) of the research question?

1	2	3	4	5
Not at all				Discussed extensively
		Moderately discussed		

2. Did the reviewer discuss the originality (contribution, addition of knowledge to scientific literature or field) of the paper?

1	2	3	4	5
Not at all				
		Moderately discussed	.	Discussed extensively with references
			.	
			.	

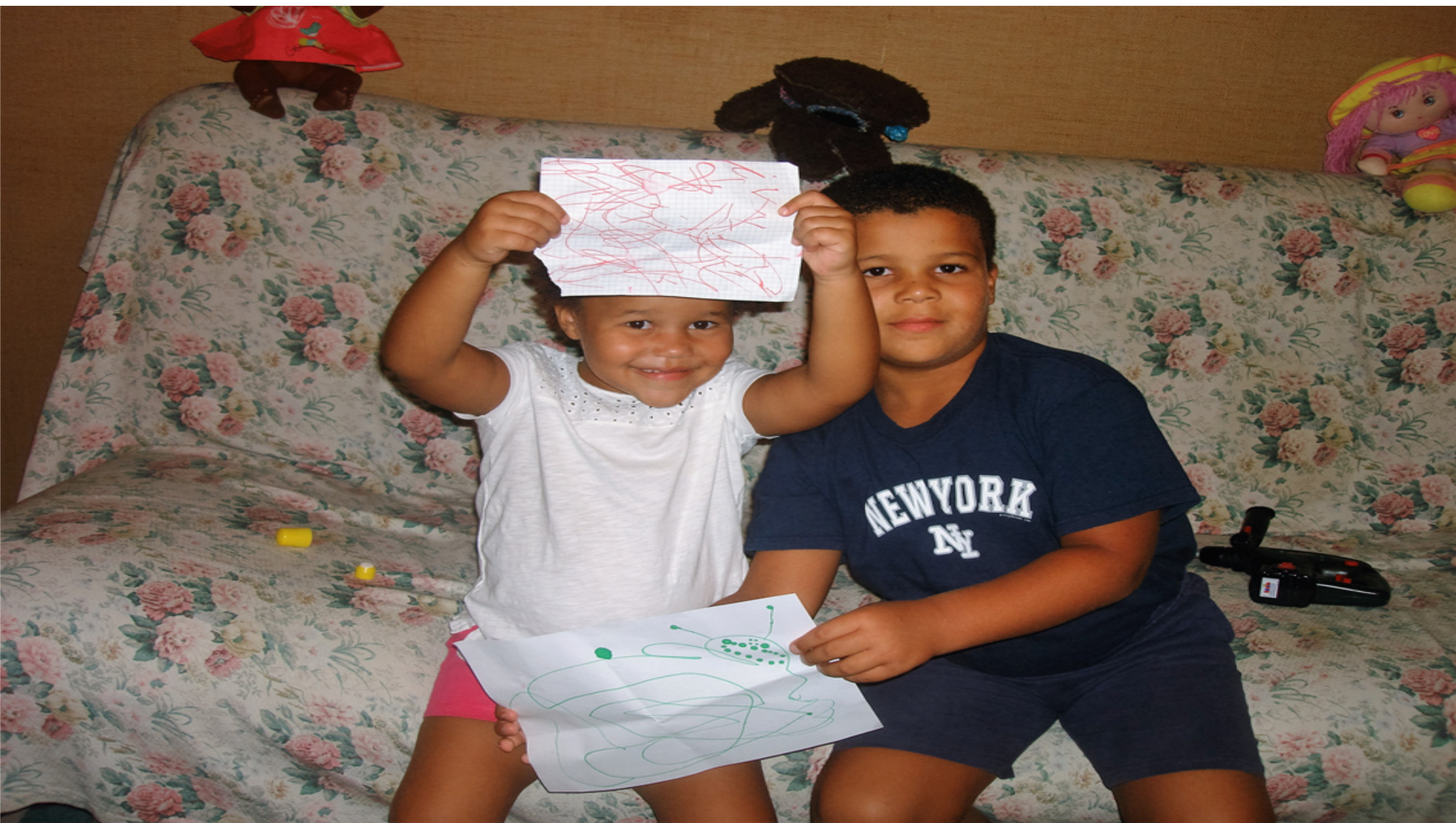
9. Did the reviewer supply appropriate evidence using examples (referred to specific text) from the paper to substantiate his or her comments?

1	2	3	4	5
No comments substantiated		Some comments substantiated		All comments substantiated

10. Did the reviewer comment on the author’s interpretation of the results?

1	2	3	4	5
Not at all				Discussed extensively

Independent Inter-rater correlation (Kappa) = 0.65. 95% CI 0.50 – 0.80



Manuscript Characteristics	
	n (%)
All studies with reviews (n = 881)	
1	346 (39.2)
2	465 (53.1)
3 or more	80 (9.0)
	Mean \pm SD
Overall quality score	2 \pm 0.5
Overall author satisfaction score	4 \pm 1.2
Overall editor opinion score	
Review timeliness	4 \pm 1.0
Review influence	4 \pm 1.0

Author satisfaction vs. quality of the review

- Spearman's correlation showed no association
- Across all journal subject areas: Spearman's coefficient range: -0.08-0.23, P range = 0.09-0.81).

Author satisfaction vs. reviewer decision

- No significant differences in Kruskal-Wallis H test in author satisfaction scores broken down by reviewer, all subject areas: (X^2 range = 0.288-2.253, P range = 0.29-0.32)

Editors' opinion about the influence of the review vs. reviewer recommendation

- There was no relationship between editors' agreement about the influence of reviews and a favorable recommendation by the reviewer for a manuscript. (X^2 range = 3.556-6.674, P range = 0.15-0.46)

Reviewer decision vs. quality of the review

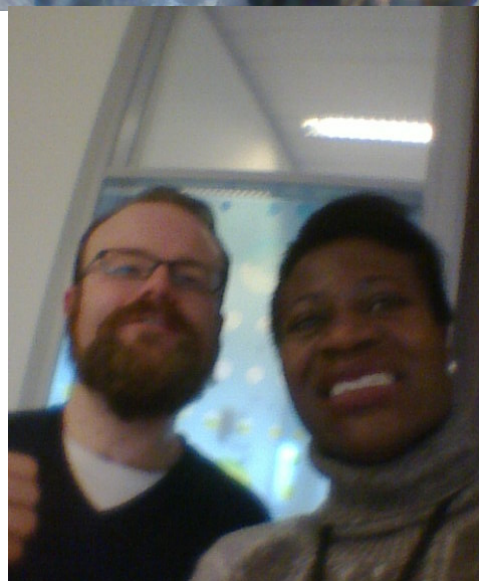
- No significant differences in Kruskal-Wallis H test in author satisfaction scores broken down by reviewer, all subject areas: (X^2 range = 0.242-2.842, P range = 0.24-0.28)

Author satisfaction vs. Timeliness or editor's opinion about the review influence

- Spearman's correlation showed no association
- Across all journal subject areas: Spearman's coefficient range: (-2.0-.87, p range = 0.75-0.79).

Quality of the manuscript vs. journal type

- No significant differences in Kruskal-Wallis H test in manuscript quality broken down by journal type, all subject areas: ($X^2 = 182.463$, P range = 1.8-1.9)



Modified Review Quality Instrument (RQI) designed by van Rooyen et al. Each item assesses quality using a 5-point Likert scale from 1 (low) to 5 (high).

1. Did the reviewer discuss the importance (relevance, supportive, potential of the work, significance, scientific value, merit, benefits, usefulness) of the research question?

1 2 3 4 5

Not at all

Moderately discussed

Discussed extensively

2. Did the reviewer discuss the originality (contribution, addition of knowledge to scientific literature or field) of the paper?

1 2 3 4 5

Not at all

Moderately discussed

Discussed extensively with references

3. Did the reviewer clearly identify the strengths of the method (study design, data collection, or data analysis)?

1 2 3 4 5

Not at all

Some

Comprehensive

4. Did the reviewer clearly identify the weaknesses of the method (study design, data collection, or data analysis)?

1 2 3 4 5

Not at all

Some

Comprehensive

5. Did the reviewer make specific useful comments on the writing (style, language) of the manuscript?

1 2 3 4 5

Not at all

Comprehensive

6. Did the reviewer make specific useful comments on the organization (structure, references, how sections are organized) of the manuscript?

1 2 3 4 5

Not at all

Comprehensive

7. Did the reviewer make specific useful comments on the tables or figures of the manuscript?

1 2 3 4 5

Not at all

Extensive

8. Were the reviewer's comments constructive?

1 2 3 4 5

Not at all

Very constructive

9. Did the reviewer supply appropriate evidence using examples (referred to specific text) from the paper to substantiate his or her comments?

1 2 3 4 5

No comments substantiated

Some comments substantiated

All comments substantiated

10. Did the reviewer comment on the author's interpretation of the results?

1 2 3 4 5

Not at all

Discussed extensively

11. How would you rate the quality of this review overall?

1 2 3 4 5

Poor

Excellent