



Research Paper Guidelines

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The purpose of this white paper is to provide guidance for university students, PhD candidates, and early career researchers to write and to review their research papers prior to submission to an academic journal for publication.

It is the 17th paper in a series of thoughts collected, organized, and promoted by the Quality in Education Think Tank (QiETT) of the International Academy for Quality (IAQ). The first paper addressed a broader scope of topics and put into perspective the overall field of “Quality in Education”, which set a common ground for further reflection and guidance of QiETT activities. The forthcoming papers, such as this one, focus on more specific topics and delve deeper into particular topics based upon the collection of international inputs from quality and education experts.

To date, this collection of white papers comprises the following titles:

- 1-“Quality in Education: Perspectives from the QiETT of IAQ”
- 2-“Large Scale Training of Quality Professionals”
- 3-“Inclusive Quality of Education”
- 4-“Continuing Education in Quality Improvement for Healthcare Professionals and its effects on organizational improvement”
- 5-“Current Societal Challenges to Quality and Quality Management in Higher Education”
- 6-“Applying Quality Theory to Educational Systems”
- 7-“Training and Teaching Statistical Methods for Quality”
- 8-“Simple Hints to Help Trainers Improve Training Quality”
- 9- “Student Quality Circles: A Step Towards a Total Quality Society”
- 10- “Solving Problems in Education Using Quality Tools”
- 11- “Making Online Education Effective”
- 12- “Integration: The Key to Effective and Efficient Quality Education”
- 13 “Examining the Nexus of Workforce Development and Quality”
- 13- “Examining the Nexus of Workforce Development and Quality”
- 14- “Flashes of Insight – The Many Pathways to Creativity and Innovation”
- 15- “Writing a Research Paper”
- 16- “Publishing a Research Paper”
- 17- “Research Paper Guidelines”

1. Introduction

The International Academy for Quality's Quality in Education Think Tank has published guidance for both writing a research paper (Barsalou and Sariava 2022a) and getting the completed research paper published in a journal (Barsalou and Sariava 2022b). To complement and complete our trilogy of White Papers in this area, the present White Paper provides a list of relevant topics that authors may want to consider for revision and improvement of their research articles, before their submission to academic journals.

Although many research papers are structured according to the IMRaD (Introduction, Method, Results and Discussion and Conclusions) (Mack 2018) sequence of topics, in this White Paper, we will breakdown the individual elements of a research paper into introduction, literature review, methodology, discussion, conclusions, and references, with specific items that are felt to be relevant in each of these paper segments.

Please note that any research paper must conform to the specific requirements of the corresponding target journal (Simon et al. 2020). Therefore, the actual research paper submitted may have a structure that does not totally align with our suggested list of segments, but most research papers will use these, or similar building block checklists. Therefore, this should not be a problem, as the content of any submitted research paper should still closely be aligned with the suggested topics and corresponding recommendations. For example, a research paper may have a materials and methods section; in such as case, our discussion and suggestions would still contain relevant questions to be accounted for. Or, as yet another example, a research paper may have one section for discussion and conclusions; that being the case, our suggestions for both discussion and conclusions should be used.

The detailed guidance provided below, according to the segments already mentioned, includes a list of questions authors may want to keep in mind, regarding the contents of the paper, with a cell to place a checkmark under possible answers consisting of yes, no, and n/r (Not Relevant). For its optimal use, this White Paper can be printed to place a checkmark under the appropriate answers to the relevant questions. If the answer is no, it may be advisable to either improve contents in the research paper accordingly, or at least take this into account when receiving and providing feedback to the reviewer's comments.

2. Research Paper Guidelines

In this Section, drawing upon our experience as authors and reviewers, we provide several Tables (1 to 9), with suggested issues and questions that authors may want to take into proper consideration before submission for publication in academic journals.

Table 1. Abstract

Question	Yes	No	N/R
Is the purpose of the paper clearly stated?			
Is the research gap the paper seeks to close well explained?			
Does the abstract explain why this paper is needed?			
Are the research design, methodologies or approaches used well summarized?			
Are findings well explained?			
Are the implications of the paper well explained?			
Are limitations of the paper listed?			
Is the value of the paper well explained?			
Is the abstract structured according to the target journal requirements?			
Does the abstract respect the maximum wordcount for the target journal (generally 150-400 words)			
Is a visual abstract (if permitted or required) provided?			
Are the major overall contributions of the paper clearly highlighted?			

Table 2. Introduction

Question	Yes	No	N/R
Does the introduction clearly align with the editorial scope of the target journal?			
Is the novelty of the paper well explained?			
Is the significance of the paper well explained?			
Are the research questions the paper addresses properly identified?			
Does the introduction place the research conducted into the proper context?			
Does the introduction show why this paper is relevant?			
Does the introduction show which knowledge gaps the paper aims to address?			

Table 3. Literature review

Question	Yes	No	N/R
Does the literature review make clear what has already been achieved before and by other authors?			
Does the literature review provide the right context for understanding the paper's research, its outcomes and contributions?			
Are the right reliable primary sources of information being used?			
Are the most recent relevant contributions (last 5 years) well covered?			
Are older references (over 10 years since publication) properly identified and mentioned, either a well-known and important sources, or presented in a right historical context?			
Are different approaches represented, covered and compared in the literature review?			
Does the literature review provide a clear overview of the current state of the art with regards to the relevant topics?			
Is the literature review comprehensive and does it cover the most important and current references?			
Is the literature review well organized and able to support the research goals, methodologies and outcomes related to this paper?			

Table 4. Research Methodology

Question	Yes	No	N/R
Can a reader reproduce the study based on the description provided in the methodology section?			
Are the materials, data and equipment used listed?			
Are sound justifications for the research methodology provided?			
Are case studies or samples used well-chosen and justified?			
Are algorithms sources of data well described?			
Are experimental protocols, conditions, procedures and equipment used clearly identified and appropriately justified?			

Table 5. Research Results

Question	Yes	No	N/R
Are the results obtained well presented?			
Are the steps taken in the analysis of the results obtained well explained?			
Is a proper stratified or segmented analysis of results presented?			
Are quantitative and/or qualitative results clearly presented, easy to understand and follow?			
Are results obtained well compared with those obtained previously by other authors?			

Table 6. Discussion

Question	Yes	No	N/R
Does the paper explain how gaps in the literature have been closed?			
Are the results well interpreted for the readers to understand?			
Are limitations of the paper well presented?			
Are the relevance of the results achieved well explained?			
Are conclusions drawn from the results supported by available evidence?			
Does the discussion show how research questions/goals have been addressed and to what extent they were answered/achieved?			
Are any possible research or results limitations well highlighted?			

Table 7. Conclusions

Question	Yes	No	N/R
Are the aims of the paper reiterated and reviewed according to results and discussion?			
Are the main research questions restated, showing the main paper's main contributions in order to answer them?			
Do the concepts and ideas conveyed in the conclusion connect to the paper introduction?			
Are directions for future research well elaborated and identified?			

Table 8. References

Question	Yes	No	N/R
Is there an entry in the literature section for every work cited in the text?			
Is every entry in the literature section cited in the text?			
Is the reference style correct for the target journal?			
Is the reference style used consistent for every work listed in the literature review?			
Are there any missing references that may need to be added?			

Table 9. General edition considerations

Question	Yes	No	N/R
Is the paper formatted according to the requirements of the target journal?			
Is the paper above the minimum word count for the target journal?			
Is the paper below the maximum word count for the target journal?			
Are all tables referred to in the text?			
Are all figures referred to in the text?			
If copywritten material was used, is permission to use the material available?			
Is the target journal's ranking acceptable?			
Are you sure the target journal is not a predatory journal?			
Are the names and required biographical details for all coauthors available?			
Has the paper been blinded per the target journal's requirements?			
Are all declared facts within the paper supported by evidence or a citation?			
Are all tables easily readable?			
Is the quality of the figures good enough for publication?			
Does the paper fit well with the editorial scope of the target journal?			
Are you familiar and comfortable with the target journal's refereeing process and the duration of the referring process?			
Overall, is there a proper match between the paper and scope of the target journal?			

3. Conclusions

Paper revision and acceptance is not a deterministic process, and there are lots of uncertainties attached to editorial decisions, depending namely on the referees allocated to the analysis of any given paper, their own biases and response times.

The above guidelines, based upon the author's own vast experience, both as authors, reviewers and editors, tries to provide some relevant insights, suggestions and recommendations about things authors may want to consider in order to increase paper quality and acceptance probability in academic journals.

References

Barsalou, M. and P. Saraiva, (2022a), "Writing a Research Paper," International Academy for Quality, Quality in Education Think Tank. Retrieved 26 November 2023 from

<https://iaquality.org/resources/Documents/Think%20Tanks/QiETT/Writing%20a%20Research%20Paper.pdf>.

Barsalou, M. and P. Saraiva, (2022b), “Publishing a Research Paper,” International Academy for Quality, Quality in Education Think Tank. Retrieved 26 November 2023 from <https://iaquality.org/resources/Documents/Think%20Tanks/QiETT/Publishing%20a%20Reseach%20Paper.pdf>.

Mack, C. A., (2018), *How to Write a Good Scientific Paper*. Bellingham, WA: Society of Photo-Optical Instrumentation Engineers (SPIE).

Simon, E. L., M. Osei-Ampofo, B. W. Wachira, and J. Kwan, (2020), “Getting Accepted Successful Writing for Scientific Publication: A Research Primer for Low- and Middle-Income Countries,” *African Journal of Emergency Medicine*. 10(2): 154-157. DOI: 10.1016/j.afjem.2020.06.006.