Exploring Variations in Abstract Writing Formats and Structures Among Ph.D. Students

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Abstract

Background:
The introduction, a crucial component of any research paper, must be well-written so that readers can evaluate its quality. A typical five-paragraph abstract includes an introduction, objective or purpose, methodology, findings/results, and conclusion. However, not all Ph.D. candidates follow this structure and format when writing their abstracts.

Methodology:
The purpose of this study was to identify and describe variations in abstract writing formats and structures among Surabaya state university Ph.D. candidates. Using a qualitative descriptive methodology, the researchers analyzed 15 dissertation abstracts: eight from the Faculty of Civil Engineering and Planning at FTSP-ITS and seven from the Medical Science department at Airlangga University Surabaya. They examined the number of paragraphs and the structure of the abstract in each.

Findings:
The study indicated various abstract structures and writing formats: 40% of the abstracts had three paragraphs, 26.66% had five paragraphs, 20% had four paragraphs, and 13.33% had one paragraph. In terms of abstract structure, 60% lacked a conclusion, 33.33% lacked an objective, 26.66% lacked all five abstract structures, 26.66% lacked both the objective and the conclusion, and 6.66% lacked an introduction.

Conclusion:
In conclusion, the study found several variations in dissertation abstract writing formats regarding both paragraph count and abstract structure.

Originality:
The novelty of this study rests in its focus on analyzing variations in abstract writing formats and structures among Surabaya state university Ph.D. candidates. By examining 15 dissertation abstracts from various faculties, this study sheds light on the inconsistencies and deviations from the standard format and structure of abstracts, which may impact readers' ability to comprehend and evaluate research papers. This study contributes to a better understanding of how Ph.D. students' abstract writing practices vary and identifies potential enhancement areas.

1. INTRODUCTION

The purpose of an abstract is to provide a concise summary of the main points of a written work, such as a book, speech, or article (Klimova, 2015; Nundy et al., 2022; Plakhotnik, 2017). It provides an overview of the work's content, allowing readers to grasp its essence rapidly. Abstracts play a crucial role in disseminating knowledge in academic research by providing a concise yet informative summary of lengthier reports or studies. This article examines the various types of abstracts, their structure, characteristics, the writing format typically employed by Ph.D. students, and the difficulties they confront when writing effective abstracts for their research (Adinkrah-Appiah et al., 2021; Sanganyado, 2019).

The two most common varieties of abstracts are descriptive and informative. Descriptive abstracts briefly overview a report or article's objective, methodology, and content. In contrast, informative abstracts provide a more comprehensive summary of the work, including its context, research problems, aims, literature review, methodology, analysis, findings, and benefits. The choice of research methodology substantially impacts the content and manner of the abstract, necessitating a thorough comprehension of the nature of the research to create a high-quality abstract (Conn, 2022; Lingard & Watling, 2021).

A coherent and well-structured abstract is required for effective communication of research findings. An abstract should typically include an introduction that explains the research's title and rationale, a body that discusses the research's main content, such as its purpose, problem statement, methodology, supporting theories, and related prior research, and a conclusion that presents the final research results and conclusion. To ensure clarity and accuracy, abstract writing must consider linguistic factors such as lexical equivalence, grammatical structure, and coherence (Otta et al., 2022; Raeisi et al., 2019).

In academic publishing, the importance of abstracts cannot be emphasised. Publishers and indexing services use abstracts to determine the relevance and quality of research articles, directly affecting their visibility and accessibility. In the context of the digital era, the importance of abstracts has increased. With the proliferation of online databases and search engines, researchers rely more and more on abstracts to find and evaluate relevant literature. A compelling and informative abstract serves as the primary entry point to the full text of a research article, making it a crucial element for attracting readers and increasing citation rates (Conrad & Lee, 2020; Dash, 2016).

Several studies have collectively highlighted the importance of structured abstracts, linguistic features, and training in enhancing the comprehension and accessibility of research

articles across various fields (Gregori-Signes & Clavel-Arroitia, 2015; Ngai et al., 2018; Nguy & Ha, 2022; O'Rourke, 1997; Radix & Mohammed, 2017). While O'Rourke, (1997) found that structured abstracts significantly improved readability and information retention in biomedical research articles, Gregori-Signes & Clavel-Arroitia (2015) demonstrated the impact of coherence and lexical density on abstract comprehension in social sciences research. Meanwhile, Radix & Mohammed (2017) emphasized the role of structured training in improving abstract writing among graduate students. Although these studies focus on different aspects, collectively underscore the significance of well-structured abstracts and linguistic features, along with the need for proper training to enhance the comprehension and accessibility of research articles.

Given the importance of abstracts in academic research, it is crucial to investigate the factors that contribute to their efficacy. The function of education and training in abstract writing is an aspect that merits investigation. Many Ph.D. candidates may not receive adequate instruction on writing abstracts, which may compromise the content and influence of their research. In addition, cultivating a peer review and feedback culture among researchers can help improve abstract writing. Ph.D. students can obtain valuable insights and suggestions for refining their abstracts, thereby enhancing clarity, coherence, and overall effectiveness, by sharing draughts with colleagues and mentors (Gabriel et al., 2021; Hartley & Betts, 2007).

In conclusion, abstracts serve an indispensable role in the dissemination and influence of academic research. It is essential to ensure the quality and coherence of abstracts in order to effectively communicate research findings, attract readers, and boost citation rates. By focusing on the content, language, structure, and format of abstract writing, researchers can increase the effectiveness of their abstracts and contribute to the advancement of knowledge in their respective fields. Ultimately, the pursuit of excellence in abstract writing is an essential component of the larger effort to advance human knowledge and comprehension through rigorous and significant academic research.

2. METHODOLOGY

This study utilized a qualitative descriptive methodology that allowed for an in-depth examination of selected texts' writing format and abstract structure, thereby contributing to a comprehensive comprehension of the abstract writing process among Ph.D. students (Creswell, 2015). 15 dissertation abstracts written by Ph.D. candidates at two prestigious state institutions in Surabaya, Indonesia, were analyzed: Institut Teknologi Sepuluh Nopember

(ITS) and Airlangga University (UNAIR). These institutions were chosen to represent a diversity of academic disciplines, allowing for a comparative analysis of abstract writing across various fields of study. Using this comprehensive approach, the researchers were able to identify trends and patterns in abstract writing practices, as well as discipline-specific nuances that may influence abstract content and structure.

The process of collecting data centered on analyzing the number of paragraphs in each abstract and the abstracts' overall structure, which included elements such as introduction, objectives, methods, findings/results, and conclusions (Braun & Clarke, 2006). By analyzing these elements, the researchers were able to identify common practices and difficulties encountered by Ph.D. candidates when writing effective abstracts for their research. In addition to the structural aspects of the abstracts, the researchers also evaluated the abstracts' linguistic and stylistic characteristics, such as the use of appropriate tenses, passive voice, and academic vocabulary. Attention to these details allowed for a more thorough evaluation of the quality and coherence of the abstracts, providing valuable insights into enhancement areas and the development of best practices.

Data analysis consisted of a comprehensive examination of the collected abstracts, identifying patterns and themes, and comparing writing formats and structures across the chosen texts (Braun & Clarke, 2006). The findings were subsequently interpreted to provide valuable insights and recommendations for enhancing the quality and coherence of abstracts in academic research, thereby contributing to the ongoing discourse on effective research communication within the academic community. This study contributes to the larger effort to advance human knowledge and comprehension through rigorous academic research by highlighting the challenges researchers encounter and providing suggestions for improving abstract writing skills.

3. FINDINGS

The core data for this study came from 15 dissertation abstracts produced by Ph.D. candidates at Surabaya State universities, as previously stated. To clarify, the data gathered focused on the number of paragraphs (writing style) and the abstract structure of each piece. The following table provides a complete summary of this data.

Tabel 1 Abstract Structure Tabulation and Writing Format

Number of Data	Introduction	Aim	Methodology	Results/ Finding	Conclusion	Number of Paragraphs
K-1	V	V	V	V	V	5
K-2	V	V	V	V	-	4
K-3	V	V	V	V	V	1

Number of Data	Introduction	Aim	Methodology	Results/ Finding	Conclusion	Number of Paragraphs
K-4	V	V	V	V	-	1
K-5	V	V	V	V	V	5
K-6	V	V	V	V	V	5
K-7	-	V	V	V	V	5
T-1	V	-	V	V	-	3
T-2	V	V	V	V	-	3
T-3	V	-	V	V	-	4
T-4	V	V	V	V	-	4
T-5	V	-	V	V	-	3
T-6	V	V	V	V	-	3
T-7	V	-	V	V	V	3
T-8	V	-	V	V	-	3
Deviationn	6,66%	33,33%	0%	0%	60%	73,33% [100%]

3.1. Writing Format of Abstract

The table one displayed demonstrates that the abstract writing approaches employed by Ph.D. candidates from state universities in Surabaya exhibit considerable variation. A majority of the abstracts, accounting for eleven out of fifteen (73.33%), fail to conform to the appropriate writing format. This deviation was identified in abstracts labeled K-2, K-3, K-4, and T-1-2-3-4-5-6-7-8, which comprised fewer than the requisite five paragraphs. Conversely, a mere 26.66% of the abstracts adhered to the complete writing format, entailing five paragraphs that encompass the essential abstract structures: introduction, aim, methodology, findings/results, and conclusion. This comprehensive writing format was detected in data K-1, K-5, K-6, and K-7.

The specific results are as follows: 1) Four abstract texts (K1, K3, K5, and K6) had five paragraphs (complete), accounting for 26.66 percent of the total. These texts included the five abstract sections: introduction, objective, methodology, findings/results, and conclusion. 2) Three abstract texts, K2, T3, and T4, each contained four paragraphs, accounting for 20% of the total. 3) Six abstract texts, T1, T2, T5, T6, T7, and T8, each contained three paragraphs and accounted for 40 percent of the total; these six abstracts were data numbers T1, T2, T5, T6, T7, and T8.

Lastly, 4) two abstract texts consisted of a single paragraph, accounting for 13.33% of the total; data numbers K3 and K4 fall into this category. These variations in format and structure suggest that Ph.D. candidates need clearer instruction and education on abstract writing. Establishing standard guidelines and providing resources, such as examples of well-written abstracts, can assist students in comprehending the expectations and best practices for writing abstracts that effectively communicate their research findings. By enhancing the

quality and coherence of abstracts, students can increase their research's visibility, impact, and publication potential.

3.2. Abstract Structure

Shah (2017) emphasize that an effective research report abstract should encompass five crucial sections: 1) introduction, 2) purpose/objective, 3) methodology, 4) findings/results and discussion, and 5) conclusion. Upon analyzing the data presented in the table, it becomes evident that the abstract structures of texts authored by Ph.D. candidates at state universities in Surabaya exhibit substantial diversity. Out of fifteen abstracts, eleven (73.33%) failed to comply with the comprehensive structure, lacking key components such as the introduction, purpose/objective, and/or conclusion. These abstracts corresponded to the K2-4-7 and T1-2-3-4-5-6-7-8 data sets. The findings underscore the importance of adopting a more consistent and structured approach to abstract writing among Ph.D. students to enhance the overall quality and coherence of their academic research.

In contrast, only four abstracts (26.66%) had a complete structure, including an introduction, objective, methodology, findings/results, and conclusion. A thorough examination of the results revealed the following: 1) Four abstract texts (26.66%) had a comprehensive abstract structure. These abstracts corresponded to data K1, K3, K5, and K6. These abstracts included all five required sections: introduction, purpose/objective, methodology, results/findings and discussion, and conclusion. 2) One data point, representing 6.66 percent, lacked an introduction, specifically data K7. 3) Data numbers T1, T2, T3, T4, T5, T7, and T8 were the only abstracts that lacked the purpose/objective.

Moreover, nine abstract texts (60%) -- the plurality -- lacked a conclusion. These abstracts corresponded to the data K2-4 and T1-2-3-4-5-6-8. 5) Finally, four abstracts (26.66%) lacked both a purpose/objective and a conclusion; these were T1, T3, T5, and T8. This variation in adherence to the recommended abstract structure demonstrates the need for clearer guidance and enhanced education for Ph.D. students when writing their research abstracts. By emphasizing the significance of incorporating each of the five abstract structures, students can more effectively convey the significance and impact of their research to readers, potentially increasing their chances of publication and academic recognition.

4. DISCUSSION

In accordance with the previously explained writing format and abstract structure, datum no. T-5 cannot be regarded as an exemplary abstract due to its failure to meet the writing format and abstract structure requirements. While the writing format requires five

paragraphs, this particular piece of information consists of only three, lacking the 'purpose' and 'conclusion' sections. In addition, each paragraph should contain only one abstract structure; however, two of the three paragraphs (paragraphs 2 and 3) contain multiple abstract structures. The second paragraph combines the introduction and methodology, while the third paragraph combines the methodology and findings. As a result, T-5 does not adhere to the established guidelines for writing abstracts, which may compromise its effectiveness and clarity in communicating the main aspects of the research.

The results of this study indicate that Ph.D. students at state universities in Surabaya adhere inconsistently to the recommended abstract structure when writing their abstracts. This finding is consistent with prior research indicating that many researchers and students may not receive adequate training in writing effective abstracts (Sanganyado, 2019; Swales & Feak, 2004). The majority (73.33%) of the 15 abstracts analyzed in this study lacked a comprehensive abstract structure. Consequently, it is essential to investigate the factors that contribute to these deviations, such as the role of education and training in abstract writing and the advantages of peer review and feedback (Adinkrah-Appiah et al., 2021; Sanganyado, 2019; Swales & Feak, 2004).

The absence of essential components in the abstracts, such as the purpose/objective, methodology, and conclusion, is an important aspect of the findings. Frazer (2012) suggests that Ph.D. students may not completely comprehend the significance of these elements in communicating the essence of their research. Students' ability to compose abstracts that effectively convey the significance and impact of their research may be hindered by a lack of appropriate guidance and instruction on abstract writing (Hyland, 2004). In addition, the disparity in abstract structures among the various abstracts suggests a lack of uniformity in the guidance provided by academic institutions or administrators (Alotaibi, 2020). In order to ensure consistency and quality across all academic disciplines, it is crucial to establish distinct guidelines and expectations for abstract writing (Lang, 2008).

Prior research Sanganyado (2019) and Swales & Feak (1996) has highlighted the significance of education and training in enhancing abstract writing skills. Specifically, workshops and courses that emphasize the essential elements of an effective abstract can significantly improve the content and coherence of student abstracts (Alotaibi, 2020; Hyland, 2004). In addition, incorporating explicit instruction on abstract writing into graduate-level

research courses can help students better comprehend the conventions and expectations for abstracts in their respective fields (Swales & Feak, 2004).

Furthermore, the function of peer review and feedback in improving abstract writing should not be understated (Christian & Kearns, 2018). Researchers can obtain valuable insights and suggestions for refining their abstracts by fostering a culture of collaboration and constructive criticism (Alotaibi, 2020). In addition, feedback from mentors and experienced researchers can give students a more nuanced comprehension of the expectations and standards for abstract writing in their respective disciplines (Hyland, 2004).

In conclusion, this research emphasizes the need for enhanced education and training in abstract writing for doctoral students at Surabaya's public universities. The significant variation in adherence to the recommended abstract structure demonstrates the need for explicit guidance and standardization in academic abstract writing conventions. By incorporating seminars, courses, and explicit instruction on abstract writing into graduate-level research curricula, students can acquire the skills necessary to produce effective, coherent abstracts that convey the significance and impact of their research. In addition, cultivating a culture of peer review and feedback can provide students with valuable insights and suggestions for refining their abstracts, thereby improving the clarity and coherence of their research.

5. CONCLUSION

According to the previous findings and discussions, it can be concluded that there are a variety of formats for writing dissertation abstracts, both in terms of the number of paragraphs and the structure of the abstract. The majority of the analyzed abstracts contained three paragraphs, accounting for forty percent of the total. In terms of abstract structure, abstracts lacking a conclusion, which accounted for sixty percent of the sample, deviated the most.

Considering these variations, it is essential to emphasize the importance of adhering to established guidelines when writing abstracts. This ensures that the abstracts convey the essential aspects of the research clearly and coherently. Only three (20%) of the fifteen examined abstracts, specifically data no. K1-5-6, were classified as well-written abstracts, meeting both the format and structure requirements.

This result demonstrates the need for additional guidance and training in abstract writing for Ph.D. students, as a significant proportion of the abstracts analyzed deviated from

the anticipated format and structure. By providing adequate instruction and emphasizing the significance of adhering to established guidelines, educational institutions can help improve the quality of abstract writing, thereby enhancing the communication and impact of academic research across multiple disciplines.

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