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## Using Short-Form Communication in Academia

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### ABSTRACT

Short-form communication is increasingly recognised as a pivotal tool in academia for conveying complex ideas succinctly and accessibly. This literature review synthesises key findings in 2024, focusing on the use of abstracts, executive summaries, and brief reports<sup>(1)</sup>. Brief reports, typically under 2,000 words, facilitate rapid publication and immediate academic impact<sup>(2)</sup>. Research by Alperin et al.<sup>(3)</sup> shows that engaging abstracts increase readership and citations, boosting the visibility of academic work. Short-form communication also engages non-specialist audiences, bridging the gap between complex research and practical application<sup>(4)</sup>. Additionally, integrating short-form communication into curricula enhances students' critical reading and concise writing skills<sup>(5)</sup>. Despite these advancements, challenges remain in maintaining academic rigour. Future research should develop best practices to preserve the depth of academic discourse. This review highlights the significant impact and ongoing evolution of short-form communication in academic settings and the need for greater dissemination insights.

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### 1. Introduction: Short-form communication within academia and knowledge exchange.

Short-form communication continues to gain prominence in academia, providing a means to convey complex ideas succinctly and accessibly. This approach includes the use of abstracts, executive summaries, and brief reports to facilitate rapid dissemination and comprehension of research findings. Over the past few years, significant research has been conducted on the effectiveness and applications of short-form communication across various academic fields. This review synthesises key findings in 2024, highlighting core concepts, methodologies, and implications for future academic practices.

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## Nomenclature

**AI:** Artificial Intelligence

**LLM:** Large Language Model

**DOI:** Digital Object Identifier

**IEEE:** Institute of Electrical and Electronics Engineers

**JSTOR:** Journal Storage

**Scite.ai:** An AI-powered platform for evaluating scientific articles

**Scopus:** A bibliographic database containing abstracts and citations for academic journal article

**Atomic Academic:** An LLM trained as a research assistant to utilise a short-form approach.

## Key Concepts and Findings

### Efficiency in Knowledge Dissemination:

*Abstracts and Executive Summaries:* Recent studies highlight the benefits of structured abstracts in enhancing research accessibility. According to Shamsi et al.<sup>(1)</sup>, structured abstracts improve readers' ability to quickly grasp research content, significantly enhancing the dissemination of knowledge in academic papers.

*Brief Reports:* Short-form reports, typically under 2,000 words, have seen increased utilisation for presenting preliminary findings or concise overviews of extensive studies. These reports allow for rapid publication and immediate impact within the academic community<sup>(2)</sup>.

### Impact on Academic Engagement:

*Increased Readership and Citations:* Research by Alperin et al.<sup>(3)</sup> suggests that articles with succinct, engaging abstracts are more likely to be read and cited, indicating that short-form communication can significantly enhance the visibility and impact of academic work.

*Engagement with Non-Specialist Audiences:* Short-form communication also facilitates engagement with non-specialist audiences, including policymakers, practitioners, and the general public. Studies have shown that brief, clear summaries can bridge the gap between complex research and practical application<sup>(4)</sup>.

### Educational Applications:

*Teaching and Learning:* Short-form communication is increasingly being integrated into academic curricula. Educators are using brief, focused texts to teach critical reading and concise writing skills. According to a study by Wang and Zhan<sup>(5)</sup>, students who practice writing short summaries demonstrate improved comprehension and retention of complex material.

### 1.1. Aspects of short-form content

Table 1 summarises various short-form communication styles used in academia, highlighting their descriptions, benefits, challenges, and references. Abstracts and executive summaries enhance accessibility and comprehension but risk oversimplification. Brief reports facilitate rapid dissemination but may lack detail. Peer review models improve learning and recognition of preprints, balancing speed with quality. Short-form content boosts readership and citations, though ensuring accuracy remains a challenge. Teaching and Learning applications is an interesting prospect for a myriad of reasons. One thing apparent from the review is citations, readership and diversity of citation are trackable metrics and should be considered in output review.

**Table 1 – A table showing example aspects of short-form communication.**

| Aspect                                            | Description                                                                                            | Benefits                                                                                            | Challenges                                                                                |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Abstracts (Structured) <sup>(2)</sup>             | Brief summaries of research papers, typically 150-250 words.                                           | Enhance accessibility, allow readers to quickly grasp main points.                                  | Risk of oversimplification, may omit nuanced details.                                     |
| Executive Summaries <sup>(4)</sup>                | Concise overviews of longer documents, designed for quick understanding by non-specialist audiences.   | Improve comprehension for broader audiences, bridge gap between research and practical application. | May lack depth, potential for misinterpretation.                                          |
| Brief Articles/Reports <sup>(2)</sup>             | Short articles, usually under 2,000 words, presenting preliminary findings or concise study overviews. | Facilitate rapid dissemination, allow timely sharing of research.                                   | Limited space for detailed analysis, potential for incomplete representation of research. |
| Teaching and Learning Applications <sup>(5)</sup> | Using peer review models to enhance learning and recognition of preprints.                             | Speeds up publication and increases recognition of early-stage research.                            | Balancing speed with quality and thoroughness in peer review.                             |
| Readership and Citations <sup>(3)</sup>           | Impact of short-form content on visibility and citation rates of academic work.                        | Increased readership, higher citation rates, greater impact.                                        | Ensuring accuracy and completeness of summarised information.                             |
| Engagement with Non-Specialists <sup>(4)</sup>    | Short-form content tailored to policymakers, practitioners, and the general public.                    | Broader dissemination, practical application of research findings.                                  | Simplifying without losing essential context, avoiding oversimplification.                |

## 2. Methodology

The article was generated using Atomic Academic, a ChatGPT-4 tuned LLM. The initial draft was edited with Scite.ai, followed by a manual review and reference check. Citation editing was required. The search covered publications from January 2019 to June 2024, using keywords like "short-form communication," "academic abstracts," "executive summaries," and "brief reports."

## 3. Discussion and Implications

The reviewed literature underscores the transformative potential of short-form communication in academia. Key advancements in the use of abstracts, executive summaries, and brief reports have shown that these formats significantly enhance the accessibility and impact of research findings. The increased readability and engagement associated with short-form communication suggest that it is a valuable tool for reaching broader audiences, including non-specialists.

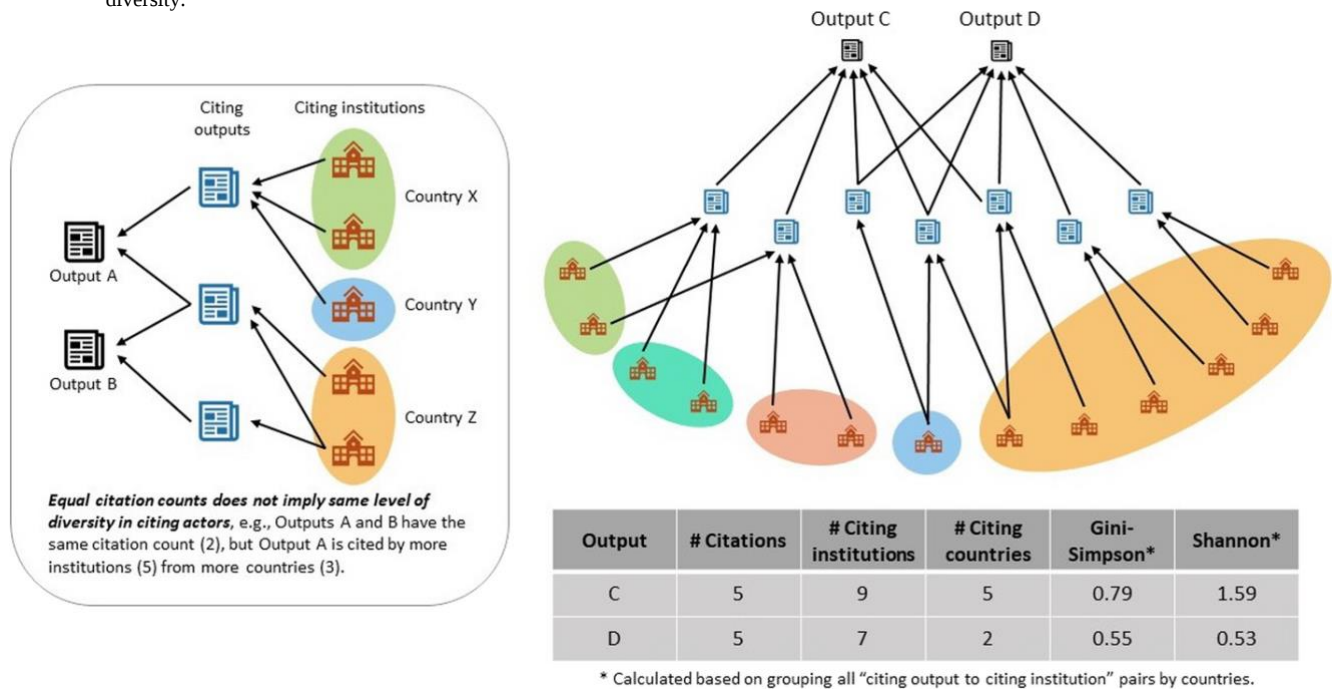
Educational applications of short-form communication are particularly noteworthy. Integrating these formats into academic curricula not only improves students' comprehension and writing skills but also prepares them for effective communication in professional settings.

However, challenges remain in ensuring that short-form communication does not oversimplify complex ideas or compromise the depth of academic discourse. Future research should focus on developing guidelines and best practices for maintaining academic rigour in short-form communication.

## 4. Illustration of citation metrics

A retrospective analysis of past citation data was conducted by Huang et al.<sup>(6)</sup> to assess the diversity of institutions and geographic locations of citations for each research output. Specifically, Figure 1 shows:

- **Output A and B:** Both have two citations. Output A is cited by institutions from two different countries, while Output B is cited only by institutions from one country, indicating lower diversity.
- **Output C and D:** Both have five citations. Output C is cited by more institutions from various countries compared to Output D, indicating higher diversity.



**Figure. 1** - Illustrative examples show differences in citation counts, citing actors, and diversity.<sup>(6)</sup>

Figure 1 illustrates that citation diversity, as measured by these indices, differs from traditional citation counts. Two outputs can exhibit significant differences in the diversity of citing entities even if they have the same citation count. For example, an article cited by a broader array of institutions will have greater citation diversity, despite having an equal number of citations.<sup>(6)</sup>

## 5. Conclusion

The past year has seen substantial progress in the application of short-form communication in academia, marked by significant improvements in knowledge dissemination, academic engagement, educational practices and large language model - artificial intelligence. These advancements underscore the potential of short-form communication to revolutionise academic writing and teaching. Future research should address challenges related to maintaining academic rigour and explore further applications of short-form communication in various academic fields.

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## Limitations

The methodology has limitations due to the ambiguous nature of paper and discussion theme selection. The use of AI tools like Scite.ai and Atomic Academic, while efficient, may introduce biases and miss nuanced studies. Extensive manual review was required, yet risks of oversight remain. Future reviews should include more human-curated methods to enhance robustness.

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