

PhD Dissertation



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**Challenges in Academic Writing: A Mixed-Methods Study of Indonesian Graduate
Students in a Non-native English-Speaking Environment**

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ABSTRACT

Writing an academic text can be challenging for English learners, including Indonesian students studying at Hungarian Universities (HUs). These students must learn to write in a second language while mastering grammatical structures and lexical resources, as well as distinguishing between academic English and conversational English in terms of conventional words, phrases, and sentence structures.

This study is aimed at examining students' experiences in English academic writing during their master's studies at HUs. The research focuses on students enrolled in seven degree programs (representing the areas of business and economics within the field of social sciences) across six HUs. The investigation centers on topics focusing on challenges, supports, attitudes, and strategies in writing academic essays. Additionally, this dissertation also looks at information density in the students' texts. Information density (ID) was selected as a key focus for this research because it is one fundamental element of academic writing, reflecting students' ability to express complex ideas effectively. This feature conveys maximum meaning with minimal wordiness in the limited space of a sentence. Moreover, ID often serves as an indicator to distinguish between lower and higher levels of writing proficiency.

This research employed a mixed-methods study inspired by Creswell's (2009) basic convergent design. Eleven MA and MSc students participated in the study. Data collection was conducted using two checklists, one for the semi-structured interviews and one for the academic writing strategy use. Additionally, the participants also submitted their essays (n=32) for the study. Data analysis was performed using Web Speech API from Google, ATLAS.ti, Coh-Metrix, and Microsoft Excel Analysis ToolPak.

The results suggest that the students face challenges in writing English academic essays across 47 themes, which can be classified into four main categories: challenges in the writing process (n = 18), challenges related to the subject course (n = 19), challenges regarding institutional policy (n = 5), and challenges related to external factors (n = 5). In terms of academic writing support, 24 themes emerged and were categorized into three groups: institutional policies (n = 8), subject courses (n = 8), and the students' prior experiences and knowledge in academic writing (n = 8). As for attitude, nine themes were identified and grouped into two groups: positive attitudes toward the class of English for academic writing in a non-native English-speaking environment (n

= 3) and positive attitudes toward English academic essay assignments in a non-native English-speaking environment (n = 6).

In terms of academic writing strategies, the students employed 82 strategies across the three writing stages: pre-writing (n = 29), writing (n = 49), and post-writing (n = 4). Furthermore, based on the writing strategy taxonomy classification, the study identified 36 subcategories, including cognitive strategies (n = 18), metacognitive strategies (n = 9), social strategies (n = 4), and affective strategies (n = 5). Among these, cognitive strategies were the most frequently used by the participants, with C1-level students utilizing more strategies than B2-level students.

Regarding information density (ID), this research suggests both B2-level and C1-level texts contain more content words than function words. Academic essays produced by C1-level students appear to be more lexically dense compared to those written by B2-level students. Likewise, texts written by C1-level students exhibited a higher frequency of expanded noun phrases (NPs) across semesters, indicating that their academic writing involves more complex NPs by adding modifiers to compact information and maximize meaning. Furthermore, the manifestation of nominalization in both student groups (B2 and C1) reflects a shift from concrete to more abstract expressions, with C1-level texts showing a higher frequency of nominalization than B2 student texts. On that account, the distribution of ID in C1-level texts remained relatively more stable than in B2-level texts across semesters.

Finally, the study provides several practical suggestions for pedagogical implications, specifically for the targeted universities in this research project. These suggestions include offering more English for academic writing (EAW) courses within faculties, with a key focus on the manifestation of information density, improving resource availability (e.g., enhancing subject teachers' English proficiency, clarifying assignment requirements), and supporting students' academic writing skill development (e.g., fostering teacher-student engagement in research collaboration).

TABLE OF CONTENTS

ACKNOWLEDGMENTS	II
ABSTRACT.....	IV
TABLE OF CONTENTS	VI
LIST OF ABBREVIATIONS AND ACRONYMS	IX
LIST OF FIGURES	XI
LIST OF TABLES	XII
LIST OF APPENDICES	XIV
CHAPTER 1 INTRODUCTION.....	1
1.1 Research Background.....	1
1.2 Research Niche and Relevance	2
1.3 Aims and Research Questions	5
1.3.1 Aims.....	5
1.3.2 Research Questions.....	5
1.4 Outline	6
CHAPTER 2 LITERATURE REVIEW.....	8
2.1 Stipendium Hungaricum.....	8
2.2 English as a Medium of Instruction (EMI).....	10
2.2.1 The Definition of EMI	10
2.2.2 Reasons for EMI Establishment.....	11
2.2.3 Characteristics of EMI in Higher Education.....	12
2.3 Academic Writing	16
2.3.1 A Working Definition of Academic Writing.....	16
2.3.2 L2 English Academic Writers	18
2.4 Aspects of Academic Writing	19
2.4.1 Information Density (ID)	20
2.4.1.1 Lexical Density	21
2.4.1.2 Expanded Noun Phrases.....	24
2.4.1.3 Nominalization.....	28
2.4.2 Measuring ID in Academic Writing.....	29
2.5 Genre of Academic Writing	30
2.5.1 Academic Essay Writing	32
2.5.2 A Working Definition of Academic Essay Writing.....	32
2.5.3 Essays in the Field of Social Science.....	34
2.6 Academic Writing Studies in Higher Education	36
2.6.1 Writing Requirements	36
2.6.2 Genre.....	38
2.6.3 Computational Linguistics	39
2.6.4 Critical Thinking.....	41
2.6.5 Writer Identity and Reader/Writer Power Relations	42
2.6.6 Writing Tools	42
2.6.7 Plagiarism.....	44
2.6.8 Writing Instruction in the Covid-19 Pandemic	45
2.7 Challenges and Strategies of English Academic Writing (EAW) in ESL/EFL Contexts ...	46
2.7.1 Challenges in EAW	47

2.7.2	<i>Strategies in EAW</i>	49
CHAPTER 3 RESEARCH DESIGN		59
3.1	Aims and Research Questions (RQs)	59
3.2	Research Methods	60
3.2.1	<i>Mixed-Methods Research</i>	60
3.2.2	<i>Strengths and Weaknesses of Mixed-Methods Research</i>	65
3.3	Phases of the Study.....	66
3.4	Participants	67
3.5	Research Instruments and the Development of the Research Tools	70
3.5.1	<i>Semi-Structured Interview Guide (Phase 1: Students' Experiences in EAW)</i>	70
3.5.2	<i>Interview Checklist (Phase 2: Academic Writing Strategies)</i>	72
3.5.3	<i>Students' Academic Essays (Phase 3: Information Density)</i>	72
3.6	Piloting and Main Studies	73
3.6.1	<i>Phase 1: Experiences in English Academic Writing (EAW)</i>	73
3.6.1.1	Pilot Study.....	73
3.6.1.2	Main Study.....	74
3.6.2	<i>Phase 2: Academic Writing Strategies (AWSs)</i>	75
3.6.2.1	Pilot Study.....	75
3.6.2.2	Main Study.....	77
3.6.3	<i>Phase 3: Text Analysis on ID</i>	78
3.6.3.1	Pilot Study.....	78
3.6.3.2	Main Study.....	79
3.7	Data Collection Procedures	78
3.7.1	<i>Interviews and Checklist (Phases 1 and 2)</i>	81
3.7.2	<i>Academic Essays (Phase 3)</i>	82
3.8	Data Analysis Procedures.....	83
3.8.1	<i>Qualitative Data Analysis Procedures</i>	83
3.8.2	<i>Quantitative Data Analysis Procedures</i>	85
3.8.3	<i>Text Analysis: Analyzing Students' Essays Using Coh-Metrix</i>	86
CHAPTER 4 CHALLENGES, SUPPORTS, AND ATTITUDES IN EAW		90
4.1	Results	90
4.1.1	<i>Challenges Indonesian Graduate Students Face When Writing Academic Essays in English</i>	90
4.1.1.1	Challenges in Relation to the Writing Process.....	91
4.1.1.2	Challenges in Relation to the Subject Course.....	94
4.1.1.3	Challenges in Relation to the Institutional Policies	97
4.1.1.4	Challenges in Relation to External Factors.....	99
4.1.2	<i>Support the Students Receive in English Academic Writing (EAW) at Hungarian Universities (HUs)</i>	100
4.1.2.1	The Support regarding the Category of Institutional Policies.....	102
4.1.2.2	The Support regarding the Category of the Subject Course	105
4.1.2.3	The Support regarding the Category of the Students' Prior Knowledge Experiences in EAW	107
4.1.3	<i>Attitudes the Students Hold toward EAW in a Non-native English-speaking Environment</i>	109
4.1.3.1	Positive Attitudes toward the Class of EAW	110

4.1.3.2	Positive Attitudes toward English Academic Essay Assignments.....	112
4.2	Discussion.....	113
CHAPTER 5 STUDENTS' STRATEGIES IN ENGLISH ACADEMIC ESSAY WRITING AND THEIR OCCURRENCES		119
5.1	Results	119
5.1.1	<i>Strategies Utilized by IGSs in the Pre-writing Stage.....</i>	<i>120</i>
5.1.2	<i>Strategies Utilized by IGSs in the Writing Stage</i>	<i>124</i>
5.1.3	<i>Strategies Utilized by IGSs in the Post-writing Stage</i>	<i>127</i>
5.1.4	<i>Students' Strategies Based on the Writing Taxonomy and Their Occurrences</i>	<i>129</i>
5.1.4.1	The Classification of Academic Writing Strategies (AWSs) Based on the Taxonomy	129
5.1.4.2	The Frequency of Writing Taxonomy Reported by IGSs in EAW.....	131
5.1.4.3	Writing Taxonomy Distribution by Students' Prior English Proficiency Levels Across Semesters.....	133
5.1.4.4	The Comparison between B2 and C1 Level Students' Writing Strategy Employment during Their Master's Studies in Hungary	136
5.2	Discussion.....	137
CHAPTER 6 INFORMATION DENSITY: TEXT ANALYSIS.....		146
6.1	Results	146
6.1.1	<i>The General Overview of ID in IGSs' Academic Essays.....</i>	<i>146</i>
6.1.2	<i>The Comparison of ID Components between B2 and C1 Students' English Academic Essays across Three Semesters</i>	<i>147</i>
6.1.3	<i>The Occurrence and Distribution of ID Components in the Students' Academic Essays across Three Semesters</i>	<i>152</i>
6.2	Discussion.....	155
CHAPTER 7 OVERALL DISCUSSION OF THE RESEARCH FINDINGS.....		163
CHAPTER 8 CONCLUSION.....		182
8.1	Key Findings	182
8.2	Pedagogical implications	184
8.3	Research Limitations	185
8.4	Future Research Directions	186
REFERENCES.....		188
APPENDICES		206

LIST OF ABBREVIATIONS AND ACRONYMS

AES	: Automated Essay Scoring
AI	: Artificial Intelligence
AWE	: Academic Writing Evaluation
AWS	: Academic Writing Strategies
BME	: Budapest University of Technology and Economics
CEFR	: Common European Framework of Reference for Languages
CEU	: Central European University
CHATGPT	: Chatbot Generative Pre-Trained Transformer
C-SAW	: Computer-Supported Argumentative Writing
DAAD	: <i>Deutscher Akademischer Austauschdienst</i> (the German Academic Exchange Service)
DicSci	: Dictionary of Verbs in Science
DSL	: Doctoral School of Linguistics
EALF	: Academic English as a Lingua Franca
EAP	: English for Academic Purposes
EAW	: English Academic Writing
EFL	: English as a Foreign Language
EIS	: Electronic Information Service
ELF	: English as a Lingua Franca
ELFA	: English as a Lingua Franca in Academia
ELTE	: Eötvös Loránd University
EMI	: English Medium Instruction
ESL	: English as a Second Language
ESP	: English for Specific Purposes
FL	: Foreign Language
HE	: Higher Education
HEI	: Higher Education Institution
HU	: Hungarian Universities
ID	: Information Density
IGS	: Indonesian Graduate Students
IELTS	: International English Language Testing System
IMRaD	: Introduction, Methods, Results and Discussion
LD	: Lexical Density
LSM	: Learning Management Systems
L1	: First language
L2	: Second Language
M	: Mean
MA	: Master of Arts
MATE	: The Hungarian University of Agriculture and Life Sciences
NA	: Not Available
NES	: Native English Speaker
NLP	: Natural Language Processing
NNES	: Non-Native English Speaker
NP	: Noun Phrase

PPCU	: Pázmány Péter Catholic University
PPIH	: <i>Persatuan Pelajar Indonesia di Hungaria</i> (Indonesian Student Association in Hungary)
QS	: <i>Quacquarelli Symonds</i>
QUAL	: Qualitative
QUAN	: Quantitative
RQ	: Research Question
SD	: Standard Deviation
SEA	: Southeast Asian
SELF	: Studying in English as a Lingua Franca
SH	: <i>Stipendium Hungaricum</i>
SWAN	: Scientific Writing Assistant
TEFLIN	: Teaching English as a Foreign Language in Indonesia
TESOL	: Teaching English to Speakers of Other Languages
TTR	: Type-Token Ratio
WRDADJ	: Adjective incidence
WRDADV	: Adverb incidence
WRDNOUN	: Noun incidence
WRDVERB	: Verb incidence
WrELFA	: Written English as a Lingua Franca
WWW	: World Wide Web

LIST OF FIGURES

Figure 1 <i>Lamb et al. 's (2021) drivers of EMI in Indonesian higher education institutions</i>	14
Figure 2 <i>A mixed-methods research design of the study</i>	61
Figure 3 <i>The overview of a Convergent Mixed Methods design of Indonesian graduate students' experiences in EAW in a non-native English environment</i>	63
Figure 4 <i>Tag clouds from thematic analysis in ATLAS.ti</i>	84
Figure 5 <i>Codification analysis on Atlas.ti 8.4.5</i>	85
Figure 6 <i>Data analysis of the interview checklist</i>	86
Figure 7 <i>Utilization trends of cognitive, metacognitive, social, and affective strategies across three semesters among B2-level Indonesian graduate students</i>	134
Figure 8 <i>Utilization trends of cognitive, metacognitive, social, and affective strategies across three semesters among C1-level Indonesian graduate students</i>	135
Figure 9 <i>The comparison of EAW strategies used by B2 and C1 level students over time</i>	136
Figure 10 <i>The distribution of the linguistic features in the B2 students' essays across three semesters</i>	153
Figure 11 <i>The distribution of the linguistic features in the C1 students' essays across three semesters</i>	154

LIST OF TABLES

Table 1	<i>Key features of academic writing adapted from Singh and Lukkarila (2017, pp. 6-7) ...</i>	19
Table 2	<i>Major types of postmodifications</i>	26
Table 3	<i>The example of nominalization from congruent forms to grammatical metaphor</i>	28
Table 4	<i>Types of academic writing adapted from Bailey (2018)</i>	31
Table 5	<i>Fundamental structure in social science essays, adapted from Redman et al. (2017, pp. 6-7)</i>	35
Table 6	<i>The classification of academic writing taxonomy based on key mentioned studies</i>	54
Table 7	<i>The issues and aims of the study</i>	59
Table 8	<i>The relationship of data collection and analysis to the research questions</i>	64
Table 9	<i>Strengths and weaknesses of mixed methods research adapted from Johnson and Onwuegbuzie's (2004) research</i>	65
Table 10	<i>Phases of the research project</i>	67
Table 11	<i>Participant data and information for the research project</i>	69
Table 12	<i>Collected students' essay assignments between 2019 and 2021</i>	73
Table 13	<i>Participants of the first pilot study in Phase 1</i>	74
Table 14	<i>The participants of the main study in Phase 1</i>	74
Table 15	<i>Participants of the second pilot study in Phase 2</i>	75
Table 16	<i>The participants of the main study in Phase 2</i>	78
Table 17	<i>Participants of the third pilot study in Phase 3</i>	79
Table 18	<i>The participants of the main study in Phase 3</i>	80
Table 19	<i>Relevant indices of ID</i>	88
Table 20	<i>The students' English academic writing challenges at Hungarian universities</i>	90
Table 21	<i>Challenges Indonesian graduate face in English academic essay writing regarding the writing process</i>	92
Table 22	<i>Challenges IGSs face in English academic essay writing regarding the category of subject course</i>	95
Table 23	<i>Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies</i>	98
Table 24	<i>Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies</i>	99
Table 25	<i>The support Indonesian graduate students receive in English academic essay writing at Hungarian universities</i>	101
Table 26	<i>The support Indonesian graduate students received in writing English academic essays with regard to the category of institutional policies</i>	103
Table 27	<i>The support Indonesian graduate students have regarding the category of subject courses</i>	106
Table 28	<i>The support Indonesian graduate students receive regarding the category of graduate student prior experience</i>	108
Table 29	<i>Attitudes IGSs have regarding EAW in a non-native English-speaking environment.</i>	110
Table 30	<i>Positive attitudes toward the class of English for academic writing (EAW) in a non-native English-speaking Environment</i>	111
Table 31	<i>Positive attitudes toward English academic essay assignments at Hungarian universities</i>	112

Table 32	<i>The results of strategies Indonesian graduate students employed in English academic essay writing during in Hungarian HEIs.....</i>	120
Table 33	<i>Indonesian graduate students' English academic essay writing strategies with regard to the pre-writing stage.....</i>	122
Table 34	<i>The students' English academic essay writing strategies with regard to the writing stage.....</i>	125
Table 35	<i>Strategies Indonesian graduate students utilize in English academic writing in the post-writing stage</i>	128
Table 36	<i>Identification and classification of English academic writing strategies the students employ in English academic essay writing</i>	129
Table 37	<i>The total frequency of AWSs mentioned by IGSs in the three semesters</i>	132
Table 38	<i>Descriptive statistics results of B-level students' writing strategy frequencies across three semesters.....</i>	133
Table 39	<i>Descriptive statistics results of C1-level students' writing strategy frequencies across three semesters.....</i>	134
Table 40	<i>Total frequency of information density in the students' academic essays using Coh-Metrix.....</i>	146
Table 41	<i>Comparative descriptive statistics of ID in the students' academic essays across three semesters</i>	147
Table 42	<i>Comparison of LD measures in the B2 and C2 text extracts</i>	149
Table 43	<i>The occurrences of ID in B2 students' essays across three semesters</i>	152
Table 44	<i>The occurrences of ID in B2 students' essays across three semesters</i>	154
Table 45	<i>Strategies Indonesian graduate students utilize in English academic writing in the post-writing stage</i>	234

LIST OF APPENDICES

- Appendix A : Interview extracts of challenges
employ in writing academic essay – Interview extracts
- Appendix B : Interview extracts of the students' supports in English academic writing
at Hungarian universities
- Appendix C : Interview extracts of attitudes the students have regarding English
academic writing
- Appendix D : Interview extracts of writing strategies used by the students
- Appendix E : A semi-structured interview guide of the students' academic writing
experiences in a non-native English-speaking environment
- Appendix F : A follow-up interview checklist guide
- Appendix G : A letter of consent
- Appendix H : Research ethics

CHAPTER 1

INTRODUCTION

1.1 Research Background

In recent decades, English has become the global lingua franca in many areas of life, including higher education (HE) (Crystal, 2003). As a consequence, English is now used by both native and non-native speakers for teaching, learning, and research purposes in different fields of study all over the world. One example of this application is English for academic purposes (EAP), including English for academic writing. The importance of quality in academic text production at the university level has been the focus of attention of some writing research (Crossley, 2020; McNamara et al., 2010).

Existing literature has maintained that writing is a significant indicator that plays a vital role and makes students successful in their studies (Braine, 2002; M. Li, 2024). This is exemplified by Craswell and Poore (2012), who indicate that students' writing assignments and theses are considered high-stakes assessments in supporting their academic success. As noted by Irvin (2010), composing academic writing is difficult, as it requires the ability to construct correct sentences, organize paragraphs with topic sentences, use a high level of critical literacy, read complex texts, understand key disciplinary concepts, and employ strategies for synthesizing, analyzing, and responding critically to new information. In addition, Phyo et al. (2024b) denote that producing an English academic text imposes some constraints for non-native English students, as they may have limited experience in English academic writing and tend to struggle with understanding complex academic conventions due to their sociocultural literacy practices.

In line with the trend of internationalization, an increasing number of international students have travelled abroad for education over the past decade. These students originate from diverse countries, particularly non-native English-speaking regions (see OECD, 2015, p. 322), indicating that English often serves as a primary medium of communication during their studies. Indonesian students, for example, have participated in this global mobility for several years, with many studying in Hungary since 2016. A growing number of Indonesian students now enroll in Higher Education Institutions (HEIs), supported by the Hungarian government's Stipendium Hungaricum (SH) scholarship program (PPI Hongaria, 2022). Most of these students pursue master's degrees across various faculties, including humanities, social sciences, and economics. While studying in

a non-native English-speaking environment can be a rewarding and fruitful experience, this situation can pose a variety of linguistic, cultural, and institutional barriers, such as understanding task requirements and producing well-structured academic texts. Moreover, Swales and Feak (2012) argue that producing academic writing demands active engagement, critical thinking, and a deep understanding of disciplinary conventions.

1.2 Research Niche and Relevance

English academic writing (EAW) in a non-native English-speaking environment has been a key focus for applied linguists in the field of L2 writing research (Matsuda & Silva, 2020). Relevant studies focus on several themes addressing, for example, challenges in EAW, strategies in EAW, and linguistic features (e.g., information density) in academic writing.

EAW has become a significant challenge for university students, particularly non-native English speakers (NNESs) in English-medium higher education (Li, 2024). This challenge is especially pronounced for NNESs studying in non-native English-speaking environments, such as Indonesian Graduate Students (IGSs) enrolled in Hungarian Higher Education Institutions (HEIs). These students may encounter stressful processes and must navigate academic conventions shaped by unfamiliar cultural norms. Consequently, the students must employ effective writing strategies to enhance their writing quality and achieve academic success. As noted by Torrance et al. (2000), such writing strategies play a pivotal role in the development of L2 academic writing skills. Developing academic writing skills means having the ability to both understand and analyze academic texts, as well as produce various forms of academic writing such as essays, laboratory reports, summaries, theses, and dissertations (Sárdi, 2023, p. 309).

Relevant studies have explored two fundamental perspectives on academic writing strategies (AWSs). The first perspective involves language learning strategies, as defined by Oxford (2011) and Rose (2015), which refer to conscious actions utilized by L2 learners to support their language acquisition and writing development. Building on this framework, Mu and Carrington (2007) and Raoofi et al. (2017) proposed a taxonomy of academic writing strategies, classified into four categories: cognitive, metacognitive, social, and affective strategies. Cognitive strategies deal with mental operation activities such as idea generation, notetaking, and the selection of appropriate vocabulary. Metacognitive strategies involve skills used to control, regulate, and refine the writing processes, including monitoring, revising, and editing. Social and

affective strategies refer to the ways writers interact with others (e.g., receiving feedback, asking peers to proofread the text) and manage emotional responses (e.g., maintaining motivation and taking a break).

The second perspective on academic writing strategies, as suggested by Johnson (2016) and Richards and Schmidt (2010), is associated with the stages of the writing process, including pre-writing, writing, and post-writing. In the pre-writing stage, writers typically engage in activities such as brainstorming, mind-mapping, and finding relevant sources. During the writing stage, key activities include drafting and revising. The post-writing stage involves editing, proofreading, and finalizing, including correcting spelling errors or ensuring adherence to task descriptions. It is important to note that the strategies employed during the writing process are nonlinear. It means that writers often move back and forth between the stages as they refine their work.

In EAW, some studies, including Kim (2021), Lei and Yang (2020), Kalinauskaitė (2018), and McNamara et al. (2010), suggest that text quality is closely linked to lexical richness, lexical diversity, lexical sophistication, and information density (ID). Lexical richness refers to the overall range of vocabulary used, reflecting a writer's ability to incorporate varied word choices (Laufer & Nation, 1995). Lexical diversity measures the proportion of unique words to the total words, indicating the degree of repetition or variation in language (Read, 2000). The Type-Token Ratio (TTR) is a commonly used method to measure vocabulary diversity (see Lei and Yang, 2020, for more detail). Lexical sophistication examines the use of advanced or uncommon vocabulary, demonstrating a writer's depth of lexical knowledge (Crossley & McNamara, 2011). In addition, information density (ID) is a vital aspect of academic writing. As Hyland (2009) emphasizes, academic writing often depends on the concise and precise conveyance of complex ideas through abstraction and technicalities.

Adapted from Kalinauskaitė's (2018) definition, ID refers to a broader term used in discourse analysis to describe linguistic features that allow complex information to be densely packed into a limited space within a sentence. This is achieved through both lexical features (i.e., lexical density) and syntactic features (i.e., nominal phrases, expanded noun phrases, and nominalization). By integrating both lexical and syntactic features, ID becomes a key characteristic of high-quality academic writing.

Throughout this study, the term "information density" (ID) will be used to encompass both lexical and syntactic structures that contribute to information-rich academic writing. The following paragraphs discuss how ID is manifested in academic texts.

A closely related way to examine ID is through lexical density (LD). It is worth noting that the terms "ID" and "LD" are not synonymous. Instead, the latter is a subcategory of the former, since ID emphasizes the patterns of both lexical and syntactic features, while LD focuses specifically on the proportion of content words (e.g., nouns, verbs) to function words (e.g., prepositions) in running texts (Ure, 1971). The manifestation of content words, including nouns and verbs, contributes significantly to LD, as these manifest the primary meaning in academic writing. What is more, the highly structured nature of academic genres also contributes to LD (Halliday, 1993).

Additional features relevant to ID detection, as identified by Fang (2005), Kalinauskaitė (2018), and Yinfei and Nenkova (2014), include syntactic features such as expanded noun phrases (which allow more information to be packed into a single sentence) and nominalization (the transformation of verbs or adjectives into noun forms). These features enhance abstraction and align with the formal conventions of academic discourse, particularly within the field of social sciences.

This dissertation focuses on ID as a key measure of academic writing quality, as it helps express the complex ideas in fewer words by using clear and compact language. In this way, ID improves clarity, reduces unnecessary wording, and supports effective academic communication.

Additionally, several studies suggest that the manifestation of ID (i.e., lexical and syntactic features) can signal writing proficiency levels (beginner, intermediate, and advanced levels). Elgobshaw and Aldawsari (2022) and Gregori-Signes and Clavel-Arroitia (2015) argue that an increase of lexical density in the students' writing performance positively correlates with higher proficiency levels. Furthermore, Biber et al. (2020) and Lan et al. (2019) suggest that advanced-level students' texts seem to contain more complex noun phrases, making the text denser. Hence, these linguistic features can serve as indicators to distinguish writing proficiency levels. In the context of IGSs in Hungarian HEIs, analyzing ID is relevant, as it underlines the manifestation of ID in B2 and C2 level students' academic writing.

Despite recent advances in EAW research, studies addressing the intersection of challenges in EAW, strategies in EAW, and the characteristic features of ID components by the students

enrolled in the Hungarian HEIs remain underexplored. This research project aims to fill this gap by providing insights with theoretical and pedagogical considerations. For the theoretical aspects, this study is expected to test existing findings on challenges in EAW, supports, attitudes, strategies, and ID manifestation in students' essays, enriching the literature on L2-English academic writing. In terms of pedagogical instruction, by identifying strategies and ID patterns to improve EAW quality, the findings will support international students in the fields of humanities, social sciences, and economic faculties at Hungarian HEIs. Additionally, this present study offers practical recommendations to the targeted institutions for enhancing pedagogical supports for NNEs.

1.3 Aims and Research Questions

1.3.1 Aims

The current study investigates Indonesian graduate students' experiences in EAW in Hungarian HE. The research focuses on three key issues:

1) Students' challenges in EAW

The aim is to identify challenges faced by Indonesian graduate students when writing academic essays, support in academic writing, and their attitudes towards EAW in a non-native English-speaking environment.

2) Students' strategies in EAW

The aim is to explore strategies employed by the students to address challenges in EAW at HUs and to compare the distribution of the strategies employed by the students across their studies.

3) Information density (ID) in students' essays

The aim is to look at the patterns of ID in the students' researched essays written as assignments during their master's program (Semesters 1-4) and to evaluate the relationship of the patterns with the students' initial English proficiency levels (C1 and B2).

1.3.2 Research Questions

To address the aims of the present study, the following six research questions are formulated regarding Indonesian Graduate Students' (IGSs) experiences with EAW in Hungarian HE:

1. What challenges do Indonesian graduate students face when writing academic essays in English?
2. What types of support do the students receive to address the challenges in EAW?
3. What attitudes do the students hold toward EAW in a non-native English-speaking environment?
4. What writing strategies do the students employ in EAW?
5. What are the characteristic features of ID components in the students' essays across three semesters?
6. What are the characteristic features of ID components in the essays based on the students' initial proficiency levels?

1.4 Outline

After presenting the research background, research niche, study goals, and research questions of the current study in Chapter 1, the main body of the dissertation structure is divided into the other seven chapters: Chapter 2 discusses relevant previous theoretical and empirical research in connection with the main topics of this dissertation, including English Medium Instruction (EMI), the norm of academic writing, linguistic features in academic writing with a specific focus on information density, and challenges and strategies in EAW.

Chapter 3 discusses the research design of the empirical study. It highlights the aims and research questions, as well as the selection of the research method, which is mixed-methods research. For the purposes of the study, Creswell's Basic Convergent Design was chosen, as this type of research is relevant for the current study. Furthermore, the chapter provides information on participants, phases of the study, research instruments, and the pilot studies. Data collection and data analysis procedures are also elaborated on accordingly.

Chapter 4 analyzes qualitative findings in relation to the three research questions, which focus on the challenges faced by IGSs in writing English academic essays, the support they receive in EAW, and their attitudes towards the English academic writing class and its essay assignments.

Chapter 5 explains the employment of academic writing strategies based on the writing stages: pre-writing, writing, and post-writing. The chapter also underlines the taxonomy of academic writing strategies utilized by the students, including cognitive, metacognitive, social, and affective strategies. The next discussion highlights the frequency of academic writing strategies based on their previous English proficiency levels (B2 and C1 groups).

Chapter 6 investigates the students' writing analysis, focusing on the characteristic features of information density (ID) components in their text, and a comparison of the ID between B2 and C1 students' essays across their studies.

Chapter 7 discusses overall findings in connection with the six research questions, addressing academic writing challenges faced by IGSs, institutional and pedagogical supports available to them, their attitudes toward EAW, strategies employed in their writing process, the manifestation of ID across their semesters, and the relationship between students' initial English proficiency levels and the patterns of ID in their academic essays.

Finally, Chapter 8 is the conclusion. This chapter provides a brief explanation of the main findings related to the six research questions of the dissertation, followed by a discussion on pedagogical implications, research limitations, and suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

This chapter delves into various aspects of theoretical and empirical reviews in connection with experiences in English academic writing. The review begins with an overview of the Stipendium Hungaricum scholarship, followed by English as a Medium of Instruction (EMI). It begins by examining the definition, reasons for establishment, and the role of EMI in higher education, particularly in continental Europe. It also explores the concept of academic English as a lingua franca (EALF). The review proceeds to examine the realm of academic writing, discussing its definition, purpose, and language features, including information density. Various genres of academic writing, including essay writing and its working definition, are also covered. Finally, the next discussion pinpoints challenges and strategies associated with English academic writing in ESL and EFL contexts.

2.1 Stipendium Hungaricum

More and more international students pursue their higher education studies through scholarships. For example, studying in Central European higher education, including in Hungarian HEIs, can now be done through a scholarship called Stipendium Hungaricum (SH). The Hungarian government has fully funded and provided this scholarship to their 80 sending partners on five continents, including Indonesia (see Tempus Public Foundation, 2022, for more detail). This objective is consistent with the mission of the SH scholarship, which was established in 2013 by the Hungarian government to promote Hungarian higher education globally and to attract international students from all continents who can develop personal and professional ties to Hungary while receiving a high-quality education in the heart of Europe (Stipendium Hungaricum, 2020). In the 2018-2019 academic year, 28 universities in Hungary participated in this scholarship program, offering more than 460 programs with medium instruction in English (Tong, 2020). The scholarship program includes bachelor's, master's, and doctoral degrees and a one-tier master's: an integrated program for a long duration (5-6 years) where bachelor's and master's programs are unified, and partial (exchange) studies are offered (Tempus Public Foundation, 2019).

In the early stages of the agreement between Hungary and Indonesia in 2016, 50 students were eligible for the scholarship program. It is worth noting that since 2020, Indonesia has

benefited from a doubled increase in the scholarship recipients. According to the data released by *Persatuan Pelajar Indonesia di Hongaria* (PPIH), or the Indonesian student association in Hungary, the total number of Indonesian students enrolled at Hungarian Universities (HUs) is more than 180 (PPIH, 2024).

In 2020, PPIH announced that 183 active students were enrolled in more than five HUs, including Eötvös Loránd University (ELTE), Budapest University of Technology and Economics (BME), Corvinus University, the Hungarian University of Agriculture and Life Sciences (MATE), the University of Pannonia, the University of Pécs, the University of Szeged, the University of Debrecen, Széchenyi István University, the University of Sopron, Semmelweis University, Budapest Business School, the University of Miskolc, and Pázmány Péter Catholic University (PPCU) (PPIH, 2024). These students pursued bachelor's, master's, and doctoral programs across various fields of study.

International students enrolled in Hungarian HEIs must meet the university's English proficiency requirements. The Council of Europe (2020) published the Common European Framework of Reference for Languages (CEFR), which describes language learners' speaking, reading, listening, and writing abilities at six reference levels. These levels are A1 (beginners), A2 (elementary English), B1 (intermediate English), B2 (upper-intermediate English), C1 (advanced English), and C2 (proficient English). In most cases, HUs require students to demonstrate B2-level English or higher or achieve an IELTS (International English Language Testing System) score of 5.5–6.5 to enroll in master's programs, for example, in the field of social science and economics studies (see *Stipendium Hungaricum*, 2025). Many Indonesian students submit IELTS certificates to fulfill the scholarships' English language proficiency requirements. Notably, some of these students attempt the test multiple times before achieving the B2 level minimum standard, as highlighted by Kusumawati (2017).

On the other hand, despite the requirement for an English proficiency certificate, this seems not to be the only high-stakes assessment for graduate students during the master's program. For non-native speakers of English (NESs), studying through English as a medium of instruction (EMI) can compound their academic difficulties. Hyland (2006) asserts that most graduate students encounter lectures, seminars, and exams where they must take notes, deliver presentations, and complete written assignments. As such, the latter issue is closely related to the current research project, which deals with academic writing.

2.2 English as a Medium of Instruction (EMI)

It is undeniable that globalization has caused significant changes in the world's economy, ecology, and communication. Waters (2001) emphasizes that globalization is characterized by the compression of time and space, the reduction of diversity through expanded trade and interconnectedness, and the formation of new social relationships. Hence, globalization has reshaped modern society.

There is now clear evidence that non-English-speaking countries are experiencing a major increase in the use of English for teaching academic subjects due to globalization (Galloway & Rose, 2021). English embodies a value tied to its perceived social functions and utility within the global linguistic market. Phillipson (2009) conceptualizes English as a "*process*," a "*product*," and a "*project*." As a product, global English encompasses the linguistic codes and forms used across geographically and culturally diverse communities. As a process, it involves the expansion of language practices through the mobilization of underlying structures, ideologies, and agency. A project focuses on the normative goals of English becoming the default language of international communication and the dominant language of intranational communication in a growing number of countries around the world.

Due to the acceleration of globalization, the use of English as a lingua franca (ELF) becomes increasingly significant due to the internationalization of universities and the global exchange of knowledge. According to Seidlhofer (2011, p. 7), ELF means 'the use of English among speakers of different first languages for whom English is the communicative medium of choice.' ELF focuses on mutual understanding, intelligibility, and the negotiation of meaning among speakers with different native languages. As stated by Jenkins et al. (2018), ELF deals with the diverse varieties of English that speakers contribute to these interactions, promoting the acceptance of non-native English varieties as equally valid for communication in academic settings. Moreover, Dearden (2015) argues that the use of ELF has also led to the development of EMI programs, which offer courses taught entirely in English at universities where English is not the native language.

2.2.1 The Definition of EMI

A widely accepted working definition of EMI, described by Macaro (2018, p. 19), is "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the majority's first language (L1) is not English." This definition excludes L1-

English or English-dominant environments that frame EMI as a compensatory mechanism for linguistic contexts where English is not the primary language of communication.

Smit (2023) asserts that a successful EMI implementation necessitates the integration of three fundamental aspects: (1) *the systematic utilization of English as the medium for education*, (2) *the provision of academic content separate from English language instruction*, and (3) *the engagement of L2 English users*. However, as Macaro (2015) critically notes, the rapid global expansion of EMI is often conceptualized as an “unstoppable train.” It reflects the enthusiasm of policymakers and educators prioritizing internationalization over pedagogical equity.

EMI is a global phenomenon that primarily occurs in tertiary education, yet its invasion into secondary and primary sectors highlights its role as a transformative, albeit controversial, force within education. Dearden (2015) contends that EMI enhances access to global academic networks as well as workforce competitiveness. Conversely, Hamid et al. (2013) warn that EMI may stratify learning outcomes, favoring students with existing English proficiency and marginalizing linguistically diverse learners. Therefore, it is important to note that the expansion of EMI across educational levels can promote opportunities for global integration and concerns about deepening educational inequalities.

2.2.2 Reasons for EMI Establishment

There are several reasons for the significant growth of EMI in recent years, primarily due to the current status of English as a global language and its use as a lingua franca (Macaro, 2018). Altbach et al. (2009) argue that the existence of approximately 7 million international students studying education abroad has led universities to enhance their institutional standing through internationalization. Furthermore, Lamb et al. (2021) identify key motivations for adopting EMI in HE, including curriculum internationalization, strengthening global competitiveness, maintaining institutional prestige, and improving students' English proficiency. Their study further highlights EMI's role in preparing students for the global labor market, enhancing universities' international profiles, accommodating international students, fostering collaboration with international HEIs, improving subject-specific learning, accelerating national institutional reputations, supporting staff career development, and facilitating re-entry opportunities for graduates.

The emphasis on improving institutional profiles is most likely connected with global ranking systems, such as the QS (*Quacquarelli Symonds*) World University Ranking (see Liu & Le Ha, 2021; Sahan et al., 2021). Governments in Asia and beyond increasingly rely on these metrics to allocate funding and assess institutional performance (e.g., Macaro et al., 2017; Tamtam et al., 2012). Nevertheless, implementing EMI without adequate preparation for both educators and students risks undermining its effectiveness (Costa & Coleman, 2013). Macaro et al. (2017) further look over this trend within broader institutional challenges, such as declining domestic enrollment due to demographic shifts, reduced public funding for HE, competition between public and private sectors, and efforts to attract international students through perceived academic internationalization. They emphasize that English serves not merely as a language of instruction but as a strategic tool for academic positioning as well.

2.2.3 *Characteristics of EMI in Higher Education*

The spread of English is connected to globalization. Waters (2001) views that globalization not only shapes linguistic practices but also transforms the economic dynamics of HE. Similarly, Montgomery (2004) underlines the complexity of English's globalization and contends that decisions are influenced by stakeholders involving editors, educators, parents, writers, publishers, translators, officials, academic associations, businesses, and educational institutions.

HEIs have increasingly adopted EMI (see e.g., Coleman et al., 2018; Macaro et al., 2017), driven by its potential to enhance student and faculty mobility, strengthen institutional competitiveness in the global labor markets, and elevate universities' international reputations. This trend is largely because EMI facilitates the mobility of both students and faculty, enhancing their employability in international settings, and helping institutions achieve attractive and reputable academic profiles. Furthermore, Macaro (2018) explains that the growing phenomenon of EMI in HE establishes clear links with institutional factors, including perceived internationalization, efforts to attract foreign students amid declining domestic enrollment due to demographic shifts, national reductions in higher education funding, competition between public and private sectors, and the strategic use of English as the primary academic language.

According to Lamb et al. (2021), establishing standard English proficiency requirements and investing in staff training, which includes the use of appropriate educational technology, are critical factors in the spread of EMI in HEIs.

It is now evident that EMI is being implemented at all levels of higher education, offering both undergraduate and graduate programs in English for international students (Lasagabaster et al., 2014). Dearden (2015) undertook a widely cited survey on the growth of EMI across 60 countries, revealing a rapid expansion of EMI with expectations of continued growth in both private and public education sectors. In Europe, for example, there has been a significant shift from mother tongue-medium higher education courses to English-medium courses. Wächter and Maiworm (2014) reported that between 2007 and 2014, the number of EMI courses in Europe grew by 1,000 percent to accommodate the rising number of international students. Brogginini and Costa (2017) also noted that almost all postgraduate programs in Scandinavia are now taught in English.

Björkman's (2011) study suggests that the rising use of ELF as a medium of instruction in HE across continental Europe and elsewhere is driven by new groups of learners who primarily require English for communication with speakers from other L1 backgrounds. Petzold and Berns (2000) found that English is becoming a significant medium of instruction in Hungary, particularly in Budapest HEIs that attract students from various non-English-speaking countries. According to their study, university students engaged with English through various academic texts, such as professional journal articles, reference works, and textbooks, using the language as a gateway to current knowledge. In addition, research indicates that in Denmark, EMI serves as a marker of social distinction for middle-class students with higher self-confidence in English, as well as a pathway to career advancement (Lueg & Lueg, 2015). Notably, the expansion of EMI in Europe is supported by relatively strong foundations in English proficiency at the secondary school level.

A similar trend is evident in Southeast Asia, including countries such as Malaysia, Thailand, the Philippines, Myanmar, and Vietnam, with the rise of EMI in Indonesia already well documented (see Dearden & Macaro, 2016; Lamb et al., 2021). The growing adoption of EMI in Indonesia is seen as beneficial for both content and language learning, offering an innovative approach to improving English proficiency levels. Across Southeast Asian (SEA) countries, several interconnected factors contribute to the spread of EMI, such as the increasing dominance of English in academic publications, expanded career development opportunities for staff, and the pressure of competing in the global labor markets. Figure 1 presents the key indicators for improving academic reputation and internationalization, as identified by Lamb et al.'s (2021) study.

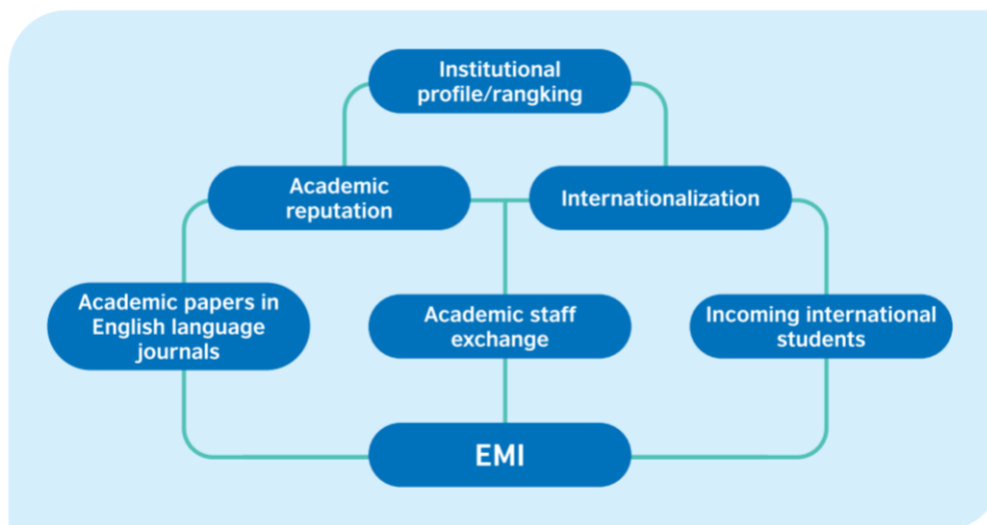
Figure 1*Lamb et al.'s (2021) drivers of EMI in Indonesian higher education institutions*

Figure 1 shows that EMI can point out several aspects of how it alleviates Indonesian HEIs, including publications in English, academic staff mobility, and the acceptance of international students. These aspects contribute to improving the academic performance of the institution, leading to a widely diverse and multicultural campus and encouraging worldwide collaboration and recognition. By prioritizing these areas, institutions can successfully work towards becoming world-class establishments, attracting top talent and producing high-quality research in an interconnected academic landscape. Therefore, the integration of EMI into educational institutions is an important factor that can upgrade the institution's rank.

Although EMI promotes international collaboration, sharing of ideas, and mobility of students and academic staff (Jenkins, 2015), it also poses challenges to linguistic competence, academic literacy, and intercultural communication for both native and non-native English speakers (Hyland & Hamp-Lyons, 2002). In particular, non-native speakers of English tend to face more challenges in adjusting to new academic cultures (Carroll & Ryan, 2005) and meeting the linguistic demands of academic English, including the ability to comprehend complex texts, participate in oral discussions (e.g., Macaro, 2020), and produce well-written assignments (Flowerdew & Peacock, 2001). Likewise, Lasagabaster (2022) argues that EMI teachers often appear pedagogically unprepared. They frequently find themselves in situations where they have no choice but to teach their subjects in English to meet the demands of the institutional profile.

It is worth noting that addressing the complexity of challenges relevant to the use of EMI requires attention from both pedagogical and institutional perspectives. Hence, the use of EMI in higher education is not viewed as a threat, but rather as a motivation to support students in achieving both linguistic and academic success (Kirkpatrick, 2014).

In addition, the growth of EMI in HE has led to the use of English as a lingua franca for teacher-student communication, facilitating diverse linguistic backgrounds. This phenomenon is referred to by Mauranen et al. (2010) as *English as an Academic Lingua Franca* (hereafter EALF).

EALF is discussed and defined by various experts in the field. Applied linguists have proposed multiple definitions, which are explored before addressing the construct definition for this current study. Mauranen et al. (2010, p. 183) define EALF as the use of English by speakers of various native languages when engaged in research and education. Their research includes two major projects: the ELFA (English as a Lingua Franca in Academia) corpus project, which created a spoken academic discourse corpus of 1 million words (e.g., the ELFA corpus), and also the WrELFA (Written English as a Lingua Franca in Academia) databases. The other project, SELF (Studying in English as a Lingua Franca), adopts a micro-analytic perspective, whereby participants' experiences of ELF are captured in deputy enclave settings. Clouet (2017) defines EALF as the use of English across various specialized fields, including medicine, engineering, science, and business, serving as a catalyst for intercultural communication within the global academic community (p. 314).

EALF in this regard serves as the language of teaching, learning, research, academic publication, and communication between academic staff and students, particularly in higher education contexts (Jenkins, 2015, p. 158). It explores EFL practices, trends, and features in natural settings that are used by proficient users in university environments. Mauranen (2012) further highlights EALF's fluidity and adaptability, emphasizing that users actively negotiate and adjust their language practices to meet the communicative needs of their academic communities. This integrative posture captures a dynamic understanding of EALF language, which must evolve with the shifting linguistic and cultural landscape of higher education.

Given the presence of two closely related acronyms, ELFA (English as a Lingua Franca in Academia) and EALF (English as an Academic Lingua Franca), it is important to clarify their usage. While both concepts share similar goals, this dissertation will use EALF to represent the underlying concept of English as a common means of communication in academic settings,

encompassing the various aspects and implications of using English as a lingua franca in HEIs. This approach ensures consistency and coherence in the discussion of English as a lingua franca throughout the present study.

2.3 Academic Writing

It is indisputable that the process of composing a novel diverges markedly from that of composing academic texts, such as essays. The differentiation between the two can be primarily attributed to their distinctive writing styles.

In novel writing, the approach is inherently artistic, marked by the use of intricate, sophisticated language and unique linguistic features (Tolchinsky, 2006). On the other hand, Swales and Feak (2012) argue that academic writing frequently lacks these stylistic features. Hyland (2008) emphasizes that academic writing uses formal features (e.g., reporting practices) that align with the academic conventions and requires evidence-based argumentation and logical organization. What is more, academic writing is challenging because it entails complex ideas, providing salient points, transferring ideas to coherent text, and revising until the draft is well-produced (Paltridge, 2004).

It is worth noting that academic writers must navigate disciplinary norms by employing genre-specific features (Biber & Conrad, 2019; Hyland, 2015). This necessitates metacognitive awareness, as academic writers must monitor and control their writing processes. Besides, effective writing strategies are critical in this regard, as they enable writers to manage both the composition and learning trajectories (see e.g., Díaz Larenas et al., 2017). Academic writing mastery not only develops intellectual growth but also underpins scholarly success (Haffa et al., 2021).

Consequently, it is imperative for the students to acknowledge the necessity of adopting academic writing strategies for university assignments and other academic contexts. As Staples et al. (2016) and Zhang (2018) focus on, adherence to genre conventions allows writers to communicate ideas effectively and contribute meaningfully to their fields.

2.3.1 *A Working Definition of Academic Writing*

Defining academic writing can be challenging, as applied linguists have offered various interpretations depending on the purpose. While the majority associate it with academic settings,

there is no universally accepted definition of academic writing. The following sections, meanwhile, present several working definitions from experts in the field (e.g., Bailey, 2018; Hyland, 2022; Hyland & Salaga-Meyer, 2008; Irvin, 2010; Paltridge, 2004). After examining these definitions, a working definition will be established for the purposes of this dissertation.

Hyland (2004) denotes that academic writing is the practice of adopting the thinking and communication styles valued by disciplinary peers: supervisors, examiners, and researchers. It involves understanding of both writing as a process and as a product. Moreover, Hyland and Salaga-Meyer (2008) examine key issues in academic writing, such as linguistic features, feedback, genre conventions, disciplinary practices, and identity. Their study tends to use the terms "*academic writing*" and "*scientific writing*" interchangeably, emphasizing their shared purposes. Nevertheless, Hyland (2004) identifies academic writing as being relevant to academic settings such as universities and research institutions, with a formal tone, precise language, and a clear focus on research problems and supporting evidence. He also examines that academic writing encompasses a diverse range of document types, such as dissertations and research papers, as well as essays and reports. This explanation has become one establishment in researching in the field of academic writing by numerous applied linguists.

Additionally, Irvin (2010, pp. 3-7) defines academic writing as not only focusing on specific features but also dealing with conventions that occur in academic contexts such as colleges or universities, as well as with the role of audience. The primary audience for academic writing is the professor and possibly classmates, and it frequently revolves around specific assignments assigned by the teacher. Bailey (2018), who holds the same opinion, delves into the description of academic writing, relevant referencing, and formatting.

Based on Paltridge's (2004) perspective, academic writing extends beyond the sentence structure levels. It encompasses rhetorical functions, such as descriptions, narratives, definitions, exemplification, classification, comparison and contrast, cause and effect, and generalizations. This definition highlights that academic writing requires both grammatical accuracy and the ability to manipulate language to convey complex ideas effectively.

Furthermore, Thaiss and Zawacki (2006) explain that academic writing can be classified into two different purposes from the viewpoints of researchers and teachers. The former perspective views academic writing as related to any writing that serves educational purposes in a college or university setting. The latter suggests that academic writing include student writing in

response to academic assignments as well as professional writing by trained academics intended for publications and conferences. While academic writing may relate to other forms of writing, such as "writing for the workplace," distinctions occur. Factors, such as audience and purpose, play essential roles in defining academic writing and differentiating it from other types of writing.

In light of the descriptions provided by the experts above, the working definition of academic writing for this current research project refers to a form of writing with distinct linguistic features, used in academic settings, including universities and research institutions. It is characterized by a clear emphasis on research problems and the presentation of well-supported viewpoints, serving as a means of communication and persuasion within academic discourse communities.

2.3.2 *L2 English Academic Writers*

The term "*L2 writer*" refers to anyone who is writing or learning to write in a language other than their native language (Matsuda & Silva, 2020). It consists of both second and foreign language writers as well as writers who are writing in their third, fourth, fifth language, and so forth. As second language writers, they seem to encounter some constraints, including language, strategy, and culture (Hyland, 2003). As stated by Matsuda and Jablonski (2000), they do not only learn to write, but second language writers also acquire second language structures. Apart from the second language grammar, L2 writers necessitate developing their language proficiency and genre knowledge as well.

Another definition of second language writers classified by Matsuda and Silva (2020) refers to *FL writers*. It indicates writers who are writing in languages in which the target language is not popular. This type of writer can be grouped into two general categories, which are EFL writers and other foreign language writers. It becomes evident that the distinction between EFL and other foreign languages is significant even if they investigate the same academic unit. The main reason for the distinction is based on the status of the English language as the dominant language of universal communication, especially in academic discourses. As a result, with the dominance of ELF in scholarly communication, writing in academic contexts for graduate students and researchers has been a major emphasis in many applied linguistics studies.

2.4 Aspects of Academic Writing

It is important to note that considering features in academic writing may lead to better writing with clear purposes and goals. As stated by Singh and Lukkarila (2017), there are eight common features found in academic writing, as displayed in Table 1 below.

Table 1

Key features of academic writing adapted from Singh and Lukkarila (2017, pp. 6-7)

Key Features	Short Descriptions
Audience awareness	Writers consider the reader's shared knowledge and tailor the content accordingly.
Argumentative purpose	Writers present a unique position or viewpoint on a topic, demonstrating knowledge and application.
Problematizing approach	Writers show previous positions or viewpoints as problematic, promoting alternative perspectives.
Rational tone	Writers use clear and logical explanations to persuade or appease the reader.
Relevant content	Writers include only credible and relevant information to support or discredit arguments.
Coherent structure	Writers organize ideas systematically, from general categories to specific instances.
Cohesive style	Writers use linguistic devices to connect ideas and ensure reader understanding with minimal confusion.
Complex grammar and vocabulary	Writers use a variety of sentence types, vocabulary, and grammar without sacrificing clarity.

The use of the first-person singular "I" is a notable feature of academic writing, although its appropriateness remains debatable. Maintaining objectivity is crucial, even when the pronoun "I" is required; skilled academic writers can subtly and persuasively convey their voice (Li & Ye, 2023). Some argue that proficient academic writers employ it implicitly to make their voice apparent and convincing. Zinsser (2016) states that writers can convey a sense of *I-ness* and suggests two techniques:

"Good writers are visible just behind their words. If you aren't allowed to use 'I', at least think 'I' while you write, or write the first draft in the first person and then take the 'I's out." (Zinsser, 2016, p. 22)

In contrast, Hyland (2002) notes that self-mention is essential for establishing a scholarly persona and gaining acceptance for one's ideas. However, non-native English speakers, especially those from different intellectual and cultural traditions, may hesitate to adopt an individualistic self in their writing (see e.g., MacIntyre, 2019, for further information). This reluctance among L2

writers may stem from their culturally and socially constructed view of self, which complicates the assertion of authority. Hyland and Jiang (2017) underline that these perspectives on the use of "I" in academic writing highlight the need for writers to balance objectivity and personal voice, depending on their cultural backgrounds and the conventions of their disciplines.

2.4.1 Information Density (ID)

Writing is an essential component of HE, as it helps students communicate their ideas effectively and promotes academic success. However, writing an academic text can be challenging for English learners, particularly when they need to write in an L2 and incorporate discipline-specific language features (e.g., Lin & Morrison, 2021). Research in the social sciences has highlighted the use of specific linguistic features in academic writing. For example, studies (see e.g., Crossley, 2020; Fang, 2005; Staples et al., 2016) indicate that writers often use clausal features (such as clausal coordinate conjunctions and *WH* complement clauses), phrasal features (such as nouns, premodifying nouns, and expanded noun phrases,) and technical vocabulary.

The appropriate use of linguistic features in academic writing is closely linked to a high degree of information density (ID), which manifests complex substantial information by enhancing meaning while limiting wordiness. Kalinauskaitė (2018) argues that ID ensures clarity and conciseness through syntactical features (i.e., expanded noun phrases and nominalization), as well as lexical features (i.e., lexical density). To examine this more closely, ID emphasizes patterns of both lexical and syntactic features, while LD focuses specifically on the proportion of content words (e.g., nouns) to function words (e.g., prepositions) in running texts (Laufer & Nation, 1995). By using both lexical and syntactic features, ID becomes a key characteristic of high-quality academic writing.

It should be noted that information density (ID) is fundamental to academic writing and can significantly influence writing performance. For instance, Elgobshaw and Aldawsari (2022) emphasized the significance of lexical density in academic writing performance. They observed that a greater amount of information carried in a text with the help of a higher proportion of content words can improve the clarity and depth of the content.

Apart from lexical density, syntactic features also play an important role in academic writing. Relevant studies have shown that significant key syntactic features include the use of expanded noun phrases and nominalization (Biber & Gray, 2010; Staples et al., 2016; Wu et al.,

2020). Wu et al.'s (2020) corpus-based analysis of research articles found that EFL writers tend to produce longer sentences and employ expanded nominal phrases to convey more information and to enhance efficient communication. Their study also noted that the increased sentence length was largely due to the manifestation of phrasal construction, rather than clausal ones.

Furthermore, the frequent use of expanded noun phrases can also signal a writer's English proficiency level. As Ai and Lu (2013) observed, students with higher proficiency levels tend to produce more expanded noun phrases than those with lower English proficiency.

In terms of nominalization, Biber and Gray (2010) demonstrated that this feature is a key indicator of academic prose, especially within texts in the field of social sciences. In the same way, Staples et al. (2014) revealed that nominalization frequently appears in social science essays, as it enables writers to express disciplinary content knowledge and to present information in a more compact, academic form for their audience.

Based on the above, ID is relevant to this dissertation, as it investigates academic writing focusing on essays within the field of social sciences and highlights the preference for information density from the point of view of lexical density, expanded noun phrases, and nominalization leading to concise texts that convey a substantial amount of information. Therefore, the subsequent paragraphs offer a comprehensive explanation of the prominent characteristics discussed in academic writing.

2.4.1.1 Lexical Density. Undoubtedly, NNEs encounter challenges when producing well-written texts in English, as evidenced by studies conducted by Sajjad et al. (2021), AlMarwani (2020), and Muflihun and Tohamba (2020). Moreover, the quality of academic writing is influenced by various linguistic features, including information density (ID). In examining ID, several studies have focused on lexical features, including lexical density (LD), which emphasizes the proportion of content words within a text (Laufer & Nation, 1995), and syntactic features, such as (expanded) noun phrases and nominalization (Fang, 2004; Kalinauskaitė, 2018).

Introduced by Jean Ure (1971), LD is defined as the ratio of lexical words to total words in both written and spoken language forms. It is typically calculated based on the proportion of content words rather than function words. Content words encompass nouns, verbs, adjectives, and some adverbs, while function words include prepositions, conjunctions, auxiliary verbs, some adverbs, determiners, and pronouns (Eggins, 2004). According to Ure (1971), one lexical item

such as “*turn up*” is regarded as two words, contracted forms such as “*haven’t*” and hyphenated forms such as “*baby-sitter*” are regarded as one word. Ure’s (1971) research revealed that most spoken texts have an LD below 40%, whereas the majority of written texts have an LD of 40% or higher. The use of content words in academic texts demonstrates the richness of lexical density. Formal texts, like academic writing, have higher density than informal texts (e.g., Biber, 1996).

Halliday (1985) further developed and refined the notion of LD, emphasizing the distinction between lexical and grammatical items. It should be noted that lexical items may consist of more than one word. For instance, Halliday considers “*turn up*” as a single lexical item, whereas Ure (1971) treats it as one lexical item (“*turn*”) and one grammatical item (“*up*”). Likewise, Halliday defines a lexical item as functioning within open lexical sets, allowing for contrast with numerous items in the world (p. 63). In contrast, grammatical items are part of closed systems characterized by fixed word classes and a predetermined number of items, with no possibility of adding new members.

In connection with language function, a clause typically consists of participants (expressed by *nouns*), processes (expressed by *verbs*), and circumstances (expressed by *adverbial* or prepositional *phrases*) (Egins, 2004). Vande Kopple (1994) posits that the high use of nouns in academic texts is essential. His research findings highlight that grammatical subjects in scientific writing are often noun phrases, typically technical or specialized terms, which are necessary for expressing the complex concepts common in academic fields. This higher proportion of nouns enables precise and dense information delivery, a crucial aspect of academic communication. Consequently, this aligns with the concept of lexical density, where texts with more content words (e.g., *nouns*) and fewer function words (e.g., *articles* or *prepositions*) are considered more lexically dense. Syarif et al. (2018) emphasize the importance of nouns and verbs in academic writing, as they carry the most information. Moreover, the highly structured nature of academic genres contributes to the LD in academic writing (Halliday, 1993).

In the context of academic writing, clauses tend to incorporate a greater number of content words, whereas in everyday spontaneous speech, function words play a significant role within the clause. As noted by Halliday (1993), everyday spontaneous speech generally includes 2-3 content words per clause, while written language exhibits 4-6 content words per clause. In the same vein, Fang (2004) suggests that academic texts, in particular, demonstrate even higher density,

sometimes reaching 10-13 content words per clause. Consequently, it has been posited that the texts contain denser information, contributing to the expression of complex ideas.

Numerous studies focusing on LD have been conducted by applied linguists, including the comparison of lexical density (LD) between NESs and NNEs. Findings indicate that LD values are higher in English L1 texts. Linnarud (1975), for instance, discovered that texts written by L1 English speakers contain a higher level of lexical density than those of L2-English Swedish student writers. Syarif (2018) also reported that EFL students' writings tended to be lexically sparse, using few content words. In a related study, Kouach (2021) conducted a readability test to assess the LD employed by students. The results revealed that the texts produced by EFL students appeared to be easily readable, suggesting a lower utilization of LD in the text. This suggests that the EFL group may have a more limited vocabulary and may struggle with lexical variation, which could contribute to their lower lexical density.

Nasseri and Thompson (2021) examined the differences in LD among English L1 and L2 (both EFL and ESL) academic writing. The study showed that the relationship between LD and the groups of students (EFL, ESL, and NESs) is that EFL students had the lowest LD in their texts, followed by ESL students. In contrast, NESs had the highest lexical density, which resulted from their ability to construct more nominal phrases, effectively conveying more information and ideas within their writing. It can be the case that L1 English speakers often possess the capability to utilize a broader vocabulary range, including longer phrases, which can contribute to higher lexical density. Moreover, their early exposure to English provides them with a deeper comprehension of the language's subtleties and facilitates the use of a more extensive vocabulary. These findings underscore the significance of LD as robust predictors of distinctive features of written language, especially in formal contexts such as academic writing.

Besides, Gregori-Signes and Clavel-Arroitia (2015) revealed a noteworthy relationship between English proficiency levels and text density. Their findings demonstrated that texts written by students with higher levels of English proficiency exhibited a greater degree of LD compared to their counterparts. To et al. (2013) revealed that lower-graded IELTS test papers exhibited less density due to infrequent use of nominal phrases, a critical aspect in academic writing. This finding highlights the significant contribution of nominal phrases to making a text lexically dense.

Some research studies have indicated that factors can influence the patterns of LD in academic writing performance. The study conducted by Zou (2022) revealed that vocabulary

knowledge, specifically the emphasis on mastering content words rather than excessive use of function words, significantly influences the use of lexical density. Furthermore, another empirical investigation conducted by Elgobshawi and Aldawsari (2022) examined the factors contributing to the enhancement of LD in writing among English major students enrolled in writing courses. The findings of this study indicate that writing experience, encompassing writing skills and familiarity with the topic, plays a significant role in fostering the improvement of LD as students progress from level 1 to level 2 of the writing course. Furthermore, Finch (2015) conducted an interview study with English teachers in Australia. The study suggests that the enhancement of students' academic writing performance through the use of LD was influenced by contextual factors such as writing instruction, teachers' feedback, and writing strategies. Also, motivational factors such as affection, prior knowledge, and time management played a significant role. Furthermore, cultural and societal factors also contributed to this relationship. The study additionally posited that the utilization of grammatical metaphor, specifically nominalization, can also have an impact on texts that are lexically dense.

2.4.1.2 Expanded Noun Phrases. A syntactic aspect to look at ID is through noun phrases. The manifestation of noun phrases might somewhat delineate the articulation of complex ideas (Fang, 2004). According to Richards and Schmidt (2010), a noun phrase (NP) is a group of words with a noun or pronoun as the main part (the head). It may consist of only one word, or it may be long and complex (p. 402). Biber et al. (1999, p. 579) state that multiple modifications, known as an expanded noun phrase, accompany the use of noun phrases in academic writing. An expanded noun phrase is a noun phrase that contains additional elements beyond the basic structure of a noun and its determiners (Finch, 2015). These additional elements, known as premodifiers and postmodifiers, serve to provide more detail, specificity, and complexity to the noun phrase. Furthermore, Biber et al. (1999) underline that a complex noun phrase contains multiple modifications, including premodifiers or postmodifiers.

Premodifiers are words or phrases that come before the head noun and modify or describe it, such as adjectives, participles, and nouns. The following noun phrases provide examples of premodifications, highlighted with bold fonts, and head-noun phrases, marked by underlines.

Examples:

a specific scheme

delighted customers

connecting systems

chain problems

It is also possible for a noun head to contain multiple premodifiers.

Two-word modifications:

the global cold chain

chain management solutions

Three-word premodifications:

discolouration, bruising, and microbiological growth

genuine, nonstrategic legal rights

Four-word premodifications:

very finely grained alluvial material

the formerly self-sufficient rural feudal economy

Postmodifiers, on the other hand, are elements that come after the head noun and further elaborate on it, including finite and non-finite postmodification clauses, prepositional phrases, adverbial phrases, adjective phrases, reflexive pronouns, non-restrictive clauses (i.e., relative clauses, *ed*-clauses, and *ing*-clauses), non-restrictive prepositional phrases, and appositive noun phrases (a noun phrase that comes after another noun phrase to provide extra information about it). The following Table 2 shows major structural types of postmodifications of a head-noun phrase.

Table 2*Major types of postmodifications*

Types	Examples
Finite postmodifying clause:	
<i>relative clause</i>	<i>a footpath <u>that disappeared in a landscape of fields and trees</u></i> <i>beginning students <u>who have had no previous college science courses</u></i>
Non-finite postmodifying clause:	
<i>to-clause</i>	<i>the way to get <u>to our house</u></i> <i>one of the key contenders <u>to mount a rescue bid for Ferranti</u></i>
<i>ing-clause</i>	<i>rebels <u>advancing rapidly southwards</u></i> <i>a structure consisting of independent <u>tetrahedra</u></i>
<i>ed-clause</i>	<i>fury <u>fanned by insensitive press coverage</u></i> <i>products <u>required to support a huge population</u></i>
Prepositional phrase as postmodifier	<i>a phone <u>with a couple of buttons on it</u></i> <i>evidence <u>for a second victory by Jenny Pitman in the Grand National</u></i>
Adverb phrase	<i>He was just trapped <u>in there with apparently no way out</u>.</i> <i>Grace and Cordelia and Carol are <u>up ahead</u>; I am <u>a block behind</u>.</i>
Adjective phrase	<i>President Bush will reiterate he wants a smooth transition and will cooperate in any way <u>as easily as possible</u>.</i> <i>The extremely short-duration varieties <u>common in India</u> were not used in West Africa.</i>
Reflexive pronoun	<i>He <u>himself</u> paid two fruitless visits to the site of a camp near Borneo.</i> <i>The airlines <u>themselves</u> will next week step up their recruitment drive.</i>
Non-restrictive relative clause	<i>The goat, <u>which had slid about during the transfer</u>, regarded him with bright-eyed perspicacity.</i>
Non-restrictive ed-clause	<i>A converted farm building, <u>donated by Mr. and Mrs. Tabor</u>, has been turned into a study room filled with photographs and displays.</i>
Non-restrictive ing-clause	<i>Style variation is intrinsic to the novel's satiric-epic picture of Victorian urban society, <u>concentrating on the capitalist house of Dombey</u>.</i>
Non-restrictive prepositional phrase	<i>Certain of the soils on the east, derived from limestones and schists, <u>with mixed sandstones and shales</u>, are alkaline in reaction and poor in nitrogen.</i>
The appositive noun phrase	<i>both types of eggs (<u>diapause and non-diapause</u>)</i>

Adapted from Biber et al.'s (1999) Longman grammar of spoken and written English: Complex Noun Phrases

The difference between a noun phrase and an expanded noun phrase is that a noun phrase is a group of words centered around a noun that functions as a subject, object, or complement in a sentence. As stated by Biber et al. (1999), a noun phrase typically consists of a noun (the head) and any associated words that modify or describe the noun, such as determiners, adjectives, and prepositional phrases. On the other hand, an expanded noun phrase (or complex noun phrase) goes beyond the basic noun phrase structure by including additional elements such as premodifiers (e.g., adjectives, participles, nouns) and postmodifiers (e.g., relative clauses, prepositional phrases, appositive noun phrases). These elements allow for a richer and more nuanced expression of ideas in writing (Biber & Gray, 2011; Díez-Bedmar & Pérez-Paredes, 2020).

Research including Biber and Gray (2011), Karimi et al. (2014), Durrant and Brenchley (2023), and Díez-Bedmar and Pérez-Paredes (2020) indicates a strong correlation between the utilization of expanded noun phrases and the level of information density. The reason for this is that expanded noun phrases consist of numerous intricate modifiers, enabling them to encapsulate a substantial amount of information in a concise and structured manner. This attribute renders them a powerful instrument for developing rich and subtle descriptions.

Additionally, Biber et al. (1999) also acknowledge that abstraction or nominalization within an expanded noun phrase can serve as an indicator for identifying the head noun of clause postmodifications. The utilization of these linguistic features enhances the degree of conceptualization, generalization, adaptability, expressiveness, and symbolism in the description.

For example:

As the lush, green plant growth of the tropical rain forest ...
(Adapted from Fang, 2004, p. 338)

The example provided above illustrates the expanded noun phrase structure containing pre- and postmodifiers. Typically, these phrases include a head noun (e.g., *growth*) along with pre- or post-modifiers. Pre-modifiers can encompass deictic elements expressed through determiners and pronouns (e.g., *the/these*), epithets represented by adjectives denoting qualities (e.g., *lush, green*), and classifiers conveyed through nouns (e.g., *plant*). Post modifiers, on the other hand, may consist of prepositional phrases (e.g., *of the tropical rainforest*) or embedded clauses (e.g., *... that caused Uber's failure in the mentioned region, ... no such one-market strategy that fits all countries*). Fang (2004) further highlights that the utilization of longer phrases can pose challenges for some students who may not be accustomed to the process of meaning-making potential from such longer

phrases. Hence, these expanded noun phrases contribute to the density of information within the text, potentially leading to confusion during text processing.

2.4.1.3 Nominalization. Another syntactic feature closely related to ID is nominalization. This linguistic feature is commonly found in academic texts (see e.g., Biber, 2006), particularly in research articles and other formal written genres such as essay writing (Swales & Feak, 2012). Several studies (see e.g., Biber, 1992; Edling, 2006; Fang, 2004; Halliday, 1993) have demonstrated that nominalization plays a key role in text density. Nominalization is a linguistic process that transforms verbs, adjectives, or other word classes into nouns, turning actions or qualities into entities or things (Fang, 2004, p. 339). This process allows writers to condense information and present it in a more compact, formal manner, resulting in increased abstraction and lexical density in the text (Halliday, 1998). By using nominalization, processes (congruently worded as verbs) and properties (congruently worded as adjectives) are turned metaphorically into nouns (Edling, 2006). This is in a similar fashion to the description explained with a morphosyntactic analysis (see Table 3).

Table 3

The example of nominalization from congruent forms to grammatical metaphor

Congruent forms	Grammatical metaphor
Is <i>impaired</i> by alcohol	Alcohol <i>impairment</i>
They <i>allocate</i> an extra packer.	The <i>allocation</i> of an extra packer

(adapted from Halliday, 1994, p. 353)

In Table 3, the examples demonstrate the transformation of verbs (*impair*, *allocate*) into nouns (*impairment*, *allocation*) through grammatical metaphor, resulting in denser phrases and evolving syntactic positions. The identification of this transformation can also be seen from the view of morphological process, as highlighted by Zamparelli (2020, p. 203). Nouns commonly derived from suffixes *-ness*, *-ity*, *-tion*, *-hood*, *-cy*, *-ment*, and *-ship* and nouns derived from gradable adjectives (e.g., *strength* from *strong*) are more abstract. Conversely, nominal suffixes like *-er* and *-ist* (e.g., *plumber*, *artist*) refer to specific individuals and are arguably more concrete. Another nominal formation is based on suffixes such as the deverbals *-age* (e.g., *steerage*), *-al* (e.g., *betrayal*), *-ance* (e.g., *annoyance*), *-y* (e.g., *enquiry*), and the denominals *-age* (e.g., *orphanage*) and *-ism* (e.g., *despotism*).

All in all, ID plays a pivotal role in assessing the quality of content and complexity of academic writing (Biber et al., 2012; Halliday & Matthiessen, 2004; Read, 2000). For the purposes of the present study, examining ID is based on the manifestation of LD, expanded noun phrases, and nominalization. LD measures the proportion of content words (such as verbs, nouns, adjectives, and adverbs) to function words (such as articles, prepositions, and pronouns). Expanded noun phrases involve adding pre- and post-modifiers to pack more information into concise structures. Nominalization refers to the transformation of verbs, adjectives, or other word classes into nouns, turning actions or qualities into entities or things. This process allows writers to condense information and present it in a more compact, formal manner, resulting in increased abstraction and density in the texts. Thus, a text with a high level of nominalization typically reflects more abstract language, whereas lower levels suggest the use of more concrete language.

2.4.2 *Measuring ID in Academic Writing*

The development of computational analysis tools over the past decade has supported writing researchers, particularly those focusing on text analysis, in achieving greater accuracy and efficiency (Towns & Todd, 2014). For example, the measurement of ID has evolved from manual calculations, such as examining lexical density using the method proposed by Halliday (1985) and Ure (1971), to computational approaches that rely on scores derived from specific linguistic indices (see e.g., Mahadini et al., 2021). To assist in their analyses, researchers have utilized automated writing tools such as Graesser et al.'s (2004) Coh-Metrix.

Coh-Metrix has gained widespread use in numerous studies (Crossley et al., 2016; S. Crossley & McNamara, 2011; Maamuujav, 2021) due to its effectiveness in measuring linguistic features, including ID, making it a valuable resource for researchers in the field. It is a computational system designed to measure cohesion and coherence metrics for written and spoken texts. Coh-Metrix allows readers, writers, and researchers to assess the difficulty level of a text for their target audience efficiently. Moreover, this tool provides 108 indices that can measure various dimensions, including lexical and syntactic aspects (Graesser et al., 2014).

For lexical aspects, Coh-Metrix provides information about familiarity, concreteness, imageability, polysemy, and hypernymy. In addition, the tool can analyze lexical density (LD) by calculating the frequency of content and function words. *Incidence scores*, which reflect the number of specific content word types per 1,000 words, include noun (WRDNOUN), verb

(WRDVERB), adjective (WRDADJ), and adverb (WRDADV) occurrences (McNamara et al., 2014, p. 73).

In terms of syntactic analysis, Coh-Metrix measures the average number of modifiers per noun phrase, which is particularly relevant for identifying expanded noun phrases. This key feature reflects how densely information is packed in sentence structure, signalling the density of complex information (Biber & Gray, 2010). Graesser et al. (2004) explain that the tool captures information density by analyzing the number of modifiers per noun phrase. For example, the noun phrase (NP) “*the lovely little girl*” has three modifiers and a head noun. Furthermore, Azadnia et al. (2019) used this feature to investigate Iranian EFL student writing. Their results suggest that the students employed more modifiers in their dissertation, contributing to structurally sophisticated texts and indicating a higher level of English language proficiency.

Several studies have applied Coh-Metrix to explore ID and other textual features. Crossley et al. (2007), for instance, developed a new readability formula that incorporates ID and other linguistic measures, using Coh-Metrix to analyze various linguistic features within texts. Likewise, Guo et al. (2013) employed Coh-Metrix to study academic essays written by English language learners, including nominalization, measured by identifying abstract, generic nouns formed through derivational morphemes such as *-ment*, *-tion*, *-lity*, and *-ness* (Biber, 1988). As suggested by McNamara et al. (2014), Coh-Metrix does not have direct access to investigate nominalization indices. However, the tool can detect the mean of the use of concreteness in the text. This index can signal the use of nominalization, as high nominalization indicates a higher use of abstract words and less concreteness.

2.5 Genre of Academic Writing

According to Kouachi (2021), academic writing types are primarily organized into two fundamental categories. The initial classification pertains to the various genres of academic writing adapted from Bailey (2018), while the second one refers to approaches or methods of writing provided by the University of Sydney’s academic language learning (2022). Notably, the typical genres of academic writing that students produce include notes, reports, projects, theses/dissertations, papers, and essays (see Table 4).

Table 4*Types of academic writing adapted from Bailey (2018)*

Type	Definition
Notes	A written record of the main points of a text or lecture, for a student's personal use.
Report	A description of something a student has done, e.g., conducting a survey.
Project	A piece of research, either individual or group work, with the topic chosen by the student(s).
Thesis/dissertation	The longest piece of writing normally done by a student (20,000+ words), often for a higher degree, on a topic chosen by the student.
Paper	A general term for any academic essay, report, presentation, or article.
Essay	The most common type of written work, with the title given by the teacher, normally 1000–5000 words.

The second category of academic writing is related to approach or a way of writing. Based on the University of Sydney academic language learning (2022), there are four primary types of academic writing: descriptive, analytical, persuasive, and critical writing. Each type has unique language features and objectives. *Firstly*, descriptive academic writing is considered the most fundamental and straightforward type. As the name implies, its purpose is to describe facts and information for readers. For example, summarizing a report or an article is a typical instance of descriptive academic writing. *Secondly*, analytical writing involves organizing the facts and details presented in the descriptive writing into categories, groups, or sections. *Thirdly*, persuasive writing encompasses elements of analytical writing, such as describing facts and reorganizing them, while also incorporating the writer's perspective. *Lastly*, critical writing, which is prevalent in academic research, requires considering at least two viewpoints, including the writer's own. Although persuasive writing also demands a point of view on a subject, critical writing entails a more comprehensive analysis of multiple perspectives.

In summary, the choice of writing type is not arbitrary; it depends on the purpose and genre of academic writing. However, in many academic institutions, including those in higher education, the essay is a predominant text type that most students encounter when completing their subject assignments (Coffin et al., 2005). Therefore, this dissertation focuses on researched essays: essays in which students are given a topic for a final assignment, typically completed outside the classroom over a period of time, usually at the end of the semester. Also, essays are commonly assigned in the field of social sciences and are considered one of the high-stakes assessments that support students' academic success (Warburton & Nigel, 2006).

2.5.1 *Academic Essay Writing*

In the pursuit of academic success, university students are often assigned various writing tasks to submit. Al-Zubaidi (2012) posits that academic writing at the university level plays a crucial role in determining a student's success. This idea aligns with Wilson and Glazier's (2011) suggestions that those who excel in English writing as language learners will enjoy increased opportunities and advantages throughout their careers. This underscores the importance of honing writing skills for students' academic and professional lives.

Irvin (2010) notes that the success of a student's written work largely depends on the nature of the writing task, be it an essay, thesis, or dissertation. However, Paltridge et al. (2007) argue that thesis writing, in particular, can be a daunting process, especially for L2 English students who may require greater language proficiency, critical thinking skills, genre-specific knowledge, and social understanding.

Among the various genres of academic writing, essay writing stands out as the most popular skill that many EFL learners strive to develop, as highlighted by Coffin et al. (2005). University students, in particular, are frequently asked to compose essays as part of their assignments. Given the prominence of essays in the EFL context, this study focuses on this specific genre. Defining the essay, identifying social science essays, and exploring two significant types are essential.

2.5.2 *A Working Definition of Academic Essay Writing*

Defining an essay can be a complex task, as various linguists propose their interpretations. Hence, it is essential to explore in detail academic essay writing before establishing a working definition for this research project. To define academic essay writing, three interrelated aspects characterize academic essays: class assignments, discipline-specific knowledge, critical thinking, and structural convention.

One clear definition, explained by Richards and Schmidt (2010), states that:

“Essays are longer pieces of writing, particularly one that is written by a student as part of a course of study or by a writer writing for publication, which expresses the writer’s viewpoint on a topic” (p. 203).

Warburton and Nigel (2006) further describe essay writing as ‘the heart of education,’ reflecting its role in synthesizing complex aspects, including social and cultural knowledge,

experiences, and communication within higher education. Cardell (2021) argues that essays serve as students' primary means of building meaningful communication among scholars in various degrees and diverse fields of topics. Additionally, essays are most commonly regarded as writing class assignments for most subject courses in the field of humanities and social sciences. Gardner et al. (2019) and serve as high-stakes assessments critical to students' academic success, as Warburton further explains:

“Whatever you study, at some point you will be asked to write an essay... students are judged on their essays. If you can't write good essays, particularly under exam conditions, then you will never succeed in these areas” (2006, p. 7).

Achieving success in academic essays for that reason appears to be closely linked to self-regulation, as it encompasses a combination of cognitive processes (e.g., critical thinking) with social interactions, such as teacher-student feedback (Negretti & Mežek, 2019).

Crossley et al. (2014) highlight the importance of academic essays as a crucial component that demands advanced writing skills (p. 199). These skills include expressing ideas, presenting arguments, and combining various viewpoints. They also argue that writing skills are fundamental for students to effectively communicate with peers, teachers, and the broader community. On the other hand, difficulties in mastering these skills can lead to negative consequences, such as failing to advance in the grade level (Crossley et al., 2014). Academic essays are thus integral to coursework, with grades reflecting students' mastery of subject knowledge.

Another key aspect of defining academic essays is related to discipline-specific knowledge. Weber (2001) asserts that academic essays require formal language features tailored to disciplinary expectations, such as genre-specific vocabulary, grammatical structures, and organizational patterns.

What is more, Graves and White (2016) contend the significance of academic essays in developing students' critical thinking abilities (p. 299). Paul and Elder (2010) further explain that critical thinking is the process of analyzing and assessing thinking with a view to improving it (p. 38). This process involves actively engaging with information, analyzing it, and making well-informed decisions. In addition, Booth et al. (2008) stress the importance of evidence in supporting arguments, while Turabian (2018) highlights the need for transparent citation practices involving giving credit to establish credibility in essay writing (p. 218).

Concise writing is essential in academic writing. Sword (2012) advocates for clarity to

engage readers, while Bailey (2018) emphasizes the need for students to develop their own voice and perspective, as this contributes to the diversity of thought and the advancement of knowledge. In addition, some researchers, including Hart et al. (2024) and Wang and Chiu (2024), argue that argumentative essays are extensively utilized in higher education settings because these essays can exemplify a necessary balance between structured argumentation and persuasive content. This view is supported by Hu (2022), who studied the adoption of argumentative essay assignments. All things considered, these studies emphasize effective argumentative essays require several aspects, including themes (e.g., topics), coherent claims, logical reasoning, evaluative statements, and persuasive integration of evidence. This framework provides a basis for examining how argumentative essays are principled in academic contexts, such as HEIs.

In terms of structural convention, Warburton (2006) divides essays into three main parts: beginnings, middles, and ends (conclusions). The beginning must engage readers and address the essays' questions, while middles present evidence-supported points. For the ends, they must contain a synthesis of arguments.

In summary, this dissertation defines academic essay writing as researched writing produced by students in higher education levels. As a subfield of academic writing, it adheres to particular genre conventions within students' disciplinary contexts, serves to fulfill graded course requirements, and demonstrates mastery of subject knowledge. Through the stages of prewriting, writing, and postwriting, students engage in a socio-cognitive process aimed at achieving academic success.

2.5.3 Essays in the Field of Social Science

Academic writing in social science essays is a critical aspect of scholarly communication within the field. It serves as a platform for university students to present their arguments, insights, and findings, contributing to the ongoing discourse on various topics. According to Redman and Maples (2017), there are various disciplines within social sciences, and the approach for each may vary slightly depending on the length. Nonetheless, a fundamental structure is shared by all social science essays, which is also common across various academic disciplines. In its simplest form, a social science essay is presented as follows in Table 5.

Table 5*Fundamental structure in social science essays adapted from Redman et al. (2017, pp. 6-7)*

Basic structure	Description
Title	Every essay should begin with the title written out in full. In some cases, this will simply be the set question or statement for discussion.
Introduction	The introduction tells the reader what the essay is about.
Main section	The main section, or ‘body,’ of the essay develops the key points of the argument in a ‘logical progression.’ It uses evidence from research (empirical evidence) and theoretical arguments to support those points.
Conclusion	The conclusion reassesses the arguments presented in the main section in order to make a final statement in answer to the question.
List of references	This provides full details of the publications referred to in the text.

What is more, in the opinion of Redman and Maples (2020), social science essays are characterized by their epistemological foundations, with two key elements consisting of evidence and theory. *Evidence*, derived from systematic and rigorous research, is crucial in social scientific writing, as it supports or challenges beliefs and hypotheses. Social science academic essay writers generate a circuit of social scientific knowledge by posing questions, formulating claims, and gathering evidence to validate or refute these claims. As maintained by Nenotek et al. (2022), university students are primarily expected to analyze and evaluate existing research findings in their essays, requiring them to assess evidence for and against claims. On the other hand, *theoretical frameworks* serve as the foundation or lens through which students approach their research. These frameworks help them in formulating research questions, making claims, selecting and analyzing evidence, and interpreting their findings, as mentioned by Grix (2019). In essence, theoretical frameworks provide a structure and direction for the students as they conduct their research and write essays on their chosen topics.

A debate persists within the social sciences regarding the relationship between theory and evidence (Bryman, 2016; Charmaz, 2014). Some experts, including Popper (2005), argue that evidence can lead to more accurate theoretical accounts, while others, such as Denzin (2018) and Feyerabend (2010), contend that theoretical orientations inherently shape the inquiry process.

Social science essays, therefore, emphasize the importance of engaging with both evidence and theory to build accounts of social worlds, as noted by Creswell and Creswell (2018) and Neuman (2014). Understanding the ongoing debate surrounding the relationship between theory and evidence (Denzin & Lincoln, 2018; Grix, 2019; Punch, 2016) will enable students to approach their social science essays with greater awareness and critical thinking. By incorporating both

evidence and theory, students can develop well-rounded arguments and more comprehensive understandings of their chosen topics, acknowledging the various perspectives and complexities within the social sciences.

2.6 Academic Writing Studies in Higher Education

Academic writing is a specialized type of communication that forms the basis of scholarly discourse. It is a product that is distinguished by many considerations, such as audience, purpose, organization, style flow, and presentation (Swales & Feak, 2012). Students at the university often find difficulties in writing academic texts, particularly in English (M. Li, 2024). They should acknowledge familiarity with the convention and expectation of academic writing in English-medium universities. As a result, considering related circumstances of academic writing in a broader context can shed light on further analysis of academic writing issues.

2.6.1 *Writing Requirements*

The examination of academic writing in the context of English-medium HEIs focusing on undergraduate and graduate students has been commenced since the 1980s. A number of studies (e.g., Horowitz, 1986; Rose, 1983; also cited in Adorján, 2015, 2019) have concentrated on the writing requirements. In addition, some notable studies have pinpointed the specific areas, including a valuable work by Bridgeman and Carlson (1983), who studied a survey of academic writing skills at the universities of the US and Canada among disciplines such as civil engineering, electrical engineering, psychology, chemistry, computer science, and English study programs. The study suggests that writing skills were rated as an important aspect for succeeding in graduate training and even more critical for success after graduation. Canseco and Byrd (1989) looked at writing requirements in graduate business courses. Their research provides insights into the specific writing tasks and expectations in the field of business, including the use of general writing tasks that can be taught in ESL classes to prepare students for this field of study. This approach helps students adapt general English writing skills to meet the more specific demands of their coursework. In the same vein, Zhu's (2004) study examined writing requirements in business courses at a large research university in the United States. The study found that students in undergraduate and graduate business courses were required to produce writing assignments such as article/book reports, business reports, business proposals, library research, and research

proposal papers. Another study is Braine's (2001) cross-cultural comparison study, which examined the distinctive academic writing requirements at the University of Texas at Austin and the Chinese University of Hong Kong. The results indicate that students at the Chinese University of Hong Kong have a critical need for English for Academic Purposes (EAP) courses to support their writing tasks, such as thesis writing. To address this need, the university requires students to enroll in a *technical communication* course offered by its English Language Teaching Unit. This course aims to improve communication between students and teachers while placing greater emphasis on general writing skills rather than technical writing.

Moreover, several studies have also been concerned about possible challenges in meeting academic writing requirements. Casanave (2002) found that graduate students in a TESOL (Teaching English to Speakers of Other Languages) program in the US were unprepared for the diverse range of written genres they were expected to engage in. Similarly, Soe (2003) discovered that students in a graduate TESOL program in Australia were uncertain about the requirements of their written assignments. These findings highlight the challenges students face in adapting to the various genres and understanding the expectations of academic writing tasks.

Additionally, Swales (2001) further contends that graduate writing is no longer a simple process but now involves unanticipated changes. In other words, academic writing entails more than just the acquisition of disciplinary language; it also involves complex processes. For example, a graduate student may need to navigate through multiple revisions of their essay assignments, thesis writing, incorporating feedback, and integrating new research findings. This process of drafting, revising, and rewriting demonstrates the complexity and evolution of academic writing at the graduate level (Bailey, 2018). According to Johns (1997), academic writing necessitates an in-depth knowledge of the context in which students write, as well as an understanding of the roles performed by the people involved in producing the texts and the context in which the texts are produced. On the basis of Morton et al.'s (2015) research, they found that students tend to encounter challenges in adjusting their writing skills to meet the demands of academic contexts.

In relation to writing requirements, it is important to note that academic writing assessment is also a significant topic in academic writing studies in higher education, particularly for L2 English writers. Applied linguists have investigated writing assessment from several approaches, including a linguistic perspective (e.g., information density) and writing feedback. For a linguistic perspective, studies like Susoy (2023) and Indarti (2021) have analyzed students' writing texts

based on factors like lexical richness, lexical density, and lexical sophistication. However, some studies argue that evaluating writing quality based solely on vocabulary is insufficient. For instance, Kalinauskaitė (2018) suggests that integrating syntactic features (e.g., nominalization) with vocabulary assessment provides a more comprehensive evaluation (see e.g., Saricaoglu and Atak, 2022).

Besides, writing feedback can serve as a valuable tool for assessing writing improvements. For example, Zhao (2014) examines teacher-supported feedback for Chinese EFL students, showing that students demonstrate greater engagement in improving their academic writing quality. Bucol and Sangkawong (2024) further explore the use of existing machine-learning technologies in writing assessments. They highlight that tools such as Chatbot Generative Pre-trained Transformer (Chat GPT) can assist in automatically evaluating students' writing based on predefined rubric prompts.

2.6.2 Genre

The next focus on the academic writing research in HE pays attention to the study of genre. The study was further developed by Swales (1990) and Bhatia (1993), who carried out the text-specific analysis at the level of discourse and language. In this circumstance, Swales (1990) employed move analysis, which is a critical step in examining the stages that a text moves through to gain its goals. Genre can be a tool to analyze texts in ways that show how differences in structures and language typically work within particular disciplines. For example, Hale et al.'s (1995) study explored the genres that undergraduate and graduate students need to master at eight US universities across multiple disciplines. Their findings showed that essays, summaries, plans/proposals, and book reviews were the most common academic genres. In addition, this study also revealed that the students of social sciences were typically required to write longer research essays, particularly in texts dealing with exposition, argumentation, cause and effect, problem-solution, classification, comparison/contrast, and analysis. In the same vein, Moore and Morton (1999) analyzed the genre of academic writing in Australia. According to the findings, the most common academic text written by the students was an academic essay, followed by a case study report written by postgraduate students. Other types of academic writing, such as research reports, reviews, literature reviews, research proposals, summaries, and short answers that required the

reproduction of previously provided items of knowledge, such as from lecturers or textbooks, were reported in this study as well.

Academic genre plays an essential role in academic writing. This is mainly because the academic genre extends beyond the language and form of the text to consider how academic texts are embedded in the communicative activities of the academic community (Swales, 1990). Academic writing, in other words, creates and reproduces social structures and social relations within the academy. Therefore, it is necessary to consider the social and cultural context of academic genres beyond the text itself, as it also allows for a more comprehensive understanding of their goal and desired outcome (Freedman, 1999; Paltridge, 2005; Starfield, 2001). According to Hyland and Salager-Meyer (2008), academic writing genres include article abstracts, scientific correspondences, acknowledgements, theses, book reviews, conference abstracts, and student essays. They further propose that less prominent forms of writing, such as grant proposals, editorial feedback on journal submissions, and article submission letters, also belong to the academic writing genre.

What is more, a number of studies, including Dong (1998), Dudley-Evans (1999), and Thompson (1999), have examined the writing of theses and dissertations that occurs in different academic disciplines. Dudley-Evans (1999) employs the term IMRaD (*Introduction-Methods-Results-Discussion*) as a traditional thesis writing type, while Thompson (1999) adds revision to this category by dividing traditional theses into simple vs. complex organization structures in which the structures are typically commenced with an introduction and subchapter and ended by a conclusion section. Additionally, Dong (1998) describes doctoral theses as based on a compilation of published research articles.

2.6.3 Computational Linguistics

Academic writing relates to the field of computational linguistics, as evidenced by several notable studies. One significant contribution to this area comes from Xue and Nation (1984). Their study concentrated on the frequency of vocabulary items in university texts. This work contributed to a better understanding of academic writers' lexical choices and their impact on text comprehension.

Moreover, certain researchers have focused on various corpus studies, including the works of Hyland (1994, 2002b, 2002a), Swales (1998), and Coxhead and Nation (2001). Hyland (1994)

examines the use of hedging in research articles. In addition to previous research, Hyland (2002a, 2002b) conducted a study on reporting practices in academic writing and examined the use of directives in scholarly discourse. An important investigation into corpus studies addressing the use of imperatives in research reports was undertaken by Swales et al. (1998), shedding light on strategies writers employ to effectively convey their ideas in the academic setting. Likewise, Coxhead and Nation (2001) examined specialized vocabulary in English for academic purposes, providing valuable insights into the linguistic complexities of scholarly communication. In a related study, Hinkel (2002) conducted extensive corpus research on texts produced by second-language writers. This study shed light on the difficulties that non-native English speakers face when writing in academic settings and highlighted areas where language proficiency could be improved.

These studies underscore the significance of corpus research towards deepening the understanding of academic writing. As maintained by Weber (2001), corpus studies not only enrich our understanding of language but also have relevant uses in the teaching of academic writing. With the enhancement of tools in computational linguistics, our understanding of practices of writing in academia will be broadened, and more efficient instructional methods will be developed for use in higher education contexts.

On the other hand, Crossley and McNamara (2014) investigated L2 essay writing at Michigan State University, addressing writing quality. Specifically, their research involved a study of students' use of syntactic complexity in an intensive English language course. To analyze their study, the researchers employed Coh-Metrix, a computational tool that measures syntactic complexity via features like sentence variety and phrase length. The study found that L2 writers tended to produce high linguistic content essays, including frequent use of nouns and phrasal complexes. Moreover, it was found that the more advanced students tended to have employed more complex syntactic forms, determining the production of writing quality. The results of the study also suggest the need for more explicit instructional focus on complexity in English writing courses in order to help learners improve their academic writing skills. In general, their study identified the role of syntactic complexity in writing among L2 learners and emphasized that instruments such as Coh-Metrix can serve useful purposes when examining the use of syntactic features in L2-English writers.

Strobl et al. (2019) examined which writing tools promote better teaching and learning of writing for higher education students irrespective of their native language. Their study focused on Automatic Writing Evaluation (AWE) and Automated Essay Scoring (AES) systems. AWE provides students timely and individualized feedback, whereas AES examines aspects of writing such as content, organization, and language proficiency, where a score is assigned based on a statistical classification. These tools also function as an efficient time-saving solution for teachers or lecturers, eliminating the requirements of multiple manual markings.

In addition, the enhancement of computational tools available today is bound to influence writing instruction in HEIs. The use of Natural Language Processing (NLP) technology is changing many fields, such as translation of text or speech, text or document summarization, and checking the grammar of a document. This technology enables writing instruction to be more effective and impactful, which directly helps students with their writing skills and academic performance. The continuous progress of NLP brings a highly optimistic perspective for the improvement of writing education in higher education. Strobl et al.'s (2019) study offers a variety of tools to enhance the quality of academic writing, including C-SAW (Computer-Supported Argumentative Writing), Correct English, DicSci (Dictionary of Verbs in Science), Turnitin (Revision Assistant), and SWAN (Scientific Writing Assistant).

Knight et al.'s (2020) examined the AcaWriter application, focusing on formative feedback and the patterns of rhetorical moves made in essay texts. AcaWriter is a web-based analytical tool powered by a computation parser that analyzes every sentence and captures rhetorical moves. According to the study, students who received feedback from AcaWriter were able to produce written drafts of higher quality and use rhetorical moves effectively.

2.6.4 Critical Thinking

Some studies, such as Canagarajah (2002) and Pennycook (1996), have cited critical thinking as a relevant factor in academic writing at the higher education level. They contend that literature often presents critical thinking as a universally applicable form, part of a culture-specific Western idea. However, critical thinking can present challenges for L2 students from different cultures and educational backgrounds, such as Asian students (e.g., Harb et al., 2022; Nguyen & Nguyen, 2020; Scott, 2000). Students might face challenges because of differences in how

education systems are structured, the teaching methods used, and the cultural expectations around classroom behaviors and ways of thinking.

Additionally, Jones (2004) and Canagarajah (2002) argue that the perception of Asian learners as passive and lacking critical thinking skills is unfounded. They assume that L2 learners possess the same level of critical thinking skills as L1 speakers. Jones (2004) further identifies that a cultural misinterpretation is the root of this stereotype. Therefore, it is critical to consider the diversity among the L2 learners when discussing their critical thinking skills.

2.6.5 Writer Identity and Reader/Writer Power Relations

The issue has an important significance in academic writing, particularly for second language student writers. Within this context, they should consider not only their self-identity but also the anticipated expectations of their readers, as highlighted by Starfield (2004). As a notable example, Kubota (2003) suggests an approach that moves beyond static, unchanging views of how individuals write in their first and second languages, based on categories such as gender, class, and race. In essence, she advocates for a more flexible understanding of writing in both L1 and L2. Instead of seeing writing styles based on the mentioned categories, it is important to notice that writing practices are dynamic and can change over time due to personal, cultural, and contextual factors.

Canagarajah (2002) underlines that the process of writing an academic text is connected with the writer's ideological perspectives. In this light, their writing not only reflects their identity but also their perception of their intended audience. What is more, the relationship between the evaluator and the student writers also cannot be overlooked. The evaluator, often the individual who assigns the academic task, wields considerable authority over the students, shaping both what they can communicate and how their work is evaluated (Ivanič & Simpson, 2014). This relationship between the writer and evaluator can greatly influence the content and tone of the writing.

2.6.6 Writing Tools

The development of artificial intelligence (AI)-assisted writing has advanced significantly over the last few decades. Pinski and Benlian (2024) define AI as a computer's ability to mimic human intelligence, enabling it to perform tasks that typically require human cognition,

characterized by three aspects: *autonomy* (operating without human intervention), *learning* (adapting through complex decision-making), and *inscrutability* (handling data complexity and opaque processes). AI assistance allows users to manage complex and large-scale data tasks (e.g., text analysis) more efficiently. This capability enhances AI's role in improving text quality across disciplines, including the production of English academic texts.

Studies (e.g., Marzuki et al., 2023; Wang & Wang, 2025) have demonstrated that AI writing tools can enhance writing quality in English academic writing (EAW) at the level of sentence structure, content development, and text organization. For instance, Grammarly provides real-time feedback on grammar, spelling, punctuation, clarity, and engagement. Tambunan et al. (2022) assert that higher education students can refine their essays by revising linguistic errors identified by this tool. Grammarly, according to Bailey and Lee (2020), is noted as the most widely used writing application for detecting linguistic errors in student writing. Besides, Marzuki et al. (2023) evaluated tools such as QuillBot, Essay Writer, and Copy.ai, emphasizing their effectiveness in assisting students with content generation and organizational coherence.

In academic writing, the application of Chatbot Generative Pre-Trained Transformer (ChatGPT) by OpenAI represents a significant evolution in the development of generative AI for enhancing writing quality. Studies such as those by Wang and Wang (2025) and Lee (2024) have shown that this tool can improve text quality by generating contextually coherent and relevant content. Their research reveals that ChatGPT helps L2 English writers produce well-structured text by assisting with various aspects, including grammatical correction, vocabulary enrichment, refining writing structure, and developing ideas.

Similarly, Mhlanga (2023) noted that ChatGPT fosters students' creative and critical thinking, encouraging them to explore diverse ideas and improve the efficiency and quality of academic texts. The features offered by ChatGPT significantly reduce the more challenging aspects of the writing process. Additionally, Wagner et al. (2022) maintain ChatGPT excels in the literature review process, particularly when dealing with large volumes of partially structured metadata in the field of social sciences. Hence, students can access a wealth of information, leading to an overall improvement in the quality of their written content.

Undeniably, AI writing tools have introduced significant changes to academic writing, yet these changes also have drawbacks that must be taken into account. According to Marzuki et al. (2023), one significant drawback is the possibility of over-reliance among students. They may

become overly dependent on these tools for fast error corrections, often without understanding their own mistakes. This reliance can weaken students' critical thinking skills, hindering their ability to gain a deeper grasp of their writing. Besides, Farrokhnia et al. (2023) pointed out that AI tools may fall short of addressing coherence, as this requires a thorough understanding of the topic, logical reasoning, and the ability to effectively connect ideas, all of which AI tools may struggle to assess accurately. In consequence, these AI writing tools may not fully capture the complexities and nuances of human language and emotion, resulting in inappropriate or incorrect recommendations in a given context (Haleem et al., 2022).

Another issue is that these are digital-based tools. They necessitate stable internet access and modern digital devices, which may result in access and utilization disparities, particularly in resource-limited settings.

2.6.7 *Plagiarism*

The awareness of plagiarism in HEIs has been a key focus for some writing researchers (e.g., Alua et al., 2023). The act of copying or stealing ideas in writing jeopardized students' ethical credibility. Hence, it is important to acknowledge students about this matter. One possible way to do that is by utilizing plagiarism checkers. These tools can generate content similar to existing texts, raising academic integrity concerns. For instance, Pennycook (1996) argues that plagiarism is not a simple issue resulting from the absence of due threats and warnings. She further maintains that plagiarism is more complex for language learners specifically because it involves borrowing words from others. It is of importance to state that there should be a flexible rather than rigid approach when defining the boundaries between acceptable and unacceptable textual borrowings. What is more, a nonethnocentric view of plagiarism, as denoted by Canagarajah (2002), considers L2 students' cultural and educational practices and rhetorical traditions. Hence, it can be concluded that texts are interconnected, meaning they are not created in isolation but instead draw on existing ideas, research, and language to formulate new knowledge.

Despite these disadvantages, it is clear that the advancement of digital technology in the realm of academic writing is on the verge of an evolutionary change. While these tools have shortcomings, their possible benefits in terms of improving writing quality for specific purposes should not be overlooked. As a result, a balanced approach that leverages AI tools' strengths while

addressing their limitations is critical for the future of academic writing instruction (see, for example, Doró, 2016).

2.6.8 *Writing Instruction in the Covid-19 Pandemic*

The impact of the crisis of the Covid-19 pandemic on teaching, student learning, and international education in HEIs has been significant across the globe. Mok (2022) mentions that a major consequence of this impact deals with the interruption of the traditional face-to-face teaching method by virtual learning. While many universities adopted virtual platforms to continue coursework during the pandemic, this new transformation has not always been positive (YÜCE, 2022). Alam et al.'s (2022) study revealed that shifting to online learning poses challenges, particularly for students. These difficulties include communication barriers between students and lecturers, and inadequate resources to adopt this transformation mean it is not yet ready. Moreover, Firmansyah et al. (2021) found that several lecturers became less interactive and often assigned tasks for students without clear explanation. This lack of engagement made it difficult for students to effectively navigate and grasp course materials.

In addition, the virtual teaching method has also been linked to psychological distress among students. Firmansyah et al. (2021) argue that the excessive workload during the pandemic caused increased frustration, confusion, and anxiety among students. Besides, Ahmad et al. (2022) assert that students felt demotivated to write, primarily due to a lack of confidence in their grammatical knowledge and content structuring skills. In the same way, Fontenelle-Tereshchuk (2024) emphasizes that excessive screen time and high stress levels contributed to influencing students' poor academic writing performance. Moreover, the shift to virtual learning has led to physical health issues, such as backaches and neck pain, as highlighted in the study of Gómez-García et al. (2022). This suggests a need for the institutions to provide counseling services and mental health support to help students cope with these challenges.

The transformation to online teaching has also been applied in academic writing instruction at higher education levels. Ahmad et al. (2022) denote that students have fewer opportunities to practice academic writing skills due to unstable internet connections and limited experience with online learning environments. Furthermore, Fontenelle-Tereshchuk's (2024) research suggests that asynchronous classes tend to result in a lack of focus, making it difficult for them to stay engaged

during the online class. As a result, the shift from on-site to online learning forced educational institutions around the world to adjust quickly, sometimes without sufficient preparation.

To address these challenges, digital tools and applications have been introduced to help students in academic writing. Research suggested that Learning Management Systems (LMS) and digital writing tools, such as Moodle and Google Classroom, have been employed by lecturers to evaluate and grade students' writing assignments. Handayani and Syarif (2021) contend that lecturers' feedback plays a critical role in improving students' writing quality. Moreover, Suwartono's (2021) study reported that the use of social media platforms (e.g., Facebook groups) can foster collaborative learning and improve academic writing skills. Other writing tools such as Grammarly, Padlet, Kahoot, and Essaybot have been identified as resources that enhance student engagement in the production of essay writing (Ahmad et al. 2022).

What is more, Alam et al. (2022) emphasize that video conferencing platforms such as Zoom and Google Meet have become essential for facilitating learning in higher education. However, some students still struggle with assessing learning materials due to technological difficulties. More recently, ChatGPT and AI-generated writing tools have emerged as potential aids in academic writing. Fontenelle-Tereshchuk (2023) investigates the role of ChatGPT in supporting students' academic writing skills. The study found that while AI-generated tools can enhance critical thinking and writing efficiency, they pose ethical concerns as well, particularly regarding plagiarism and citation accuracy. Hence, academic institutions should address these issues by providing an academic conversation class about plagiarism prevention and responsible technology utilization in writing instruction.

2.7 Challenges and Strategies of English Academic Writing (EAW) in ESL/EFL Contexts

Within ESL/EFL settings, academic writing poses numerous challenges that require distinctive strategies to address them effectively. Some studies (AlMarwani, 2020; Phyo et al., 2024a; Yang, 2024) have found that ESL/EFL students often face multiple difficulties when writing English academic texts, including frustrations due to a lack of academic vocabulary, grammatical accuracy, and cultural differences. Moreover, students often experience further challenges because the linguistic environment in EMI contexts may not support their language development as firmly as in English-speaking countries. To surmount these obstacles, the students

may employ writing strategies while working on their academic writing tasks. The following paragraphs delve into a comprehensive discussion focusing on these topics.

2.7.1 Challenges in EAW

It is a fact that English has been the dominant language in HE, both in native and non-native English-speaking environments. This situation seems to affect an area within academic writing and research publication (Flowerdew, 2013; Habibie & Hyland, 2019). Students studying in a native-English environment may be in receipt of benefits because they have a great opportunity to learn the language naturally and to access literature in English easily. Meanwhile, students enrolled at universities in non-native English-speaking environments tend to face greater challenges in writing academic texts. Research studies showed that NNEs believe that they write slower than NESs (see e.g., Hwang, 2005; Tardy, 2004). Also, NNEs need more time to write at a high level of English. These studies reflect that NNEs in every academic setting face a significant challenge in writing English texts and take efforts with reading material and class assignments, as well as social relationships in the academic environment.

In recent decades, L2 English academic writing has been of concern to many linguists in a non-native English-speaking environment, particularly dealing with constraints and challenges (M. Li, 2024). For example, an interview study carried out by Mukminin et al. (2015) mentioned Indonesian students faced challenges in academic writing such as broken English grammar and lack of institutional and social supports and lecturers' help due to higher power distance. Furthermore, Setyowati and Sukmawan (2016) pointed out that some students at a public university in Indonesia viewed academic writing as stressful and difficult to follow. Furthermore, the study revealed several efforts to improve students' academic writing by practicing writing, reading a lot for knowledge and ideas, and using diary writing. In addition, the NNE graduate students in Asia seem to use L1 backgrounds when communicating with their teachers and peers, but reading and writing assignments are in English (Braine, 2002, p. 66).

Qasem and Zayid (2019) conducted a study in a Saudi Arabian university and found that EFL students face several challenges and difficulties while writing research proposals and projects in L2, including writing in English as a second language, selecting the right topic and methodology, lack of motivation and knowledge in specialization, and time constraints. This study also provides some recommendations that can help students cope with these challenges, including more focus

on academic writing in English with training workshops and group work, guidance and support from supervisors in topic selection, and utilizing the L1 environment and conducting small groups for research and training workshops. Similarly, AlMarwani's (2020) study on Arabic TESOL students, for example, also found that students face difficulties when writing academic proposals. The difficulties involve language skills, academic writing skills, and source managing skills. Furthermore, their L1 Arabic background, which is more advanced than English, made their English academic writing problematic. In a similar fashion, research undertaken by Sing analyzed that the international NNES graduate students have shown that writing the literature review, methodology, and findings/analysis section; using appropriate academic style; writing coherent paragraphs; and expressing ideas in correct English are difficult.

Phyo et al. (2024b) reported that NNES students at HUs faced challenges in academic writing, notably due to limited access to academic resources such as books and journals via institutional login accounts. They also lacked experience in writing academic texts in English and advocated for explicit academic writing instruction. Further difficulties in academic writing included translating research into academic English and coping with writer's block (Phyo et al., 2024a).

Yang (2024) similarly discovered that NNES students at English universities struggled with vague expectations regarding academic writing tasks. The study also noted institutional support regarding academic writing was minimal and guidance from the faculty was often unclear.

Not only do the students' constraints become a basis for discussion, but the lack of experience in writing English by the supervisor takes part in narration as well. Widodo (2008) stated that the teachers or advisors serve an important role in the writing process. Furthermore, Braine (2002) identified that NNES graduate students need to interpret writing assignments carefully in order to achieve their instructor's expectations. He further stated that the students tend to impose preconceived classifications of academic tasks or to focus only on narrow aspects of the academic milieu, such as writing tasks or teachers' viewpoints, or to ignore the contexts in which the tasks are assigned and carried out. The research also reveals that a sound relationship between the advisor and advisee plays a key role in a research project and the writing of the thesis.

Moreover, Li's (2024) meta-ethnographic study classifies academic writing difficulties into key areas: a general feeling of unpreparedness, insufficient institutional support, limited feedback from subject teachers, and weak academic skills like constructing, organizing, and synthesizing

ideas. The study also highlights linguistic barriers, particularly dealing with vocabulary and grammar.

It is worth noting that NESs may receive more advantages compared with NNEs in terms of language acquisition. Academic English, nevertheless, is “*no one’s first language*” (Habibie & Hyland, 2019). In this sense, academic writing contains specificity in lexico-grammatical features and conventions, as well as disciplinary code that can be a considerable challenge for NESs. For NNEs, they may derive benefit when studying academic English as a specific purpose. In addition, pursuing a degree at the university with English as the medium of language instruction makes NNEs academically bilingual (Habibie & Hyland, 2019).

In conclusion, to clarify the discussion of academic writing challenges in this study, the term “*challenge*” refers to the various difficulties or obstacles in connection with in-class and out-of-class support that Indonesian graduate students may face when accomplishing English academic essay assignments in the EMI environments in Hungary. These challenges can include institutional policies (e.g., writing conventions and differences in educational systems) and subject courses (e.g., assessment criteria of writing assignments, plagiarism, the importance of grammatical accuracy, the use of technical vocabulary, and word length). Additionally, time constraints and limited access to resources may also contribute to the challenges faced by the students. Furthermore, addressing these challenges is crucial in order to enhance the students' academic writing skills. By providing support, resources, and targeted instruction, the students can navigate these difficulties more effectively and ultimately improve their overall academic performance.

2.7.2 *Strategies in EAW*

Writing strategies in general refer to techniques used by writers to develop texts by planning, drafting, writing, and revising (Matsuda & Silva, 2020, pp. 282-283). These strategies can be applied to any type of writing, including personal, professional, or academic writing. On the other hand, academic writing strategies are specific techniques or approaches used by writers to produce academic texts, such as research papers, essays, and dissertations (Turabian, 2018). Academic Writing Strategies (*hereafter* AWSs) typically involve organizing ideas, synthesizing and evaluating information, developing arguments, and understanding the requirements of academic writing (Canagarajah, 2022; Flowerdew, 2017). These strategies are intended to help

writers produce effective and high-quality academic texts that meet the standards and expectations of their academic disciplines.

Research concerning academic writing strategies in EFL/ESL contexts primarily adopted two distinct directions. The first method entailed employing Oxford's (1990) learning strategy taxonomies, whereas the second centered on the categorization of L2 writing strategies throughout the pre-, during-, and post-writing stages. The following paragraphs present studies that focus on academic writing strategies employed by students in EFL/ESL environments.

In terms of the taxonomy, cognitive and metacognitive strategies play a crucial role in the study of writing strategies. Cognitive strategies include mental activities used to organize and generate complex ideas. For instance, Rahmat (2021) identifies cognitive strategies such as using synonyms to replace keywords, reading original texts carefully, searching for familiar words and key points, understanding original text structures, and evaluating with paraphrasing. These strategies enable students to process, transform, and create information, assisting writers in using language effectively during the knowledge acquisition process. Idris et al. (2022) further state that cognitive strategies are related to repetition, organizing new language, summarizing meaning, guessing meaning from the context, using imagery for memorization, and critical thinking activities.

Flavell (1979) and Wenden (1998) explain that metacognitive strategies mean regulating cognitive processes to accomplish learning tasks, including planning, monitoring, and evaluating. Xia (2017) suggested using reflective questions in EFL writing classes to help students examine their writing process, with the questions categorized into three stages: preparation and planning, initiation of writing, and reflection during and after writing. Questions like "*What strategies am I using?*" and "*How can I best prevent mistakes next time?*" help students develop metacognitive knowledge and apply suitable strategies to monitor their writing. Xia's (2017) research also recommended using these strategies for new college students who may face English writing challenges and have limited experience with learning strategies. In the same way, Zhao and Liao (2021) found that Macau university students utilize several metacognitive strategies, including task interpretation, planning, translating, evaluation, monitoring, and revising. The study also revealed that translating harms writing scores, whereas task interpretation and planning positively contributed to L2 writing, although slightly. Moreover, Zhao and Liao (2021) argue that writing is a dynamic and recursive process, making it difficult to separate evaluation from monitoring. It

means that evaluating does not have to wait until the essay is completed. Monitoring and evaluation can occur at any stage of the writing process.

In a similar manner, Sun and Zhang (2022) examined writing strategies, focusing particularly on metacognitive strategies such as judgment of vocabulary use, sentence structures, organization, and time management. The findings suggest that the use of metacognitive strategies helps students achieve greater lexical complexity and improved writing performance. This indicates that texts written using metacognitive strategies tend to contain more complex words and demonstrate greater fluency.

The importance of metacognitive strategies in supporting students' writing performance was also studied by Teng (2022) and Teng and Yue (2022). They explored writing strategies employed by English learners enrolled in an English academic writing course at Chinese universities. Their study showed that metacognition plays a significant role in enhancing academic writing performance and that critical thinking skills are important for academic writing. University students with a higher level of metacognitive awareness were more likely to think critically, resulting in better academic writing performance. Hence, the research highlights the importance of metacognition and critical thinking in predicting academic writing performance.

Furthermore, Putri et al. (2023) explored students' perceptions of metacognitive strategies in academic writing, focusing on planning, monitoring, and evaluating at the University of Mataram, Indonesia. The results indicated that students generally have a positive attitude towards utilizing metacognitive strategies. In the planning stage, students visualized the overall structure of their writing from beginning to end. During the monitoring stage, they applied prior knowledge and sought additional resources to enhance understanding. For the evaluating stage, students reflected on their writing organization and made improvements, including editing for spelling errors, keyword usage, and sentence structure. Furthermore, Razzaq and Hamzah (2024) and De Silva (2015) suggest that integrating metacognitive (planning, monitoring, and evaluating) and cognitive strategies can significantly influence writing performance and foster students' motivation in the writing process.

Mu (2005) has developed a taxonomy that can be used to analyze AWSs. The taxonomy, which is based on ESL writing strategies collected from previous studies relevant to academic writing strategies, includes *rhetorical* (e.g., use of L1, genre consideration), *metacognitive* (e.g., planning, monitoring), *cognitive* (e.g., generating ideas, summarizing), *communicative* (e.g.,

reduction), and *social affective strategies* (e.g., getting feedback, rest). Although these L2 English AWSs may not be comprehensive, they can be helpful for future studies on classifying academic writing strategies, as they provide a solid theoretical foundation to build upon. Despite the limitations of Mu's (2005) ESL writing strategies taxonomy, its importance in ESL writing and teaching cannot be overlooked, particularly due to its clarity and ease of understanding for novice ESL writers. As a result, this taxonomy serves as a valuable starting point for researchers seeking to explore the field further and provides a beneficial framework for those new to ESL writing research.

Two years later, Mu and Carrington (2007) conducted a further study focusing on academic writing strategies employed by three Chinese postgraduate students in an Australian HEI. This study was collected through semi-structured interviews, questionnaires, retrospective post-writing discussions, and written drafts of papers. The findings reveal that the participants utilized rhetorical, metacognitive, cognitive, and social/affective strategies in their writing. The study found differences between writing processes in an L2 and an L1 involving rhetorical strategies and linguistic aspects. Furthermore, the study revealed that metacognitive, cognitive, and social/affective strategies were effectively applied across both L1 and L2 writing processes. However, rhetorical strategies, specifically those concerning paragraph organization, did not transfer as positively between the two languages.

Raoofi et al. (2017) also classify writing strategies into four categories: cognitive, metacognitive, social, and affective strategies. They further explain that metacognitive strategies help students manage planning, organizing, and focusing on their own writing. Similarly, Fajaryani et al. (2021) found that EFL students employ all four types of strategies. Cognitive strategies include notetaking, summarizing, and repetition, while metacognitive strategies involve preparatory activities before writing, such as reading some relevant materials. Social and affective strategies focus on developing feelings and awareness, such as interacting with their colleagues as well as sharing and discussing with peers and supervisors. Moreover, Negretti and Mežek (2019) highlight that social interaction, particularly communication with the lecturers and supervisor, supports students in navigating the challenges of academic writing.

Mazgutova and Hanks (2021) demonstrate how Chinese students employed cognitive and social strategies in an EAP course at a British university. The cognitive strategies included using background knowledge, making assumptions, rescanning text to obtain access to lexical items,

drawing inferences, and backtracking during the writing and revising process. Social strategies are related to interactions with other people, such as tutors and peers, in order to boost motivation and reduce anxiety. Furthermore, Hu (2022) reports Chinese EFL learners employ metacognitive strategies (e.g., planning, revising, monitoring, and execution) and affective strategies (e.g., enjoyment). Planning activities included reading topics and listing ideas before writing, while revising involved creating new words when facing ambiguous meanings. Monitoring focused on linguistic aspects, such as grammar and sentence structure.

Bui et al. (2023) employed a content-based qualitative data analysis approach, utilizing a comprehensive research-based taxonomy for L2 AWSs. This taxonomy encompasses rhetorical (e.g., a topic sentence and supporting ideas, cohesive devices), metacognitive (e.g., planning, drafting, monitoring and evaluating, revising and editing), cognitive (e.g., conceptualizing, elaborating, summarizing, and translating from L1 to L2), social (e.g., exchanging ideas and getting feedback from lecturers), and affective strategies (e.g., reducing anxiety). They found that rhetorical, metacognitive, and cognitive strategies were most frequently used by teacher participants, with self-efficacy and self-regulation crucial in strategy selection. Their findings carry important implications for L2 writing classrooms, emphasizing the need to focus on academic writing strategies to enhance pre-service teachers' writing quality.

More recently, Li (2024) conducted a meta-ethnography study, revealing that self-regulation processes in academic writing at the higher education level can be categorized as cognitive strategies (e.g., brainstorming, reading extensively, and interpreting writing assignments and instruction) and metacognitive strategies, which involve recursive and developmental processes, such as organizing ideas in a back-and-forth motion in students' text drafts. Social strategies are related to seeking support from different social sources, including tutors, institutional services, and peers.

Building on the previous explanation of writing taxonomy, this dissertation classifies the most frequently discussed writing strategies into four categories: cognitive, metacognitive, social, and affective strategies. Rhetorical and communicative strategies have been excluded due to limitations in the features identified in existing research and overlaps in categorization. To be more specific, rhetorical strategies can be classified under either cognitive or metacognitive strategies, whereas communicative strategies are associated with social strategies. A summary of the discussed writing strategy taxonomy is presented in Table 6.

Table 6*The classification of academic writing strategy taxonomy based on key mentioned studies*

Strategy types	Key features	Key studies
Cognitive strategies	mental activities to generate, organize, and transform ideas (e.g., summarizing, paraphrasing, translating)	<i>Mu (2005); Mu & Carrington (2007); De Silva (2015); Raoofi et al. (2017); Rahmat (2021); Mazgutova & Hanks (2021); Idris et al. (2022); Bui et al. (2023); Razzaq & Hamzah (2024); Li (2024)</i>
Metacognitive strategies	higher-order thinking to plan, monitor, and evaluate the writing process	<i>Flavell (1979); Wenden (1998); Mu (2005); Mu & Carrington (2007); De Silva (2015); Raoofi et al. (2017); Xia (2017); Zhao & Liao (2021); Hu (2022); Sun & Zhang (2022); Teng (2022); Teng & Yue (2022); Bui et al. (2023); Putri et al. (2023); Li (2024); Razzaq & Hamzah (2024)</i>
Social strategies	interaction with peers, instructors, and tutors to enhance writing and motivation	<i>Mu (2005); Mu & Carrington (2007); Raoofi et al. (2017); Negretti & Mežek (2019); Mazgutova & Hanks (2021); Bui et al. (2023); Li (2024)</i>
Effective strategies	managing emotions such as relaxation and stress levels, reducing anxiety, and maintaining motivation	<i>Mu (2005); Mu & Carrington (2007); Raoofi et al. (2017); Mazgutova (2021); Hu (2022); Bui et al. (2023); Li (2024)</i>

In connection with the stages of the writing process: pre-writing, writing, and post-writing, some studies have revealed academic writing strategies employed by ESL/EFL students in higher education contexts. Abdul-Rahman (2011) compared the academic writing strategies of NESs and NNESs in higher education. Native participants were born and educated in Britain, while non-native participants were nationals of Mainland China and Libya. The study aimed to identify similarities and differences between these groups. The findings revealed patterns and variations among NESs and NNESs students regarding various factors, such as nationality, gender, age, and subject area. NES students were found to rely more on feedback, use spoken English, and employ a crucial composing process strategy called "delaying editing" to maintain their train of thought. NNES students, on the other hand, lacked organization strategies when planning, hesitated before transferring their thoughts into writing, and tended to make surface-level revisions. They also paid more attention to their supervisors and tutors as intended readers, rather than addressing a general audience. Despite these differences, both NES and NNES students used a variety of sources as

models, such as other students' assignments, and discussed their writing plans with others. Abdul-Rahman (2011) identified two different approaches to AWSs: the 'sink' approach, which involves pouring down whatever thoughts come to mind, and the 'shuttling' approach, which entails using diverse sources and assimilating information. The shuttling approach was more commonly used among non-NES students.

Munoz-Luna (2015) examined extralinguistic aspects of L2 academic writing, focusing on the relationship between metalinguistic items (such as transition and frame markers) and the writing strategies employed by Spanish undergraduates studying English. The study found that students who produce more complex sentences and coherent texts use a broader range of writing strategies, both before and during the writing process, which helps them structure and design their texts more effectively. These high-scoring students were competent in utilizing complex transition markers for coherence as well as frame markers in their essay writing. Their commonly used pre-writing strategies include drafting, outlining, and proofreading. Munoz-Luna (2015) recommended teaching English for Specific Academic Purposes, emphasizing writing strategies, genre features, grammatical issues, and identity theories to help students improve their L2 writing skills and better address target-reader needs.

A further study is related to Mallia (2017), who discussed various writing strategies to help non-native English-speaking students studying in British and Western universities improve their academic writing. These strategies include pre-writing tasks such as brainstorming and outlining, focusing on effective paragraph structure (e.g., *topic sentence*, *supporting details*, and *concluding sentence*), understanding basic essay components (e.g., *introduction*, *body*, and *conclusion*), and familiarizing oneself with different functional essay types (e.g., *argumentative*, *descriptive*, and *comparative*). The study also emphasizes language aspects like formality (e.g., *avoiding colloquial language*), cohesive devices (e.g., *using transitional phrases* like "however" and "in addition"), caution and hedging (e.g., "*probably*" and "*might*"), providing evidence (e.g., *using citations and quoting sources*), and avoiding plagiarism. Furthermore, Mallia (2017) highlights the importance of collaborative learning (e.g., *peer review and group discussions*), critical thinking (e.g., *analyzing and evaluating arguments*), and employing inductive and deductive approaches in organizing paragraphs and developing essays. These strategies aim to enhance the writing skills of non-native English-speaking students at a higher education level.

Additionally, another study focusing on EFL/ESL students' AWSs addresses feedback. For example, Hernandez et al. (2017) investigated the use of blog-assisted feedback, a form of computer-mediated communication (CMC), applied by ESL students at a tertiary-level institution in Southern Luzon, the Philippines. The study illustrates that blog-assisted feedback helps improve students' writing skills throughout the writing process, including prewriting, composing, providing feedback, revising, editing, and publishing. Hernandez's findings demonstrated that blog-assisted feedback offers positive benefits such as virtual collaboration between peers, online error correction, writing development records, and improved writing skills. Moreover, Hernandez suggested that blog-assisted feedback is recommendable for ESL students, as it motivates them to write and provides a convenient platform for writing.

Hussain (2019) analyzed academic writing strategies (AWSs) utilized in ESP classrooms and assessed L2 learners' perceived proficiency based on their ESP (English for Specific Purposes) test course. Sixty participants from various departments at King Saud University completed a questionnaire to provide data. The results revealed that although learners considered their academic writing skills adequate, they identified the need to improve grammar, vocabulary, punctuation, and the use of AWSs. The majority used outlining and brainstorming strategies, resulting in above-average performance. However, they called for improvements in EAP instructors' teaching methods, ESP topics, and the creation of an inclusive learning environment. Despite utilizing writing strategies such as brainstorming, outlining, and speed writing, L2 learners still have academic writing needs. They desire a focus on grammar, organization of ideas, and the use of academic writing strategies while also requesting improvements in teaching styles and inclusivity.

Mazgutova and Hanks (2021) studied the writing strategies of 14 Chinese English-L2 learners at a British university. They found that students employed various strategies, including extensive reading, learning from well-written student examples, focused revision, and valuing teacher feedback. The researchers suggested that participating in EAP courses could improve essay writing and reduce reliance on less effective grammar revision strategies. Mazgutova and Hanks recommended encouraging students to read widely, guiding them to academic books, journals, professional magazines, and educational websites to enhance their English vocabulary and support their arguments. Using exemplary essays from other students as models could help improve their writing style, clarity, cohesion, and accuracy. Students should also be urged to utilize teacher

feedback by attending tutorials and asking questions. Teachers should emphasize the importance of focusing on content and organization before addressing surface-level revisions and encourage students to reread their assignments multiple times to spot inconsistencies and develop new ideas.

Dari et al.'s (2022) study demonstrates EFL freshman students' activities during pre-writing, writing, and revising stages. In pre-writing include looking at examples written by a native speaker or more proficient writers, making short notes, starting writing without a written plan, making a timetable, and making an outline in students' L1. In the writing stage, the students reread what has been written, examine grammar after finishing each paragraph, use background knowledge to help elaborate ideas, use a monolingual dictionary, and write a draft in L1 and then translate it into the targeted language. Revising involves checking mistakes after receiving feedback from teachers, checking whether essays meet the requirements, asking a person to supply feedback, reading feedback and using it for improving the text, and making changes in the writing body organization.

It is important to highlight that while previous studies have investigated the strategies in academic writing from both taxonomy (e.g., cognitive, metacognitive) and process (i.e., pre-writing, writing, post-writing) perspectives, the integration of technological tools plays a critical role in the production of academic writing as well. For instance, recent studies by Bouzar et al. (2024) and Rahayu et al. (2024) have demonstrated the significance of assistive technology in enhancing students' academic writing performance. Alua et al. (2023) found that the use of plagiarism checkers, such as Turnitin, can enhance the quality of students' academic writing. This is supported by Sárdi (2023), who suggests that such tools can enhance students' writing quality and support self-regulatory practices such as evaluation, revision, and proofreading. What is more, Bakla and Karakaş (2022) emphasize that the employment of writing tools such as bibliographic managers, typing assistants, and generated artificial intelligence (AI) applications can help students write more efficiently and become more confident academic writers.

Based on the foregoing studies concerning academic writing strategies in ESL/EFL settings presented, it can be summarized that the importance of incorporating a wide range of academic writing strategies in these contexts to enhance students' writing skills and performance, including both the writing process and the final products, cannot be overstated. These strategies include the academic writing strategy taxonomy utilized by various writing researchers. NNEs have been observed to use various writing strategies during different stages of the writing process, such as

brainstorming, outlining, and speed writing. However, despite utilizing these strategies, they still express a need for improvements in teaching styles, grammar, the organization of ideas, and the use of academic writing strategies. The studies also highlight the value of feedback, collaboration, and learning from examples of other students' work in improving L2 learners' writing skills. Encouraging students to read widely, participate in EAP courses, and utilize teacher feedback can further enhance their writing abilities.

CHAPTER 3

RESEARCH DESIGN

This chapter provides a comprehensive overview of the aims and research questions, research methods, characteristics of the research design, limitations of the study, and concluding remarks. First, it outlines the central issues, including the aims of the study and the research questions. Second, it presents the research approach and phases of the research project, including piloting studies. This is followed by a review of the research design, including descriptions of the participants, instruments, the development of the tools, the procedures for both qualitative and quantitative data collection, and data analysis methods. Finally, the chapter concludes with a discussion of the study's limitations and closing remarks.

3.1 Aims and Research Questions (RQs)

The principle aim of this study is to investigate Indonesian graduate students' experiences in producing English academic texts within Hungarian HE. The focus of attention centers on three main issues: students' challenges in EAW, their strategies in EAW, and the manifestation of information density (ID) in their academic essays. An overview for each issue is presented in Table 7.

Table 7

The issues and aims of the study

Issues	Aims
<i>Students' challenges in EAW</i>	To identify the challenges faced by IGSs when writing academic essays, the types of support available for academic writing, and their attitudes towards EAW in a non-native English-speaking environment.
<i>Students' strategies in EAW</i>	To explore the strategies employed by the students to address the challenges in EAW at Hungarian Universities (HUs) and to compare the distribution of these strategies over the courses of their studies.
<i>Information density in the students' academic essays</i>	To look at the characteristic features of ID components in the students' academic essays written during their master's studies at HUs and to evaluate the relationship between these features and the students' initial English proficiency levels (C1 and B2).

To address the aims of the present study, the following research questions are formulated to explore the EAW experiences of Indonesian graduate students in Hungarian HE:

1. What challenges do Indonesian graduate students face when writing academic essays in English?
2. What types of support do the students receive to address the challenges in EAW?
3. What attitudes do the students hold toward EAW in a non-native English-speaking environment?
4. What writing strategies do the students employ in EAW?
5. What are the characteristic features of ID components in the students' essays across three semesters?
6. What are the characteristic features of ID components in the essays based on the students' initial proficiency levels?

3.2 Research Methods

3.2.1 *Mixed-Methods Research*

Researchers have conducted a number of mixed-methods studies by combining qualitative and quantitative data in a single study (Cohen et al., 2017; Creswell, 2014; Dörnyei, 2007). For a deeper understanding of the nature of mixed methods research, it is fundamental to define the term.

According to Creswell & Clark (2018), mixed methods research is:

A systematic approach that involves collecting and analyzing both qualitative and quantitative data, integrating these two forms and their findings, and organizing these processes within structured research designs based on theoretical and philosophical frameworks. (p. 3)

Mackey and Bryfonski (2018) further explain that mixed-methods research is a strategy of inquiry that allows the researcher to explore a research question from multiple perspectives, potentially avoiding the limitations of relying solely on either quantitative or qualitative methods (p. 103). A mixed methods study, therefore, involves the combination of data collection methods, research designs, and philosophical orientations.

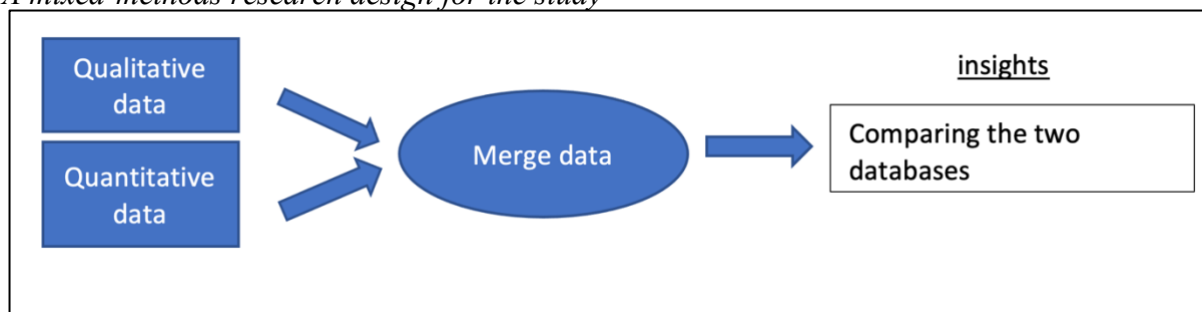
Moreover, Tashakkori and Creswell (2007) point out that a key concept in mixed methods research is the ‘*integration*’ of research methods, approaches, or paradigms. Based on these definitions, it can be concluded that mixed methods research emphasizes the integration of core components involving data collection methods (e.g., interviews and content analysis), research

approaches (e.g., qualitative and quantitative), and methodological viewpoints (e.g., paradigms and philosophical orientations) to investigate a single phenomenon from multiple angles.

When conducting mixed methods research, the researcher engages in several key procedures (Creswell and Clark, 2018). First, both qualitative and quantitative data are rigorously collected and analyzed to respond to research questions and hypotheses. Second, the researcher integrates (or mixes or combines) the two forms of data and their results. Third, these two procedures are organized into specific research designs that provide the logic and procedures for conducting the study. Finally, the researcher frames these procedures within theory and philosophy. The implication of the preceding procedures in relation to the present study is illustrated in Figure 2.

Figure 2

A mixed-methods research design for the study



Designing a mixed-methods study requires careful consideration of whether it will bring the results together (merge), meaning that one type of data enhances or supplements the analysis of the other, or whether the data will undergo a separate analysis. Creswell and Clark (2018) have clearly divided mixed methods designs into two types: basic and advanced designs. Basic designs consist of convergent, explanatory, and exploratory sequence designs. Convergent design merges the two databases together. Explanatory designs sequentially connect the qualitative and quantitative databases and have the second database explain the first. In other words, explanatory sequence designs require quantitative data to be collected first, then qualitative data are collected as a follow-up. An exploratory design is the opposite of an explanatory design, where qualitative data are collected first and quantitative data are collected as a follow-up.

In terms of advanced designs, the category is divided into four types: experimental designs, case studies, participatory-social justice designs, and evaluation designs. Mixed-methods Experimental designs augment the research trial by embedding qualitative data so that the

experiment can incorporate the personal experiences of the participants. Mixed methods Case designs include embedding both quantitative and qualitative data into a case or cases. The intent of this design is to increase in-depth cases by integrating multiple sources of data. Mixed methods Participatory social justice designs involve framing the study within a theoretical participatory perspective to help address injustice against underrepresented or marginalized groups or to involve stakeholders in the process of research. The last advanced mixed methods evaluation designs are relevant to the type(s) of core designs to be used in an evaluation. This design is to merge and connect the different methods to best accomplish the evaluation objectives by embedding a core design at one or multiple points within the evaluation process.

For the sake of the study, Creswell's Basic Convergent Design was selected from among various mixed-methods designs, as this seemed to be the most appropriate model for the purpose of the current research. The selection of this design was due to several reasons. First, convergent design was used in the study because the researcher believed that employing qualitative alone and quantitative alone would not be enough to fully address the research problems. By integrating both types of data, a more comprehensive understanding of the issue could be obtained.

In line with the principles of convergent design, qualitative and quantitative data were gathered simultaneously. Rather than conducting one type of study first and using its results to inform the other, the two datasets were analyzed separately and then compared. This parallel approach allowed for triangulation of findings and supported a more interpretation of the phenomenon under exploration. As a result, the convergent design was considered a logical and effective methodological approach for this dissertation.

Second, this type aims to confirm, cross-validate, and corroborate the findings of the three project phases.

Third, since the present study investigates IGSs' experiences in EAW in the Hungarian HEIs, the employment of mixed-methods research helps answer the formulated questions. The questions require both qualitative and quantitative methods of data collection and analysis to achieve the aims of the study.

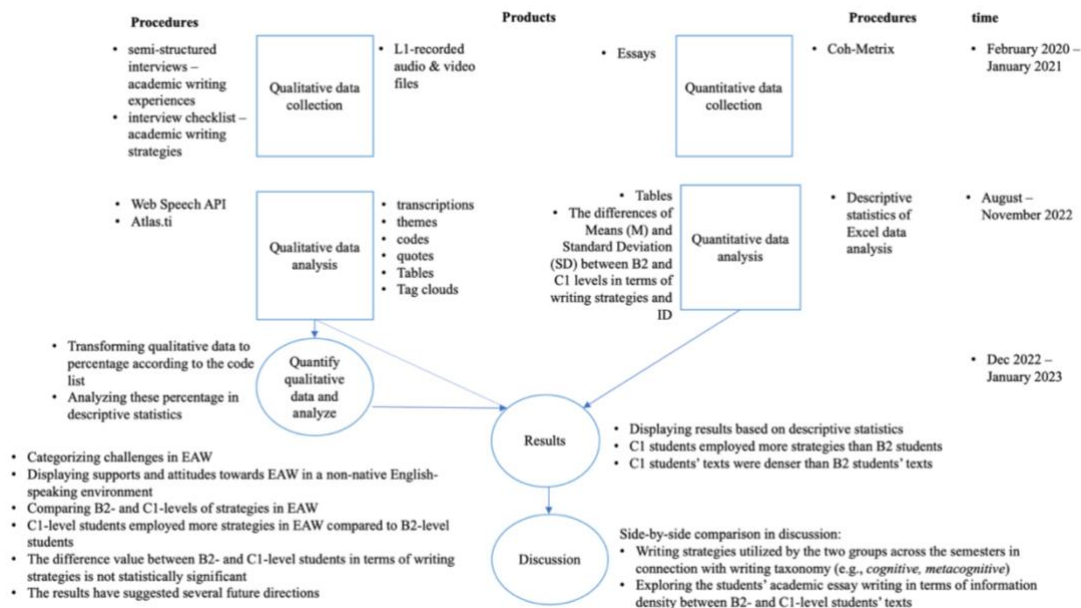
Fourth, the use of mixed methods research also provides a more detailed investigation of IGSs' challenges and strategies in EAW. A key feature of mixed methods research is the investigation of multiple data sources, including academic writing such as essays (Creswell & Clark, 2018). Academic essays are central to this study, as writing in the social sciences typically

requires theories to build explanations and incorporating well-researched evidence to support arguments and claims (MacMahon, 2017). Therefore, exploring academic essays produced by IGSs enrolled in the area of social science programs between 2019 and 2022 was an appropriate methodological approach, incorporating both qualitative and quantitative methods.

In investigating students' challenges and strategies in EAW, the qualitative data collection procedures seemed to be adequate. However, the study also aimed to collect quantitative statistical data to analyze the frequency of academic writing strategies (AWSs) employed by B2 and C1 level students and the manifestation of them in the students' academic texts. Therefore, the findings of the study can be indicators to highlight the utilization of AWSs and the relationship between the patterns of ID and the students' original English proficiency levels (B2 and C1). Figure 3 illustrates the convergent mixed-methods design used in this dissertation.

Figure 3

An overview of the convergent mixed-methods design of Indonesian graduate students' experiences in EAW in a non-native English environment



Finally, the phases of the research project were conducted in parallel, with equal priority given to both qualitative and quantitative procedures to investigate Indonesian graduate students' experiences in academic writing. Table 8 summarizes the relationship between data collection and the analysis of the research questions, indicating the various phases of the research project.

Table 8*The relationship of data collection and data analysis to the research questions*

Research questions	Project phases	Research method(s)	Data collection		Data analysis
			Instruments	Participants	
RQ1: <i>What challenges do Indonesian graduate students face when writing academic essays in English?</i>	Phase 1	QUAL	semi-structured interview guide	pilot study, n= 2 main study n = 9	interview transcriptions
RQ2: <i>What types of support do the students receive to address the challenges in EAW?</i>	Phase 1	QUAL	semi-structured interview guide	pilot study n= 2 main study n= 9	interview transcriptions
RQ3: <i>What attitudes do the students hold toward EAW in a non-native English-speaking environment?</i>	Phase 1	QUAL	semi-structured interview guide	pilot study, n= 2 main study n= 9	interview transcriptions
RQ4: <i>What writing strategies do the students employ in EAW?</i>	Phase 2	QUAL	semi-structured interview guide and interview checklist	pilot study, n= 2 main study n= 9	interview transcriptions
		QUAN			statistical analyses
RQ5: <i>What are the characteristic features of ID components in the students' essays across three semesters?</i>	Phase 3	QUAN	essays	pilot study, n = 7 essays = 14	statistical analyses
		QUAL		main study N = 11 essay = 32	content analyses
RQ6: <i>What are the characteristic features of ID components in the essays based on the students' initial proficiency levels?</i>	Phase 3	QUAN	essays	pilot study n = 7 essays = 14 main study = n = 11 essays = 32	statistical analyses

3.2.2 *Strengths and Weaknesses of Mixed-Methods Research*

As far as mixed methods research is concerned, researchers who are willing to conduct this approach must be aware of its requirements at both the planning and execution stages of their research. By applying the mixed methods design in the current study, the researcher intended to take advantage of its strengths while minimizing, or at least reducing, its potential weaknesses.

In this study, the researcher also sought assistance from colleagues to calculate and interpret the numerical data using Microsoft Excel. It is important to carefully consider the strengths and limitations of each type of mixed-methods design to ensure that the chosen approach aligns with the research objectives and produces meaningful results. Additionally, reading previous studies in connection with mixed-methods research and gaining knowledge from social media tutorials such as Cresswell's YouTube channel explaining mixed-methods studies can help in selecting an appropriate design. As a result, a convergent design was selected for this research project (see Section 3.2 Research Method for more information).

Table 9 shows the strengths and weaknesses of mixed methods research adapted from Johnson and Onwuegbuzie (2004).

Table 9

Strengths and weaknesses of mixed methods research adapted from Johnson and Onwuegbuzie's (2004) research

Strengths	Weaknesses
Words, pictures, and narrative can be used to add meaning to numbers.	It can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team.
Numbers can be used to add precision to words, pictures, and narrative.	The researcher has to learn about multiple methods and approaches and understand how to mix them appropriately.
This approach can provide quantitative and qualitative research strengths	Methodological purists contend that one should always work within either a qualitative or quantitative paradigm.
Researchers can generate and test a grounded theory.	More expensive
Can answer a broader and more complete range of research questions because the researcher is not confined to a single method or approach.	More time-consuming

A researcher can use the strengths of an additional method to overcome the weakness in another method by using both in a research study.	Some of the details of mixed research remain to be worked out fully by research methodologists (e.g., problems of paradigm mixing, how to qualitatively analyze quantitative data, how to interpret conflicting results).
Can provide stronger evidence for a conclusion through convergence and corroboration of findings.	
Can add insights and understanding that might be missed when only a single method is used.	
It can be used to increase the generalizability of the results.	
Qualitative and quantitative research used together produces more complete knowledge necessary to inform theory and practice.	

Based on Table 9, several notable strengths emerge. These include the ability to enhance numerical data with words, pictures, and narrative; the capacity to answer a broader range of research questions; and the potential for providing stronger evidence through the convergence and corroboration of findings. Furthermore, mixed methods research increases the generalizability of results and promotes a more comprehensive understanding of the research topic by combining qualitative and quantitative approaches.

On the other hand, mixed methods research poses several challenges. These include the difficulty for a single researcher to competently conduct both qualitative and quantitative research, the necessity for researchers to learn about multiple methodological approaches, and the increased demands in terms of costs and time. In addition, methodological purists may oppose the integration of different paradigms and certain methodological concerns, such as issues related to data analysis procedures and the interpretation of conflicting results. Despite these drawbacks, mixed methods research offers valuable insights and more complete knowledge, which can be essential for advancing both theory and practice in various fields.

3.3 Phases of the Study

As outlined in Section 3.2, this research project adopts both qualitative and quantitative approaches and is organized into three different phases. The qualitative approach involved semi-structured interviews in Phase 1, which explored challenges related to EAW, followed by an interview checklist in Phase 2 that examined the strategies applied in EAW. The quantitative

approach was employed in both Phases 2 and 3, focusing on a comparison analysis of academic writing strategies based on the writing taxonomy employed by B2 and C1 students during their studies at Hungarian HEIs, as well as the patterns of ID in their texts across semesters. The outline of the three phases is presented in Table 10.

Table 10

Phases of the research project

Project phases	Descriptions	Research methods
Phase 1	semi-structured interviews about IGSs' experiences in EAW, including challenges, strategies, and attitudes	Qualitative (QUAL)
Phase 2	follow-up interview checklist about strategies in EAW.	Qualitative (QUAL) and Quantitative (QUAN)
Phase 3	essay analysis focusing on the characteristic features of ID components and the relationship between the ID and the students' initial English levels	Qualitative (QUAL) and Quantitative (QUAN) and

3.4 Participants

The participants involved in this project were selected based on the following criteria:

- The students were Indonesian students who enrolled in a master's degree program in Hungarian HEIs in the field of business and economics within the field of social sciences.
- The students started their studies between 2019 and 2020.
- The students had an English proficiency certificate (e.g., IELTS).
- The students were registered in the database of the Indonesian student association in Hungary (*PPI Hungaria*).
- The students produced academic essays during their studies as part of their course requirements.

The procedures for the participant selection were carried out in several stages. First, the researcher contacted the representative of *PPI Hungaria* to obtain information on prospective students who might be suitable for the research project, based on their student database. Second, the selected participants were categorized based on the university they attended and the geographical locations of their studies. This categorization was important to ensure the inclusion

of participants from multiple cities and universities, making the findings representative and generalizable.

In the next stage, the prospective participants were contacted via the WhatsApp application and invited to participate in the study. Given the significance of their involvement, the researcher explained the aims of the study and the expected time commitment. Students who agreed to participate were asked to confirm their participation via WhatsApp or email. Finally, those who agreed to take part in the study were required to read and sign a letter of consent (see Appendix G).

A total of eleven students participated in the study, ranging in age from 23 to 29 years. They were divided into two groups based on their previous IELTS proficiency levels: six students at a lower proficiency level (B2; 6.0–6.5) and five students with a higher proficiency level (C1; 7.0–7.5) at the time of university enrollment. These participants were registered in programs such as International Relations, Regional and Environmental and Economic Studies, Social Integration, International Economics and Business, Business Development, Supply Chain Management, and Human Resources Counseling.

The decision to use the students' initial English proficiency levels was based on the validity period of their IELTS certificates, which were submitted as part of their master's degree application for the SH scholarship in 2019. These certificates were obtained approximately 3 to 5 months prior to the submission. Since IELTS results are considered valid for up to two years, it is reasonable to use this reference as a reliable indicator of the participants' proficiency during the data collection period (2020-2021). In addition, the participants were contacted during this present study and asked to self-assess their current English proficiency using the CEFR rubric, which was provided to them. All 11 participants confirmed that their English proficiency had not changed significantly during the data collection, and they still identified with the same CEFR level reported in their initial application. Furthermore, all participants agreed with their classification into B2 and C1 student groups. Therefore, this reflective self-assessment, supported by the CEFR descriptors and the validity of the IELTS certificates, remains a valid parameter for the classification used in this dissertation.

To ensure adequate representation across the aforementioned disciplines within Hungarian HE, and in consideration of the limited number of participants, the sample was selected from various universities. A purposive, non-probability sampling procedure was employed, by which

participants were deliberately chosen based on their relevance to the research aims (Cohen et al., 2017). For confidentiality purposes, pseudonyms were assigned to all participants, as displayed in Table 11.

Table 11*Participant data and information for the research project*

No	Pseudonyms	Gender	Age	Faculties/ Departments	Study programs	IELTS /CEFR	Universities	Previous EMI experiences	Academic writing experiences in L1	Frequency of producing academic texts during their studies in Hungary
1	Ani	Female	25	Social and Political Sciences	International Relations	6.5/B2	Corvinus	An IELTS instructor	Undergraduate studies	15
2	Tutik	Female	25	Social and Political Sciences	International Relations	6.5/B2	Corvinus	Undergraduate studies in Turkey	NA	15
3	Sri	Female	24	Business and Economics	Business Development	6.5/B2	Pécs	NA	Undergraduate studies	10
4	Yanti	Female	28	Education and Psychology	Social integration	6.5/B2	ELTE	Junior high school teacher exchange in the USA	Undergraduate studies	10
5	Bambang	Male	25	Economics	Supply Chain Management	6.0/B2	Széchenyi István	NA	Undergraduate studies	12
6	Budi	Male	29	Faculty of Social Science and Economics	Regional and Environmental Economic Studies	6.0/B2	BME	NA	Undergraduate studies	10
7	Eko	Male	26	Social and Political Sciences	International Relations	7.5/C1	Corvinus	Research and teaching assistant in an international program	Undergraduate studies	15
8	Lilis	Female	26	Economics and Business Administration	International Economy and Business	7.0/C1	Szeged	An IELTS instructor	Undergraduate studies	10
9	Novi	Female	27	International, Political, and Regional Studies	Regional and Environmental Economic Studies	7.5/C1	Corvinus	Research and teaching assistant in an international program	Undergraduate studies	13
10	Rina	Female	25	Humanities and Social Sciences	Human Resources Counseling	7.0/C1	Pécs	Student exchange in Japan, an intensive English course	Undergraduate studies	10
11	Triono	Male	23	Social and Political Sciences	International Relations	7.5/C1	Corvinus	Undergraduate Studies in Malaysia, and an IELTS instructor	NA	15

*NA: Not Applicable

The number of participants in this study was relatively small, primarily due to the limited availability of IGSs enrolled in HU between 2019 and 2020. However, since the participants had relevant experiences in composing academic essay assignments and met the requirements of the study, the sample was considered appropriate for the research strand. The most important aspect of defining the sample in the study was that all participants contributed to answering the proposed research questions. Therefore, the current study relied heavily on the insights provided by the selected participants.

3.5 Research Instruments and the Development of the Research Tools

To meet the goal of the research project, this study employed three instruments across the three phases: a semi-structured interview guide, an interview checklist, and graded essay assignments submitted by the participants. The subsequent sections provide comprehensive descriptions concerning the instruments utilized in the study, as well as the development that has been made throughout the design.

3.5.1 Semi-Structured Interview Guide (Phase 1: Students' Experiences in EAW)

One crucial instrument in qualitative research is an interview. Interviews can provide deeper insights and a better understanding of social phenomena by exploring participants' opinions, behaviors, and experiences (Maykut & Morehouse, 2005; Prescott, 2011). Among the various types of interviews, the researcher conducted in-depth, semi-structured interviews during Phases 1 and 2 of this study. Semi-structured interviews are relevant to a specific topic through open-ended questions, which may vary in phrasing or sequence depending on the participant (Creswell, 2007, 2009). The primary goal of these interviews was to explore Indonesian graduate students' experiences in EAW, including the challenges they face, the strategies they employ, and their attitudes towards EAW in a non-native English-speaking environment.

The validation process for the interview guide on academic writing experiences included a number of steps to ensure the instrument's reliability and validity. The first step in developing the interview guide was an extensive review of the literature to identify relevant themes within the realm of academic writing experiences. Commonly identified topics include *students' academic backgrounds* (e.g., Munoz-Luna, 2015), *the writing process*, including planning, drafting, evaluating, and revising (e.g., Canagarajah, 2011; Hu, 2022), *writing feedback* (e.g., Hyland & Hyland, 2019), and *the challenges faced by students along with their writing strategies* (Hu, 2022; Odena & Burgess, 2017).

The identified themes were then adopted for this study, with the aim of refining the topics to improve the quality of the resulting interview questions. Hence, 43 preliminary interview questions were developed, reflecting the finalized two general topics involving students' experiences in a non-native English environment (n=28 questions) and linguistic features (n=15 questions).

Adjustments were made during the interview section in the Phase 1 pilot study, as some questions were found to carry broader meanings or contained technical words that might confuse the participants. Additionally, the pilot discovered that certain questions elicited similar responses upon analysis. To address this issue, problematic questions were revised.

For instance, the question, "*What do you think about academic writing?*" and, "*Did you pay much attention to grammatical accuracy in writing academic papers?*" were simplified to avoid requiring further clarifications from the participants. The questions were modified to "*To what extent were you required to submit essay assignments in your studies?*" while the second question was reworded as "*In your opinion, what linguistic features did you use to express your ideas in your writing?*" Furthermore, another category was created to gather more detailed information regarding students' challenges, strategies, and attitudes toward academic writing (see Appendix E).

In the next step, the revised set of questions was employed in the Phase 2 pilot study to review that the modifications were effective. Examples of these revisions can be found in Section 3.6.2. By systematically progressing through these stages, the instrument was developed to ensure a reliable and valid interview guide for exploring academic writing experiences.

The semi-structured interviews were conducted both face-to-face and online during Phases 1 and 2, covering the pilot and main studies. The interviews followed the interview guide approach, in which specific topics and issues were pre-identified and structured within the interview schedule (Maykut & Morehouse, 2005; Prescott, 2011).

The interview schedules were developed based on the evaluation results from the Phase 1 pilot study. It was noted that 43 questions in the Phase 1 pilot study were not organized into subcategories. In the main study, irrelevant and redundant questions in the Phase 1 pilot were removed, and subcategories were introduced in the final version to make the interview guide more structured and coherent. As a result, 36 questions were formulated based on the following themes:

1. Students' academic backgrounds
2. Students' experiences in EAW

3. Students' strategies in EAW
4. Faculty support toward EAW
5. EAW in a non-native English-speaking environment
6. EAW feedback

3.5.2 Interview Checklist (Phase 2: Academic Writing Strategies)

The researcher designed an interview schedule that included a list of structured questions, along with additional information for each question to help the interviewer keep participants focused on the relevant topics and make the data collection systematic for all interviews (Dörnyei, 2007). Following a similar procedure to earlier interviews, an interview checklist was developed based on the findings of the pilot studies. The goals of the interview checklist were to validate students' strategies in EAW in relation to their semester of study.

On that account, the researcher filled in responses during the main interview based on the participants' semester levels, which were limited to the first three semesters (Semesters 1-3), due to insufficient data on essay assignments in Semester 4.

The interviews in both Phases 1 and 2 were conducted in Indonesian to allow the participants to express their feelings and thoughts about their EAW experiences without facing language barriers. As highlighted in Section 2.7.2 and presented in Table 6, the academic writing strategy taxonomy in the existing literature was classified into four main categories: *cognitive, metacognitive, social, and affective strategies*. To address these categories, a total of 16 questions were included in the interview checklist (see Appendix F for full interview checklist questions).

These enhancements resulted in the final version of the interview checklist. By carefully incorporating feedback from the piloting studies and integrating well-established academic writing strategy frameworks, the instrument was further refined for the main study. This process aimed to ensure the completeness, reliability, and validity of the interview data collected.

3.5.3 Students' Academic Essays (Phase 3: Information Density)

The documents collected from the students, which are essay assignments, were used as instruments in the Phase 3 pilot study. These essays had been submitted and graded by lecturers as part of the students' assignments in social science subjects. Consequently, the essays represent high-stakes assessments, which are a critical aspect in supporting students' academic success (Crossley et al., 2014; Munoz-Luna, 2015). A total of 32 essays were collected over

three semesters from the 2019/2020 to 2021/2022 academic years. An overview of the essays is presented in Table 12.

Table 12

Collected students' essay assignments between 2019 and 2021

CEFR	Study programs	Number of texts	Number of words	Number of sentences	Number of paragraphs
B2	International Relations, Supply Chain Management, Regional and Environmental Economic Studies, and Business Development Social integration	17	49898	3125	1884
C1	International Economy and Business, Regional and Environmental Economic Studies, Human Resources Counseling, International Relations	15	48397	3479	1810
Total		32	98295	6604	3694

To ensure that the instruments, data collection, and analysis procedures functioned adequately and met the research objectives, a pilot study was conducted (Dörnyei, 2007). The primary goals of the pilot study were to gather feedback and identify potential issues that could arise during the main study.

The following process was to conduct pilot studies in three phases to assess the effectiveness of the initial questions. The findings indicated that some questions elicited similar responses, indicating redundancy. To address this issue, the problematic questions were revised to improve clarity and enhance the overall quality of the instrument.

3.6 Piloting and Main Studies

3.6.1 Phase 1: Experiences in English Academic Writing (EAW)

3.6.1.1 Pilot Study. The first pilot study was carried out to support Phase 1 and involved two students. It focused on their experiences in EAW, including the challenges they faced and strategies they employed during their first academic year (2019/2020). The students were also asked to express their attitudes towards EAW in Hungarian HE. An overview of the participants can be seen in Table 13.

Table 13*Participants of the first pilot study in Phase 1*

Pilot study N = 2	CEFR/IELTS	Pseudonym	Gender	Semester	Academic year
	6.5	Ani	Female	2	2019/2020
	6.0	Budi	Male	2	2019/2020

The first pilot study was conducted to examine the participants' experiences and challenges in EAW at Hungarian universities through trial interviews. At the beginning of the piloting process, several modifications were made, including adjustments to both the participants and the interview questions. Initially, the interviews were initiated to address both IGSs and their subject teachers, who assessed the students' academic essays. However, due to time limitations and limited access to the lecturers, the researcher decided to drop the questions designed for the teachers from the interview schedule. Consequently, only selected students participated in the pilot study. As a result of these adjustments, a number of proposed interview questions were developed from the initial plan.

3.6.1.2 Main Study. As for the main study in Phase 1, the participants were nine students enrolled in various academic programs during the 2020/2021 academic year. The group consisted of two male and seven female students. All participants had experience submitting essays for EAW, which had been assessed by their professors. Table 14 demonstrates the participants in the main study of Phase 1.

Table 14*The participants of the main study in Phase 1*

Main study N=9	CEFR	Pseudonym	Gender	Semester	Academic year
	B2	Bambang	Male	1	2020/2021
		Sri	Female	3	2020/2021
		Tutti	Female	3	2020/2021
		Yanti	Female	3	2020/2021
	C1	Eko	Male	3	2020/2021
		Lilis	Female	3	2020/2021
		Novi	Female	3	2020/2021
		Rina	Female	1	2020/2021
		Triono	Female	3	2020/2021

The interviews, for example, were carried out in two different situations: online and offline. Several interviews, including those related to the pilot studies in Phases 1 and 2, were conducted online in response to the Covid-19 pandemic, which occurred in early 2020 and

affected data collection procedures. A total of 36 questions were asked, covering the following areas: academic backgrounds (n=6), academic writing experiences (n=5), writing strategies (n=12), faculty support (n=3), and academic writing experiences in a non-native English-speaking environment.

3.6.2 Phase 2: Academic Writing Strategies (AWSs)

3.6.2.1 Pilot Study. The Phase 2 pilot study was conducted to discover the participants' strategies in EAW. This follow-up interview aimed to verify and confirm the strategies reported by the participants during the Phase 1 pilot study, specifically those used when writing academic essays. To achieve this, an interview checklist was employed. The second pilot study involved two students, as presented in Table 15.

Table 15
Participants of the second pilot study in Phase 2

Pilot study N = 2	Pseudonym	CEFR/ IELTS	Gender	Semester	Academic year
	Budi	B2	Male	3	2020/2021
	Tuti	B2	Female	3	2020/2021

The second pilot study was a follow-up interview from Phase 1, with a specific focus on the strategies in EAW. This was a retrospective interview in which the participants were asked to recall the strategies they had employed when writing their previously submitted academic essays. After a review of the results from the initial pilot study, it was determined that a follow-up interview checklist was required. Even though writing strategy questions were asked in Phase 1, the focus in Phase 2 was different. In Phase 1, the questions were more general, asking about overall writing strategies. In the Phase 2 follow-up interviews, the questions focused on each semester, so the participants could describe the strategies they used in more detail during each semester.

The primary goals of this interview checklist were to ensure that participants had provided complete responses and to assist them in recalling any information they may have forgotten during the Phase 1 interview. The participants were asked each question twice to verify the relevance of their answers. Also, the same questions were repeated three times to focus on individual semesters one by one. For example, in the case of the question below. The participants were offered clarification in order to ensure they understood the questions and to ensure the relevance of their answers.

1. *Generally speaking, which of these phases did you include in the writing process of your essays in semesters 1, 2, and 3?*
 - a. *Planning*
 - b. *Drafting*
 - c. *Composing*
 - d. *Evaluating/monitoring*
 - e. *Editing/revising*
 - f. *Finishing*
 - g. *Other*
2. *What was the focus of attention when monitoring and evaluating your writing assignments in semesters 1, 2, and 3?*
 - a. *Idea*
 - b. *Grammar*
 - c. *Vocabulary*
 - d. *Sentence*
 - e. *Other*
3. *What activities did you engage in when producing your writing assignments in semesters 1, 2, and 3?*
 - a. *Brainstorming*
 - b. *Mind mapping*
 - c. *Searching for the literature*
 - d. *Taking note from the literature*
 - e. *Ordering notes*
 - f. *Making an outline*
 - g. *Interacting with people, including teachers and peers*
 - h. *Reading widely*
 - i. *What else...*

Questions 1 and 3 appeared to overlap, which led the participants to provide similar responses to both. Therefore, Questions 1 and 3 were revised into the following formats:

- 1) *How did you organize your writing process?*
 - a) *Drafting*
 - b) *Writing*
 - c) *Revising*
 - d) *Finalizing*
 - e) *Submitting*
- 3) *What did you do before starting to write up your submitted essays?*
 - Brainstorming*
 - a) *Mind mapping*
 - b) *Searching for the literature*
 - c) *Reading widely*
 - d) *Synthesizing what has been read*
 - e) *Ordering notes*
 - f) *What else*
 - g) *Other*

The words "monitoring" and "evaluating" in Question 2 appeared to cause confusion for the participants. To avoid ambiguity and redundancy, the revised question used only the word "*evaluate*," which meant to observe and verify the progress during the process of writing academic essays. The participants were allowed to mention multiple strategies, which could then be matched to the available answer options. Accordingly, the question was revised as follows:

- 2) *What aspects of writing did you pay attention to when evaluating your writing assignments?*
 - a) *Goals*
 - b) *Idea*
 - c) *Grammar*
 - d) *Vocabulary*
 - e) *Punctuation*
 - f) *Spelling*
 - g) *Reference*
 - h) *Other*

In the pilot study of Phase 2, both online and face-to-face interview formats were employed to test the effectiveness of the interview guide. A modification to the interview procedures was made during the process to allow for greater flexibility in how the participants answered the questions. In the initial version of the interview protocol, some questions were repeated three separate times during the same interview session. This was done to gather specific responses for each individual semester (Semester 1, Semester 2, and Semester 3). For instance, participants were asked to describe their writing strategies in Semester 1, then the same question was asked for Semester 2 and again for Semester 3. While this approach aimed to capture detailed information, it made the interview repetitive and time-consuming for the participants.

Based on this situation, questions were rephrased to be applicable across multiple semesters. For example, the question *Generally speaking, which of these phases did you include in the writing process of your essay?* was adjusted so that the participants could reflect on their experiences across Semesters 1, 2, and 3. This adjustment not only saved time but also made it easier for the participants to compare and articulate their strategies across different academic periods with greater confidence.

3.6.2.2 Main Study. For the main study in Phase 2, the participants consisted of nine students: three male and six female students. The study was conducted during the 2020/2021 academic year, covering both first- and second-year students. Two participants were in their

first academic year, as they started their studies in 2020, while the other seven students were in their second academic year, as they enrolled in their master's program in 2019. An overview of the participants in the Phase 2 main study is presented in Table 16.

Table 16

The participants of the main study in Phase 2

Main study N=9	CEFR	Pseudonym	Gender	Semester	Academic year
	B2	Ani	Female	4	2020/2021
		Bambang	Male	2	2020/2021
		Sri	Female	4	2020/2021
		Yanti	Female	4	2020/2021
	C1	Eko	Male	4	2020/2021
		Lilis	Female	4	2020/2021
		Novi	Female	4	2020/2021
		Rina	Female	2	2020/2021
		Triono	Male	4	2020/2021

The study was conducted using both online and face-to-face interview formats, based on scheduling agreements between the participants and the researcher. In the main study, 16 questions were asked to assess the strategies they employed in Semesters 1, 2, and 3, with the support of Excel sheets to track and organize responses. This second interview aimed at reviewing for any overlap or missing information from the interview conducted in the Phase 1 main study. It specifically focused on students' ability to recall and articulate the strategies they utilized in their academic essays. The goal is for the students to make sure that they say something about strategies that were missing from the previous interview section.

To capture their answers, the researcher read each question aloud, and the participants could either list multiple strategies or respond with "yes" or "no" to indicate whether they had used specific strategies during their writing process. The researcher then marked (✓) the relevant answers indicated by each participant and matched the answers with the provided options. The full list of the interview checklist questions can be seen in Appendix F.

3.6.3 Phase 3: Text Analysis on ID

3.6.3.1 Pilot Study. The third pilot study focused on comparing students' essays from their first academic year in 2019/2020, specifically between Semesters 1 and 2. This study corresponded to Phase 3 and concentrated on the patterns of information density (ID). Seven students, primarily studying at universities in Budapest, participated in this phase.

Each student was asked to send one document each semester to the researcher, with a minimum length of 1,500 words, aligning with the standard word count requirement for social science essays (Redman & Maples, 2017; Sawrikar & McAuliffe, 2019). This word count requirement was also applied to the main study.

This pilot study also served as a preliminary step to determine whether the proposed methods and findings could be successfully applied. An overview of the participants involved in the third pilot study is displayed in Table 17.

Table 17

Participants of the third pilot study in Phase 3

Pilot study N = 7	CEFR	Pseudonym	Gender	Semester	Essay word length		Academic year
					Semester 1	Semester 2	
	B2	Ani	Female	3	3628	4763	2020/2021
		Budi	Male	3	2860	1759	2020/2021
		Tutik	Female	3	4327	1696	2020/2021
		Yanti	Female	3	2114	2085	2020/2021
	C1	Eko	Male	3	2951	5364	2020/2021
		Novi	Female	3	8064	3865	2020/2021
		Triono	Male	3	2645	3209	2020/2021

3.6.3.2 Main Study. In the main study of Phase 3, eleven students were involved in the research project. The group consisted of four male and seven female students, divided into two groups based on their initial English proficiency levels: B2 and C1. Initially all students were asked to send four essay assignments from semester 1 to semester 4, which were submitted and graded by their professors. However, since they were required to write their thesis in Semester 4, none of the participants submitted an essay during the term. Additionally, one student did not submit an essay in Semester 3. Hence, no essay assignments were available (NA) for any students in semester 4 and for one student in the third semester.

The main study focused on specific indices related to ID (i.e., lexical density and expanded noun phrases). In order to provide sufficient information regarding the ID, these indices were transformed into numerical data using Coh-Metrix, a computational linguistic tool developed by Graesser et al. (2004). The participants in the Phase 3 main study can be seen in Table 18.

Table 18*The participants of the main study in Phase 3*

Main study N = 11	CEFR	Pseudonym	Gender	Semester	Essay word length				Academic year
					Semester 1	Semester 2	Semester 3	Semester 4	
	B2	Ani	Female	4	3628	4763	1852	NA	2020/2021
		Bambang	Male	4	2972	1655	4964	NA	2021/2022
		Budi	Male	4	2860	1731	1951	NA	2020/2021
		Sri	Female	4	4720	3478	NA	NA	2020/2021
		Tutik	Female	4	4327	1696	3624	NA	2020/2021
		Yanti	Female	4	2114	2011	1552	NA	2020/2021
		Total			20621	15334	13943	-	
C1	Eko	Male	4	2951	5035	2975	NA	2020/2021	
	Lilis	Female	4	1701	1570	3608	NA	2020/2021	
	Novi	Female	4	8064	3617	4477	NA	2020/2021	
	Rina	Female	4	2184	1866	2536	NA	2021/2022	
	Triono	Male	4	2645	3193	1975	NA	2020/2021	
	Total			17545	15281	15571	-		
Academic essay word length of all participants				Semester 1	Semester 2	Semester 3	Semester 4	Total word length	
				38166	30615	29514	-	98295	

It is important to note that seven participants involved in the pilot studies were also included in the main study. This overlap occurred for several reasons. First, the pilot studies focused specifically on analyzing lexical density (LD) indices, particularly the frequency of content words in the students' writing during their first semester. In contrast, the main study expanded the analysis to include aspects of ID, such as expanded noun phrases, as well as nominalization indices across all available texts from multiple semesters. This broader scope was intended to better understand how the participants manifested individual differences in their EAW during their studies at HUs.

The second reason for the involvement of the same participants in the pilot and the main study was the small sample size and the limited number of essay submissions. Therefore, including these participants' texts in both the pilot and the main phases was a logical and consistent decision. Moreover, unlike human characteristics, which may be influenced or altered over time due to learning, reflection, or repeated exposure to similar questions or experiences, written texts remained fixed once they were produced. This permanence ensures consistency and reliability in the data, making written texts ideal for reanalysis across different phases of a study.

3.7 Data Collection Procedures

The data collection procedures were organized according to the qualitative and quantitative aspects of the study. Semi-structured interviews were employed to gather qualitative data, while students' researched writing (i.e., submitted essay assignments) was analyzed for quantitative data. The following sections describe these two data collection procedures.

3.7.1 Interviews and Checklist (Phases 1 and 2)

In Phase 1, the semi-structured interview protocol was implemented after the participants signed the letter of consent. Each participant took part in two interview formats, either face-to-face or online, conducted by the researcher. The researcher read out the questions to the participants. In cases where the questions are unclear or ambiguous, the participants may request further clarification from the researcher regarding the purpose of the questions.

The interviews consisted of 36 questions organized into six thematic categories: *academic backgrounds* (n=6), *academic writing experiences* (n=5), *academic writing strategies* (n=12), *faculty support for academic writing* (n=3), *academic writing in a non-native English-speaking environment* (n=6), and *writing feedback* (n=4). The complete interview guide is available in Appendix E.

In Phase 2, the participants were asked to recall the strategies they employed while completing their essay assignments. This phase served as a retrospective follow-up interview to support the data collection in Phase 1, particularly in cases where they had omitted or forgotten to mention certain writing strategies.

This interview checklist included 16 multiple-choice questions related to different stages of the academic writing process. The participants were allowed to mention more than one strategy per question. During the interview, the researcher recorded responses by ticking the most relevant answers on an interview checklist sheet (in Excel format). For example, when the participants were asked, "*What did you do before writing your essay assignment in Semesters 1, 2, and 3?*", they might respond with "*brainstorming*" for semester 1, "*mind-mapping*" for semester 2, and "*collecting relevant reading sources*" for semester 3. The researcher then selected the corresponding options on the checklist. These selections were later analyzed based on frequency to identify commonly used writing strategies. The full interview checklist guide can be seen in Appendix F.

Some participants demonstrated clear recall of their strategies, while others encountered difficulty. To assist them, the researcher suggested possible strategies from the

checklist to help prompt their memory. If a suggested option matched the participant's recollection, it was recorded. However, if no listed option aligned with their response, the question was skipped. To minimize recall bias, the participants were asked each question twice, and at the end of the session, they were invited to mention anything they might have forgotten.

The interviews were conducted in Indonesian, as using the participants' native language helped reduce potential language barriers and ensured more accurate responses.

Most interviews with participants studying at universities in Budapest were conducted offline, while the interviews with those residing in other cities, including Szeged, Pécs, and Győr, were conducted online. For face-to-face interviews, the researcher suggested suitable public locations for audio recording, such as a park or a café. All interviews were recorded using a mobile phone in audio-only format. The audio files were then stored on a laptop, protected by security passwords. This ensures that the data remains secure and accessible only to the researcher.

For online interviews, platforms such as Zoom and Skype were used due to pandemic-related restrictions and geographical challenges. These sessions were recorded in audio or video format, following guidelines by Busetto et al. (2020).

Each interview, whether online or offline, lasted approximately 30 to 40 minutes. Due to the large file size, the recordings were uploaded to YouTube as private, password-protected videos, accessible only by the researcher. This method mirrored the data security protocols used for offline recordings.

3.7.2 Academic Essays (Phase 3)

For the quantitative data collection procedures, the researcher asked the participants to submit copies of their graded research essays from each semester during their master's program. Each essay was to meet the minimum length requirement of 1,500 words, as set by this research project. Altogether 32 essays were collected, covering one essay per student per semester. One essay is missing because one student, Sri, did not produce any essays in Semester 3.

The data collection was divided into two rounds. The first round included the students who began their studies in the 2019/2020 academic year (n=9 students, 27 essays), and the second round involved those who started in 2020/2021 (n=3 students, 8 essays). The collected essays were analyzed using Coh-Metrix to generate numerical data related to ID.

The academic essays used in this study were researched writing graded by lecturers as part of the participants' course requirements. Research-based writing refers to tasks assigned by the lecturers that required students to develop academic essays with well-structured

arguments supported by evidence and relevant theories. The students were required to include proper citations and consult a variety of academic sources, such as journal articles, books, and credible online publications, with an adequate list of references. In addition, these essay assignments were given within a specific timeframe and had to be submitted by a given deadline.

Since these essays were submitted to fulfill course requirements, the subject matters, topics, and assignment instructions varied depending on the participants' fields of study. Most of the essays submitted to the researcher were related to the students' final thesis work.

The next step in preparing the essays for Coh-Metrix analysis involved grouping them according to two criteria: students' English proficiency levels and semesters. The texts were screened for length. Once verified, the essays were analyzed using Coh-Metrix. After the tool generated the numerical data, the results were saved as Word documents.

The students' essays focused on issues in social sciences and economics discussed in classes with the help of the subject teachers. The broad aim of the essays was to select and investigate a topic in a detailed way. In-text citation was a requirement only in some of the cases.

However, it is worth noting that Coh-Metrix does not have a feature to remove in-text citations (e.g., proper nouns, numbers), which may affect the analysis of content nouns. The tool calculates all metrics, including the frequency of content nouns, based on incidence scores without data cleaning. Despite these limitations, the quantitative data generated from the essays were systematically prepared for future research analysis.

3.8 Data Analysis Procedures

The data analysis of this mixed-methods study was divided into three parts: qualitative data, quantitative data, and text analysis.

3.8.1 *Qualitative Data Analysis Procedures*

The qualitative data analysis began with listening to the audio or video recordings, followed by transcribing the interviews using the Web Speech API, a speech recognition application that converts spoken language into text (Adorf, 2013). To analyze and code the transcripts, the researcher utilized ATLAS.ti, a computer-assisted qualitative data analysis software that facilitates qualitative data analysis, such as coding, analyzing transcripts and field note analysis, building literature reviews, creating network diagrams, and data visualization (Friese, 2014; Woods et al., 2016; Woolf & Silver, 2018).

Atlas.ti was selected as the primary tool for data management and thematic analysis dealing with academic writing experiences, including challenges, support, and attitudes, as well as academic writing strategies based on writing taxonomy. This tool provides strong support for an interpretive analysis, and its use ensured methodological rigor and transparency. Furthermore, it also allowed for a deeper exploration of emerging themes and relationships within the data. The codification results were classified based on their occurrence and frequency, as well as briefly discussed in the analysis sections, with participants' names being completely anonymous.

The classification of the data set in this study was carried out in three stages. First, open coding was used to identify initial patterns of ideas across the dataset. Second, these codes were then classified into broader categories and refined into themes. Finally, the coding analysis involved organizing the themes into main and subcategories. The coding was validated by cross-checking with the original interview extracts to ensure accuracy and consistency.

A total of 238 codes related to academic writing experiences were gathered from the interview transcripts and are presented in the tag cloud in Figure 4. These codes were subsequently classified into seven major categories: *writing process*, *subject course*, *institutional policies*, *academic backgrounds*, *writing supports*, *attitudes*, and *writing strategies*. These thematic codes were then used to structure the analysis of the results.

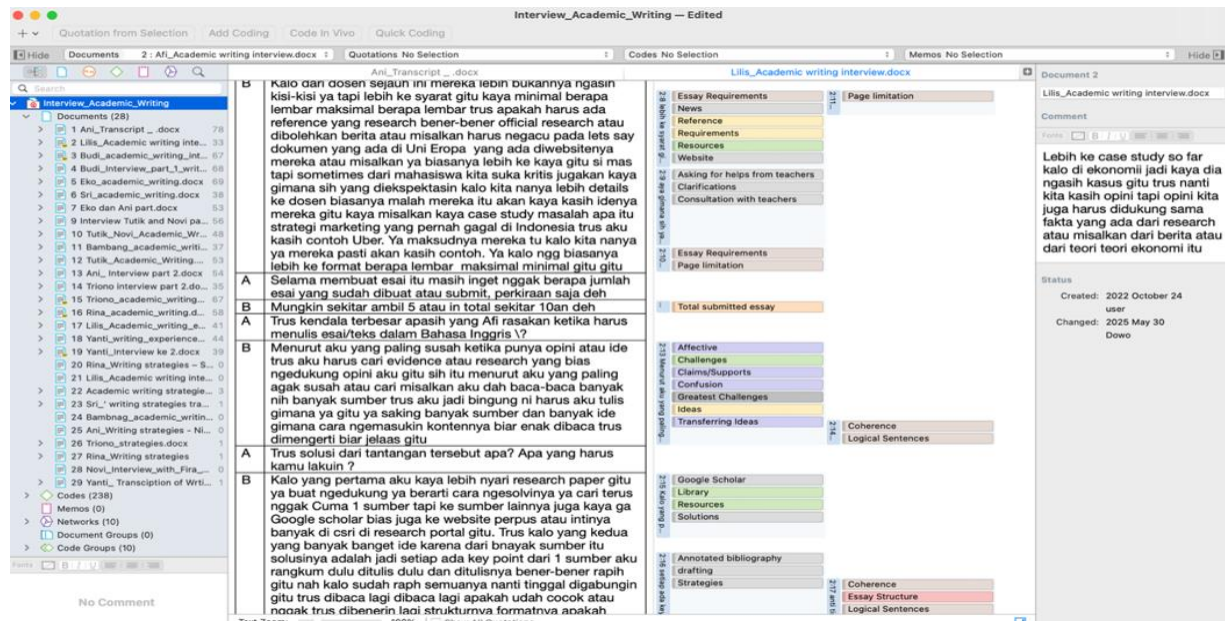
Figure 4
Tag clouds from thematic analysis in ATLAS.ti



In the case of the interview transcripts, brief translated excerpts were referenced using the numbers and names generated by the ATLAS.ti software (see Figure 5). A total of 945 quotations from the extracts were labeled using a two-number system that identifies the

sources. For example, the label 1:32 "*translated extracts*" means that the quotation came from participant 1's transcript (i.e., Ani, B2 level) and was quotation number 32.

Figure 5
Codification analysis on Atlas.ti 8.4.5



3.8.2 Quantitative Data Analysis Procedures

Quantitative data analysis was employed to examine two main areas: (1) the use of academic writing strategies, with a focus on the taxonomy of academic writing strategies (i.e., *cognitive, metacognitive, social, and affective*) as reported through the interview checklist, as well as (2) the manifestation of ID in students' academic essays during their master's studies at HUs. The utilization of academic writing strategies was assessed using data from the interview checklist, with frequencies analyzed and descriptive statistics computed using Microsoft Excel Analysis ToolPak.

Descriptive statistics were used to investigate and describe the utilization of writing strategies employed by B2 and C1 level students and the pattern of ID that appeared in their academic essays. With a small sample size ($n=11$), these descriptive statistics allowed us to spot trends and to compare the two groups. This method aligns with the study's exploratory goals, providing an initial understanding of these situations before applying inferential statistical analyses in future research.

For the interview checklist analysis, the total number of student responses was calculated and used as the raw data of the statistical analysis. When students reported using a

particular writing strategy multiple times, such as *looking up definitions* twice, each occurrence was counted separately (see Figure 6).

Figure 6
Data analysis of the interview checklist

	Bambang_Gyor			Sri_Pecs			Yanti_ELTE			Budi_BME			Anik_Corvinus			Iriano_Corvinu			Eko_Corvinus			Novi_Corvinus		
1) How did you organize the overall structure of your writing process?	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Drafting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Writing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Revising	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Finishing / justifying	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Submitting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
other																								
2) What did you do before writing your submitted essays?																								
Brainstorming	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mind mapping	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Searching for the literature	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reading widely	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Synthesizing what has read	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

To analyze ID patterns, data were generated using Coh-Metrix based on relevant ID indices listed in Table 19. The numerical results were then calculated using the Excel Data Analysis ToolPak. These results were used to compare the patterns of ID and their relationships to English proficiency levels during their master's studies at HUs. The comparisons were based on the descriptive statistics analysis.

3.8.3 Text Analysis: Analyzing Students' Essays Using Coh-Metrix

For text analysis, the essays were classified according to B2 and C1 levels of English proficiency. The texts were then uploaded to Coh-Metrix (Graesser et al., 2004) to obtain numerical data on ID. Coh-Metrix is a highly advanced and comprehensive automated program for analyzing text, encompassing the evaluation of both text and speech. The tool has been extensively utilized by numerous researchers (e.g., Finch, 2015; Jung & Shin, 2021; Mahadini et al., 2021; Xu & Liu, 2016) in recent decades to investigate various aspects of students' texts across different academic fields. These evaluations encompass multiple levels, including the text, paragraph, sentence, and word. This tool plays a crucial role in both corpus analysis and education.

Coh-Metrix was selected for the current investigation, as its usefulness has been demonstrated by the above-mentioned studies to investigate discourse analysis in connection with academic writing, resulting in a significant contribution to revealing the patterns of ID in EFL students in writing academic essays.

For the current research, information density (ID) was measured using indices of lexical density, expanded noun phrases, and nominalization (Fang, 2004; McNamara et al., 2014; Read, 2000). High ID indicates that a text contains a greater proportion of content words

compared with function words, more frequent use of modifiers in noun phrases, and greater use of nominalizations, resulting in more abstract language. Conversely, low ID reflects the opposite patterns.

This study focused on six relevant ID indices, including the frequency of content words, specifically nouns (WRDNOUN), verbs (WRDVERB), adjectives (WRDADJ), and adverbs (WRDADV) in comparison to function words; the frequency of expanded noun phrases, measured as the average number of modifiers per noun phrase (SYNNP); and nominalizations, assessed through concreteness indices (WRDCNc). Even though Coh-Metrix does not explicitly provide a direct nominalization index, the level of abstraction in a text can be inferred through concreteness measures. A lower frequency of concrete words indicates a more abstract text, which is closely associated with the use of nominalizations (McNamara et al., 2014). For a more detailed discussion, see Section 2.4.1.

In Coh-Metrix, the analysis of relevant ID indices was based on the incidence score and mean numbers. The incidence score is a measure that counts the number of occurrences of a particular category per 1,000 words in a text (McNamara et al., 2014). A higher incidence score indicates that the word or concept appears more frequently and is more prominent in the text. For example, the present study assumes a text passage consisting of 1000 words. Within this text, the word "*study*" is observed 20 times. The incidence score for the *study* is calculated by dividing the number of its occurrences, which is 20, by the total number of words in the passage, which is 1000. Therefore, the incidence score of the *study* in this text passage is 0.02. Furthermore, as stated by McNamara et al. (2014), the incidence score for content words is significant because it provides a quick indication of how much meaningful content is present in the text. In other words, it is a measure of the substantive information contained in the text. As a result, the labels indicate key information regarding the frequency of occurrences relating to information density in Indonesian B2 and C1 English proficiency level students' essay writing. Table 19 shows relevant indices selected for this study to measure ID. In addition, the statistical data analysis results were followed by data interpretation.

Table 19*Relevant indices of ID for the present study*

Labels	Indices	Descriptions
Lexical density	WRDNOUN, WRDVERB, WRDADJ, WRDADV	the frequency of content words, incidence score
Expanded noun phrases	SYNNP	the mean number of modifiers per noun-phrase
Nominalization (by looking at concreteness)	WRDCNCc	The mean number of concrete words reflects that a lower frequency of concrete nouns corresponds to a higher use of abstract nouns, including those formed through nominalizations.

Adapted from McNamara et al. (2014).

3.9 Limitations

It is important to acknowledge that several methodological limitations were encountered during the employment of mixed-methods research for the current study. First, the researcher was unable to include subject teachers as participants due to limited access and time constraints to conduct interviews.

Second, this research was considered a small-scale investigation, given the limited number of participants enrolled in social science programs between 2019 and 2020. As a result, further development is necessary, particularly in expanding the quantitative data collection, including increasing the sample size and the quantity of essays produced by participants.

Third, the quantitative data analysis was conducted using a single analytical technique, which restricted the scope and depth of the findings. Employing a more diverse range of statistical methods in future studies may promote comprehensive insights.

Fourth, the researcher's personal backgrounds and experiences may have influenced the participants' responses, potentially contributing to social desirability bias, specifically during the interview process.

Fifth, the use of Indonesian as the primary language during interviews presented challenges in the translation process because decisions taken during translation may lead to misinterpretations causing bias when analyzing data, which, in turn, may potentially affect interpretation as well. To mitigate this risk, the researcher carefully reviewed the translation and revised the initial version with the assistance of writing tools such as QuillBot, which led to a more polished and precise translation.

3.10 Summary

This mixed-methods study addressed the students' EAW experiences in a non-native English-speaking environment. A convergent parallel mixed methods design was used, which is a type of design in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged.

In this study, qualitative data collection involving semi-structured interviews and content analyses was applied to answer the challenges in EAW as well as to look at strategies employed by the students in order to respond to the challenges. Furthermore, the interview checklist was conducted to recheck the students' responses to strategies in EAW during the first interviews.

In terms of quantitative data, descriptive statistics were used in this project to examine the utilization of writing strategies and the patterns of ID in the participants' texts, based on their initial levels of English proficiency.

The reasons for collecting both qualitative and quantitative data were to answer six research questions that required a mixed-methods approach, as well as to gain more complete and in-depth information on Indonesian graduate students' experiences in EAW at HUs.

CHAPTER 4

CHALLENGES, SUPPORTS, AND ATTITUDES IN EAW

This chapter examines key findings in relation to the first three main research questions: (1) *What challenges do Indonesian graduate students face when writing academic essays in English?* (2) *What types of support do the students receive to address the challenges in EAW?* (3) *What attitudes do they hold toward EAW in a non-native English-speaking environment?*. This will be followed by the discussion of the topics.

4.1 Results

4.1.1 *Challenges Indonesian Graduate Students Face When Writing Academic Essays in English*

Based on codification data analyses, the study has resulted in 47 themes, which were classified into four big categories relating to challenges Indonesian Graduate Students (IGSs) face in writing academic essays: *the writing process* ($n = 18$), *subject courses* ($n = 19$), *institutional policies* ($n = 5$), and *external challenges* ($n = 5$). The categories and themes are illustrated in Table 20.

Table 20
The students' English academic writing challenges at Hungarian universities

Categories	Sub-categories	Themes
Category 1: The writing process	academic skills and convention	• low reading comprehension • difficulties in summarizing previous research studies • poor time management • plagiarism
	students' language proficiency	• overuse of passive sentences • poor knowledge and lack of technical vocabulary • word repetitions • grammatical errors • difficulties in finding equivalent words in English • L1-Indonesian interference
	structure and content	• clarity and coherence • essay structure conventions
	cognition and affect	• lost ideas and being stuck • difficulties in transferring thoughts into writing • diffidence • exhaustion • impatience

Categories	Sub-categories	Themes
		• lack of motivation
	Total number of themes	18 themes
Category 2: The subject course	sources	• limited access to credible data sources • insufficient references from the lecturers
	essay topics	• long quest for assigned topics • students' limited topic knowledge
	essay requirements	• deadline completion • unrealistic lecturer expectations for academic writing quality • adherence to text length requirements • the level of critical analysis • adherence to topic relevance criteria • meeting general task descriptions
	subject-teacher competencies	• subject-lecturers' low English proficiency • lecturers' poor language awareness • lack of clarification and corrective feedback from the lecturers • team teaching' lack of consistency • lecturers' poor awareness of plagiarism • lecturers' slow response
	subject-course instruction	• technical problems during online learning • unclear instruction • discomfort of virtual learning
	Total number of themes	19 themes
Category 3: The institutional policy	issues in relevance to English academic writing-related courses	• a lack of an English for academic writing course • insufficient course content • overlapping contents between the Research Methods and English for Academic Writing classes
	online database and library provision	• inaccessible online databases and journals due to off-campus residency • a lack of an English source database in the university library
	Total number of themes	5 themes
Category 4: External factors	technical challenges	• lost internet connection • unsupported equipment
	environmental issues	• distraction during writing
	time management	• long time writing due to unfamiliar topics • short-time allotments
	Total number of themes	5 themes
Total numbers of all themes		47 themes

4.1.1.1 Challenges in Relation to the Writing Process. Based on Table 20, the category of the writing process encompasses a variety of challenges that the participants may

encounter while researching, organizing, and composing their academic essays in English. The challenges consist of 18 themes, which are divided into four subcategories.

First, the challenges the students face involve *academic skills and convention*. It consists of four themes that describe challenges related to higher-order academic abilities, such as comprehending academic texts, summarizing information from relevant sources, poor time management, and adhering to integrity standards like avoiding plagiarism.

Second, the subcategory of *students' language proficiency* outlines six themes focusing on grammatical aspects, vocabulary, expression, and the influence of their first language (L1).

Third, the subsequent challenge in the writing process is relevant to *structure and content*, consisting of two themes: clarity and coherence and essay structure conventions. These themes deal with difficulties in logical organization, clear presentation, and conventional formatting of ideas and arguments within an academic essay.

Fourth, the subcategory of *cognition and affect* covers challenges faced by the participants in writing academic essays in English. This comprises six themes that describe challenges related to their mental processes during writing (e.g., formulating thoughts) and emotional or psychological factors such as confidence and motivation that influences their ability to write effectively.

Table 21 outlines the challenges that IGSs face when writing academic essays in English in connection with the writing process, including extracting examples. (For more excerpts, see Appendix A)

Table 21

Challenges Indonesian graduate students face in English academic essay writing regarding the writing process

Category 1: The Writing Process		
Sub-categories	Themes	Extract examples
Academic skills and convention	low reading comprehension	"I find it challenging to comprehend articles with complex vocabulary." Triono, C1-level
	difficulties in summarizing previous research studies	"It is really difficult for me to explain previous complex research findings in a simple way." Eko, C1-level
		"While searching for evidence from sources to support my arguments, I often become confused due to the large number of texts I read. This makes it difficult to integrate the ideas from the sources into my writing...." Lilis, C1-level
	plagiarism	"The acceptable level for plagiarism is 15% or less. It was difficult ... to avoid copying another person's work." Eko, C1-level
	poor time management	"I struggled with my time management, which led to the late submission of my second essay. I underestimated

		<i>the amount of time required for drafting; as a result, I found myself rushing to complete the assignment at the last minute.</i> " Eko, C1-level
Students' language proficiency	overuse of passive sentences	<i>"My lecturer pointed out that I overused the passive voice in the text."</i> Tutik, B2-level
	poor knowledge and lack of technical vocabulary	<i>"Sometimes, I find it difficult to distinguish between everyday words and academic ones, for example, using 'get' instead of 'obtain.' In my essay, I used to 'get' more often until I realized that 'obtain' is a suitable synonym."</i> Budi, B2-level
	word repetitions	<i>"Due to my limited vocabulary, I am unable to use many distinct words. As a result, I repeatedly use the same words."</i> Yanti, B2-level
	grammatical errors	<i>"My big challenge in writing is always about grammar."</i> Rina, C1-level
	difficulties in finding equivalent words in English	<i>"When I think of an idea in Indonesian, I often struggle to translate it into English because I cannot find a suitable word for it."</i> Ani, B2-level
	L1-Indonesian interference	<i>"Writing academic essays in English is difficult since I continuously think in Indonesian."</i> Tutik, B2-level
Structure and content	clarity and coherence	<i>"My teacher said that my text was unclear and unstructured."</i> Sri, B2-level
		<i>"It may appear challenging to ensure that ideas from one paragraph flow into the next while writing."</i> Yanti, B2-level
	essay structure conventions	<i>"Because my lecturer feels uncomfortable with brackets in the text, I have to use a footnote."</i> Tutik, B2-level
Cognition and affect	lost ideas and being stuck	<i>"...particularly when I get stuck and have no idea what to write."</i> Ani, B2-level
		<i>"I struggled to decide what perspective to take on the topic"</i> Rina, C1-level
		<i>"I get stuck when trying to transfer my ideas into writing, which makes it difficult to continue the discussion. So, I often end up repeating ideas I have already mentioned."</i> Budi, B2-level
	difficulties in transferring thoughts into writing	<i>"I constantly struggle when I have a lot of ideas but no idea how to put them into sentences."</i> Triono, C1-level
	diffidence	<i>"Previously, I struggled to express my arguments with confidence."</i> Budi, B2-level
		<i>"Reading a few articles made me doubt what I had written. Now I'm unsure if I should rewrite it or just delete it."</i> Lilis, C1-level
	exhaustion	<i>"Sometimes I'm too tired to edit my writing, so I just send it right away."</i> Eko, C1-level
		<i>"It was too much for me when we started writing ten-page essays for each subject during semester two."</i> Novi, C1-level
	impatience	<i>"...seems like I don't have much time, so I write it in a rush."</i> Ani, B2-level
	lack of motivation	<i>"I am stuck in writing due to lack of motivation."</i> Rina, C1-level

4.1.1.2 Challenges in Relation to the Subject Course. Another challenge the students face in EAW deals with the subject course. The category of subject course consists of 19 themes, which are further classified into five subcategories.

The first sub-category focuses on the challenges that IGSs face in connection with *sources* (n = 2). The study found that they reported difficulties in accessing credible data sources and insufficient references from their lecturers. These challenges may significantly direct their research and the quality of their academic writing.

The second subcategory is related to *essay topics* (n = 2). This challenge involves a long quest for assigned topics and students' limited topic knowledge. These issues can result in a lack of enthusiasm, motivation, and engagement in the writing process.

The third subcategory is relevant to *essay requirements* (n = 6), involving deadline completion, unrealistic lecturer expectations for academic writing quality, adherence to text length requirements, the level of critical analysis, adherence to topic relevance criteria, and meeting task descriptions. These requirements are critical to academic essay writing, and failing to meet them can significantly impact their grades.

The fourth sub-category gives emphasis to *subject teacher competencies* (n = 6). The students mentioned that they find difficulties due to their subject lecturers' low English proficiency, lecturers' poor language awareness, lack of clarification and corrective feedback from the lecturers, inconsistency in team teaching, lecturers' poor awareness of plagiarism, and slow response from the lecturers. These issues may result in miscommunication, confusion, and lack of motivation.

The final subcategory deals with challenges in relation to *subject-course instruction* (n=3). The participants gave an account of *technical problems during online learning*, such as internet connectivity issues, software glitches, and hardware malfunctions. They also reported *unclear instruction*, which can cause confusion and hinder their learning, as well as the discomfort of virtual learning.

Table 22 shows the challenges the students face in English academic essays regarding the category of *the subject courses*, including extracted examples. (For more excerpts, see Appendix A)

Table 22*Challenges IGSs face in academic essays in English regarding the category of the subject course*

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
Sources	limited access to credible data sources	<i>"The problem is that the data I found was only available in French and was not publicly accessible."</i> Triono, C1-level <i>"Finding reliable sources of information is a significant challenge."</i> Bambang, B2-level
	insufficient references from the lecturers	<i>"During semester two, my lecturer did not provide sufficient references."</i> Budi, B2-level
Essay topics	long quest for assigned topics	<i>"Since we can choose any topic for our essay, it can be difficult. Particularly when the topic is completely unfamiliar. I could spend hours researching this topic alone."</i> Lilis, C1-level
	students' limited topic knowledge	<i>"I was assigned a topic about green corporation industries talking about the film industry, a subject about which I know absolutely nothing."</i> Novi, C1-level
		<i>"Due to the fact that I must adhere to my lecturer's ideas, which are mostly European in nature and completely at odds with my background as a citizen of an ASEAN country, combining these two different aspects in my essay is rather difficult."</i> Lilis, C1-level
Essay requirements	deadline completion	<i>"My score was reduced because I was late to submit my essay."</i> Eko, C1-level
	unrealistic lecturer expectations for academic writing quality	<i>"It is possible that the essay initially received a 5 but was later downgraded to a 4 due to poor grammar."</i> Ani, B2-level
		<i>"My lecturers in the International Relations program wanted the students to write well-written academic texts with a lot of requirements."</i> Tutik, B2-level
	adherence to text length requirements	<i>"One requirement is in regard to the text's length. Having a lengthy text will result in a lower grade."</i> Eko, C1-level
		<i>"Our essay will be graded on five different criteria. We must tally up one point for each. If we fail to provide, say, 10,000 words for a word category, our score will be reduced. When we write for 10% longer than those accepted numbers, the score is reduced by 0.75, and when we write for 20% longer, the score is reduced by 0.25."</i> Eko, C1-level
	the level of critical analysis	<i>"I didn't receive a good grade for my second semester essay because there was inadequate critical analysis."</i> Sri, B2-level
	adherence to topic relevance criteria	<i>"Once you fail to relate to the topic of your essay assignment, your score will be reduced. However, you will get a five if you succeed."</i> Ani, B2-level
	meeting general task descriptions	<i>In the Employer Branding course, the lecturer gave us a general topic. Based on my previous studies in Indonesia, I thought that it was related to companies. But here in Hungary, it seemed more</i>

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
		<i>focused on the employee psychology. So, I wasn't sure if my essays met the lecturer's expectations. That was one of my challenges in the first-year study, and I didn't really understand how lecturers typically evaluated the essays.</i> Rina, C1-level
Subject-teacher competencies	subject-teachers' low English proficiency	<i>"Some of the professors in my department have trouble speaking or writing English."</i> Sri, B2-level
	lecturers' poor language awareness	<i>"The lecturers in my department don't pay much attention to language use or grammar."</i> Lilis, C1-level
	lack of clarification and corrective feedback from lecturers	<i>"The score is just quantitative, so I'm hoping receiving the qualitative part will show where it falls short and where it excels."</i> Lilis, C1-level
		<i>"I sometimes question how I receive that grade. I am clueless as to which sections of my text are strong and which need improvement."</i> Sri, B2-level
	team teaching's lack of consistency	<i>"The course of English for academic writing has two lecturers. As a result, when giving an essay task, lecturer A assigns the task with their own requirements while lecturer B corrects the task differently. We are perplexed since the two lecturers are not communicating well with one another."</i> Triono, C1-level
	lecturers' poor awareness of plagiarism	<i>"No lecturers in my department provide instruction on how to write an appropriate and efficient essay without plagiarizing."</i> Yanti, B2-level
Subject-course instruction	lecturers' slow response	<i>"I submitted my paper multiple times, but my lecturer never responded. So, I was forced to wait for a while. I only worry that my lecturer did not read my email."</i> Triono, C1-level
	technical problems during online learning	<i>"I found online learning difficult because technical problems seem to happen during the class, such as unstable internet connection, frozen video, and unclear sounds/voice, making it difficult for me to understand the subject material."</i> Triono, C1-level
	unclear instruction	<i>"The explanation is vague in some way."</i> Lilis, B2-level
	discomfort of virtual learning	<i>"I don't enjoy online learning because I cannot talk to my classmates in person."</i> Triono, C1-level

Table 22 illustrates that IGSs face various challenges in EAW, particularly influenced by aspects within the subject course. These difficulties encompass several areas, such as sources, where the students encounter limited access to data sources, finding relevant sources, and insufficient sources provided by their lecturers. Furthermore, the students also struggle with selecting appropriate essay topics, including the extensive effort required to identify appropriate subjects, and their limited topic knowledge, including a notable mismatch between their understanding and the lecturer's intended topic perspective.

Essay requirements also pose significant challenges, such as strict deadlines, unrealistic lecturer expectations for academic writing quality, precise text length adherence, the demanded level of critical analysis, meeting task descriptions, and difficulty in adhering to topic relevance criteria.

Moreover, issues concerning subject-teacher competencies present challenges for IGSs in writing academic essays, such as low English proficiency among subject teachers, inconsistency in team teaching, unrealistic expectations, poor awareness of plagiarism guidance, and slow responsiveness.

Finally, the subject-course instruction environment contributes to these challenges, including technical problems during online learning, unclear instructions when assigning essay writing tasks, and general discomfort associated with virtual learning. These combined aspects can greatly impact students' ability to successfully compose academic essays in English.

4.1.1.3 Challenges in Relation to the Institutional Policies. An additional challenge of IGSs' experience in writing academic essays in English is concerned with the category of *institutional policies*. This category consists of 5 themes, each of which is further divided into two subcategories. The first sub-category deals with issues that are directly related to EAW courses (n=3), including the absence of an English for Academic Writing course, insufficient content of the English academic writing courses that are offered, and overlapping content between the research methods and the English for academic writing course. The second sub-category is related to online database and library provision (n=2). The first theme is inaccessibility of online databases and journals for students who reside off-campus. The second theme is a lack of an English source database in the university library.

Table 23 demonstrates challenges the participants face in writing English academic essays with regard to institutional policies, including extracting examples. (For more excerpts, see Appendix A)

Table 23

Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies

Category 3: The Institutional Policies		
Sub-categories	Themes	Extract examples
Issues in relevance to English academic writing-related courses	a lack of an English for Academic Writing course	<i>"We do not have a course of English for academic writing."</i> Budi, B2-level
	insufficient course content	<i>"I hoped that by enrolling in English for academic writing and communication, I would learn about fundamental theories relating to international relations that could be applied in the field of social science situations. Sadly, there were no international relations theory-related issues raised in this discussion. The subject mainly discussed general research paradigms."</i> Eko, C1-level
	overlapping contents between the Research Methods and the English for Academic Writing courses	<i>"In the third semester, we enrolled in a research methods course that would primarily focus on the thesis research design. Unfortunately, the course appeared to be the same as the course of English for academic writing that we enrolled in semester 2."</i> Eko, C1-level
Online database and library provision	inaccessible online databases and journals due to off-campus residency	<i>"Since we no longer reside in the campus dormitory, we are unable to access the campus internet, which previously allowed automatic downloads of online articles. Now, only abstracts are accessible."</i> Tutik, B2-level
	lack of an English source database in the university library	<i>"The majority of books at the university library are in Hungarian, and there are very few in English."</i> Triono, C1-level <i>"It is rather difficult to find books in English at my university library, so I need to visit other libraries, such as the Central European University (CEU) library, to access the references I need."</i> Ani, B2-level

Table 23 highlights institutional policies as another factor contributing to the challenges the students face when writing English academic essays in English. This challenge includes two main issues: *the relevance of English academic writing-related courses* and *the provision of online databases and libraries*.

Regarding the first issue, the study found that the absence of a dedicated English for Academic Writing class, insufficient course content, and overlapping content between the courses of Research Methods and English for Academic Writing significantly affect students' ability to complete their essay assignments.

The second issue concerns the availability and accessibility of online databases and library provisions. These factors play a crucial role in students' academic writing challenges. Limited access to relevant sources and materials can hinder students' ability to conduct thorough research and gather sufficient evidence to support their arguments. Without proper

resources, students may struggle to meet the academic standards expected of them, leading to lower-quality essays and grades.

Moreover, the students face challenges accessing the university's library because of their residential location. To access the digital library, they are required to use the campus internet connection; without this, they cannot access the library. Additionally, a lack of English references in the campus library further impacts the successful completion of students' essay assignments. The students are then forced to rely on online resources or purchase books independently. This can be particularly challenging for students who may not have the financial means to purchase books or access online resources.

4.1.1.4 Challenges in Relation to External Factors. The subsequent challenge encompasses external factors, including five themes under three sub-categories: *technical challenges* (n=2), *environmental issues* (n=1), and *time management* (n=2). Table 24 shows the challenges in connection with general and external factors.

Table 24

Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies

Category 4: General and external factors		
Sub-categories	Themes	Extract examples
Technical challenges	lost internet connection	<i>"The internet connection was suddenly interrupted while I was searching for relevant sources during the writing process. This disruption discouraged me from continuing to write."</i> Triono, C1-level
	unsupported equipment	<i>"I remembered that my lecturer asked me to include statistical analysis using SPSS, but due to technical issues with my laptop, I could not install the software."</i> Triono, C1-level
Environmental issues	distraction during writing	<i>"I cannot keep my phone away from me, and that makes it hard to finish my writing on time."</i> Rina, C1-level
Time management	long time writing due to unfamiliar topics	<i>"It would take me a long time to finish my essay when the given topic was unfamiliar."</i> Novi, C1-level
	short-time allotments	<i>"Each week, we are required to submit an essay on an assigned topic, with only three days allotted for completion."</i> Ani, B2-level

The information presented in Table 24 underlines challenges faced by IGSs when writing academic essays in English, particularly those influenced by external factors. These

include technical challenges, such as unreliable internet connections and unsupported equipment, which hinder the writing process and disrupt access to important resources. Furthermore, the environmental issues category emphasizes distraction during writing, often caused by personal devices.

In addition, IGSs also encounter *time management* issues, which address the difficulties in managing their time effectively for completing their essay assignments. This category contains three themes: the demand of unfamiliar topics and short deadlines. Notably, time allocation seems to be a significant issue in EAW, as the process of writing an academic essay can be laborious and time-consuming, especially when students must write about unfamiliar topics.

While institutional policies and the subject course categories are typically classified as external factors, Category 4 has a different factor. The main difference lies in the fact that the former are controlled by the institution, whereas the latter originates from the students' broader environments or personal circumstances.

4.1.2 *Support the Students Receive in English Academic Writing (EAW) at Hungarian Universities (HUs)*

Apart from the challenge the students encounter when writing academic essays in English, the students received support for successfully accomplishing their academic essays. Table 25 demonstrates research results relating to support for IGSs in English academic writing during their studies in Hungarian higher education. The support is correspondingly classified based on three categories with 23 themes involving *institutional policies* (n=8), *subject courses* (n=8), and *the students' prior knowledge experiences* (n=8). (see Appendix B for a complete list of extracts.)

Table 25

The support Indonesian graduate students receive in English academic essay writing at Hungarian universities

Categories	Sub-categories	Themes
Institutional policies	availability of academic writing-related courses	• available courses in English for academic purposes • available courses to support thesis writing
	accessible learning platforms	• the accessibility of universities' digital libraries • public access to academic information via Moodle, Neptun, Microsoft Teams, and Canvas • the provision of automatic plagiarism checking tools with Urkund • free access to download online subscribed journals with students' institutional accounts and the university's internet connection
	obtainable academic engagement	• the university's research-based involvement • joining in conference and forums on publication events
	total	8 themes
Subject courses	students' perceived improvement in EAW	• subject-teachers' motivating encouragement • feedback on language concerns • guidance on essay content development • the allocation of free time for student consultation • accessible and timely lecturer feedback through digital platforms
	essay topics	• students' perceived relevance of assigned topics • integration of assigned topics with master's thesis
	sources	• secondary sources provided by lecturers
	total	8 themes
Graduate student prior experiences	educational background and achievements	• pursuing higher studies in an English-speaking medium university • receiving external peer feedback on academic work
	English language proficiency development	• gaining learning experience for IELTS • working as an IELTS instructor • attending an English language course
	academic writing development	• producing research writing in English • completing a course in academic writing during undergraduate studies
	cultural adaptation and mobility	• gained experience through student exchange
total		8 themes
Total numbers of all themes		24 themes

Table 25 lists support that is available to IGSs to help them complete their academic essay writing assignments. The support can be classified into three categories: *institutional policies*, *subject courses*, and *graduate students' previous experience in academic writing*. The institutional policies support emphasizes the availability of courses related to academic writing, such as English for academic purposes and courses that assist with thesis writing. Accessible learning platforms refer to digital platforms that provide easy access to academic resources. This includes digital libraries, platforms like Moodle and Microsoft Teams that allow public access to academic information, plagiarism checking tools like Urkund, and free access to online journals through institutional accounts. The accessible academic engagement focuses on the university's research-oriented involvement and opportunities for students to participate in conferences and publication events.

The support regarding the subject courses category is centered around students' perceived enhancement of English academic writing skills. This encompasses topics such as the provision of motivating support from subject teachers, addressing language issues, enhancing content development, and scheduling dedicated time for student consultations. Prompt and timely responses from teachers and easy access to receive feedback are also important topics in academic writing assistance. What is more, the sub-category of essay topics explores the significance of assigned topics, their incorporation into the master's thesis research, and sources for students' references.

The support related to academic writing deals with graduate students' prior experience. This support encompasses their educational background and achievements, such as pursuing advanced studies in an English-speaking university and receiving recognition from external readers. The assistance of English language proficiency development is a sub-category that includes activities such as completing an academic writing course during undergraduate studies, gaining learning experience for IELTS, working as an IELTS instructor, and participating in English courses. Moreover, the development of academic writing skills is demonstrated through the production of research papers in English, while cultural adaptation and mobility involve the experiences of student exchange.

4.1.2.1 The Support regarding the Category of Institutional Policies. In connection with Table 25, IGSs enjoy support from the category of institutional policies, which is classified into eight themes based on three subcategories. The first subcategory pertains to *the availability of academic writing-related courses* (n=2), including courses in English for academic writing and courses to support thesis writing.

The second subcategory is related to *accessible learning platforms* (n=4), such as the accessibility of universities' digital libraries, public access to academic information via Moodle, Neptun, Microsoft Teams, and Canvas, the provision of automatic plagiarism checking tools with Urkund, and free access to download online-subscribed journals with students' institutional accounts and the university's internet connection.

The third subcategory gives rise to *obtainable academic engagement* (n=2), which includes university research-based participation and joining conferences and forums on publication events.

Table 26 illustrates the support the students receive in writing English academic essays with regard to institutional policies and includes extract examples. (For more excerpts, see Appendix B)

Table 26

The support Indonesian graduate students received in writing English academic essays with regard to the category of institutional policies

Category 1: Institutional Policies		
Sub-categories	Themes	Extract examples.
Availability of academic writing-related courses	available courses in English for academic writing	<i>"We have a class of English academic writing, in which we get assignments to write essays and have them corrected every week."</i> Ani, B2-level
		<i>"In the second semester, we have an Academic Writing and Communication course offered in a hybrid format, combining both online and in-person sessions."</i> Eko, C1-level
	available courses to support thesis writing	<i>"We have taken a course on how to write a thesis, including how to conduct a literature review and other thesis-related tasks."</i> Budi, B2-level
		<i>"At my faculty, academic writing is offered as an elective course, which I chose not to take. However, a thesis writing course is compulsory and must be completed later in the program."</i> Lilis, C1-level
Accessible learning platforms	the accessibility of universities' digital libraries	<i>"I usually look for references ... such as the university library website."</i> Lilis, B2-level
	public access to academic information via Moodle, Neptun, Microsoft Teams and Canvas	<i>"Due to online learning, we are required to submit our essay via Moodle."</i> Budi, B2-level
		<i>"I can find task requirements relating to the Middle East and the EU in Microsoft Teams."</i> Eko, C1-level

		<i>"We can find all information regarding the essay assignments uploaded by our lecturers on Moodle or Canvas, so we need to read the task descriptions carefully." Yanti, B2-level</i>
	the provision of automatic plagiarism checking tools with Urkund	<i>"When we submit our essay, it is automatically processed by Urkund, a plagiarism detection tool provided by our university. The essay must pass through this system before it is officially considered submitted." Tutik, B2-level</i>
		<i>"Besides Moodle, our university offers Urkund, a plagiarism detection system that helps assess the similarity index required by our lecturers." Eko, C1-level</i>
	free access to download online subscribed journals with students' institutional accounts and the university's internet connection	<i>"I can easily access and download online articles using my institutional account, as the university's Wi-Fi automatically logs me in and grants access to the articles." Rina, C1-level</i>
Obtainable academic engagement	the university research-based participation	<i>"I frequently participated in a research week event during my first day as a university student. I had to write up an essay every week to be submitted at the event." Bambang, B2-level</i>
		<i>"There is a community-based research project in our faculty, in which each group is required to submit a proposal." Lilis, C1-level</i>
	joining in a conference and forum on publication events	<i>"Following my lecturer's suggestion, I submitted my paper to both the faculty conference and an essay competition." Ani, B2-level</i>
		<i>"I have written three draft articles for publications, and one of them is for an international conference." Bambang, B2-level</i>

Table 26 classifies the different forms of institutional policy assistance provided to IGSs in English academic essay writing. The table is organized into sub-categories such as the availability of academic writing-related courses and contains topics such as the presence of courses specifically focused on English for academic writing and courses that provide assistance with thesis writing. For instance, some students indicated the existence of a specialized course focused on English academic writing, in which they are given weekly assignments and receive feedback on their work. Furthermore, the curriculum includes courses that teach the necessary skills for writing a thesis, such as conducting comprehensive literature reviews and completing other associated thesis assignments.

The second sub-category, accessible learning platforms, pertains to the ease of use and availability of universities' digital libraries. It also includes the accessibility of academic information through platforms such as Moodle, Neptun, Microsoft Teams, and Canvas. Additionally, it encompasses the provision of automatic plagiarism checking tools with Urkund, as well as the ability to freely download online subscribed journals using institutional accounts and university internet connections. Some students consider these platforms indispensable for their academic pursuits, as they utilize them to search for sources, submit essays, and access assignment guidelines. One student, for example, mentioned the ease of accessing online journals by downloading them using their institutional account and the university's Wi-Fi.

The third sub-category, obtainable academic engagement, encompasses topics pertaining to active participation and involvement in research-based activities such as conferences and publication events. The students emphasized their involvement in university research events starting from the commencement of their studies, which necessitated consistent essay submissions. In addition, they participated in academic conferences and essay competitions, and some of them even prepared draft articles for international conferences. Participating actively in research and academic events offers students valuable experience and improves their academic writing abilities. Thus, it can lead them to network with other professionals in their field and gain recognition for their work.

4.1.2.2 The Support regarding the Category of the Subject Course. The present study conducted on the support received by IGSs in English academic essay writing has yielded some interesting findings. The support is provided in terms of subject courses and has resulted in eight themes that are divided into three key sub-categories. The first subcategory focuses on *students' perceived improvement in English academic writing* (n=5). This includes subject teachers' motivating encouragement, language concerns, content development, free time allocation for students' consultation, and accessible and timely lecturer feedback through digital platforms. The second subcategory gives emphasis to support in connection with *essay topics* (n=2), involving students' perceived relevance of assigned topics as well as integration of assigned topics with master's thesis. The third category highlights *sources* (n=1) covering secondary sources provided by lecturers.

To demonstrate the support IGSs receive dealing with the subject course, Table 27 showcases extract examples. For more excerpts, please refer to Appendix B.

Table 27

The support Indonesian graduate students have regarding the category of subject courses

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples.
Students' perceived improvement in English academic writing	subject-teachers' encouragement motivating	"My lecturer said that producing good writing takes time, so do not rush." Ani, B2-level "One or two of our lecturers have mentioned that using perfect English is not crucial, as long as we demonstrate a clear understanding of the subject matter. They also emphasized that grammatical accuracy is not heavily prioritized. As long as the main points are conveyed in the text, we can feel confident in our work." Budi, B2-level
	feedback on language concerns	"My lecturer said that if I did not fix my grammar, he would not understand what I was trying to explain." Ani, B2-level "I think my lecturer is excellent because he provides me detailed feedback that clarifies both linguistic and content-related issues. Yanti, B2-level
	guidance on essay content development	"I received feedback from the lecturer, who mentioned that 'I already marked your assignment, and next time you have to improve how to structure the idea.'" Rina, C1-level "Our lecturers provide guidance on writing structure, covering key aspects such as the abstract, background of the study, literature review with foundational theories, and the conclusion." Budi, B2-level
	the allocation of free time for student consultations	"Our lecturers are open to scheduling appointments and willingly allocate their free time to provide us with feedback on our essay assignments." Budi, B2-level
	accessible and timely lecturer feedback through digital platforms	"We received feedback from the lecturer via a quick message uploaded to the system a few days after the submission, including our grade, which we can see in Microsoft Word." Eko, C1-level "We can see our feedback, which is compiled in a folder from the lecturer based on our Neptun codes." Triyono, C1-level
Essay topics	students' perceived relevance of assigned topics	"My favorite topic makes it easier for me to complete the assignment quickly, and finding references is not a problem." Tutik, B2-level "From the assigned topic, I was able to learn a lot of new vocabulary, which helped me improve the quality of my writing." Budi, B2-level
	integration of assigned topics with master's thesis	"The topics selected for our essays are intended to provide an overview of our future thesis project. Since my essays in the first semester focused on the sustainability of palm oil production, I plan to develop this into my research thesis, with a focus on comparing European and Indonesian policies." Budi, B2-level
Sources	secondary sources provided by lecturers	"To assist us in developing our assigned topics, our lecturers provide a selection of secondary sources, including comprehensive lists of recommended articles for our references." Budi, B2-level "After each class session, my lecturer uploads a reading list via Moodle, which we can use as secondary sources to support our essays." Tutik, B2-level

Table 27 presents the support the students receive in writing English academic essays regarding the subject course. The support consists of two categories: students' perceived improvement in English academic writing, and essay topic. Students' perceived improvement in English academic writing is supported by several key themes, as noted in the provided table. Firstly, motivating encouragement from subject teachers plays a crucial role. For example, lecturers' reassurance that producing excellent writing takes time and should not be rushed. Feedback addressing language concerns is also pivotal, as it emphasizes the importance of correct grammar for clarity and comprehension. Additionally, guidance on essay content development and organization helps the students structure their ideas more effectively. The provision of free time for consultations ensures that IGSs receive personalized guidance. Furthermore, timely lecturer feedback via the system is a notable support, exemplified by feedback received through the system a few days after submission. Lastly, accessible to obtain lecturers' (e.g., when feedback is compiled in a structured manner using Neptun codes) ensures the students can readily review and utilize the guidance provided.

In terms of essay topics, IGSs view the relevance and integration of assigned topics as critical to their engagement and academic success. When they find topics interesting or aligned with their preferences, it becomes easier for them to complete assignments efficiently and locate relevant references. Furthermore, the thoughtful selection of essay topics that align with the students' master's thesis work provides a valuable preview and foundation for their future research endeavors. This integration not only makes the assignments more meaningful but also contributes to a more cohesive and focused academic journey, ensuring that the skills and knowledge acquired are directly applicable to their thesis writing. Moreover, the secondary sources provided by lecturers are highly beneficial in helping students develop their academic writing based on the assigned topics. These sources comprising a list of articles, can be used by the students to strengthen the references in their academic writing assignments.

4.1.2.3 The Support regarding the Category of the Students' Prior Knowledge Experiences in EAW. After conducting the analysis, the study has identified eight themes related to the participants' prior experience, which are classified into four sub-categories. The first sub-category, *Educational background and achievements* ($n=2$), includes pursuing higher studies at an English-medium university and receiving external peer feedback on academic work. The second sub-category, *English language proficiency development* ($n=3$), involves completing an English for academic writing course during undergraduate studies, gaining experience learning for IELTS, working as an IELTS instructor, and participating in an English

course. The third sub-category, *academic writing development* (n=2), comprises producing research writing in English. The fourth sub-category features *cultural adaptation and mobility* (n=1), including a student mobility exchange experience.

Table 28 demonstrates the support the students receive regarding the category of the student's prior experience in EAW. (see Appendix B for more excerpts.)

Table 28

The support Indonesian graduate students receive regarding the category of graduate student prior experience

Category 3: The Student's Prior Knowledge Experiences in EAW		
Sub-categories	Themes	Extract examples
Educational background and achievements	pursuing higher studies in an English-medium university	<i>"During my undergraduate studies in Malaysia, I used English, including for writing essay assignments and my bachelor's thesis."</i> Triono, C1-level
	receiving external peer feedback on academic work	<i>"I received a lot of feedback from the reviewers at the faculty conference that I submitted my paper to."</i> Ani, B2-level
English language proficiency development	gaining learning experience for IELTS	<i>"IELTS helped me learn a lot of things, including how to use academic vocabulary, how to properly elaborate sentences, and how to use verb tenses."</i> Lilis, C1-level
		<i>"While preparing for the IELTS, I developed an understanding of context-specific vocabulary usage in business contexts such as sales, where I learned to distinguish between terms like 'buying' and 'purchasing.'" Bambang, B2-level</i>
	working as an IELTS instructor	<i>"I taught IELTS while pursuing my master's degree."</i> Triono, C1-level
		<i>"Teaching IELTS has supported and enhanced my ability to write academic texts in English."</i> Lilis, C1-level
	attending an English language course	<i>"I used to join a class of English at English First (EF). As a result, I grew up in an environment that encouraged me to learn English."</i> Rina, C2-level <i>Before I took the IELTS test, I joined an English course for a year to prepare."</i> Yanti, B2-level
Academic writing development	producing research writing in English	<i>"I used to be a research assistant who frequently worked on English-language reports."</i> Novi, C1-level
		<i>"I had the opportunity to contribute a book chapter through a program provided by the National Research and Innovation Agency of Indonesia."</i> Eko, C1-level
	completing a course in academic writing during undergraduate studies	<i>"I had a class of English academic writing when I was an undergraduate student."</i> Sri, B2-level <i>"I gained experience in academic writing when I enrolled in an academic writing course during my bachelor's studies at a state university in Indonesia."</i> Ani, B2-level
Cultural adaptation and mobility	gaining experience through student exchange	<i>"Through student exchange programs in Malaysia and Japan, I was exposed to different academic writing that reflects diverse culture and educational norms."</i> Rina, C1-level

Table 28 displays the support the students have in academic writing in connection with their prior experience. It reveals that they have varied and rich educational backgrounds and achievements that significantly support their academic writing performance. Some students have pursued higher studies at English-speaking medium universities, such as in Malaysia, where they used English exclusively for essay assignments and thesis writing. This immersion in an English-speaking academic environment has enhanced their proficiency and familiarity with academic conventions. Besides, feedback from external readers, such as reviewers at faculty conferences, has provided them with critical insights and improvement opportunities, further honing their academic skills.

In terms of English language proficiency development, the students have engaged in various activities. Experiences with the IELTS exam have been particularly beneficial, teaching them essential vocabulary, sentence elaboration, and proper verb tense usage. Some students even taught IELTS and academic writing during their master's studies. Additionally, the students also participated in English courses at non-formal institutions like English First (EF), which fostered an encouraging environment for continuous learning and provided additional support.

Prior roles in academic writing development, such as being research assistants working on English-language reports, have provided practical experience in producing research writing. Furthermore, completing academic writing courses during their undergraduate studies laid the foundation for advanced writing skills. Not to mention that cultural adaptation and mobility experiences, such as participating in student exchange programs in countries like Malaysia and Japan, exposed the students to different academic writing structures, thereby enhancing their adaptability and broadening their academic perspectives.

4.1.2 *Attitudes the Students Hold toward EAW in a Non-native English-speaking Environment*

The next topic addressed by the current study concerns students' attitude about English academic essay writing in Hungarian HE. These attitudes are categorized into two groups, comprising nine themes: *positive attitudes toward the class of English for academic writing in a non-native English-speaking environment* (n=3) and *positive attitudes toward English academic essay assignments in a non-native English-speaking environment* (n=6). A summary of these nine themes is presented in Table 29. (see Appendix C for long extracts.)

Table 29*Attitudes IGSs have regarding EAW in a non-native English-speaking environment*

Categories	Themes
Positive attitudes toward the class of English for academic writing (EAW) in a non-native English-speaking environment	• perceived importance and desired integration of the academic writing class within the curriculum • significant advantages • value of international perspectives in the academic writing class
Total	3 themes
Positive attitudes towards English academic essay assignments in a non-native English-speaking environment	• Beneficial necessity for skill development • social benefits • supported practical academic writing assignments with a specific topic • prospective assistance for the academic future • valuable aids to inexperienced students in academic writing • a source of enjoyment
Total	6 themes
All together	9 themes

Table 29 displays students' attitudes toward English for Academic Writing (EAW) in a non-native English-speaking environment. These attitudes can be classified into two categories. The first category pertains to the positive views toward the English for Academic Writing class in Hungarian higher education. This includes the recognition of the practical value of EAW classes, the significant advantages of having such a class, and a widespread acceptance of its importance across different educational, social, and cultural contexts.

The second category highlights the favorable attitudes toward English academic essay assignments at HUs, which encompass various themes including the importance of essay assignments, the social advantages they bring, the support they provide for practical academic writing, the future academic assistance they offer, their value as aids for inexperienced students, and the enjoyment derived from engaging in these tasks. The following sections provide further explanation for these two categories.

4.1.2.1 Positive Attitudes toward the Class of EAW in a Non-native English-speaking Environment. The findings of the current study, as presented in Table 29, reveal that IGSs exhibit positive attitudes toward an English for academic writing class in a non-native English-speaking environment. This category is composed of three distinct themes, namely, *perceived importance and desired integration of the academic writing class within the*

curriculum, significant advantages, and the value of international perspectives in the academic writing class.

Table 30 shows the results of these attitudes toward the English for academic writing class in a non-native English-speaking environment involving extract examples.

Table 30

Positive attitudes toward the class of English for academic writing (EAW) in a non-native English-speaking Environment

Categories	Themes	Extract examples
Positive attitudes toward the class of EAW in a non-native English-speaking Environment	perceived importance and desired integration of the academic writing class within the curriculum	<i>“It would be advisable if the academic writing class were part of the curriculum rather than an optional extracurricular activity with only four meetings, emphasizing its practical value for my subject course.”</i> Novi, C1-level
	significant advantages	<i>“The class of English for academic writing provides numerous advantages, truly benefitting my overall academic writing skills.”</i> Tutik, B2-level
		<i>“After enrolling in the Academic Writing class, I have become more confident in writing essays, and. I believe the class offers valuable skills without any drawbacks.”</i> Lilis, C1-level
	value of international perspectives in the academic writing class	<i>“...because students studying in Hungarian higher education come from all over the world. As a result, exchanging ideas on how to write well-written academic essays is extremely beneficial, highlighting a conventional view of its importance across diverse backgrounds.”</i> Sri, B2-level

Table 30 presents students’ attitudes toward the class of EAW at HUs, emphasizing three main themes. Students acknowledge the practical value of these classes for their academic course, and the significant benefits they offer are widely recognized. Moreover, students from various educational, socioeconomic, and cultural backgrounds find the classes worthwhile. Specifically, engaging in discussions on effective strategies for composing high-quality academic essays is exceedingly advantageous.

Overall, the findings emphasize the perceived significance and extensive advantages of the EAW class at HU.

4.1.2.2 Positive Attitudes toward English Academic Essay Assignments. Another category concerning the students' attitudes toward English academic writing in a non-native English-speaking environment pertains to their positive attitudes toward English academic essay assignments. This involves six themes, which are as follows: *beneficial necessity for skill development, social benefits, supported practical academic writing assignments with a specific topic, prospective assistance for the academic future, valuable aids to inexperienced students in academic writing, and a source of enjoyment*. These themes are further elaborated upon in Table 31, which provides illustrative examples of the various ways in which IGSs express their positive attitudes towards English academic writing.

Table 31

Positive attitudes toward English academic essay assignments at Hungarian universities

Categories	Themes	Extract examples
Positive attitudes toward English academic essay assignments	beneficial necessity for skill development	<i>"My study in Hungary improves my academic writing because I must adapt to writing academically, as all subjects are taught in English. This is unlike my undergraduate study in Indonesia, which seldom involved English writing in an academic context and sometimes lacked it entirely."</i> Lilis, C1-level
	social benefits	<i>"We were given the opportunity to work collaboratively with international students to prepare an academic essay together."</i> Budi, B2-level
	supported practical academic writing assignments with a specific topic	<i>"During the class of academic writing, we need to write an essay with a specific topic, for example, research background in the first week and literature review in the second week. By writing essays per session every week, we learned how to develop our essays."</i> Ani, B2-level
	prospective assistance for the academic future	<i>"I believe that completing academic essays each semester aids in our preparation for thesis writing."</i> Lilis, C1-level <i>"Through essay writing, I have learned how to construct academic text with clear and coherent logical flow, which is essential for my future thesis."</i> Sri, B2-level
	valuable aids to inexperienced students in academic writing	<i>"One of my classmates who was unknowledgeable in academic writing mentioned that attending the class of English for academic writing helped her think critically and gain learning in writing academic texts."</i> Bambang, B2-level
	a source of enjoyment	<i>"Writing in English is fun, and I enjoy it. I would rather write an essay than take a test."</i> Tutik, B2-level <i>"Instead of choosing to give a presentation in the class, which I found demanding, I preferred to write an essay to fulfill the course requirement, as I enjoy writing."</i> Sri, B2-level

Table 31 indicates that IGSs hold favorable attitudes toward English academic essay assignments at HUs. The data suggest that the students studying at the universities typically perceive English academic writing as a fundamental skill before coming to study abroad, as some of them may have experienced a lack of academic writing classes in their prior education. They assert that essay assignments offer social advantages, promoting interaction and collaboration among international students as well. Additionally, consistent and organized essay assignments serve to enhance their English academic writing abilities systematically and equip them for thesis writing. It seems that some students may find academic essay writing assignments useful, especially those who lack knowledge of writing academic texts. Moreover, some students mentioned that English academic essay writing is more pleasurable compared to conventional tests.

4.2 Discussion

The present study provides valuable insights into challenges the students face when writing English academic essays. It also explores support they receive during their studies and their attitudes toward EAW. The results suggest that the participants encounter challenges in three main aspects: *the writing process*, *the subject course*, and *the institutional policies*. For the writing process, the students struggle with *academic skills and conventions* (e.g., low reading comprehension), *students' language proficiency* (e.g., overuse of passive voice, grammatical errors), *structure and content* (e.g., clarity and *coherence*), and *cognitive and affective issues* (e.g., lost ideas, exhaustion). These challenges significantly contribute to the difficulties IGSs face in completing their essay assignments.

The production of academic essays involves several crucial activities, including critical thinking, which is essential for generating ideas and arguments and ensuring clarity and coherence for a well-organized text. The results indicate that internal factors influence the production of academic writing. This writing process appears to pose challenges for IGSs, who are completing their academic essay assignments.

As academic writing skills require practical activities to become advanced writers, IGSs also face challenges in producing academic texts based on their practical experiences. This study further supports the findings of Phyo et al.'s (2024a) study, which reported that non-native English graduate students in Hungary encounter several challenges in academic writing, including limited experiences in academic writing and writer's block during the writing process. Critical aspects such as their level of critical thinking, identified as a particular issue in academic writing by several studies, and their English proficiency levels as NNES may

contribute to their struggle in producing academic writing. This aligns with claims by Mukminin et al. (2015) that factors such as limited exposure to EAW, insufficient knowledge, and a lack of technical vocabulary can contribute to challenges faced by EFL/ESL students and impact their academic writing performance.

In relation to the subject course, the study reveals significant challenges the students face, particularly concerning source *engagement* (e.g., difficulties in finding relevant materials). The participants also struggle with *essay topics*, evidenced by a long quest for assigned topics and their limited prior knowledge in these areas. These combined issues can impede the production of high-quality essays, potentially hindering overall academic success and master's degree progression and negatively impacting overall scores. This finding aligns with Phyo et al. (2024b), who reported that non-native English students at HUs faced limited access to secondary sources for academic writing (e.g., journal access), even with institutional login.

Further challenges include meeting *essay requirements*, notably deadline completion, and navigating high lecturer expectations for writing quality. This finding is consistent with Yang (2024), who found that NNES reported difficulties in meeting unclear expectations, including ambiguity in master's by coursework writing expectations and teacher expectations, leading to confusion. Such confusion, stemming from unclear task descriptions, can induce stress among students, a mental health issue commonly reported among SEA students. Additionally, *subject-teacher competencies* present another obstacle in academic essay production for IGSs at HU, specifically citing lecturers' low English proficiency, poor language awareness, and insufficient clarification and corrective feedback. This issue is relevant to Yang's (2025) study, which found that NNES at Australian universities often struggle to receive appropriate assignment feedback from their lecturers, thereby limiting their ability to develop and improve their writing skills.

In addition, during the pandemic, the medium of instruction deliberately changed to online learning, posing challenges for students when completing their writing assignments under *subject course instruction*. This category includes technical problems with online learning, which disrupted the flow of learning and caused confusion. Understanding instructions from lecturers is another major challenge, as confusion and uncertainty can result in essays that fail to meet the objectives or expectations of the assignment. The pandemic has exacerbated these issues, as some previous studies, such as Ahmad et al. (2022) and Firmansyah et al. (2021), have investigated the impact on writing instruction and students' assignments. The participants have struggled to adapt to online learning, which makes them

feel discomfort, leading to a decrease in motivation and engagement with their coursework. The lack of face-to-face interaction with lecturers and peers has made it harder for the students to receive the necessary support and guidance to improve their writing skills. As a result, the pandemic has highlighted the need for additional resources and support for the students to help them overcome these challenges and succeed in their academic pursuits.

In connection with the institutional policies, IGSs mentioned the absence of an English for academic writing course at some universities presents a significant challenge for the students in academic writing during their studies under *issues in relevance to English academic writing-related courses*. This lack of a dedicated class hampers students' ability to improve their knowledge and skills in academic writing, which is crucial for their academic pursuits. Hence, a study by Phyo et al. (2024b) suggests that international students at HUs need explicit training sessions, particularly in academic writing, such as training on the utilization of technical vocabulary, grammar, and citation.

Insufficient course content, overlapping content between Research Methods and English for Academic Writing classes, and inaccessible online databases and libraries due to off-campus residency further exacerbate the issue. Some studies (Björkman, 2011; H. Coleman, 2011; Dearden & Macaro, 2016; Macaro et al., 2018) have highlighted prominent aspects in achieving the goal of EMI establishment in higher education, as discussed in the literature review chapter. This includes the crucial accessibility to English sources for the students at HUs, where English is the medium of instruction. Universities must ensure that their libraries have an adequate collection of English-language sources to support the academic needs of international students. Providing alternative means of access to online resources for off-campus graduate students can help improve their academic writing skills.

One more aspect of the challenges students face in writing academic essays is related to general and external factors. These factors include *technical challenges* (e.g., lost internet connection), *environmental issues* (e.g., distraction during writing), and *time management issues* (e.g., long time writing due to unfamiliar topics). These three factors are critical for students in producing academic essays.

Students may feel demotivated when their internet connection is suddenly lost during activities like searching for data sources. Moreover, distractions like playing mobile phones can negatively impact the productivity of their essays, which in turn affects their time management. For successful academic writing, effective time management is something that can affect how their writing is produced in a timely manner and contribute to overall academic writing performance. As highlighted by Phyo et al. (2025b), maintaining motivation and time

management are fundamental aspects in achieving academic success. This cannot be achieved if students are demotivated when completing their writing assignments.

Apart from the challenges the students face when writing academic essays, the study found that they received support during the successful accomplishment of EAW. This support includes three aspects: support related to institutional policies, subject courses, and students' prior knowledge of academic writing. In accordance with institutional policy support, the students benefit from *the availability of English academic writing courses* (e.g., available courses to support thesis writing), *accessibility learning platforms* (e.g., public access to academic information via Moodle, Neptun, Microsoft Teams, and Canvas), and *obtainable academic engagement* (e.g., the university's research-based involvement). These forms of support can help prepare the students for academic writing before they write their final thesis project.

As noted by Phyto et al. (2025b), the availability of English for academic writing courses may encourage students to focus on specific topics such as vocabulary, grammar, sentence structure, and essay organization. This focus can assist them in identifying and correcting specific weaknesses in their writing. Furthermore, by emphasizing the conventions and expectations of academic writing, such courses can improve students' ability to produce essays that are clear, concise, and well-organized.

Furthermore, it is worth mentioning that students who enroll in the English for academic writing course have opportunities to practice their writing skills and receive feedback on their work, as well as to build confidence in improving the quality of their academic essay writing. As the study by Phyto et al. (2024b, 2024a) suggests, feedback provided by lecturers on academic writing can help students understand their weaknesses and strengths.

The provision of accessible learning platforms also plays an important role in supporting students' writing. These platforms offer many advantages for students in gaining information or secondary resources by accessing subscribed journals. Students can also benefit from using tools like Urkund to improve their essays, as this can help detect the level of plagiarism, which is a critical aspect for their writing submission criteria. Plagiarism issues are also a key aspect in academic writing that received much attention in the study of Yang (2024).

The accessibility of learning platforms such as plagiarism checkers and public access to academic information and resources (including free access to online subscribed journals via institutional accounts and the university's internet connection) can further help students develop their academic writing skills. Access to the journals is subject to the terms of the university's agreement with the Hungarian Academy of Sciences under the Electronic

Information Service National Programme (EIS). It is worth noting that EIS provides electronic information infrastructure for HE and research, ranging from full-text periodicals to factual information databases (see the Hungarian Academy of Sciences' website: <https://eisz.mtak.hu/index.php/en/>). As a result, in order to fully access publishers such as JSTOR or Elsevier, the six universities joined the program's membership to provide great resources to their students.

Moreover, involvement in lecturers' projects and collaborations on academic journal publications can boost students' confidence in academic writing. Participation in academic conferences also contributes to the development of their writing skills.

In terms of the subject course, this research found that the participants received support under two key sub-categories: *students' perceived improvement in EAW* (e.g., subject teachers' motivating encouragement) and *essay topics* (e.g., the integration of assigned topics with their master's thesis writing).

The study also found that lecturers' feedback plays a crucial role in improving students' writing skills by offering personal face-to-face consultations, even for written evaluations. The participants reported being given dedicated time slots to receive feedback on their writing assignments before submitting the final version. Additionally, the selection of essay topics appears to influence students' awareness and efficiency in addressing the task. The more familiar the topic, the easier and faster they can complete their writing assignments. Hence, these two subcategories are critical to meeting students' academic writing needs, particularly for IGSs at HU.

Regarding the students' prior experiences in academic writing, it is evident that HU supports them by recognizing the transferable skills and approaches acquired through their *previous academic backgrounds and achievements*. For instance, those who have pursued higher education at English-medium universities are typically exposed to a wide range of academic writing styles and formats, including essays and theses. As a result, they often develop critical thinking abilities and a strong foundation in EAW, which they can apply to their studies at HU.

The participants reported that they received external peer feedback on their academic work, such as when submitting articles to journals or presenting conference papers. This aligns with Douglas's (2020) findings, which highlight that master's students are expected to produce high-quality academic papers that involve literature review and critical analysis, thereby fostering the development of their critical thinking skills.

In addition, students' prior experiences in *developing English language proficiency* proved advantageous. Preparing for standardized tests such as the IELTS and working as English instructors contributed positively to their academic writing skills. Furthermore, to enhance these skills, some students had previously produced research papers in English and completed courses in English for Academic Writing (EAW) during their undergraduate studies. These experiences equipped them with essential skills and knowledge to meet academic writing requirements and fostered the development of critical thinking abilities.

Cultural adaptations and international mobility significantly enhanced students' understanding of academic writing conventions. Through participation in student exchange programs, the students became more aware of and familiar with academic writing practices in different countries. As noted by existing research, academic writing contains distinctive features (including formal conventions and structured argumentations) that differ from other types of writing. Familiarity with these conventions is essential for success in academic discourse, particularly at the graduate level of studies.

On the other hand, the present study discovered that the students seem to have positive attitudes toward the EAW course as well as academic essay assignments during their master's studies at HU. By enrolling in the course, the students can gain the ability to produce a well-written text for their assignments. This is an important requirement for them to achieve academic success. The integration of the EAW course with their thesis writing is also beneficially associated, as this can provide significant advantages at the end of their study by assisting with thesis writing.

The value of international perspectives in the academic writing class acknowledges their diverse experiences in writing academic essays, for example, by helping other students who are inexperienced in academic writing. Besides, the English for academic essay writing class can facilitate a shared understanding among writers from diverse educational, social, and cultural backgrounds, as it serves as a universally recognized means of communication in the academic sphere, often referred to as English as an Academic Lingua Franca (EALF).

CHAPTER 5

STUDENTS' STRATEGIES IN ENGLISH ACADEMIC ESSAY WRITING AND THEIR OCCURRENCES

This chapter discusses the findings in connection with Academic Writing Strategies (AWSs) employed by the participants when writing English academic essays, focusing on the three stages of writing: pre-writing, writing, and post-writing. The discussion also examines the frequency of occurrence of the students' strategies in academic writing based on writing strategy taxonomy, encompassing cognitive, metacognitive, social, and affective strategies. The subsequent paragraphs provide further explanations of the research findings and delve into a detailed discussion of the results.

5.1 Results

According to codification data analyses of the transcribed interviews, the study has resulted in 82 strategies employed by the participants in writing English academic essays during their studies at HUs. The strategies are classified into three big categories in accordance with stages of the writing process, which are *pre-writing*, *writing*, and *post-writing*. Each stage of the writing process serves a purpose and contributes to the final product being clear, well-structured, and effective.

The pre-writing stage pertains to 29 strategies that aim to facilitate idea generation, research, and structural planning. These strategies are broadly categorized into five phases, namely *Planning* (n=4), *Understanding and refining the topic* (n=7), *Information gathering and source management* (n=4), *Academic reading and note-taking* (n=12), and *Structuring and organizing content* (n=2). The purpose of this stage is to enable the students to generate and organize their thoughts and ideas in a structured and coherent manner, which serves as a crucial foundation for the subsequent stages of the writing process.

The writing stage focuses on putting ideas into words and starting to build a rough draft of writing. The goal of this stage is to produce a clear and well-organized piece of writing that effectively communicates the ideas. In this stage, the classification of 49 writing strategies is elicited from nine phases: *preparatory stages* (n=2), *research and information management* (n=4), *text-length fulfillment* (n=3), *content development* (n=7), *language and stylistic enhancement* (n=8), *visual and citation support* (n=3), *text revision and editing* (n=7), *academic integrity assurance* (n=4), and *motivation and mindset management* (n=11).

The post-writing stage is instrumental in ensuring clarity, conciseness, and accuracy, all contributing to the objective of producing a polished, final product ready for submission. This phase often encompasses proofreading, revising, and editing to ensure that the text is clear, precise, and free of errors. A total of four writing strategies are identified in this stage, grouped into two distinct phases: *revision and final check* (n=3) and *post-submission reflection* (n=1).

Table 32 illustrates the strategies employed by the students during the process of writing English academic essays in their respective Hungarian HEIs.

Table 32

The results of strategies Indonesian graduate students employed in English academic essay writing in Hungarian HEIs

Stages of the writing process	Phases	Number of strategies
Category 1: Pre-writing	<i>planning</i>	4
	<i>understanding and refining the topic</i>	7
	<i>information gathering and source management</i>	4
	<i>academic reading and note-taking</i>	12
	<i>structuring and organizing content</i>	2
	Total	29
Category 2: Writing	<i>preparatory stages</i>	2
	<i>research and information management</i>	4
	<i>text-length fulfilment</i>	3
	<i>content development</i>	7
	<i>language and stylistic enhancement</i>	8
	<i>visual and citation support</i>	3
	<i>text revision and editing</i>	7
	<i>academic integrity assurance</i>	4
	<i>motivation and mindset management</i>	11
	Total	49
Category 3: Post-writing	<i>revision and final check</i>	3
	<i>post-submission reflection</i>	1
	Total	4
Total strategies		82

5.1.1 Strategies Utilized by IGSs in the Pre-writing Stage

In relation to the pre-writing stage, the participants used 29 strategies when writing academic essays in English, which were divided into five phases. The first phase is related to

planning (n=4), including *drawing up a timetable, brainstorming, recalling previous knowledge, and preparing the writing environment.*

The second phase focuses on understanding and refining the topic (n=7), which involves *looking up keywords in academic databases, preliminary reading of current and highly cited articles, narrowing down the topic, looking for definitions of key terms, consulting with the lecturers, asking for help from classmates, and watching exploratory content from YouTube.*

The third phase is relevant to the provision of data sources (n=4), consisting of *in-depth database research for evidence collection, using institutional access (VPN, subscriptions), using teachers' suggested readings, and creating and managing the source database.*

The fourth phase concerns academic reading and note-taking (n=12), *underlining reading abstracts only, selecting relevant information, using digital tools (i.e., Ctrl+F and dual screens), highlighting, taking notes, organizing key points, writing summaries, translating, making annotations, skimming and scanning the text, synthesizing, and paraphrasing relevant theories.*

The fifth phase emphasizes structuring and organizing content (n=2), which are *mind mapping and designing a general layout.*

Table 33 demonstrates strategies the students utilize in writing English academic essays with regard to the pre-writing stage, including extracting examples (for more excerpts, see Appendix D).

Category 1: The pre-writing stage**Table 33***Indonesian graduate students' English academic essay writing strategies with regard to the pre-writing stage*

Phases	Strategies	Extract examples
Planning	drawing up a timetable	<i>"At the beginning of the course, I listed all my writing assignments along with their deadlines so I could plan my time effectively."</i> Tutik, B2-level
	brainstorming	<i>"Before I begin writing, I usually spend some time thinking through different ideas and directions I could take in the essays."</i> Sri, B2-level
	recalling previous knowledge	<i>"Since I've written about this topic before, I can reuse some ideas and build on what I already know."</i> Budi, B2-level
	preparing the writing environment	<i>"I cannot focus if I am tired or hungry, so I make sure to rest and eat before I sit down to write."</i> Rina, C1-level
Understanding and refining the topic	looking up keywords in academic databases	<i>I searched for keywords related to my topic in the CEU online library to see what kind of research had already been done."</i> Sri, B2-level
	preliminary reading of current/highly cited articles	<i>"I usually start by finding the most recent and highly cited articles so I can understand the current trends or academic conversation around my topics."</i> Novi, C1-level
	narrowing down the topic	<i>"The assigned topic was too general, so I had to focus on a specific viewpoint that I could manage within the word limit."</i> Tutik, B2-level
	looking for definitions of key terms	<i>"To make sure I understand the core idea, I look up clear and academic definitions of key concepts like 'Chicken Game Theory.'"</i> Ani, B2-level
	consulting with the lecturer	<i>"When I struggled to find reliable sources, I scheduled a consultation with my lecturer to clarify the topic direction."</i> Budi, B2-level
	asking for help from classmates	<i>"I discussed the topic with my classmates who had a better grasp of it, and they helped me understand the key points."</i> Eko, B2-level
	watching explanatory content (e.g., YouTube)	<i>"When academic sources were too complex, I watched short YouTube explainers to get a general understanding before reading more deeply."</i> Lilis, B2-level
Information gathering and source management	in-dept database research for evidence collection	<i>"I searched for scholarly articles on Google Scholar to collect evidence and understand different angles."</i> Bambang, B2-level
		<i>"I read several pieces of information from the European Commission and ASEAN websites."</i> Ani, B2-level
		<i>"Usually, I read papers from Google Scholar because it provides a lot of credible sources."</i> Lilis, C1-level
	using institutional access (VPN, subscriptions)	<i>"By logging into my university account, I could access paywalled articles on ScienceDirect for my essays."</i> Lilis, C1-level
		<i>"Some articles are blocked due to my residency, so I use a VPN to access them through a private connection."</i> Tutik, B2-level

Phases	Strategies	Extract examples
Academic reading and note-taking	using teachers' suggested readings	<i>"I used the reading list uploaded on Moodle by my lecturer as a starting point for gathering sources."</i> Budi, B2-level
	creating and managing a source database	<i>"I save all the articles I find into folders categorized by theme, so I can easily retrieve them later when writing."</i> Eko, C1-level
	reading abstract only	<i>"I quickly skim the abstracts to decide whether an article is useful before reading it in full."</i> Novi, C1-level
	selecting relevant information	<i>"From each article, I pick out the points that directly relate to my argument and ignore unrelated sections."</i>
	using digital tools (Ctrl+F, dual screens)	<i>"I use Ctrl+F to quickly find specific terms in long PDF articles, as it saves a lot of time."</i> Sri, B2-level
		<i>"I also split my screen so I can read articles on one side and write notes or drafts on the other at the same time."</i> Yanti, B2-level
	highlighting	<i>"While reading, I highlight key points and quotes that I might want to use in my essays."</i> Lilis, C1-level
	taking notes	<i>"I summarize each source in my own words while noting useful quotes and their page numbers."</i> Lilis, C1-level
	organizing key points	<i>"After collecting notes, I arrange them by theme or argument to create a logical structure for my writing."</i> Lilis, C1-level
	writing summaries	<i>"I write a concise summary of each article's main argument so I can easily remember its relevance later."</i> Budi, B2-level
	translating	<i>"When I find a useful article in a different language, for example, in Chinese, I translate the article into English first so I can fully understand and use it for my essay."</i> Ani, B2-level
	making an annotation	<i>"I wrote short summaries and evaluations for each source in an annotated bibliography to keep track of their value."</i> Triono, C1-level
	skimming and scanning	<i>"I skim through articles to see if they cover ideas or theories that directly connect with my topic."</i> Budi, B2-level
	synthesizing	<i>"I grouped and combined findings from multiple articles related to China to build a stronger argument."</i> Eko, C1-level
	paraphrasing relevant theories	<i>"Sometimes, I restate relevant theories in my own words to ensure I completely understand them. Paraphrasing helps me break down the core ideas of a theory and rephrase them in a logical way."</i> Eko, C1-level
Structuring and organizing content	mind mapping	<i>"I create a mind map with arrows and branches to visually organize the relationship between ideas."</i> Sri, B2-level
	designing a general layout	<i>"I usually sketch a rough outline of my essay's structure, like introduction, body paragraphs, and conclusion, before I start drafting."</i> Eko, C1-level

5.1.2 Strategies Utilized by IGSs in the Writing Stage

The study has identified 49 strategies utilized by the participants during the writing stage of English academic essay writing, organized into eight phases. These include preparatory stages (n=2), which involve *drawing an outline* and *managing the drafts*. The phase of research and information management (n=4) encompasses *using a Google search engine to gather information*, *employing Google Translate*, *consulting dictionaries*, and *keeping notes in the OneNote application*. The phase dedicated to text-length fulfillment (n=3) comprises *writing long sentences*, *footnoting*, and *expanding paragraphs*. Content development (n=7) covers *providing examples*, *defining concepts*, *relating to a theory*, *remaining neutral*, *providing results in numbers*, *creating subtopics*, and *presenting personal viewpoints*.

Additionally, the language and stylistic enhancement phase comprises strategies (n=8), such as *using discourse markers*, *using new and specific vocabulary*, *using passive forms*, *code switching*, *using fixed phrases*, *learning from other people's writing*, *employing writing tools*, and *replacing repetitive words*. The phase of visuals and citations (n=3) includes *utilizing in-text citations*, *adding charts, figures, or tables*, and *automatic citations*.

In terms of the text revision and editing phase (n=7), the strategies include *rereading the texts after writing several paragraphs*, *deleting redundancy*, *reorganizing paragraphs*, *breaking complex sentences*, *operating error detectors*, *proofreading*, and *making immediate corrections*.

The phase of academic integrity assurance (n=4) contains *citing sources*, *paraphrasing with tools such as QuillBot*, *writing long sentences to avoid plagiarism*, and *utilizing plagiarism checkers such as Grammarly, Urkund, BibMe, and EduBirdie*. Lastly, motivation and mindset management during the writing stage encompass strategies (n=11) covering *complying with course requirements*, *calling family and friends*, *writing in a quiet and comfortable environment*, *taking a few days off*, *avoiding rushing in completing the essay writing assignments*, *thinking about readers*, *engaging in stress-relieving activities*, *producing one page per day*, *building confidence*, *striving for a good grade*, and *meeting writing deadlines*.

Table 34 provides a comprehensive summary of the various phases and strategies implemented by the students during the writing stage, complete with extract examples.

Category 2: The writing stage**Table 34***The students' English academic essay writing strategies with regard to the writing stage*

Phases	Strategies	Extract examples
Preparatory stages	drawing an outline	<i>"Before starting my draft, I created a detailed outline to organize my main ideas and arguments."</i> Tutik, B2-level
	managing the drafts	<i>"I wrote several drafts and saved each version in a separate folder to track my progress."</i> Lilis, C1-level
Research and information management	using a Google search engine	<i>"I often use Google to find background information or clarify unfamiliar concepts before deeper research."</i> Triono, C1-level
	attempting to use Google Translate	<i>"When I don't understand a sentence or word in a foreign article, I use Google Translate to get a rough idea."</i> Tutik, B2-level
	consulting dictionaries	<i>"I utilize the Google-Oxford Dictionary to find definitions and synonyms when I'm unsure about word usage."</i> Eko, C1-level
		<i>"I searched for a word in the Google dictionary that means 'a man who runs for a war,' and I found the word 'belligerent,' which sounded unfamiliar to me."</i> Eko, C1-level
	keeping notes in OneNote	<i>"I store all my research notes in OneNote so I can easily organize and retrieve sources later."</i> Eko, C1-level
Text-length fulfillment	writing long sentences	<i>"To meet the word count, I sometimes write longer sentences with multiple clauses."</i> Budi, B2-level
	footnoting	<i>"I include footnotes to add extra explanations without interrupting the main text and help meet the word count."</i> Yanti, B2-level
	expanding paragraphs	<i>"I add more supporting details and explanations to extend my paragraphs when needed."</i> Budi, B2-level
Content development	providing examples	<i>"To support my arguments, I include concrete examples like product cases or real-world applications."</i> Ani, B2-level
		<i>"I provide an example of how Agua is a reusable bottle...this will serve as evidence for my argument."</i> Budi, B2-level
	defining concepts	<i>"In my introduction, I define key concepts clearly to guide the reader."</i> Eko, C1-level
	relating to a theory	<i>"I aligned specific sections of my writing with theoretical frameworks we learned in our course."</i> Lilis, C1-level
	remaining neutral	<i>"When addressing controversial topics, I try to remain neutral and present balanced arguments, like in my hijab essay writing."</i> Lilis, C1-level
	providing results in numbers	<i>"I present data in numerical form to support the claims in my analysis."</i> Budi2-level
	creating subtopics	<i>"To organize my idea better, I divided my writing into subtopics during the drafting stage."</i> Novi, C1-level

Phases	Strategies	Extract examples
	presenting personal viewpoints	<i>"I occasionally insert my personal views to make the essay more reflective or unique."</i> Bambang, B2-level
Language and stylistic enhancement	using discourse markers	<i>"To improve flow, I use connectors like 'however' and 'in addition' between paragraphs."</i> Yanti, B2-level
	using new and specific vocabulary	<i>"After reading academic articles, I try to incorporate new, discipline-related vocabulary into my writing."</i> Tutik, B2-level
		<i>"I am conscious of using specific vocabulary, such as the fact that in my field, "purchasing" is frequently substituted for "buying."</i> Bambang, B2-level
	using passive forms	<i>"I use passive voice to emphasize something, like when the actor is unknown or less important than the action."</i> Triono, C1-level
	code switching	<i>"Depending on the topic and audience, I switch between English and French to express my ideas more effectively."</i> Eko, C1-level
	using fixed phrases	<i>"I rely on common academic phrases like 'this is mainly because' to link ideas clearly."</i> Ani, B2-level
	learning from other people's writing	<i>"I analyze well-written papers to understand how others structure arguments or use academic language."</i> Tutik, B2-level
		<i>"I also review my classmates' essays to compare writing styles and see how they approach similar topics."</i> Tutik, B2-level
	employing writing tools	<i>"Grammarly often recommends more precise or varied vocabulary, which helps improve my word choice."</i> Bambang, B2-level
Visual and citation support	replacing repetitive words	<i>"When I notice repeated words, I look for synonyms using an online dictionary to improve variety."</i> Ani, B2-level
	utilizing in-text citations	<i>"I include in-text citations whenever I quote or paraphrase sources to give proper credit."</i> Novi, C1-level
	adding charts, figures, or tables	<i>"I tend to use visuals like graphs and tables to make my arguments more persuasive and clearer."</i> Novi, C1-level
Text revision and editing	automatic citations	<i>"I employ Mendeley to generate citations and manage my bibliography efficiently."</i> Sri, B2-level
	rereading the text after writing several paragraphs	<i>"After writing a few paragraphs, I reread them to check flow and clarity."</i> Sri, B2-level
	deleting redundancy	<i>"If a paragraph feels repetitive or unnecessary, I remove it during revision."</i> Ani, B2-level
	reorganizing paragraphs	<i>"I reorganize paragraphs if the structure doesn't seem logical or smooth."</i> Eko, C1-level
	breaking complex sentences	<i>"When sentences become too long or confusing, I break them into shorter ones."</i> Tutik, B2 level

Phases	Strategies	Extract examples
	operating error detectors	<i>"I use Microsoft Word's spelling and grammar tools to catch common errors while writing."</i> Eko, C1-level
	proofreading	<i>"Before submission, I proofread my essay using tools like Grammarly."</i> Budi, B2-level
	making immediate corrections	<i>"As soon as I spot an error, I correct it immediately instead of waiting."</i> Lilis, C1-level
Academic integrity assurance	citing sources	<i>"To prevent plagiarism, I always credit the source when I use someone else's ideas or words."</i> Budi, B2-level
	paraphrasing with tools	<i>"I use tools like QuillBot to help me paraphrase without losing the original meaning."</i> Yanti, B2-level
	writing long sentences to avoid plagiarism	<i>"I sometimes construct longer sentences with more of my own commentary to ensure originality."</i> Yanti, B2-level
	performing plagiarism checks	<i>"Before submission, I run my paper through plagiarism checkers like Edubirdie."</i> Tutik, B2-level
Motivation and mindset management	complying with course requirements	<i>"I remind myself that writing an essay is essential for passing the course."</i> Budi, B2-level
	calling family	<i>"When I lose motivation, I talk to my family for emotional support and encouragement."</i> Rina, C1-level
	writing in a quiet space	<i>"When I feel frustrated, I go to the library because it helps me focus."</i> Lilis, C1-level
	taking a few days off	<i>"If I experience writer's block, I stop writing for two to three days before starting up again."</i> C1-level
	avoiding rushing	<i>"I try not to rush writing at the last minute because it hurts creativity."</i> Lilis, C1-level
	thinking about readers	<i>"I think about how my lecturer will perceive the essay, so I aim for clarity."</i> Budi, B2-level
	stress relief	<i>"Listening to music helps me relax before I start writing."</i> Budi, B2-level
	producing one-page per day	<i>"I set a goal to write one page per day to keep consistent progress."</i> Rina, C1-level
	building confidence	<i>"Over time, I've gained confidence in my writing by reflecting on my progress."</i> Budi, B2-level
	striving for good grade	<i>"My motivation is to get the highest grade possible, so I push myself to do better."</i> Rina, C1-level
	meeting deadline	<i>"Even if I'm not in the mood, I finish the essay on time to meet the deadline."</i> Yanti, B2-level

5.1.3 Strategies Utilized by IGSs in the Post-writing Stage

According to the research findings, IGSs employed six strategies in completing English academic essays during the post-writing stage. These strategies are divided into three phases: *feedback and revision* (n=4), *final review* (n=1), and *post submission* (n=1). The evaluating

content phase consists of having *a consultation with the lecturer* and *asking for help to proofread the content and language*. The ensuing task fulfillment and compliance phase involves *making certain that the aims are met, analyzing plagiarism, and conducting final proofreading*. Lastly, the relaxing phase includes one strategy, which is taking a well-deserved rest. Table 35 illustrates the strategies IGSs utilized during the post-writing stage, along with the extracts.

Category 3: The post-writing stage

Table 35

Strategies IGSs utilize in English academic writing in the post-writing stage.

Phases	Strategies	Extract examples
Revision and final check	external review	<i>“Before submitting the essay assignment, I met with my lecturer to get feedback and make final improvements.” Budi, B2-level</i>
		<i>“I asked a friend to read my draft and point out confusing sections or awkward phrasing.” Triono, C1-level</i>
	plagiarism analysis	<i>“Before submitting, I ran a plagiarism check to ensure originality and avoid accidental copying.” Novi, C1-level</i>
	final review of content, structure, formatting	<i>“Before submission, I check the text’s length, structure, and references to make sure everything meets the assignment criteria.” Tutik, B2-level</i>
		<i>“I reviewed the assignment brief to check that I addressed all the required objectives before submission.” Ani, B2-level</i>
Post-submission reflection	celebrating completion and recovery	<i>“Once I submitted the assignment, I took time to relax and reward myself after the intense effort.” Rina, C1-level</i>

It can be concluded that the academic writing strategies employed by IGSs during the phases of the writing process: pre-writing, writing, and post-writing, were both structured and manageable. Across these three stages, the students utilized a variety of writing strategies to elevate the quality and coherence of their essays.

In the pre-writing stage, the students engaged in activities including outlining, time management, brainstorming, refining the topics, and gathering relevant sources.

During the writing stage, the students’ focus shifted to developing content, integrating supporting evidence, refining language use, and ensuring clarity through logical structure organization, precise vocabulary, citation practices, and continuous revision.

The post-writing stage involved proofreading, receiving external feedback from lecturers and peers, conducting plagiarism checks, and performing self-assessment, such as the final reviewing of formatting and verifying alignment with the task descriptions.

It is worth noting that strategies utilized by IGSs are not applied in a strictly linear sequence. Rather, the students often cycle back to earlier stages, such as revisiting outlines, refining content, or correcting errors. The strategies in academic writing are a recursive writing process that supports the completion and submission of their final work.

5.1.4 *Students' Strategies Based on the Writing Taxonomy and Their Occurrences*

The following sections provide detailed explanations about three central topics related to the strategies employed by the students with B2 and C1 levels in EAW based on the writing taxonomy. The first topic highlights the identification and classification of the strategies employed by the students. This is followed by the occurrence of the strategies during the studies. The third topic compares the frequency of writing strategy occurrences used by the two groups in three semesters.

5.1.4.1 The Classification of Academic Writing Strategies (AWS) Based on the Taxonomy. Based on the AWS taxonomy, the study identified 36 sub-categories: *cognitive strategies* (n=18), *metacognitive strategies* (n=9), *social strategies* (n=4), and *affective strategies* (n=5). Table 36 presents the strategies employed by IGSs in writing English academic essays.

Table 36

Identification and classification of English academic writing strategies the students employ in English academic essay writing

Strategy groups	Sub-strategies	Strategy examples
Cognitive	generating ideas	<i>brainstorming</i>
	retrieving prior knowledge	<i>recalling previous knowledge</i>
	clarifying concepts	<i>looking up definition, looking up keywords in academic database, watching YouTube explainers, consulting with dictionaries, using a Google search engine</i>
	rehearsing comprehension	<i>reading abstract only, preliminary reading of current and highly cited articles, narrowing down the topics, highlighting, skimming and scanning</i>
	note-taking	<i>taking notes, keeping notes in OneNote application</i>
	summarizing	<i>writing summaries, making annotations</i>
	synthesizing	<i>synthesizing multiple texts or ideas</i>
	translating	<i>using Google Translate</i>
	organizing content	<i>mind-mapping, organizing key points, creating sub-content sections</i>

	managing sources and information	<i>in-dept database research, using suggested readings from teachers, selecting relevant information</i>
	visualizing data	<i>adding charts, figures or tables</i>
	expanding content and elaboration	<i>writing in complex sentences, expanding paragraphs, providing examples</i>
	defining concepts	<i>defining key terms</i>
	integrating theories	<i>connecting ideas to theoretical concepts, rewriting theories with own words</i>
	argument structuring	<i>remaining neutral, presenting personal viewpoints</i>
	presenting evidence	<i>providing results in numbers</i>
	controlling language use	<i>using discourse markers</i>
		<i>using new and specific vocabulary</i>
		<i>code-switching, using passive forms</i>
		<i>using fixed phrases</i>
Metacognitive	avoiding plagiarism	<i>paraphrasing</i>
	planning	<i>drawing up a timetable, designing a general layout, drawing an outline</i>
	monitoring writing	<i>using Ctrl+F, dual screens</i>
	evaluating	<i>rereading text, checking writing structure, reviewing assignment criteria, and doing a final review of content, structure, and formatting</i>
	revising/editing	<i>deleting redundancy, adjusting layout, replacing repetitive words, making immediate corrections, reorganizing paragraphs, breaking long sentences</i>
	resource management	<i>creating and managing a source database, using institutional log-in</i>
	managing text	<i>footnoting to expand the text and meet assignment requirements, writing in long sentences to fulfill length, using layout to manage sections</i>
	drafting management	<i>managing the drafts</i>
	utilizing tools	<i>using writing tools (e.g., Grammarly), automatic citation tools (e.g., Mendeley), operating language error detectors, using proofreading and paraphrasing tools (e.g., Quillbot), employing plagiarism checkers</i>
	citing sources	<i>utilizing in-text citations to comply with institutional referencing requirements</i>
Social	seeking academic feedback	<i>consulting with the lecturer, receiving external reviews</i>
	seeking peer support	<i>asking classmates for help</i>
	anticipating reader expectations	<i>thinking about the readers (e.g., the lecturers)</i>
	learning from others	<i>learning from other people's writing</i>
Affective	regulating emotional readiness	<i>preparing the writing environment, writing in a quiet place</i>
	maintaining task focus	<i>complying with course requirements as personal goal orientation</i>
	managing stress and recovery	<i>taking a few days off, listening to music, celebrating completion, engaging in academic entertainment (e.g., Netflix)</i>
	handling time pressure	<i>avoiding rushing</i>
	sustaining motivation	<i>calling family or friends, producing one page per day, realizing writing has improved, striving for a good grade, meeting deadlines</i>

Table 36 presents a structured classification of AWS utilized by the participants in writing academic essays, organized into four main categories: cognitive, metacognitive, social,

and affective strategies. These categories are further divided into 36 subcategories that reflect a wide range of academic writing activities, including generating and refining ideas, integrating theoretical concepts, structuring and revising texts, seeking feedback from external readers, adhering to institutional conventions, and sustaining motivation throughout the writing process. The taxonomy highlights how IGSs engage with both the cognitive demands and emotional pressures of academic writing. By analyzing the frequency of strategy use based on the writing taxonomy across three semesters, using descriptive statistics derived from the interview checklist assessment, valuable insights can be gained into students' progress in employing these strategies, as well as differences related to their prior English proficiency levels (i.e., B2 and C1 levels).

5.1.4.2 The Frequency of Writing Taxonomy Reported by IGSs in EAW. Based on the data transcription analysis, the study found 1,665 occurrences of various strategies, including *cognitive* (n=871), *metacognitive* (n=579), *social* (n=118), and *affective* (n=97). The calculation of writing strategy occurrences was based on students' responses to a checklist instrument administered during retrospective interviews, covering the employment of academic writing strategies (AWSs) across the three semesters. Each item in the interview checklist allowed multiple answers, typically offering five options per question. Students were permitted to respond to all applicable answers and to add strategies not listed among the provided options. Each selected strategy was counted as a single frequency occurrence.

In the cases where responses were difficult to categorize, the original interview transcripts were reviewed to identify the most appropriate and contextually relevant category, ensuring consistency in the coding process. Moreover, the interviews were conducted relatively soon after the writing tasks, with a 2-3 month gap between assignment and data collection. This short interval was intended to enhance the accuracy of participants' recall of the strategies they utilized while completing academic essay assignments. Table 37 displays the total frequency of strategies employed by the participants in assigning academic essay writing over the course of three semesters.

Table 37*The total frequency of AWSs mentioned by IGSs in the three semesters*

Types of writing strategies	Total frequency	
Cognitive	871	52%
Metacognitive	579	35%
Social	118	7%
Affective	97	6%
Total frequency	1653	100%

As shown in Table 37, cognitive strategies emerged as the most frequently employed category of writing strategies, accounting for 52% of all strategies used by IGSs across the three semesters. This trend indicates that the students consistently relied on mental processes directly related to task completion, such as generating ideas, outlining, and employing linguistic structures, including both lexical and syntactical aspects, which are considered essential aspects of academic writing skills.

Metacognitive strategies were identified as the second most commonly employed, comprising 35% of the total strategies used during their master's studies at HUs. This suggests that IGSs also engaged in planning, monitoring, and evaluating, as well as editing throughout the writing process, reflecting a higher level of awareness and control over their cognitive efforts. These patterns show a growing emphasis on self-regulated learning, though it remains secondary in the overall process of completing academic essay assignments.

On the other hand, social and affective strategies were used less frequently. This low frequency seems to reflect the individual nature of graduate-level academic writing, which often offers limited opportunities for collaborative learning or external feedback. Likewise, the limited application of affective strategies may indicate a lack of awareness in controlling emotion during the writing process or insufficient institutional support to assist the students in managing anxiety, motivation, encouragement, and confidence while completing academic essay assignments.

The subsequent section elaborates on the calculation and analysis of these strategy occurrences, derived from descriptive statistics analysis conducted using the Data Analysis Toolpack in Microsoft Excel. The results provide valuable insights into strategy preferences and trends across the three semesters, emphasizing progressive trajectories of IGSs during their master's-level academic journey.

5.1.4.3 Writing Taxonomy Distribution by Students' Prior English Proficiency Levels Across Semesters. The following paragraphs describe the statistical analysis of the frequency of academic writing strategies (AWSs) applied over the three semesters. The results are divided into two sections focusing on an overall comparison of AWSs based on students' English proficiency levels. The first section focuses on the frequency of strategies employed by B2-level students, while the second section examines the occurrence of the strategies among C1-level students during their master's studies. The descriptive statistics for B2-level students are presented in Table 38.

Table 38

Descriptive statistics results of B2-level students' writing strategy frequencies across three semesters

B2- English level students	Types of strategies	Semesters					
		1		2		3	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	Cognitive	3.31	4.21	3.60	4.66	2.60	3.66
	Metacognitive	2.43	2.63	3.03	3.21	2.43	3.04
Social	0.85	0.94	1.14	1.35	0.42	0.75	
Affective	0.50	0.70	1.00	1.50	0.50	0.84	

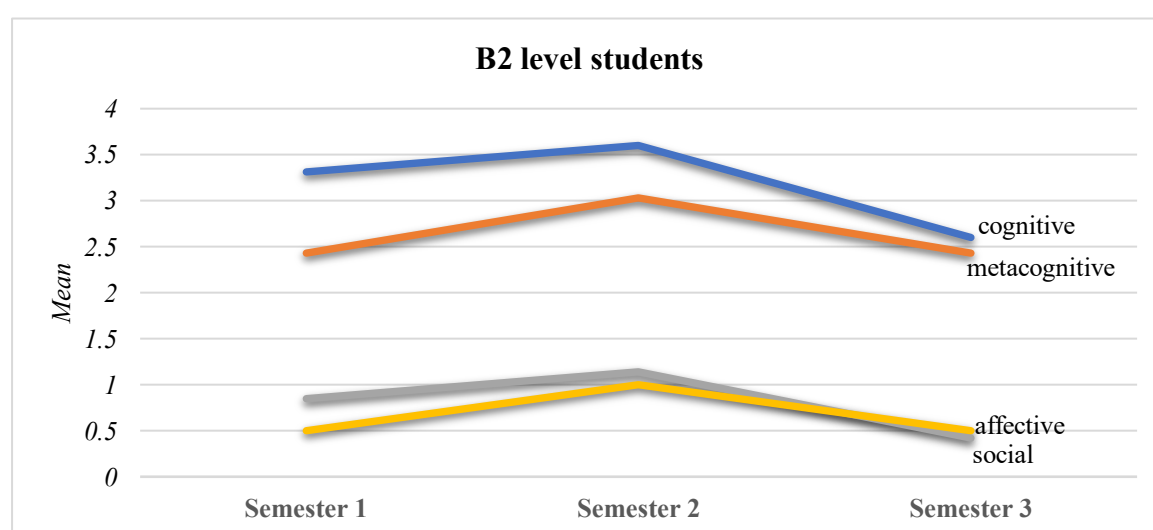
The analysis of academic writing occurrences among B2-level students across the three semesters suggests that cognitive strategies were the most frequently utilized by the students, with a high level mean of 3.60 in semester two (SD = 4.66), followed by a decline to 2.60 in semester three (SD = 3.66). Metacognitive strategies followed a similar trend, rising from a mean of 2.43 in Semester 1 (SD = 2.63) to 3.03 in Semester 2 (SD = 3.21), before returning to 2.43 in Semester 3 (SD = 3.04). The fluctuation in both strategy types suggests that students initially increased their engagement with the essay assignment, including task-focused and self-regulatory strategies, during the middle phase of their studies, albeit this engagement was not fully sustained into the final semester. High standard deviations across the three semesters mean a wide variability in personal usage of writing strategy preferences.

In contrast, social and affective strategies showed a lower frequency level. Social strategies increased slightly in semester two (mean = 1.14, SD = 1.35) before falling to 0.42 in semester three (SD = 0.75), while affective strategies demonstrated a similar increase in semester two (mean = 1.00, SD = 1.50) but returned to baseline in the final semester. These trends suggest that B2-level students prioritized cognitive-focused control over interpersonal or emotional regulation strategies.

Moreover, the occurrences of all categories display a similar trend of increasing employment during the second semester. This trend reflects students' awareness of gaining academic writing experiences, particularly in utilizing writing strategies learned from the previous semester. However, the trend drops in the third semester because of stress and shifting expectations of their academic journey during the pandemic. Figure 7 displays trends in the writing taxonomy utilized by B2-level students while writing academic essays across the three semesters.

Figure 7

Utilization trends of cognitive, metacognitive, social, and affective strategies across three semesters among B2-level Indonesian graduate students



In the second section, statistical findings for C1-level students concerning the frequency of occurrences of writing strategy taxonomy across three semesters are presented in the following Table 39.

Table 39

Descriptive statistics results of C1-level students' writing strategy frequencies across three semesters

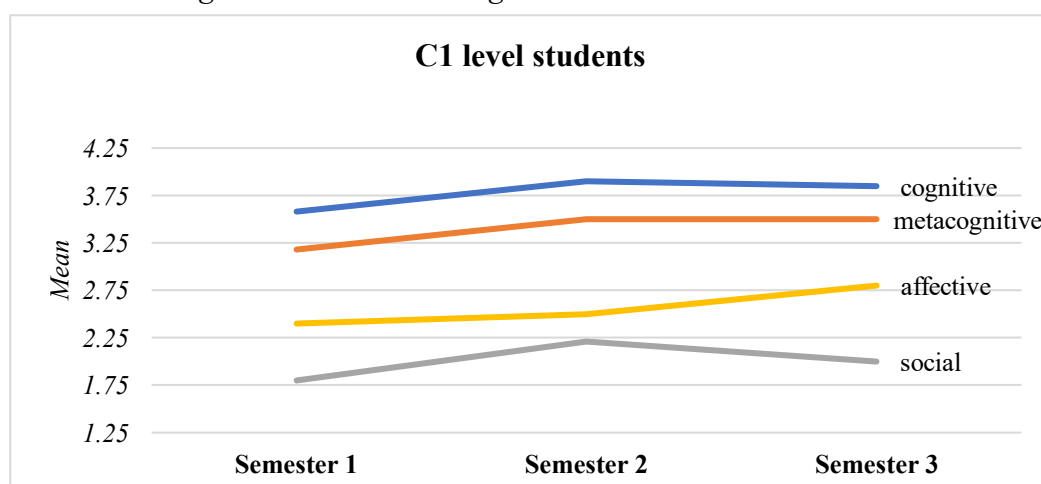
C1-English level students	Types of strategies	Semesters					
		1		2		3	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	Cognitive	3.58	4.40	3.90	4.30	3.85	4.88
	Metacognitive	3.18	3.90	3.50	4.06	3.50	3.86
	Social	1.80	1.52	2.21	2.93	2.00	2.40
	Affective	2.40	1.60	2.50	1.27	2.80	2.40

The data from Table 39 reveals consistent patterns in the utilization of writing strategies among C1-level students across the three semesters. Cognitive strategies were noted as the most frequent types of the strategies utilized by IGSs, with the highest mean scores in all semesters (mean = 3.58, 3.90, and 3.85, respectively). This trend suggests a stable and dominant role in the students' writing processes. Although the mean slightly reached its highest point in the second semester, the increase was modest, and the strategy remained relatively consistent over time. Metacognitive strategies followed a similar upward trend from semester one (mean = 3.18, SD = 3.90) to semester two (mean = 3.50, SD = 4.06), maintaining that level in semester three. This shows that the students gradually improved their awareness and planning in their writing processes, likely building on their earlier writing experiences.

On the contrary, social and affective strategies recorded lower mean scores. As for social strategies, although the mean scores started from a low baseline in the first semester (mean = 1.80), they experienced a notable increase in the second semester (mean = 2.21). This can mean that collaborative efforts or increased peer interaction during that period, particularly the availability of group essay assignments, as reported by Lilis (C1 level student). For affective strategies, the results demonstrate a steady rise from semester one to three (mean = 2.40, 2.50, and 2.80), meaning that the students increasingly managed their emotions and attitudes toward academic writing, perhaps as they gained confidence or emerging challenges (e.g., pandemic-related situations). The relatively high standard deviations, particularly in cognitive strategies (ranging from 4.30 to 4.88), denote considerable individual differences in the frequency of strategy use. The overall frequency of writing strategy occurrences applied by C1-level students is illustrated in Figure 8.

Figure 8

Utilization trends of cognitive, metacognitive, social, and affective strategies across three semesters among C1-level Indonesian graduate students

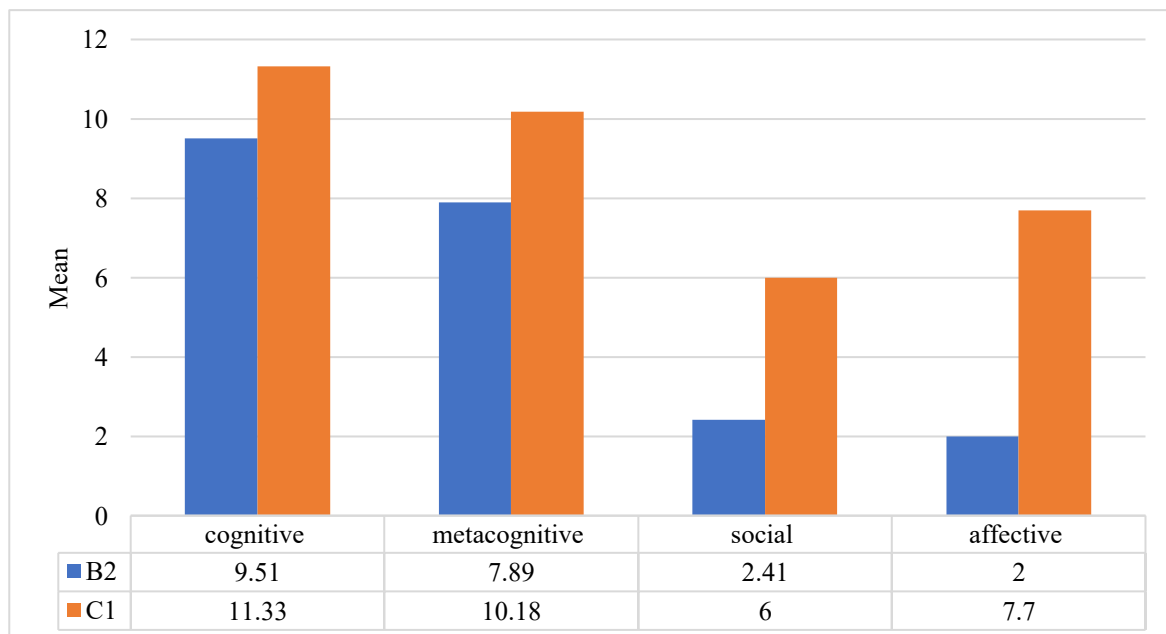


5.1.4.4 The Comparison between B2 and C1 Level Students' Writing Strategy Employment during Their Master's Studies in Hungary. Based on the calculated data, it is a fact that C1-level students exhibit a higher level of writing strategy occurrences across all categories compared to their B2-level counterparts. For instance, C1-level students recorded a mean score of 11.33 for cognitive strategies, surpassing the B2 group, which scored 9.51. By the same token, for metacognitive strategies, the mean for C1-level students was 10.18, compared to 7.89 for B2-level students. The differences are even more notable in social strategies (C1: 6.00; B2: 2.41) as well as affective strategies (C1: 7.70; B2: 2.00), underlining a more extensive use of a wider range of strategy utilization among experienced students.

This higher level of strategy use can be attributed to the C1-level students' greater experiences in academic writing and their prior higher English proficiency levels, which likely support their ability to apply the strategies more effectively. Their prior knowledge and familiarity with academic discourse facilitate diverse use of AWS, as shown in the elevated mean scores. Figure 9 below displays this comparative analysis of the AWS employed by B2 and C1 level students over time during their studies in Hungary.

Figure 9

The comparison of EAW strategies used by B2 and C1 level students over time



Based on the illustrative data in Figure 9, it shows that both groups actively utilized cognitive and metacognitive strategies when completing their academic essay assignments. These two types of strategies play a critical role in producing well-structured academic texts. Cognitive strategies facilitate students engaging deeply with the task, organizing their ideas,

and presenting arguments effectively. Metacognitive strategies, on the other hand, focus on planning, monitoring, and evaluating the writing process, offering greater control and awareness during text production.

While cognitive and metacognitive strategies are highly prevalent among the students, it is important to note that the utilization of other strategies, such as social and affective strategies, particularly among C1 students, is also significant. Social strategies may reflect interaction among lecturers and peers as well as collaborative learning, while affective strategies suggest improved emotional encouragement and confidence in facing academic writing challenges. Although these strategies were frequently less used than cognitive and metacognitive strategies in the two groups of students, their higher score mean among C1-level students demonstrates a profound understanding of strategy progress during their studies in Hungary.

5.2 Discussion

This current study underlines the research question regarding the strategies in writing English academic essays utilized by IGSs while studying in Hungary. The question consists of four main aspects focusing on the strategies used by the students in connection with the writing process: (1) the strategies employed during pre-writing, writing, and post-writing; (2) the classification of these strategies based on an established taxonomy, (3) the frequency of strategy use by the students during the completion of their academic essay assignments, and (4) a comparison of strategy use based on students' prior English proficiency levels.

In the pre-writing stage, the students applied writing strategies that can be classified into several phases, such as planning (e.g., *brainstorming*), understanding and refining the topic (e.g., *undertaking preliminary reading of current/highly cited articles*), information gathering and source management (e.g., *in-depth database research for evidence collection*), academic reading and notation (e.g., *reading only the abstract of relevant research studies*), and structuring and organizing content (e.g., *mind mapping, designing a general layout*). The phases involve preparatory steps in data collection, processing, and information management that are undertaken before students begin their actual writing.

The pre-writing stage is a crucial step in the writing process, as all relevant strategies can help the students gather background information from various activities aimed at organizing and structuring students' thoughts and generating ideas prior to the beginning of writing academic essays. Hence, by engaging in this process, students can manage and direct their writing more effectively, resulting in a more well-rounded and adequate preparation.

Moreover, based on the findings of the current study, the use of a strategy such as *recalling previous knowledge* and using *an accessible platform provided by the institution* (e.g., free access to download online subscribed articles with students' log in) to undertake in-depth database research for evidence collection in the planning phase has also been mentioned in Chapter 4.1.2 as the support the students receive in English academic writing (EAW). This strategy plays a significant role in the successful accomplishment of the students' essay assignments. By recalling previous experiences related to academic writing, the participants can build upon their existing knowledge, identify areas for improvement, and develop more comprehensive and well-informed arguments in their writing.

In the writing stage, the classification of the strategies was divided into several themes that were connected the actual writing practices including preparatory stages (e.g., *drawing an outline, managing draft*), research and information management (e.g., *using Google search engine, consulting in online thesauri and dictionaries*), text-length fulfilment (e.g., *writing in long sentences, footnoting*), content development (e.g., *providing examples to support claims or arguments*), language and stylistic enhancement (e.g., *using discourse markers, deleting redundant paragraphs*), visual and citation support (e.g., *utilizing in-text citations*), text revision and editing (e.g., *re-reading the text after writing several paragraphs*), Academic integrity assurance (e.g., *citing sources, performing plagiarism checkers*), and motivation and mindset management (e.g., *complying with course requirements, taking a few days off*). The themes are strongly associated with metacognitive activities underlining planning, monitoring, and revising, as this stage is the core of the writing stage in which the students produce well-qualified academic essay writing. This finding corresponds to the studies conducted by Mu and Carrington (2007) and Xia (2017) as well as Teng (2022), which state that metacognitive strategies play a significant role in academic writing performance. Hence, the employment of the metacognitive strategies in English academic essays is richly varied in this stage.

As for the post-writing stage, the phases deal with revision and final check as well as post-submission reflection. The students received external feedback from the lecturers to help them improve their academic essays by ensuring the aims or objectives of the assignment were fulfilled. Furthermore, the students have a chance to meet with the lecturer to ask for feedback, and this is the strategy that the students utilized after completing their writing. This strategy aligns with the findings of Hyland and Hyland (2019) and Flowerdew (2013), who emphasize the importance of receiving feedback from experts or peers to enhance the quality of written work. Moreover, Hyland (2003) argues that integrating external feedback into the writing process can help non-native English speakers develop their academic writing skills. By seeking

guidance and clarification directly from lecturers, students can gain valuable insights and ensure that they are on the right track with their assignments.

Plagiarism analysis is important before students proceed with their submission. As Tutik (B2-level) mentioned, she needs to ensure that the plagiarism checking results align with the task descriptions. The purpose is to allow students to conduct a final evaluation of their content to guarantee academic integrity and confirm that their work is free from uncredited use of others' ideas, which is often considered unethical and unacceptable in academic discourse.

For the final review, the participants mentioned that it is essential to comprehensively examine the content, structure, and formatting of the essay before submission. By conducting a thorough final review, the students can make necessary revisions to enhance the overall quality of their work and submit a polished essay.

Finally, after the essay submission, the participants celebrate the completion of the task and take time to rest and rejuvenate. This phase allows them to alleviate stress and anxiety associated with the essay writing process. This strategy clarifies the importance of well-being and mental health for academic success. Fajaryanti et al. (2021) assert that taking breaks and allowing time for relaxation can help students avoid burnout and maintain a healthy work-life balance. Therefore, the students prioritize a good rest, such as sleeping, after submitting essay assignments.

Regarding the classification of academic writing strategies (AWSs) based on the writing taxonomy presented in Table 6 of Section 2.7.2, the findings reveal four main categories: cognitive strategies (e.g., *generating ideas, summarizing*), metacognitive strategies (e.g., *monitoring, evaluating, utilizing writing tools*), social strategies (e.g., *seeking academic feedback, learning from others*), and affective strategies (e.g., *regulating emotional readiness, managing stress and recovery*).

In reference to the frequency of occurrences of AWSs based on the interview checklist, the study indicates that cognitive strategies are used the most frequently, followed by metacognitive strategies. Social and affective strategies are used less frequently. Despite previous studies highlighting the preference of some L2 English learners for metacognitive strategies over cognitive strategies in academic essay writing, such as Putri et al. (2023) and Zhao and Liao (2021), the findings of the current study suggest that the participants favored cognitive strategies over other strategies. These findings align with research conducted by Bui et al. (2023), Díaz Larenas et al. (2017), Idris et al. (2022), and Mu and Carrington (2007), which discovered that L2 English students in higher education tended to employ more cognitive strategies when writing essays in English.

It appears that the frequent utilization of cognitive strategies in essay writing can be attributed to their direct involvement in crucial mental processes related to organizing and structuring ideas, as well as generating and analyzing content. The participants often rely on these strategies to facilitate their understanding, manipulation, and transformation of information into coherent texts. Since these activities are fundamental to the writing process, it is not surprising that cognitive strategies are employed more frequently compared to other types of strategies (see, for example, the findings in Bui's (2023) research). This is evident in their use of strategies such as consulting a thesaurus or dictionary to find synonyms.

“I searched for a word in the Google dictionary that means ‘a man who runs for a war,’ and I found the word ‘belligerent,’ which sounded unfamiliar to me.” (Eko, C1-level)

This reliance on cognitive strategies can be especially pronounced among students who are developing their writing skills, as they need to focus on generating and organizing ideas before considering aspects such as social and affective (Hyland, 2009). This information is relatable to participants who rely more on their own thinking and problem-solving skills (cognitive strategies), as well as their ability to plan, monitor, and evaluate their own writing (metacognitive strategies), when completing academic essays to enhance academic performance. This finding is consistent with the suggestions proposed by Razzaq and Hamzah (2024) and De Silva (2015), who argue that the integration of cognitive and metacognitive strategies can help students' writing performance. Therefore, these two types of strategies are frequently employed by IGSs. On the other hand, the relatively low frequency of social and affective strategies may indicate that they are not emphasized as much in the instruction.

“One or two of our lecturers have mentioned that using perfect English is not crucial, as long as we demonstrate a clear understanding of the subject matter. They also emphasized that grammatical accuracy is not heavily prioritized. As long as the main points are conveyed in the text, we can feel confident in our work.” (Budi, B2-level)

In addition, social and affective strategies appear to reflect the individual nature of graduate-level academic writing, which often provides limited opportunities for collaborative learning or peer feedback. This is compounded by a lack of awareness in managing emotions and both physical and mental aspects during the writing process, including general and external factors (e.g., technical challenges, environmental issues), as discussed in the students' challenges section (see Section 4.1.1). These conditions contribute to difficulties in managing anxiety, motivation, and confidence when completing essay assignments.

The results also confirm fluctuations and periods of stability in the use of writing strategies across semesters, influenced by several aspects. This study identifies six relevant

factors that contribute to changes in the use of AWSs during the completion of students' essay assignments.

First, *subject topics* link to the employment of academic writing strategies. These aspects tend to relate to the previous discussion of challenges students face in Section 4.1.1 when writing academic essay assignments.

“In semester three, I was assigned a topic about green corporations talking about the film industry, a subject about which I know absolutely nothing.” (Novi, C1-level)

Second, *academic environments* play a significant role in the application of AWSs. In the earlier discussion regarding the challenges students encounter with regard to inaccessible online databases and journals due to residing off-campus, certain participants expressed the necessity of relying on the university's internet connection to download articles while staying in the campus dormitory.

“Since we no longer reside in the campus dormitory, we have lost direct access to the university's internet network, which previously allowed us to download online academic articles and other scholarly resources without restrictions. This has posed challenges in the process of completing our academic essay assignments, particularly when conducting literature reviews.” (Tutik, B2-level)

Without this residency, it seems difficult for students to have full access if they use their internet connection. To solve this problem, some students use VPN (Virtual Private Network) to have full access that cannot be downloaded from their own private connection.

“Off-campus access is either limited or requires additional steps, such as VPN login or institutional authentication. So, I now need to use a VPN to download the restricted article.” (Tutik, B2-level)

This is done by the students who do not stay at the campus dormitory or outside of the residence. As a result, they seem to rely on credible sources from highly cited journal providers to support their essays by using a VPN.

Third, *instructional methods* are closely linked to the implementation of writing strategies. An example of this is the shift from offline to online learning, which requires the participants to adapt to a new situation where they must ensure technical requirements such as a stable internet connection, which was previously discussed as another challenge the students face.

“I found online learning difficult, so I had to make sure my internet connection was stable during every class. Sometimes, even a slight drop in connection would make this miss important parts of the lecture, especially when the lecturer was explaining something critical.” (Triono, C1-level)

To cope with these issues, the participant adopted a metacognitive strategy and took notes afterwards, which required reviewing recorded lectures and creating outlines based on lecture content after class. The students also used secondary sources uploaded by the lecturer via Moodle and used short YouTube videos to help them understand difficult parts of the explanation or missing content due to technical problems.

“To address that, I started rewatching recorded sessions in Teams and taking notes afterwards. Then I would make an outline from those notes to guide my assignments. It really helped me focus my writing, even if I didn’t catch everything live in the class.” (Triono, C1-level)

“When I missed content from the class or found academic sources were too complex, I would search for short YouTube explainers to get a general understanding before reading more deeply. Watching a 5-10 minute video can help me understand the basic concepts.” (Ani, B2-level)

“To assist us in developing our assigned topics, our lecturers provide a selection of secondary sources uploaded through Moodle, including comprehensive lists of recommended articles for our references.” (Budi, B2-level)

It is worth mentioning that students tend to utilize cognitive strategies to address the problems encountered during instruction or the writing process. These activities serve as preliminary steps in building foundational understanding, which enhances their confidence and performance in EAW. As previously discussed in the chapter on challenges faced by the students, Fontenelle-Tereshchuk’s (2024) study provides support for the notion that technicality helps L2 English students encounter their writing tasks. Moreover, this situation is also relevant to studies involving Hernandez et al.’s (2017) research, which provides evidence that the change to online learning affects students’ writing strategies.

Fourth, *assessment criteria* can be attributed to changing writing strategies. The criteria used for evaluating students’ essay assignments play a crucial role in shaping their approach to writing. When the assessment criteria undergo modifications, students are compelled to adjust their strategies accordingly to meet the new expectations and requirements.

“Our essay is graded based on five different criteria, and we have to ensure that we meet each one to get full marks. For each criterion, we conform to one point. If we fail to meet something specific, let us say, if we don’t reach the required 10,000 words for the word category, our score will automatically drop. Even if we go beyond the required word count, it still affects the score. Writing 10% longer than those accepted numbers results in a 0.75 point deduction, and if we go 20% over, the penalty increases further.” (Eko, C1-level)

“I noticed that the use of word precision or selection also affects the scoring. For example, I tried changing the word ‘company’ to ‘industry’ or ‘corporate,’ and that actually helped me get a higher score. It seems that using more formal or subject-

specific terms makes my essay sound more academic and receives better feedback.”]
(Budi, B2-level)

This is evident in that the complexity of essay tasks, as highlighted by previous literature studies including Rahmat (2021), poses a challenge for students in higher education and impacts their academic writing strategies. As a result, they tend to meet academic essay writing criteria in order to achieve their expected scores and gain impressive results. By aligning their strategies with specific assessment criteria, students can effectively meet expectations, achieve desired outcomes, and enhance their chances of positive results in academic writing.

Fifth, a key aspect in affecting the use of academic writing strategies is related to *motivation*. The study has revealed changes in the student’s motivation due to the pandemic situation; striving for an excellent grade is an example that supports the use of the strategies.

“As a result of the pandemic, assignments that were not initially part of the course now required us to write essays for every subject.” (Novi, C1-level)

“I was stressed because I had to submit all the essays while I was infected with COVID.”
(Rina, C1-level)

These two excerpts illustrate that managing motivation is critical in supporting the timely completion of writing tasks, particularly under personal pressure. These results are also relevant to the previous studies, such as Ahmad et al. (2022) and Gómez-García et al. (2022), that underscore how students in higher education experienced demotivation and stress due to heavy workloads and physical challenges during the pandemic, particularly while completing their essay assignments. The pandemic context not only triggered the introduction of new challenges, as mentioned by Mok (2022), but also heightened students’ awareness of their individual learning differences, especially in controlling emotions and stress while completing essay assignments.

Finally, students tend to prioritize their emotional and affective needs as they progress in their studies, focusing on *building confidence* and *engaging in stress-reducing activities*. These findings are consistent with the studies discussed in the previous research by Bui et al. (2023) and Mu (2005), which underscores the significance of affective strategies in facilitating successful academic writing. The following excerpts illustrate how IGSs build their confidence in EAW and apply AWSs by listening to music or watching movies to support their mental well-being and create an enjoyable environment.

“While studying in Hungary, I also work as an IELTS trainer. I don’t use any grammar checking tools or other writing applications because I trust my grammar knowledge. I only use a dictionary to check vocabulary when needed.” (Triono, C1-level)

“I found it challenging to begin the writing process without first listening to music, as it helps me relax, focus, and create a mentally stimulating environment. Listening to music also helps me clear my mind and ease the stress, especially during tight deadlines or when I feel overwhelmed.” (Novi, C1-level)

“I usually watch Netflix when I'm feeling stressed out, especially after long hours of studying or writing. Watching movies can help me recharge emotionally and return to my academic task with a clearer mind” (Rina, C1-level)

To conclude, the influence of these six factors on the employment of writing strategies is of paramount importance. These findings not only reinforce the significance of these factors but also align with previous studies (see e.g., Hu, 2022; Mu & Carrington, 2007) discussed in Chapter 2, which emphasize their substantial impact on the occurrence of writing strategies. The study has also established an interrelationship between the students' English proficiency levels and their employment of writing strategies across multiple semesters. The C1 students were found to use writing strategies more frequently than their B2 counterparts. These results also support the conclusion of Raoofi et al.’s (2017) study, which also indicates that students with higher English proficiency tend to employ a greater number of strategies when writing academic essays in English compared to lower proficiency students.

It is worth noting that the students' previous educational backgrounds seem to contribute to their ability to employ various writing strategies in academic essay writing.

“My background in IELTS preparation has significantly contributed to my academic writing performance, particularly in areas such as coherence, structure, and argument development.” (Lilis, C1-level)

“Back in my undergraduate years in Indonesia, I had the opportunity to work on a research collaboration with my supervisor. One of the things we did was create a research database to support our study. I now use the same strategy to build databases for my essay assignments, as it helps me organize the sources smoother during the writing process.” (Eko, C1-level)

Based on the statistical data, C1-level students exhibit a higher frequency of writing strategy use, reflecting having more opportunities to practice their academic writing skills. While the B2 students also benefit from institutional support through an English for academic writing course, as discussed in Section 4.1.2, the C1 students exhibit greater engagement in enhancing their academic writing ability.

“Due to consistent practice in writing essay assignments, I was able to write better essays in the last semester by learning from my previous mistakes.” (Novi, C1-level)

Another notable factor observed in the C1 students is their effective regulation of comfortable feelings. They demonstrate a heightened awareness of the impact of emotions on their writing and intentionally utilize affective strategies to manage their emotions and sustain motivation.

“Before I begin writing, I often spend up to two hours preparing and ensuring that I am well-fed and have taken a bath. So, I feel physically and mentally ready to focus on my writing.”] (Rina, C1-level)

This finding aligns with the work of Hu (2022) and Bui et al. (2023), suggesting that affective factors play a crucial role in the language learning process, as they can influence students' motivation, engagement, and persistence.

All in all, the higher frequency of writing strategies applied by the C1 compared to the B2 students is likely due to their prior English proficiency levels, prior academic writing knowledge backgrounds, practical opportunities, and affective management of comfortable feelings. These factors collectively contribute to their ability to employ a wider range of writing strategies and effectively express their ideas in the successful completion of English academic essay writing assignments.

CHAPTER 6

INFORMATION DENSITY: TEXT ANALYSIS

This chapter examines the characteristic features of information density (ID) components in academic essays produced by IGSs throughout their studies at Hungarian universities. The calculation of ID frequency was performed using the Coh-Metrix 3.0 web tool analysis developed by McNamara et al.'s (2014) Coh-Metrix 3.0 web tool analysis. The analysis is divided into three subsections. First, the analysis addresses a general overview of ID in the studies. Second, the discussion explores the linguistic features that indicate ID and conducts a comparative examination of these features based on students' prior English proficiency levels, which are B2 and C1 levels. The third topic pertains to occurrences of ID-related linguistic features in the students' academic essays across the three semesters.

6.1 Results

6.1.1 *The General Overview of ID in IGSs' Academic Essays*

Table 40 presents an overview of the linguistic features of ID in the students' academic essays, as determined through the Coh-Metrix calculation.

Table 40

Total frequency of information density in the students' academic essays using Coh-Metrix

Total running words	Information density					
	Lexical density				Expanded noun phrase (the average number of modifiers per noun phrase)	Nominalization
	Incidence score per 1000 words		Total frequency/percentage			
	content	function	content	function		concreteness
98295	588.66	411.33	55890/59%	39110/41%	0.98	360.34

The data presented in Table 40 displays the total number of frequencies related to ID covering total running words, incidence score, and total frequencies of both content and function words, along with their respective percentages of occurrence; the manifestation of expanded noun phrases, which is calculated based on the average number of modifiers per noun phrase; and nominalization by looking at the frequency of concreteness.

The overall results indicate that the essays produced by the participants consist of a higher proportion of content words compared to function words, a trend consistently observed

across all studies. Furthermore, the study discovered that the frequency of content words in the students' academic essays exceeded that of function words, with content words comprising nearly 60% of the total, while function words accounted for less than 42%. These findings indicate that the students' texts fall into the category of academic writing from the point of view of lexical density (LD), aligning with relevant studies by Biber (1996), Fang (2004), and Ure (1971), which suggest that content words in academic texts typically exceed 40%.

Other relevant features of ID involve the manifestation of expanded noun phrases and nominalization. The results show that the frequency of expanded noun phrases approached 1.00, indicating that nearly every noun phrase was accompanied by modifiers, including either pre- or post-modifiers. It means a moderate use of complex noun constructions to pack more information into fewer words. In addition, the texts demonstrated frequent use of nominalization, which was investigated from the point of view of concreteness occurrences. A further analysis regarding the frequency of concreteness in the students' essays will be presented in the following paragraphs, as lower concreteness scores typically signal higher levels of nominalization, signifying academic writing features.

6.1.2 The Comparison of ID Components between B2 and C1 Students' English Academic Essays across Three Semesters

Based on the descriptive statistical analysis, the findings related to the relevant indices of ID in B2 and C1 students' essays, including the Mean (M) and Standard Deviation (SD) throughout the three semester studies, are presented in Table 41, accompanied by a detailed explanation below.

Table 41

Comparative descriptive statistics of ID in the students' academic essays across three semesters

Semesters	Groups	Relevant ID indices							
		LD				Expanded NP		Nominalization	
		content		function				concreteness	
		M	SD	M	SD	M	SD	M	SD
1	B2	579.51	18.84	420.50	18.84	0.98	0.14	374.16	19.66
	C1	592.90	11.49	407.10	11.49	0.99	0.06	368.39	2.64
2	B2	578.48	19.86	421.52	19.86	0.97	0.10	379.37	9.89
	C1	599.55	12.94	400.48	12.95	1.06	0.04	371.43	2.63
3	B2	492.30	242.91	341.03	168.12	0.81	0.41	319.49	157.13
	C1	592.74	18.89	407.26	18.89	1.03	0.04	349.18	45.02

Based on the statistical results presented in Table 41, the comparison between the B2 and C1 groups in manifesting ID in their academic essays reveals a consistent pattern of higher ID among the C1 students' essays over three semesters.

In Semester 1, the C1 group's essays exhibited a higher frequency of lexical density ($M = 592.90$, $SD = 11.49$ for content words) and a lower frequency of function words ($M = 407.10$, $SD = 11.49$), compared to the B2 students' essays ($M = 579.51$, $SD = 18.84$ for content words; $M = 420.50$, $SD = 18.84$ for function words). As for expanded NPs, both groups performed in a similar manner (C1: $M = 0.99$, $SD = 0.06$; B2: $M = 0.98$, $SD = 0.14$), but the C1 students' texts maintained a more controlled and compact distribution. Nominalization was also examined through concreteness scores. The results indicate that the C1 students' essays appeared more abstract ($M = 368.39$, $SD = 2.64$) than those of the B2 students' texts ($M = 374.16$, $SD = 19.66$), indicating the patterns of higher ID in the students' academic essays.

In semester 2, the C1 group continued to lead in all three indices of ID, showing consistently higher frequencies across key linguistic features. The frequency of content words increased to $M = 599.55$ ($SD = 12.94$), while the patterns of function words dropped to $M = 400.48$ ($SD = 12.95$). On the contrary, B2 students' essays maintained similar levels of LD ($M = 578.48$, $SD = 19.86$ for content words), with a slightly higher frequency of function words ($M = 421.52$, $SD = 19.86$). Furthermore, the C1 group's texts demonstrated a significantly higher frequency of expanded NPs ($M = 1.06$, $SD = 0.04$), compared to the B2 group ($M = 0.97$, $SD = 0.10$), reflecting a more frequent application of modifiers. The trend in nominalization remained consistent, with C1 students' essays producing more abstract language ($M = 371.43$, $SD = 2.63$) than their B2 counterparts ($M = 379.37$, $SD = 9.89$), although the gap between the two groups slightly narrowed.

In Semester 3, the gap between the two groups became more evident. The C1 students' essays maintained high lexical density ($M = 592.74$, $SD = 18.89$) and stable patterns of function words ($M = 407.26$, $SD = 18.98$). In contrast, the B2 students' writing showed notable declines and high variability ($M = 492.30$, $SD = 242.91$ for content words; $M = 341.03$, $SD = 168.12$ for function words). This instability may stem from missing text samples in this semester, which could have disrupted the consistency of the B2 group's performance. In like manner, the manifestation of expanded NPs in the B2 students' texts also dropped ($M = 0.81$, $SD = 0.41$), while the C1 students' essays manifested in a consistent way ($M = 1.03$, $SD = 0.04$). Although B2 students' texts produced less concrete language ($M = 319.49$), the large standard deviation ($SD = 157.13$) emphasizes considerable inconsistency. In contrast, the C1 students' texts remained more controlled and stable ($M = 349.18$, $SD = 45.02$). Overall, the C1 students' texts

exhibited a steady progression in manifesting ID, while the B2 group's ID patterns were increasingly unstable, especially in the final semesters.

The following examples are excerpts derived from the students' academic essays to examine how relevant indices of ID are manifested in their texts during their studies at HUs.

The comparison of LD in B2 and C1 level texts (content words highlighted in green)

Extract 1

The term waste bank consists of two words. Bank is an intermediary institution that has a function as a place to save and lend money and also financial transactions. Waste is defined as all unwanted or unusable material, which is usually discarded by its owner. Waste bank is a campaign for handling waste by buying back waste in terms of a deposit like banking system. Waste bank operates like a bank which people in a community, subdistrict, and district can use to deposit their garbage or extract money from the value of the garbage they provide to the facility, the waste bank concept will also assist governments in empowering communities to manage waste wisely and reduce waste. In waste bank concept, everyone who comes to exchange the used bottle will be paid with money, they can also save the money and take it at any time like in a bank in general. People can also apply as a membership in waste bank that will produce creative or craft goods and sell them. (Budi, B2, semester 1)

Extract 2

The arrival of European powers like Spain, Netherlands and Great Britain between 17th and 18th century completely disrupted political influences from Brunei, Sulu and Bulungan. Afterward, Brunei and Sulu's power declined as most of their influenced territories were either annexed by Spanish Empire and Netherlands East Indies or ceded to British North Borneo Company (BNBC) through lease agreement. Meanwhile, Bulungan signed a contract of vassalage with Netherlands East Indies in 1850, politically put Bulungan under Netherlands rule with fewer amount of autonomy to the extent. To settle dispute concerning their colonial territories in North Borneo, Great Britain, delegated by BNBC, and Netherlands, represented by Netherlands East Indies, signed the 1891 Convention in which previously mentioned 4°10' north parallel of latitude from Sebatik Island eastward applied. For the first time in history, shared authorities in North Borneo were settled based on their respective territorialities and henceforth ended the age of mandala. Politically speaking, geographical reality such as North Borneo entered modern era under Western colonization. (Eko, C1, semester 1)

Table 42

Comparison of LD measures in the B2 and C2 text extracts

LD information	B2 (Budi, Semester 1)	C1 (Eko, semester 1)
number of words	172	165
content words	95	110
function words	77	55.23
LD in extract (%)	55.23	66.43
LD in essay (%)	57.56	58.82

Table 42 displays the comparison of ID measures observed in both the extract and the full essay, indicating that the C1 students' writing is denser than that of the B2 students' texts. It further demonstrates that the C1 students' texts contain more content words than the B2 text. Nevertheless, the difference in ID patterns between the two groups appears to be relatively small.

Expanded noun phrases in B2 and C1 level texts (expanded noun phrases are bold, head nouns are underlined)

Extract 1:

*The **term** waste bank consists of two words. Bank is an intermediary **institution** that has a function as a place to save and lend money and also financial transactions. Waste is defined as all unwanted or unusable **material**, which is usually discarded by its owner. Waste bank is a **campaign** for handling waste by buying back waste in terms of a deposit like banking system. Waste bank operates like a **bank** which people in a community, subdistrict, and district can use to deposit their garbage or extract money from the value of the garbage they provide to the facility, the waste bank **concept** will also assist **governments** in empowering communities to manage waste wisely and reduce waste. In waste bank **concept**, **everyone** who comes to exchange the used bottle will be paid with money, they can also save the money and take it at any **time** like in a bank in general. People can also apply as a **membership** in waste bank that will produce creative or craft goods and sell them.* (Budi, B2, semester 1)

Extract 2:

*The arrival of European **powers** like Spain Netherland and Great Britain between 17th and 18th century completely disrupted political influences from Brunei, Sulu and Bulungan. Afterward, Brunei and Sulu's **power** declined as most of their influenced **territories** were either annexed by Spanish Empire and Netherland East Indies or ceded to British North Borneo Company (BNBC) through lease agreement. Meanwhile, Bulungan signed a **contract** of vassalage with Netherland East Indies in 1850, politically put Bulungan under Netherland rule with fewer amount of autonomy to the extend. To settle **dispute** concerning their colonial territories in North Borneo, Great **Britain**, delegated by BNBC, and Netherland, represented by Netherland East Indies, signed the 1891 **Convention** in which previously mentioned 4°10' north parallel of latitude from Sebatik Island east-forward applied. For the first **time** in history, shared **authorities** in North Borneo were settled based on their respective **territorialities** and henceforth ended the age of mandala. Politically speaking, geographical **reality** such as North Borneo entered **modern era** under Western colonization.* (Eko, C1, semester 1)

The comparison of extracts from B2 and C1 students' texts reveals differences in their use of expanded noun phrases. Both texts consist of complex noun phrases by incorporating various modifications such as premodifications, postmodifications (including appositives, relative clauses, and participle (-ed and -ing) clauses), prepositional phrases, and double postmodifiers. The C1 student, in Text 2, employs longer noun phrases; for instance, "To settle dispute concerning their colonial territories in North Borneo, Great Britain, delegated by BNBC, and Netherland, represented by Netherland East Indies, signed the 1891 Convention in

which previously mentioned 4°10' north parallel of latitude from Sebatik Island east-forward applied. This sentence demonstrates complex postmodifications, including relative clauses, non-finite clauses, and prepositional phrases. The use of abstract words, such as "convention," is an indication that post-modification has started.

It is worth mentioning that social science disciplines may place a greater emphasis on the presentation and organization of information, which can also lead to greater use of nouns, including nominalization (e.g., Biber & Gray, 2010; Hyland & Salaga-Meyer, 2008). Furthermore, the utilization of nominalization (e.g., *improvement, growth, inflation*) enables students to convey complex ideas with more detail and effectiveness, thereby enhancing the density and overall clarity of their academic texts. As a consequence, the use of nouns plays a fundamental role in the social science disciplines. As a result, it is obvious that the C1 student's text is denser than the B2 student's text.

Nominalization in B2 and C1 level texts, with concrete words marked in bold

Extract 1:

State-Owned Enterprise (BUMN) Minister, Erick Thohir, said that Indonesian government will do any actions that need to be done in order to keep Garuda Indonesia far from bankruptcy even in the COVID-19 situations. The other reason why Garuda Indonesia must stay on the market is because to avoid monopoly of the airline industry in the country. Right now, In Indonesia the domestic aviation industry is an oligopoly market condition. This condition makes the ticket prices become expensive. It will be even worse if the government let a single airline dominate the market. This is why Garuda Indonesia must me there as a state-owned company, to control the market. (Sri, B2, Semester 2)

Extract 2:

It is such a brilliant step to be taken due to its ability to turn national liability to be a great diplomatic asset. Moving the excess capacity from China to abroad means that China is helping other less developed nations to achieve the same level of development due to its excellent quality of production, sophisticated technology and equipment, complemented by more than 30 years of experience in the developmental state model. The One Belt One Road (OBOR) projects, or as it is more widely known, the Belt and Road Initiative (BRI), has the intention of creating a positive sum game – where both parties involved experience "wins". Last but not least, Ethiopia is a very strategic place for China to invest due to its geographical location. (Triono, C1, Semester 2)

From the comparison of Text 1, written by Sri (a B2-level student), and Text 2, written by Triono (a C1-level student), it can be observed that both texts contain complex concepts related to economics, government, and international relations. These topics involve abstract and concrete language. In Text 1, it appears that the pattern of nominalization is balanced with the inclusion of specific, real-world issues affecting the public. These include proper nouns

such as *Eric Tohir* (the minister of BUMN in Indonesia), *Garuda Indonesia* (the national airline), *ticket prices*, and *the Covid-19 situation*. These all reflect experiences related to daily life.

On the other hand, while Text 2 also comprises concrete nouns such as real-world entities (e.g., *China*, *Ethiopia*, and *the BRI project*), it lacks references to people, physical environments, or tangible infrastructure. Moreover, Text 2 features a significant amount of abstract language. It is filled with adjectives denoting qualities (e.g., *brilliant*, *great*, *excellent*, *sophisticated*, and *strategic*) and conceptual and geopolitical terms like "*national liability*," "*intentions*," "*diplomatic asset*," "*developmental state model*," and "*positive sum game*." These lexical choices make Text 2 less concrete compared with Text 1. Consequently, Text 2, written by the C1 student, appears more abstract and denser than Text 1, written by the B2 student.

6.1.3 The Occurrence and Distribution of ID Components in the Students' Academic Essays across Three Semesters

This section examines the occurrences of ID in the students' English academic essays over three semesters. The analysis draws on descriptive statistics in connection with students' prior English levels (B2 and C1). Table 43 and Figure 10 present the manifestation and distribution of relevant ID features.

Table 43

The occurrences of ID in B2 students' essays across three semesters

B2-level students	Semesters	Relevant indices of ID (mean scores)			
		content words	function words	expanded NPs	nominalization
	Semester 1	579.51	420.5	0.98	374.16
	Semester 2	578.48	421.52	0.97	379.37
	Semester 3	492.3	341.03	0.81	319.49

Table 43 displays the patterns of relevant ID features in the B2-level students' academic essays across three semesters. The findings suggest a stable trend, with only slight increases and decreases in mean scores during their studies at HUs. While lexical density (LD) shows a decrease in frequency, similar declines also occur in expanded (NPs) and nominalization. Figure 10 provides a visual representation of these patterns.

Figure 10

The distribution of the linguistic features in the B2 students' essays across three semesters

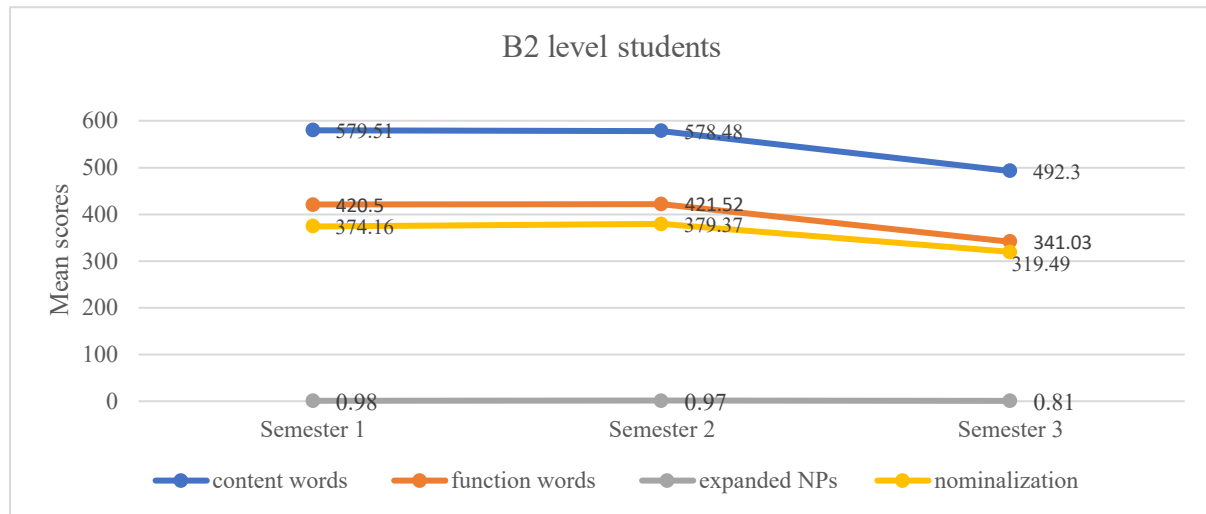


Figure 10 illustrates the frequency of relevant ID features (i.e., content and function words, expanded NPs, and nominalization) in academic essays written by B2-level students. The data reveal a changing pattern of the features across semesters. The occurrence of content words remains relatively stable between Semester 1 ($M = 579.51$) and Semester 2 ($M = 578.48$), followed by a reduction in Semester 3 ($M = 492.30$). This decline may be attributed to the absence of one participant's essay in this semester, which likely influenced the overall lexical density measures. A similar trend was also observed in the manifestation of function words, with their frequency decreasing from Semester 2 ($M = 421.52$) to Semester 3 ($M = 341.03$), while the general pattern of LD remained relatively stable.

Expanded NPs also display a noticeable reduction in three semesters ($M = 0.98, 0.97, 0.81$), suggesting less frequent use of modifiers and a preference for simpler nominal constructions. This trend seems to contrast with the increase in LD, as it combines a higher proportion of content words with fewer function words.

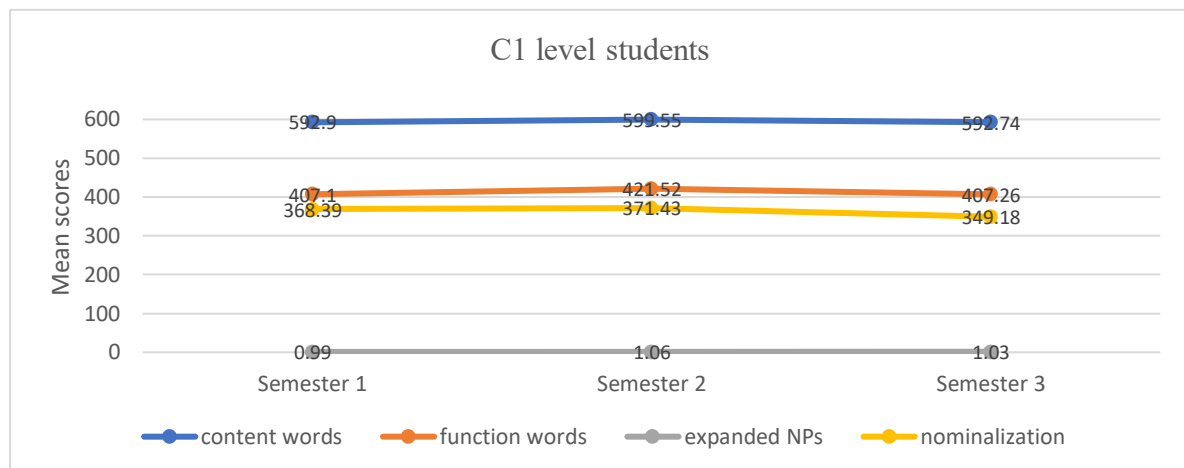
A similar pattern was evident in nominalization, where a decline in the frequency of use suggests a shift toward more abstract language. This aligns with the principle in academic writing that high information density is often associated with abstract expression of ideas.

Regarding the patterns of relevant ID features in the C1-level students' academic essays, Table 44 presents the mean scores of these features across three semester studies at HU.

Table 44*The occurrences of ID in B2 students' essays across three semesters*

C1 level students	Semesters	Relevant indices of ID (Mean scores)			
		content words	function words	expanded NPs	nominalization
	Semester 1	592.90	407.10	0.99	368.39
	Semester 2	599.55	421.52	1.06	371.43
	Semester 3	592.74	407.26	1.03	349.18

Table 44 compares key ID features in the C1 students' essays over three semesters. The findings show a notable progression in the manifestation of LD, an increasing use of modifiers in expanded NPs, as well as a decrease of nominalization, which reflects a lower frequency of concrete language and a shift toward more abstract expression. Figure 11 provides a detailed visualization of these patterns.

Figure 11*The distribution of the linguistic features in the C1 students' essays across three semesters*

According to Figure 11, there is a changing pattern of the occurrences of the relevant ID features over the three semesters. In terms of content words, the data show a slight increase from Semester 1 ($M = 592.90$) to Semester 2 ($M = 599.55$), followed by a return to the initial level in Semester 3 ($M = 592.74$). Function words also demonstrate a modest rise from Semester 1 ($M = 407.10$) to Semester 2 ($M = 421.52$), before slightly declining again in Semester 3 ($M = 407.26$). This reflects consistency in the manifestation of LD, showing that the texts consist of more content words than function words.

For expanded NPs, the frequency increases from Semester 1 ($M = 0.99$) to Semester 2 ($M = 1.06$), followed by a slight decrease in Semester 3 ($M = 1.03$). For nominalization, the frequency rises from Semester 1 ($M = 368.39$) to Semester 2 ($M = 371.43$) before dropping in

Semester 3 ($M = 349.18$), suggesting a shift from more concrete expressions to more abstract language.

All in all, the results indicate that both groups exhibit high frequencies of lexical density features, with a consistent dominance of content words over function words. The occurrences of expanded NPs and nominalization also expose progressive changes, particularly in the essays written by C1-level students, that appear to demonstrate greater consistency of ID across their studies at HU when compared to B2-level students' texts.

6.2 Discussion

This chapter presents a statistical data analysis using Coh-Metrix to evaluate the distribution frequency of key information density (ID) features in Indonesian graduate students' academic essays over three semesters. The analysis is further classified based on their prior English proficiency levels (B2 and C1). ID is a fundamental aspect of academic writing, as it enables the conveyance of a large amount of substantial information through specific linguistic features, such as lexical density (LD), focusing on the proportion of content words compared to function words, expanded noun phrases (NPs), and nominalization (Elgobshaw & Aldawsari, 2022; Nasseri & Thompson, 2021). By investigating the occurrence patterns of these linguistic features across semesters, this study emphasizes changing patterns of ID and explores the relationship between their initial proficiency levels and the frequency related to relevant ID features over their studies at Hungarian HE.

To support the explanation of the descriptive statistics, interview excerpts were included in this section to enhance the convergent mixed-methods design, in which quantitative and qualitative data were collected and analyzed in parallel and integrated during the interpretation phase.

All things considered, the findings indicate that essays written by C1-level students appear to be denser than those of their B2-level peers. In academic writing, the use of content words is critical for clearly and precisely conveying complex ideas, findings, and arguments, as well as for demonstrating the writer's expertise and knowledge of the subject (Biber & Conrad, 2019; Biber, 1999; Staples et al., 2016). As McNamara et al. (2014) assert, content words are essential for accurately describing important ideas and complex information. These linguistic features help strengthen arguments and ensure that information is clear and precise. In addition, while content words convey the majority of the information, function words remain necessary to maintain grammatical cohesion, clarity, and logical flow.

It is important to note that a potential concern in analyzing LD deals with its sensitivity to text length, affecting accuracy and comparability of the results. LD scores may be lower in longer texts, as these tend to include a higher proportion of function than content words. In contrast, shorter texts may produce artificially higher LD scores due to a lack of function words. To mitigate this issue, this present research established a minimum word count of 1,500 words for the essays and standardized the analysis using incidence scores per 1,000 words (see the design in Sections 3.7.2 and 3.8.3). This normalization allowed for proportional examination across varying text lengths, thereby enhancing the validity and reliability of the findings related to lexical density in the students' academic essays.

Moreover, expanded noun phrases (NPs) are useful in analyzing ID. This is consistent with Finch's (2015) findings, which reveal an extensive relation between ID and the manifestation of expanded NPs, suggesting that such structures contribute to a higher level of density. Other than that, studies by Gregori-Signes and Clavel-Arroitia (2015) and To et al. (2013) demonstrate that initial language proficiency also plays a crucial role in determining the overall density of a text.

An additional aspect of the evolving characteristic features of ID components is related to nominalization. As mentioned earlier in Section 3.8.3 on index selection, Coh-Metrix does not provide direct access to nominalization. However, this feature can be inferred by examining the frequency of concreteness, which reflects how concrete and abstract a text is. A higher concreteness score suggests a more concrete text, and a lower level of concreteness scores may exhibit a higher level of abstract language, leading to text density.

The findings revealed that the frequency of occurrence fluctuated across three semesters for both student groups. Nevertheless, there was a slight overall decrease in concreteness, particularly in essays written by C1-level students, which were generally less concrete than those written by B2-level students. This suggests that C1 texts manifested more abstract language, indicating greater use of nominalization. What is more, students' prior knowledge of EAW, such as drafting for publication, as well as selecting more specific language, may influence their academic writing performance and contribute to the evolving patterns of nominalization. The interview extracts 1 and 2, presented below, illustrate these results.

Interview excerpt example 1:

"I have written three draft articles for publications, and one of them is intended for an international conference. I also frequently participated in research week events since my first year at the university. I had to write an essay every week to submit for the event."
(Bambang, B2-level)

Interview excerpt example 2:

"I am aware of using specific vocabulary. For example, in my field, the word "purchasing" is often used instead of "buying." (Bambang, B2-level)

The two interview excerpts above suggest that students' experiences in EAW contributed to the development of their writing skills. Through opportunities to write academic texts for publication (e.g., journal articles), which often contain high frequencies of abstract language and lower concreteness. This means that the students were exposed to academic norms that emphasize nominalization. As Swales and Feak (2012) point out, nominalization is a common feature in academic genres like journal articles.

Regular academic writing activities, such as producing weekly essays, can enhance students' writing performance by refining their linguistic abilities. For instance, Bambang, a B2-level student, described his conscious choice of academic vocabulary by using '*purchasing*' instead of '*buying*.' This lexical selection reflects nominalization, where the verb "*purchase*" becomes the noun "*purchasing*," performing abstract language, and leading to increased ID. According to Fang (2004), nominalization enables writers to compress information, transforming everyday language (e.g., "*buy*") into more complex and academic-oriented terms (e.g., "*purchasing*"). These participant insights help explain how changes in the frequency of nominalization via concreteness show evolving patterns of ID across the three semesters.

The results of the present study suggest that several factors may influence the changing patterns of ID over the three semesters. It is worth noting that, first, *the nature of social science and economics disciplines* tends to promote the manifestation of content words more than function words. This implies that students in these fields may place a higher emphasis on providing complex information (see Biber, 2006; Hyland, 2009; Swales & Feak, 2012). For instance, when addressing topics in regional and environmental economics, students are more likely to prioritize the presentation of quantitative data. They include statistics and economic indicators to support their arguments, rather than delving into the emotional effects of policy decisions on marginalized communities. Hence, the use of lexical items such as "*growth*," "*inflation*," and "*rate*" is commonly used to analyze and compare different countries' development trajectories. (see B2 student's essay extract)

B2 student's essay extract

"Compared to the previous year, Indonesia's economic conditions have begun to show signs of improvement. This is evidenced by positive GDP growth, lower inflation, and declining interest rates, which together reflect increased economic stability and investor confidence...." (Bambang, B2 level, Semester 1)

Second, students' lexical resources appear to contribute to the patterns of ID-related features. It is well-established that *discipline-specific vocabulary* plays a key role in EAW. These words allow students to effectively convey their ideas and arguments based on their selected topics with precision and clarity, particularly when addressing topics within their field of study. By incorporating discipline-specific vocabulary, students can enhance the overall quality of their work.

Given that academic essays in the area of social sciences and economics frequently require specific vocabulary, Biber and Conrad (2019) note that students must have strong lexical resources in order to effectively convey complex ideas. It is crucial to point out that the participants with a broader and more diverse vocabulary may have more words to express the ideas. For example, in an essay on human resources counselling that focuses on the growth of labor markets in Europe, a student with a well-developed lexical resource might be able to use words like "*broad labor underutilization*," "*social inclusion*," "*labor force*," and "*stratification*" to express complex ideas with precision. These specialized vocabulary choices contribute to higher density and elevate the quality of the essay (see excerpt examples 3 and 4).

Interview excerpt example 3

"There are a number of technical words that were new to me, especially during the regional and environmental economic courses. I had to learn and understand terms like carbon pricing, sustainable development, and environmental externalities. At first, these words were unfamiliar, but over time, I started using them in my essays to explain the concepts more precisely." (Budi, B2 level)

Interview excerpt example 4

"I deliberately used topic-specific terms to make my writing more concise. For example, instead of writing long explanations, I used words like social inclusion, labor force participation, and stratification. These words help me condense complex ideas into shorter and more academic sentences." (Rina, C1 level)

Overall, the use of discipline-related vocabulary can contribute to increased text density, as it allows for the expression of complex ideas in a concise and precise manner. This aligns with Swales and Feak (2012) and Staples et al. (2016), who note that specialized vocabulary enhances both clarity and density, particularly when presenting complex information.

In terms of changes in the degree of ID in the students' academic essays over their studies at HUs, B2-level students showed a slight decrease in their manifestation of relevant ID features. This decline appears to be influenced by several affective factors. During Semesters 2 and 3, some students experienced heightened stress due to the COVID-19 pandemic, especially as multiple courses required essays as final assignments to be submitted at the same

time. This stress seems to contribute to a reduction in their writing performance, involving the overall density of their essays. Furthermore, the transition to online learning may have limited opportunities for students to participate in discussions and practice language skills, affecting their writing abilities. The pandemic also appeared to diminish students' motivation to achieve their academic goals. Interview excerpts 5 and 6 below illustrate how IGSs felt overwhelmed and changed their academic goals.

Interview excerpt, example 5

"In semester three, our essay assignments were extremely demanding and caused me headaches. I understood that everything was under lockdown due to COVID, but the pressure from all the assignments was overwhelming. It was challenging to focus and keep up with the workload." (Yanti, B2 level)

Interview excerpt example 6

"Because of COVID-19, all of our classes were moved online. That meant I couldn't meet with my professor and international classmates in person, so I had to study alone. This situation made me feel hopeless. I used to be really excited about my classes and assignments, but now I just don't see the point anymore." (Triono, C1 level)

On the other hand, the difference in the frequency of ID-related features between B2 and C1 level students' essays appears to be relatively small. However, there is a general indication that the essays produced by C1 students were denser and better written compared to those of B2 students. One possible factor contributing to this trend is that C1 students had greater access to maintain their writing activities, such as *enrolling in EAW courses*, as stated by Eko.

Interview excerpt example 7

"We are lucky that our faculty supports us by offering an academic writing course, which students can take in Semester 2. It really helps strengthen our academic writing skills." (Eko, C1 level)

In addition, *the specific subject course* may influence students' text density (see excerpt 8). Subject teachers may choose to emphasize certain content-specific vocabulary in one semester over another, depending on the learning objectives and focus of the course. Thus, this instructional emphasis can affect students' familiarity with key terminology and their ability to express complex ideas, leading to the shaping of both their understanding of the subject matter and the linguistic density of their written work.

Interview excerpt example 8

"I received a lower grade in one semester, as my lecturer suggested that I revise some of the vocabulary in my essay. For example, he advised me to use the word 'corporate' instead of 'company'. I followed the suggestion, and in the next assignment, I received a better score." (Budi, B2 level)

Third, *students' knowledge of the subject course* can also affect the patterns of ID-related features, as certain fields of study inherently involve complex ideas and theoretical concepts (Crossley, 2020). Without a deep understanding of the subject matter, it can be challenging for IGSs to grasp these complex ideas and express them effectively in their academic writing. See the following excerpt 9 for an example of how complex ideas can be effectively expressed in academic writing.

Interview excerpt example 9

"It was quite difficult for me to write the essay because I had to follow my lecturer's ideas, which were mostly based on European perspectives. These views often conflicted with my own background and experience as a citizen of an ASEAN country. Trying to combine these two different viewpoints in one essay was rather difficult. I must carefully consider how to represent both sides while still meeting the academic expectations of the course." (Tutik, B2 level)

Given her Indonesian background, Tutik faces the difficult task of balancing her cultural identity with the European-centric perspectives embedded in the curriculum. As a result, she must not only familiarize herself with unfamiliar academic frameworks but also recognize the value of her own viewpoints in contributing to the discussion and broadening her understanding of global issues. This finding aligns with Swales and Feak's (2012) study discussing the significance of subject-specific knowledge in academic writing, especially within the social science studies. They argue that a deep understanding of the subject matter allows students to manifest more abstract language and complex concepts in their essays, resulting in more sophisticated and information-dense writing.

Fourth, *the perceived relevance of the topic* influences how IGSs incorporate relevant ID features in their academic essays. When they view a topic as important or relevant, they are more likely to use complex language to convey their ideas. This suggests that the level of perceived relevance can impact the density and complexity of language used in their writing.

For example, in an essay for a regional environmental economics course, students who perceived climate change as a relevant issue were more likely to incorporate complex ideas, such as the concept of *green corporations*, into their essays. This demonstrated how the perceived relevance of the topic directly influences both linguistic choices and content quality (see excerpt 10). The results support Fang and Park's (2020) argument that when students find a topic interesting or significant, they are more likely to engage with it at a deeper level, exploring the complexities of the topic in their writing.

Since content words and abstract language are often used to express complex ideas, their frequency can influence text density. In contrast, when students perceive a topic as less relevant or engaging, they may be less motivated to engage with it on a deeper level, resulting in less sophisticated writing that uses less abstract language. This is because students may not see the need to explore the topic in depth and may instead focus on presenting basic information or facts in a more straightforward manner.

Interview excerpt example 10

“I was assigned a topic on the Green Corporate Movement in the film industry, but it was a subject I knew absolutely nothing about. I found it difficult to develop my ideas because I lacked the background knowledge and couldn’t relate to the topic. It felt disconnected from my interests, so I struggled to find the right vocabulary and examples to support my arguments.” (Novi, C1 level)

On the other hand, when students have a strong understanding of the subject matter, they are better equipped to express sophisticated ideas and construct well-developed arguments.

Interview excerpt example 11

“Since I had already written about Uber during my undergraduate studies, it was much easier for me to develop this topic for my essay assignment. I was already familiar with the relevant concepts, vocabulary, and key debates, so I could focus more on building a strong argument rather than spending too much time on researching the background.” (Lilis, C1 level)

Students in the field of social science and economic studies tend to use specific writing strategies to present their ideas and arguments in a clear, concise, and logical way (see the discussion on academic writing strategies in Section 5.2). One strategy the students employ involves *providing definitions* of key terms within their essays, often using expanded noun phrases to offer detailed explanations. It is important to highlight that this strategy is utilized to ensure that readers can follow the ideas presented in the text.

Interview excerpt example 12

“I usually divide my essay into three main parts. First, I define the concepts to make sure that the reader understands the terminology. Then I explain the background of my essay topic. Finally, I present my argument and support it with examples and references.” (Eko, C1 level)

According to Hyland (2009), the use of discipline-specific terminology allows writers to convey generalized ideas and engage with their audience at a higher level of academic understanding. Moreover, this view is pertinent to Biber and Gray’s work (2010), which highlights the significance of noun phrases in academic writing, as they contribute to the creation of cohesive and well-structured arguments. By incorporating expanded noun phrases, students can effectively articulate complex ideas, ensuring a more comprehensible and

engaging text. In addition, they often employed sophisticated vocabulary to increase the ID of their writing.

The explanation above highlights how the patterns of relevant ID features show progressing changes over the three semesters. The findings suggest that both student groups tend to compact information through lexical density (LD), as reflected in the increased frequency of content words over function words.

Other key aspects pertain to the manifestation of expanded NPs and nominalization, which enable IGSs to convey complex information using fewer words while maximizing meaning. The results show that texts written by C1 students tend to include complex noun phrases by adding more modifiers compared to those written by B2-level students. Additionally, the frequency of nominalization corresponds with a decrease in concreteness across both groups, indicating a shift toward more abstract language. However, this study discovers that C1-level students' essays appear notably more abstract than B2-level students' essays. Moreover, these changing patterns of relevant ID features over time may be influenced by several factors affecting students' writing performance, including students' prior knowledge in EAW, the nature of their academic field of study, the use of discipline-specific vocabulary, the academic environment, subject course content, and the perceived relevance of the essay topic.

CHAPTER 7

OVERALL DISCUSSION OF THE RESEARCH FINDINGS

This chapter presents a general discussion of the findings from six research questions concerning Indonesian Graduate Students' (IGSs) experiences with English academic writing (EAW) in a non-native English-speaking environment. The study focuses on key aspects including challenges, support, attitudes, writing strategies, and information density (ID). Each research question (RQ) is addressed through the presentation and interpretation of relevant findings.

The exploration draws on both qualitative and quantitative data, following the convergent mixed-methods research design that integrates data collection and analysis from both approaches. The qualitative data were obtained through semi-structured interviews and an interview checklist, while quantitative data were collected from students' essays analyzed with Coh-Metrix. The analysis drew on interview transcripts with Atlas.ti and essays and descriptive statistics examined with Excel Toolpak.

RQ1: *What challenges do IGSs face when writing academic essays in English?*

This question examines the challenges IGSs face when completing their academic essay assignments during their studies at HUs. Semi-structured interviews were utilized, and transcripts were analyzed using thematic analysis with Atlas.ti. This method was consistently applied across all four research questions, which focused on challenges, support, attitudes, and writing strategies.

The findings revealed 47 themes classified into four main categories: *the writing process* (n = 18), *the subject course* (n = 19), *the institutional policies* (n = 5), and *external factors* (n = 5). Challenges in *the writing process* include limited academic skills (e.g., low reading comprehension), poor time management, plagiarism, students' inadequate language proficiency, structural and organizational issues (e.g., difficulties in achieving clarity and coherence), and cognitive and affective aspects (e.g., difficulties in transferring thoughts into writing).

The results of the current study support previous research, such as AlMarwani (2020), who highlights the challenges students face in comprehending reading materials due to complex vocabulary and developing their ideas due to a large number of texts. The following excerpt illustrates this situation.

“I find it challenging to comprehend articles with complex vocabulary.” (Triono, C1-level)

“While searching for evidence from sources to support my arguments, I often become confused due to the large number of texts I read. This makes it difficult to integrate the ideas from the sources into my writing....” (Lilis, C1-level)

In addition, both Qasem and Zayid (2019) and Phyo et al. (2025b) identify time constraints as a notable challenge for international students adapting to unfamiliar academic cultures.

“I had trouble managing my time during my first semester because I was unfamiliar with the academic situation in Hungary. Everything felt new, and many assignments came at once, which made it difficult to follow. But now I know the typical teaching styles and expectations of my lecturers, and I have been able to plan my time effectively.” (Rina, C1-level)

To overcome these challenges, the students utilized various writing strategies, such as consulting social media platforms such as YouTube to gain preliminary understanding before delving deeper into continuing to investigate their topics. As Lilis (B2-level) explained:

“When academic sources were too complex, I watched short YouTube explainers to get a general understanding before reading more deeply.”

Another common strategy reported was reading only the abstract of academic articles to evaluate their relevance. As Novi (C1-level) stated:

“I quickly skim the abstracts to decide whether an article is useful before reading it in full.”

These strategies helped students manage their time more efficiently, particularly when dealing with extensive reading materials. In addition, some students adopted time management techniques, such as creating a timetable to monitor assignment deadlines and ensure timely submission of their final essay assignments.

“At the beginning of the course, I listed all my writing assignments along with their deadlines so I could plan my time effectively.” (Tutik, B2-level)

The issue of plagiarism has also been addressed in Alua et al.’s (2020) study, which attributes it to both improper use of sources and a lack of familiarity with citation conventions within the context of Western academia. As a result, students from Southeast Asian (SEA) countries may unintentionally engage in academically unethical practices. These results are consistent with Yang (2020), who documents the challenges encountered by Asian students in navigating plagiarism issues during the academic writing process. Tutik (B2-level) reflected on this uncertainty, stating:

“I usually just quote directly from the source I read, but I’ve noticed that using direct quotations could be considered plagiarism.”

This indicates that using direct quotations without appropriate citation may be perceived as plagiarism. It further underscores a lack of clarity among students regarding citation practices in Western academic contexts, where direct quotations are acceptable when properly cited.

To mitigate the risk of plagiarism, some students relied on paraphrasing tools such as QuillBot. These tools helped them rephrase content without using direct quotations. As Yanti (B2-level) explained:

“I use tools like QuillBot to help me paraphrase without losing the original meaning.”

Challenges in language proficiency include issues such as the overuse of passive voice and first language (L1) interference. Specifically, interference from Indonesian was evident in the students’ sentence structures. The following excerpt, written by Budi (B2-level), demonstrates the challenges:

*There are some problems that **should be faced** by the cities nowadays. Like most cities in the world, the population in Indonesia continues to grow every year. The urban population **is expected to increase** by 65% by 2030 compared to its level in 2006. This condition presents a serious challenge for solid waste management. This problem **should be handled by** the government. Solid waste management in Indonesia still largely relies on the landfill. Based on the data, only 69% of the total solid waste generated **is dumped** to the landfill while the rest **is handled** privately, burned or dumped to the river. This condition **will be more complicated** with the fact that two third of Indonesian territory is the ocean. (Budi, B2-level)*

This excerpt shows frequent reliance on passive constructions influenced by Indonesian grammar. This L1-Indonesian interference is consistent with findings by Braine (2002) and Setyowati and Sukmawan (2016), who observe that mother tongue transfer tends to affect learners at both intermediate and advanced proficiency levels.

Besides, some students further reported difficulties adhering to conventional academic formats. This issue is relevant to previous studies, including Swales and Feak (2012), which found that NNESs often lack explicit instruction in sentence construction and academic writing conventions required by institutions. These results suggest the significance of providing NNES students involved in IGSs with academic writing instruction that bridges the gap between their linguistic backgrounds and the conventions of academic writing in English. Moreover, this need for support corresponds with students’ positive attitudes toward academic writing classes, which they regard as instrumental in improving their academic writing skills. As Tutik (B2-level) noted:

“The class of English for academic writing provides numerous advantages, truly benefitting my overall academic writing skills.”

The final challenge in the writing process relates to cognitive and affective factors. As noted by Yang (2024) and Bui et al. (2023), a poor state of psychological readiness caused by fatigue, lack of focus, and emotional exhaustion was found to negatively impact students' writing performance. Eko (C1-level) expressed this, stating:

“Sometimes I'm too tired to edit my writing, so I just send it right away.”

To build motivation and maintain focus, students adopted various self-regulation strategies. For instance, Rina (C1-level) explained:

“I cannot focus if I am tired or hungry, so I make sure to rest and eat before I sit down to write.”

This finding underscores students' awareness of physical and emotional needs, deliberately utilizing self-regulation strategies such as resting or eating before writing to enhance concentration and productivity. These strategies not only mitigate the impact of affective barriers but also reflect growing learner autonomy in academic contexts.

The second category of academic writing challenges faced by IGSs deals with *the subject course*. This category includes access to sources, essay topics, essay requirements, subject teachers' competencies, and subject course instruction. The findings show that some students encountered limited access to reliable academic sources and had insufficient references.

“It's fairly difficult to find good sources in this city. Even though my university has a big library, I still can't find what I need, so I usually go to the Central European University (CEU) library instead. And finding sources in English sources is also a challenge, because most of the materials are in Hungarian, including the national library.” (Tutik-B2 level)

A student mentioned that she struggled to find sources to support her understanding of the assigned topic. As Hyland (2003) points out, source quality is fundamental in academic writing, particularly for those who are not yet familiar with evaluating credibility. To address this issue, she visited another university library provided by CEU in Budapest, where she was able to locate the necessary references. This situation is in line with Phyo et al.'s (2024b) findings, which suggest that access to scholarly databases is fundamental to support content development. When institutions fail to provide equitable access to English sources, it can widen the achievement gap in EMI environments (Dearden and Macaro, 2016). Furthermore, some

IGSs expressed difficulties in understanding or selecting essay topics, which often were assigned with minimum information and limited background.

“In semester two, I was assigned a topic about green corporations in the film industry, which was very difficult for me as I had no background knowledge about this topic.”
(Novi, C1-level)

This lack of contextual knowledge hinders their ability to engage critically with the topic. As argued by Elgobshawy and Aldawsari (2022), topic familiarity significantly influences early stages of the writing process, including idea generation and planning. To address this challenge, students often discuss the topic with their classmates. As Eko (C1-level) explained:

“I discussed the topic with my classmates who had a better grasp of it, and they helped me understand the key points.”

These peer interactions served as informal yet effective strategies, allowing students to gain a deeper understanding of unfamiliar topics through discussion. This finding is in line with Hyland’s (2003) view of students’ learning autonomy in non-native English-speaking academic settings, where students often depend on social networks, including peer discussion, to bridge gaps in content comprehension.

Another challenge links with the mismatch between essay requirements and students’ actual performance. These challenges include tight deadlines, unrealistic expectations regarding writing quality, rigid adherence to word count, and the expectation for deep critical analysis set by the course or lecturer. Braine (2002) and Li (2024) encompass how institutional expectations surrounding academic writing often assume a shared understanding of academic literacies, which is associated with difficulties faced by international students. Likewise, Yang (2024) mentions that high expectations may disadvantage students who are unknowledgeable, especially when the expectations are only implicitly explained, and challenge them to meet the task requirements. As Rina (C1 level) explained:

“In the Employer Branding course, the lecturer gave us a general topic. Based on my previous studies in Indonesia, I thought that it was related to companies. But here in Hungary, it seemed more focused on the employee psychology. So, I wasn’t sure if my essays met the lecturer’s expectations. That was one of my challenges in the first year of study, and I didn’t really understand how the lecturers typically evaluated the essays.”

In response to this challenge, some students consulted or scheduled appointments with their lecturers. This institutional support provision helped clarify assignment expectations and navigate the students’ writing processes. As Budi (B2-level) recounted:

“Before submitting the essay assignment, I met with my lecturer to get feedback and make final improvements.”

What is more, subject teachers’ competencies also posed challenges in EAW, including lecturers’ low English proficiency and poor feedback quality.

Some of our lecturers in the department seem to have problems with English. Sometimes, when they explained the material, it was unclear, and they often made spelling mistakes when writing English sentences on the whiteboard. (Sri, B2-level)

“I only got a number as my score. I was really hoping for some feedback on my essays so I would know what was strong and what needed extra work. I thought I could improve it for the next submission, but I didn’t get anything, just the score.” (Lilis, C1-level)

These findings are consistent with the focus of attention raised by Phyto et al. (2024b), who encompass that academic writing is difficult to improve when pedagogical training and access to teaching resources are insufficient. Moreover, the absence of corrective feedback, in particular, contradicts established best practices in EAP (English for Academic Purposes) programs, where feedback is a central point to support academic writing improvement (Hyland and Hyland, 2019).

One more challenge within the subject course category emphasizes subject-course instruction, particularly during and after the Covid-19 pandemic. The participants reported feeling discomfort when having virtual classes.

“I didn’t enjoy online classes because I cannot talk to my classmates in person.” (Triono, C1-level)

These experiences are consistent with research on emergency remote teaching by Ahmad et al. (2022) and Firmansyah et al. (2021), which highlights that the sudden shift from offline to online learning left both teachers and students, especially in higher education, unprepared for meaningful interaction, resulting in reduced learning motivation and increased student stress levels.

The third category addresses challenges in connection with *the institutional policy*, including issues in relevance to EAW (e.g., a lack of an EAW course), access to online databases, and library provision. Key concerns involved inaccessible online databases and journals due to off-campus access. The students must undertake extra steps, including the installation of a VPN, to access necessary academic sources online, which may potentially put their computers at risk with the security system.

“Some articles are blocked due to my residency, so I use a VPN to access them through a private connection.” (Tutik, B2-level)

In addition, the absence of a dedicated EAW course can significantly impact students' success. Even when an English for academic writing course was available, the students often perceived it as overlapping with research methods classes, thus limiting its effectiveness. Without structured instruction in academic writing, students may lack essential skills such as writing literature reviews or argumentative essays.

“In the third semester, we enrolled in a research methods course that would primarily focus on the thesis research design. Unfortunately, the course appeared to be the same as the course of English for academic writing that we enrolled in Semester 2.” (Eko, C1-level)

According to Yang (2024), the lack of EAW classes or curriculum support leaves international students with difficulties in navigating complex demands set by their lecturers and hinders their academic performance. Students who do not have access to this institutional support often seek alternative opportunities to enhance their academic engagement. One example is participating in institutional academic activities, such as university research forums, as shared by Bambang (B2-level):

“I frequently participated in a research week event during my first year as a university student. I had to write up an essay every week to be submitted at the event.”

The fourth type of EAW challenges relates to *the external factors*. These include environmental distractions (e.g., *interruptions during writing*). Rina, a C1-level student, stated:

“I cannot keep my phone away from me, and that makes it challenging to finish my writing on time.”

This statement highlights a common issue faced by many students in the digital age, where mobile devices disrupt focus and reduce writing efficiency. The constant urge to check update information on social media encourages multitasking behavior, which negatively affects concentration and overall productivity. This issue may impact not only the writing process but also the quality of the final text.

RQ2: *What types of support do the students receive to address the challenges in EAW?*

To answer this question, thematic analysis was conducted using interview transcripts coded in Atlas.ti. The study discovers 24 themes grouped under three main categories of support that IGSs received for EAW during their studies at HU. The first category deals with *institutional policies*. It is important to note that the presence of EAW classes such as thesis workshops serves as a key role in helping the students develop genre-specific writing conventions and critical thinking skills.

“We had a two-day thesis writing workshop in Semester 3. The class focused on the general structure of a thesis, like how to do a literature review and how to choose a research design for our thesis. It really helped me because we didn’t have a specific academic writing class in the department. So, the presence of the workshop was very useful and gave me the support I needed to start writing my thesis.” (Budi, B2-level)

This finding aligns with Hyland’s (2004) work, which highlights the importance of discipline-specific writing support for international students. Phyo et al. (2024b) also emphasize that international students at Hungarian HEIs require EAW classes to support their academic success. This corresponds with the positive attitudes IGSs hold toward EAW classes, as noted by Lilis (C1-level):

“After enrolling in the Academic Writing class, I have become more confident in writing essays, and I believe the class offers valuable skills without any drawbacks.”

In addition, access to academic writing resources via institutional platforms such as Moodle and Neptun reflects an inclusive and supportive digital ecosystem. These institutional provisions are fundamental for addressing writing challenges, as they offer easy access to academic materials and plagiarism detection tools such as Urkund, which reinforce academic integrity. This is particularly important for international students, especially from Asian countries, where differences in educational cultures can make plagiarism a significant challenge (Yang, 2024).

“When we submit our essay, it is automatically processed by Urkund, a plagiarism detection tool provided by our university. The essay must pass through this system before it is officially considered submitted.” (Tutik, B2-level)

This present study highlights the value of academic engagement opportunities, such as participation in research forums, publications, and academic conferences. As Ani (B2 level) described:

“Following my lecturer’s suggestion, I submitted my paper to both the faculty conference and an essay competition.”

These experiences allow IGSs to enhance their academic writing and engage with authentic discipline discourse communities. This finding is consistent with Swales’s (1990) theory of genre and participation in academic communities, which emphasizes the importance of interaction with real-world academic contexts in developing genre awareness and scholarly identity.

The second category relates to *the subject course support*, including the integration of essay topics with students’ theses and the availability of relevant sources provided by lecturers.

“The topics selected for our essays are intended to provide an overview of our future thesis project. Since my essays in the first semester focused on the sustainability of palm oil production, I plan to develop this into my research thesis, with a focus on comparing European and Indonesian policies.” (Budi, B2-level)

During the completion of writing tasks, students often felt lost, and guidance from lecturers can help them navigate the direction of their essay assignment, enabling them to meet task requirements more effectively.

“If I face any difficulties in completing the assignment, such as losing direction while developing the content or feeling confused about which theories to use to support the topic, I can write an email or schedule an appointment to discuss my essays. The feedback helped me stay on track and improved my understanding of the task.” (Budi, B2-level)

The importance of integrating assigned topics with the students’ research interests has been increasingly recognized by academic institutions. Moreover, additional access to relevant sources through lecturers can facilitate independent learning and promote critical engagement with academic literature. As Tutik (B2-level) indicated:

“After each class session, my lecturer uploaded a reading list via Moodle that we can use as secondary sources to support our essays.”

This support is beneficial for students who face challenges accessing limited sources, as the recommended reading lists help assist students’ research and strengthen their academic essay assignments. This underscores a positive attitude among IGSs toward academic writing assignments, particularly when sufficient institutional support is available. The findings support Paltridge and Starfield’s (2007) view that providing access to secondary sources encourages students to engage more effectively with references, resulting in the credibility of their writing. This practice not only improves students’ overall writing quality but also supports the avoidance of plagiarism by emphasizing the importance of properly cited content.

The third category concerns *students’ prior experiences in EAW*. The students reported that their previous knowledge and achievements, such as pursuing higher education at English-speaking medium universities, contributed positively to completing their essay assignments.

During my undergraduate studies in Malaysia, I used English, including for writing essay assignments and my bachelor’s thesis. So, I did not face any significant challenges in writing essays in English for my master’s studies.” (Triono, C1-level)

The participant reported that his academic experience in Malaysia, where English was used as a medium of instruction during his undergraduate studies, supported him in writing essays. As a result, he did not encounter significant challenges when completing assignments during his master’s studies. One of the texts produced by this C1-level student was well-

constructed and exhibited high information density. This aligns with the current findings that English proficiency and prior academic writing experiences are fundamental factors in producing high-quality academic texts. These are often demonstrated through the characteristic features of ID components in C1-level students discussed in Section 6.2. This also demonstrates that sustained exposure to academic English at an earlier stage of education can enhance students' preparedness for advanced academic writing tasks in graduate programs.

The participants also reported that external feedback played a valuable role in supporting their academic writing. As IGSs often encounter challenges when writing their academic essays, they actively sought evaluation from lecturers and peers to enhance their work and better meet academic expectations. Trino (C1-level) stated:

"I asked a friend to read my draft and point out confusing sections or awkward phrasing."

As Hernandez et al. (2017) argue, feedback is important to improve academic writing.

Other prior experiences, such as language proficiency development (e.g., IELTS preparation), academic writing practices (e.g., producing research papers in English), and cultural adaptation through mobility programs (e.g., student exchange), also played a significant role. These experiences collectively helped IGSs strengthen their academic writing skills and contributed to their overall academic success.

RQ3: *What attitudes do the students hold toward EAW in a non-native English-speaking environment?*

The findings related to the attitudes among IGSs in EAW suggest that they generally hold positive views toward EAW courses and academic essay assignments during their studies at HUs. Most students reported that enrolling in these courses enhanced both theoretical understanding and practical skills in academic writing, especially enabling them to produce well-written and coherent texts for their essay assignments.

"During the class of communication and academic writing, we learned about ontology, epistemology in research, relevant theories in international relations, and how to build a research design. Each week, we were assigned a topic to work on, like writing a one-page introduction or a literature review. Thereby, by the end of the course, we were able to produce our own research design for a master's thesis." (Ani, B2-level)

The presence of the class of academic writing represents institutional support provided to students during their master's studies. Ani reported that the course was beneficial not only in enhancing general academic writing skills but also in supporting their thesis writing process.

The students further noted that the academic essay assignments were directly integrated with their thesis topic, resulting in more focus and practical application of academic writing strategies. As Budi (B2 level) denoted:

“We have taken a course on how to write a thesis, including how to conduct a literature review and other thesis-related tasks. Some of our essay assignments were even based on our thesis topic, which made them more meaningful and useful.”

This finding suggests that the integration between the course content and the students’ thesis work appears to enhance both their confidence and competence in meeting the expectations of academic writing and research. Furthermore, integrating assigned topics with students’ research interests can help address challenges that arise when students are unfamiliar with a given topic or lack sufficient background knowledge. Allowing students to select their topics aligned with their research interests may ease the writing process and support successful completion of their assignments. Triono (C1-level) shared his experience:

“There was a time when the given topic was my favorite, as it dealt with hijab policies in non-Islamic countries. I was able to finish writing this essay in less than three days, compared to other essays on topics I was not really interested in.”

Since producing academic writing that meets high expectations is often a requirement for success in subject courses, IGSs believed that the experiences gained from EAW classes significantly contributed to their academic performance. What is more, EAW classes were considered valuable platforms for elevating shared understanding among international students from diverse social and cultural backgrounds.

“...because students studying in Hungarian universities come from all over the world. As a result, exchanging ideas on how to write well-written academic essays is extremely beneficial, highlighting a conventional view of its importance across diverse backgrounds.” (Sri, B2-level)

These courses offered a universal medium of academic communication, aligning with the principles of English as an Academic Lingua Franca (EALF) highlighted in Section 2.2.3. This is supported by a study conducted by Phyo et al. (2024b), which found that international students in Hungarian higher education can benefit from enrolling in academic writing courses, not only by improving their academic writing skills but also by enhancing their ability to produce well-written academic texts. Moreover, one notable advantage of EAW classes is the value of international perspectives, which enriches the learning experiences. It is a fact that international students studying at Hungarian HEIs come from around the globe with diverse academic backgrounds and cultures. Some students entered the program with limited

experience in academic writing. Hence, this course served as a valuable tool for improving their ability to write academic texts in English.

“I know that some of my classmates had difficulties writing academic texts because they did not have that experience during their undergraduate studies. So, the presence of this course (EAW) really helped guide them and develop their academic writing skills.” (Tutik, B2-level)

These findings underline the importance of establishing a shared understanding of academic writing conventions. This can be achieved by offering targeted support to the students who lack prior experience in EAW. In addition, EAW classes provide students with opportunities to express their ideas on topics relevant to their essay assignments and support the development of self-regulation strategies, which enhance both engagement and confidence in academic writing.

RQ4: What writing strategies do the students employ in EAW?

To answer this question, an integration between qualitative and quantitative analysis was applied. For the qualitative data, thematic analysis was used to classify the writing strategies and develop a taxonomy. The study identified 82 writing strategies used by IGSs, categorized across three writing stages of the writing process: pre-writing (n = 29), writing (n = 49), and post-writing (n = 4).

During the pre-writing stage, IGSs applied a range of academic writing strategies (AWSs) based on several themes, including planning, information gathering, academic reading, and note-taking. Sri (B2-level) stated:

“Before I begin writing, I usually spend some time thinking through different ideas and directions I could take in the essays.”

Furthermore, the students reported that they focused on structuring and organizing content. This stage is crucial, as it involves activities such as collecting background information and organizing ideas for the foundation of the actual writing process. It also serves to address the challenges the students face during the writing process, including poor time management and difficulties in understanding complex information due to the extensive amount of readings. Eko (C1 level) explained:

“I usually sketch a rough outline of my essay’s structure, like introduction, body paragraphs, and conclusion, before I start drafting.”

Through these initial strategies, the students were better able to engage the writing process and produce more coherent and well-structured texts, ultimately leading to more

effective and well-prepared academic essays. These results are relevant to Mallia's (2017) and Dari et al.'s (2022) findings, suggesting that pre-writing preparation plays a vital role in helping students to structure and control their academic writing process effectively.

During the writing stages, IGSs reported employing a wide range of metacognitive strategies (i.e., planning, monitoring, and revising). This stage represents the core of academic writing, underlining activities from structuring content development to language refinement and revision. Novi (C1-level) stated:

"To organize my idea better, I divided my writing into subtopics during the drafting stage."

Meanwhile, Lilis (C1-level) noted:

"As soon as I spot an error, I correct it immediately, without waiting until I have finished everything."

Carrington (2007) and Xia (2017) emphasize the value of metacognitive strategies in the production of coherent and effective academic texts. These strategies are particularly useful in addressing students' challenges with clarity and conciseness, such as by deleting redundant content. As Anis (B2-level) reported:

"If a paragraph feels repetitive or unnecessary, I remove it during revision."

This example reflects how metacognitive strategies contribute to the successful production of academic writing by allowing students to critically evaluate and revise their texts during the writing stage.

Finally, *the post-writing stage* deals with final revision, plagiarism checking, and post-submission reflection. Strategies in this stage include seeking external feedback prior to submission to ensure that the essay meets the task requirements. As Triono (C1-level) shared:

I asked a friend to read my draft and point out confusing sections or awkward phrasing." Triono, C1-level

IGSs applied these strategies not only to ensure the assignments met the task descriptions, particularly in dealing with content analysis and English proofreading, but also to improve their ability to write academic texts for broader audiences, such as public academic forums. As noted by Nisa (B2-level):

"I received a lot of constructive feedback from the reviewers at the faculty conference that I submitted my paper to. I believe that this experience taught me how to manage my research topic."

Hyland and Hyland (2019) suggest that academic feedback from external reviewers, including lecturers, plays a key role in navigating students' writing development. Hyland

(2003) further emphasizes that incorporating external feedback into the writing process can help students enhance their academic writing skills. These results align with the students' positive attitudes regarding academic feedback and its role in improving their writing quality. As Budi (B2-level) stated:

“Before submitting the essay assignment, I met with my lecturer to get feedback and make final improvements.”

Additionally, plagiarism checking was identified as a major concern for students before submission. Since assignments often require a minimum standard for originality, IGSs are expected to meet these criteria. Failure to meet the requirements can result in a mark reduction.

“Once we fail to relate to the topic of your essay assignment, our score will be reduced. However, we will get a five if we succeed.” (Ani, B2-level)

Furthermore, the students also reported conducting a final review of their work to ensure alignment with the task descriptions, including content accuracy, coherence, and writing structures. This final review was considered an important step in enhancing the overall quality of their writing.

“I reviewed the assignment brief to check that I addressed all the required objectives before submission.” (Ani, B2-level)

After submitting their essays, the students celebrated the completion of the task by taking time to rest and recharge.

“Once I’ve finished all the work and submitted the essay assignment through the system, I finally feel like I can relax. That’s usually when I head to bed.” (Yanti, B2-level)

Writing academic essays in English can be exhausting, and stress-relief activities at this stage could help students recharge and recover from the mental and emotional demands of the task. This finding is supported by Fajaryanti (2021), who argues that taking breaks and engaging in relaxation activities help students maintain a healthy work-life balance. Hence, it is essential for students to rejuvenate and acknowledge their academic achievements upon completion. Therefore, post-submission plays a key role in sustaining motivation and long-term engagement with academic writing. In addition, it is worth noting that writing strategies employed by IGSs do not follow a strictly linear process. It means that they often return to previous stages to evaluate and refine their work, ensuring the quality of the final text.

“I don’t need to complete the whole draft before reviewing my ideas or correcting grammar. As soon as I notice a mistake, I can fix it on the spot.” (Lilis, C1-level)

To classify the writing strategies and analyze their frequency, both qualitative and quantitative methods were employed. An interview checklist was used to assist the researcher

in categorizing the strategies according to a writing strategy taxonomy comprising cognitive, metacognitive, social, and affective strategies (see classification in Section 2.7.2). For the quantitative analysis, descriptive statistics were conducted to examine the frequency of writing taxonomy employed by B2 and C1 level students across three semesters.

Although previous studies, including Teng (2022) and Putri et al. (2023), suggest that NNEs in HE tend to rely primarily on metacognitive strategies, the current study found that IGSs more frequently utilized cognitive strategies. This preference may be due to the central role of cognitive activities in coping with writing challenges, emphasizing mental processes such as low reading comprehension, difficulties in summarizing previous relevant studies, transferring thoughts into writing, and students' limited topic knowledge. These mental processes were identified as a crucial area for preparing and producing well-written texts. Likewise, relevant findings have been reported by Mu and Carrington (2007), Idris et al. (2022), and Bui et al. (2023), who investigate the use of cognitive strategies in academic writing among L2 English students in HE. The utilization of these strategies allows students to manipulate, understand, and transform information into coherent and well-organized academic texts.

Moreover, this dissertation has further revealed that C1-level students appear to utilize more writing strategies compared to B2-level students. This finding corresponds with the discussion in Section 2.7.2, which emphasizes the relationship between language proficiency and the utilization of writing strategies. This result also supports the view of Raoofi et al. (2017), who found that students with higher English proficiency levels tend to employ a higher number of strategies than those with lower proficiency. A key factor contributing to this difference is the students' prior academic writing experiences and educational backgrounds, as outlined in Section 4.1.2 on writing support.

In addition, the current findings suggest that self-regulation in academic writing, as demonstrated by C1-level students, influences the characteristic features of ID components in their texts. The use of specific strategies such as incorporating technical vocabulary appears to enhance both the density and clarity of the text, particularly in defining key concepts. As Triyono (C1-level) wrote in his text:

“Muhajabat, a term for Muslim women who wear the hijab, choose to wear it voluntarily, even though there are a minority of them who are forced to wear it. They wear the hijab because it is a symbol of faith. Last but not least, it is incorrect to say that Muslim women are associated with terrorism.”

This example illustrates how the term "*muhajabat*," which is from the Arabic language, is used to describe the practice of women covering their heads. The definition provided consists of relevant features of ID, such as the use of content-specific words (e.g., *Muslims*, *hijab*), expanded noun phrases (e.g., *a symbol of faith*), and nominalization (e.g., *minority*). The utilization of self-regulation strategies, such as providing clear definitions, contributes to the clarity and contextual depth of academic writing. It also facilitates the explanation of cultural and specific concepts, fostering reader engagement and promoting critical reflection on social stereotypes, which holds significance within the field of international relations.

RQ5: *What are the characteristic features of ID components in the students' essays across three semesters?*

To answer RQs 5 and 6, a combination of qualitative and quantitative data was utilized. In terms of qualitative analysis, text analysis of students' essays was conducted to examine the distribution and comparison of relevant information density (ID) features across three semesters. This analysis was further supported by interview excerpts, providing contextual insights. For the quantitative analysis, results from Coh-Metrix calculations were used to compare the frequency distribution of ID features across the three semesters. Descriptive statistical analysis was applied to examine the distribution and the relationship between B2 and C1 level students in the manifestation of relevant ID features.

For the characteristic features of ID components, key features included lexical density (LD), expanded noun phrases (NPs), and nominalization via concreteness. The data distribution demonstrates that both B2 and C1 levels' academic essays manifest more content words than function words, followed by increased use of expanded NPs and nominalizations. It is worth noting that the data depicts progressive changes in these features, particularly in essays written by C1-level students, who showed greater consistency in the pattern of ID features across their master's studies in Hungary. This is demonstrated by the strategies used by the students to make their academic essays more dense, such as using academic words, more expanded noun phrases, and nominalization to condense information. The following interview excerpt, along with the comparison between B2 and C1 level texts presented in Section 6.1.2, illustrates this point.

"I usually try to use technical and academic vocabulary rather than common language. This is because I want to express my ideas without using too many words in a sentence. For example, the word "belligerent" can represent someone who engages in war. I think using this kind of linguistic feature has helped me achieve a high score." (Eko, C1-level)

Several causal factors may influence the frequency of relevant ID component occurrences in the students' texts. These include students' prior EAW experiences (e.g., *drafting for publications*), their subject knowledge, perceived relevance of the assigned topics, and the use of discipline-specific academic vocabulary, particularly in the fields of social sciences and economics. These factors are also related to the writing support, such as obtainable academic engagement (as discussed in Section 4.1.2) and content development strategies (outlined in Section 5.1.2).

This dissertation also found that IGSs appeared to demonstrate an emerging awareness of quality content in their academic writing through cognitive practices. Some students utilized technical words, often associated with nominalization, which is a key indicator of relevant ID features in academic writing.

"I am conscious of using specific vocabulary, such as the fact that in my field, "purchasing" is frequently substituted for "buying." (Bambang, B2-level)

This suggests a growing awareness of how discipline-specific terminology can enhance formality and precision. However, there was limited evidence that the students fully understood the role of these relevant ID features in condensing information and contributing to the overall density and efficiency of academic texts.

RQ6: *What are the characteristic features of ID components in the essays based on the students' initial levels?*

The results of the present study indicate that although both groups (B2 and C1 level students) demonstrate the patterns of ID features, the frequency distribution shows that C1 level students' essays are denser than those of B2 level students' texts. This is evidenced by the higher frequency of all ID features in the C1 group, including a greater number of content words, more frequent use of expanded NPs, and lower concreteness scores presented in Table 41, Section 6.1.2. These linguistic features are crucial for conveying complex ideas related to students' subject knowledge. The findings on the EAW challenges mentioned that students often struggle with the subject course due to a lack of content knowledge (e.g., topic familiarity), which makes it difficult for them to develop their ideas and ultimately affects the quality of their writing.

"Due to the fact that I must adhere to my lecturer's ideas, which are mostly European in nature and completely at odds with my background as a citizen of an ASEAN country, combining these two different aspects in my essay is rather difficult." (Lilis, C1-level)

This finding is supported by Biber and Conrad (2019) and Staples et al. (2016), who argue that such features enhance the sophistication and clarity of academic writing. Furthermore, McNamara et al. (2014) also emphasize that relevant ID features help strengthen arguments and enable the clear and concise delivery of information. For example, the use of expanded NPs in the C1 level texts tends to include more varied modifiers, resulting in more complex structures. This allows students to pack more information into a limited space, enhancing the density of their writing. For example:

“I add more supporting details and explanations to extend my paragraphs when needed.” (Budi, B2-level)

This observation echoes Finch’s (2015) statements that ID and expanded NPs lead to enhanced higher-level ID.

What is more, in terms of nominalization features, texts written by C1-level students tend to be less concrete, exhibiting a greater use of abstract language compared to those produced by B2-level students. Fang (2004) suggests that nominalization is a formal linguistic feature of academic writing that compresses information and transforms everyday language into more complex, abstract, and academic orientations.

Moreover, it appears that students’ prior experiences in writing academic texts, particularly before pursuing master’s studies in Hungary, also influence the characteristic features of ID components. For instance, Budi (a B2-level student) reported difficulties in distinguishing between everyday and academic English:

“Sometimes I am confused whether a word is an everyday or an academic word, such as ‘company’ versus ‘corporation’ to indicate an enterprise. The use of technical words can affect the grading score of my essays.”

This challenge reflects an issue related to language proficiency. The findings of the current study show that C1-level students tend to employ more strategies, including the use of advanced academic vocabulary to condense information, compared with their B2-level counterparts. Furthermore, Eko (C1-level) explained:

“I attended a class of academic writing during my undergraduate studies, and I participated as one of my lecturer’s research assistants. This helped me improve my academic writing skills.”

A similar experience was shared by Novi (C1-level):

“During my undergraduate studies, I participated in a research team and was required to write activity reports in English. My undergraduate thesis was also written in English. This experience helped me build motivation in EAW and supported my studies in Hungary.”

Based on the examples provided above, although the participants did not explicitly describe their use of ID features in their writing, their experiences demonstrate engagement with producing academic texts. The evidence suggests that C1-level students tend to have more extensive academic writing experience, making them more familiar with the genre. This background knowledge appears to support their ability to compose well-structured essays that reflect higher ID components. This investigation is relevant to the findings of the present study, suggesting that texts written by C1-level students tend to be denser than those produced by B2-level students.

Previous research, including Gregori-Signes and Clavel-Arroitia (2015) and To et al. (2013), also highlights the role of initial language proficiency in shaping the overall density of academic texts. Biber and Conrad (2019) further emphasize that compacting complex information requires a broad and diverse lexical resource, which C1-level students benefit from in this circumstance. Therefore, this study reinforces the view that higher proficiency levels contribute to the effective use of ID features in academic writing.

CHAPTER 8

CONCLUSION

This final chapter summarizes the key points and highlights the primary findings related to the six research questions. It also discusses pedagogical implications, addresses research limitations, and proposes directions for future studies in this field.

8.1 Key Findings

This study has successfully integrated a mixed-methods dataset to provide valuable insights in answering the six research questions (RQs), which were generally discussed in Chapter 7. This integration involved both qualitative and quantitative data collection and analysis, aligning with the mixed-methods convergent design outlined in Section 3.2. Therefore, it is crucial to highlight the answers in light of the findings obtained. The subsequent paragraphs provide general findings of each question and its corresponding answer.

RQ 1 explores challenges IGSs face in EAW. Key findings indicate that the students face a range of challenges across three main categories: the writing process, subject courses, and institutional policy. In terms of the writing process, the challenges include limited academic skills, poor time management, plagiarism, students' language proficiency, structural and organizational issues, and cognitive and affective aspects (e.g., difficulties in transferring thoughts into writing). For the subject course, the challenges include access to sources, essay topics and requirements, subject teachers' competencies, and subject course instruction. For the institutional policy, the challenges deal with the lack of an EAW course, limited access to online databases, and inadequate library provision.

RQ 2 studies the types of support IGSs receive to address the challenges in EAW. Key findings highlight three areas of support. Institutional policy-related support includes the presence of EAW classes, access to academic writing resources via institutional platforms, and academic engagement opportunities. Subject course-related support deals with perceived improvement in EAW, the integration of essay topics with students' theses, and the availability of relevant sources provided by lecturers. Additionally, students' prior experiences in EAW support include pursuing higher education at English-speaking medium universities and receiving external peer feedback on their work. These forms of support collectively contributed to students' ability to complete their academic essay assignments successfully.

RQ3 investigates students' attitudes toward EAW in a non-native English-speaking environment. Key findings suggest that IGSs generally hold positive attitudes toward two

aspects of EAW in such context. First, the students in Hungarian HEIs viewed a favorable perception of English for academic writing classes. Second, this present study reveals positive attitudes toward academic essay assignments. The students considered these assignments valuable for their academic future development, particularly useful for students with limited experience, and in some cases, even enjoyable.

RQ 4 analyzes the strategies the students utilize in EAW. The discussion is organized into two sections. First, it highlights the strategies in the writing stages: pre-writing, writing, and post-writing. Key findings show that in the pre-writing stage, the students applied a range of academic writing strategies (AWSs), including planning, information gathering, academic reading and note-taking, and structuring and organizing content. During the writing stage, the students employed AWSs based on several phases, including preparatory stages, research and information management, text-length fulfilment, content development, language enhancement, visual and citation support, text revision, academic integrity assurance, and motivation control. In the post-writing stage, the strategies deal with final revision, plagiarism checking, and post-submission reflection. Second, the discussion underlines a comparison of the strategies employed by the two student groups, based on a writing strategy taxonomy (i.e., cognitive, metacognitive, social, and affective). Key findings suggest that IGSs employed cognitive strategies more frequently than the other three types. In addition, C1-level students seemed to use a broader range of strategies when completing their academic essays compared to B2-level students. One important aspect influencing this difference is the students' prior academic writing experiences and educational background.

RQs 5 and 6 address characteristic feature ID components (i.e., LD, expanded NPs, nominalization) based on text analysis. Key findings indicate that patterns of ID in the students' texts varied and fluctuated over the course of their master's studies in Hungary. These changes were influenced by several factors, including students' academic writing activities and the selection of writing topics. Additionally, although both student groups manifested ID features in their texts, the findings show that essays produced by C1-level students were denser than those written by B2-level students, as measured by the frequency of relevant ID features across three semesters.

All in all, this study suggests that academic writing experiences of IGSs at HUs involve interrelated issues, including the challenges they face, the strategies they use, and the manifestation of ID in their texts. Key findings indicate that the use of specific writing strategies helps the students manage the challenges in EAW while also supporting the manifestation of ID features. This suggests a possible relationship that EAW challenges

influence the utilization and application of writing strategies, which in turn facilitate the appearance of linguistic features affiliated with ID. By drawing this connection among these three aspects, this dissertation highlights the triangulation relationship between students' difficulties in EAW, their strategies in coping with the challenges, and the quality of their academic writing as reflected in the patterns of ID in academic essays written by the IGSs at Hungarian HEIs.

8.2 Pedagogical Implications

These research findings provide several practical suggestions for improving pedagogy. First, it would be beneficial to implement a course dedicated to English for academic writing (EAW) within Hungarian EMI contexts. This course should be tailored to the specific needs of international students and ideally introduced in the first semester of their study programs. By considering cultural backgrounds, academic writing-related beliefs, and prior experiences in academic writing, it would help better prepare them to meet essay writing requirements set by lecturers. Moreover, an EAP course could enhance students' linguistic competence, covering grammatical accuracy, general academic and discipline-specific vocabulary, and the use of cohesive and coherent structures. The course should also focus on improving students' ability to use information density features in academic writing.

Second, students should be encouraged and informed to utilize the university's e-library facilities. Improving access to study materials and English-language literature can significantly support their academic writing. The universities could consider expanding access to subscribed digital sources beyond university boundaries, allowing students to log in and retrieve them from any location. This would help students overcome challenges in locating credible, high-quality sources with restricted access. Besides, by increasing the number of English-language textbooks and references, the university could improve or add more English textbook references in the university library, which would provide further support for international students working on their essay assignments.

Third, it is crucial to extend institutional support to subject teachers in EMI environments, focusing on enhancing both their command of discipline-related academic English and proficiency in language pedagogy. Students benefit greatly from teachers who are not only proficient in academic English but also capable of adjusting their language to match students' levels and learning needs. As a result, unclear explanations or confusing instructions in class can be avoided, thereby improving overall academic performance.

Fourth, the study found that IGSs appeared to be aware of the quality of their content, particularly through processes of editing, monitoring, and evaluating their writing from the point of view of linguistic features such as using technical words, which is affiliated with nominalization. However, they seemed unaware of the broader role that ID features play in making their texts more concise and academically appropriate. This lack of awareness promotes a potential gap in academic writing instruction, particularly in improving students' understanding of how relevant ID features can be strategically employed to achieve greater ID.

To address this, subject teachers can guide students in producing higher-quality academic essays by drawing attention to specific linguistic features such as content words, complex noun phrases with multiple modifications (e.g., prepositional phrases, relative clauses), and nominalization. These features can contribute to making their writing concise.

The current study's findings show that higher-proficiency students tend to produce a greater number of these features than their lower-proficiency counterparts. These results underscore that producing high-stakes academic writing characterized by higher ID is an important component of academic success in higher education.

Lastly, providing international students with recommended academic resources can significantly improve the quality of their academic essays. Institutions could offer access to proofreading tools to support linguistic accuracy and enhance students' fluency in academic writing. This support is particularly valuable for IGSs who find it difficult to express their ideas in English, often due to L1-Indonesian interference. Applying this policy could not only assist students with time management but also contribute to the production of well-structured and coherent academic essays.

8.3 Research Limitations

Although this study provides a comprehensive examination of the topic at hand, it does have several limitations. First, the scope of the investigation is limited by its focus on a small number of participants from specific disciplines. Therefore, the findings may not fully reflect the experiences of the broader population of Indonesian students studying in non-native English-speaking environments.

Second, the research primarily relies on students' interviews and written essay documents. The limited range of data sources may restrict the depth and comprehensiveness of the insights derived. A more diverse methodological approach, possibly involving questionnaires, classroom observations, or teachers' perspectives, could yield more robust results.

Third, during the data collection process for the checklist on writing strategies, data were gathered through retrospective interviews. This approach may have affected the accuracy and depth of the reported strategies, as the participants often described only general tendencies rather than specific behaviors. Retrospective reporting is subject to memory limitation and may lead to incomplete accounts of actual strategy use.

Fourth, the translation of the interview questions used in both the semi-structured interviews and interview checklist into English presents another limitation. Translation errors could have introduced language and content inaccuracies, potentially affecting the reliability of the results. This restriction is particularly relevant because translation was applied during the transcription and coding stages of data analysis.

Fifth, during data analysis and presentation, it appears that this present study relied on responses from a small group of similar participants. Some participants were involved in both the pilot and main phases of the study, due to the limited availability of essay assignments produced by IGSs during their studies at HUs. This overlap may have influenced the validity of the analysis.

Sixth, the findings of this dissertation are not broadly generalizable, as the dataset includes a significant number of relatively short texts and a small number of participants. Despite offering meaningful insights related to students' experiences in academic writing, the scope of the data is limited to IGSs engaging with EAW in the context of Hungarian higher education. Different circumstances may emerge in other educational or cultural settings.

Finally, it is important to acknowledge that the findings of this dissertation are shaped by the students' cultural backgrounds and the specific context of Hungarian higher education. Thus, caution should be exercised when attempting to apply these results to different student populations or educational settings.

8.4 Future Research Directions

Given the limitations of the current study, several directions for future research can be proposed. Firstly, future studies should aim to expand the sample size and diversity of participants to enhance the generalizability of the findings. This could be achieved by recruiting Indonesian students from a wider range of academic disciplines and considering students studying in various non-native English-speaking environments. Moreover, future researchers are encouraged to extend both the pilot and main studies by incorporating a wider variety of students' writing samples. A larger number of participants would allow for more diverse and representative data, strengthening the study's design and analytical depth.

Secondly, future research should broaden the range of documents for analysis, including different types of academic writing (e.g., research proposals) or even non-academic writing samples for comparative purposes. Tools such as Coh-Metrix, which offers 110 indices, could be used to examine ID. By applying additional ID indices, researchers could deepen the investigation of linguistic complexity in students' academic writing. Moreover, the application of parametric statistical methods such as t-tests or ANOVA is suggested to provide broader generalizations, particularly when working with larger datasets.

Thirdly, future studies could benefit from incorporating multiple data sources to gain a more comprehensive understanding of students' academic writing experiences and abilities. These might include teacher evaluations, student self-assessments, and peer reviews. By triangulating these multiple data sources, the reliability and validity of the findings could be enhanced. In addition, it is suggested that future studies could apply retrospective interviews with real-time or concurrent data collection methods, such as think-aloud protocols or screen-recorded writing sessions, to examine the utilization of writing strategy. These methods would enable researchers to capture richer and more accurate insights into academic writing processes.

Fourthly, the study has identified self-reported strategies and the patterns of ID in EAW, as well as suggested possible factors influencing these patterns, as discussed in Sections 5.2 and 6.3, respectively. However, a further investigation is needed to determine whether a strong correlation exists between the strategies used and the manifestation of ID features in students' texts. This study relied on qualitative analysis and selected excerpts without employing a validated instrument to study the correlation between strategy use and the manifestation of ID. Future research should apply valid quantitative tools and methods, such as Pearson correlation analysis, to empirically test the relationship between these variables.

Lastly, future studies could explore how students' cultural backgrounds and the specific education settings influence their academic writing. This could include a comparative study of Indonesian graduate students in their country, where the medium of instruction is L1-Indonesian, versus where English is the medium of instruction in academic writing. Alternatively, a longitudinal study could examine how their academic writing evolves as they become more acculturated to their educational environments. While the present study examined students' experiences, strategies, and essays over three semesters of master's studies in Hungarian HEIs, further research could extend this investigation to the doctoral level. This study would offer more details about the long-term development of academic writing performance, particularly in NNES environments.

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APPENDICES

Appendix A – Challenges Indonesian Graduate Students Face in Writing Academic Essays in English

Challenges Indonesian graduate face in English academic essay writing regarding the writing process

Category 1: The Writing Process		
Sub-categories	Themes	Extract examples
Academic skills and convention	<i>low reading comprehensibility</i>	<i>“I find it challenging to comprehend articles with complex vocabulary”</i> . Triono
	<i>difficulties in summarizing previous research studies</i>	<i>“It is really difficult for me to explain previous complex research findings in a simple way”</i> . Eko
	<i>plagiarism</i>	<i>“The acceptable level for plagiarism is 15% or less. It was difficult ... to avoid copying another person's work”</i> . Eko
		<i>“I usually just take the quotation directly because ...using direct quotation can be regarded as plagiarism”</i> . Budi
		<i>“I used to enjoy copying and pasting while citing sources, but it appears to be considered plagiarism now”</i> . Rina
	<i>poor time management</i>	<i>“Because I had difficulty managing my time, I submitted my second essay late”</i> . Eko
		<i>“I always complete my tasks just before the deadline. As is typical for deadliners, I made numerous grammar mistakes as a result”</i> . Ani
		<i>“I had trouble managing my time last semester because I wasn't used to it”</i> . Budi
		<i>“I have no idea ..., and it was difficult to write something with two ongoing processes.</i>
		<i>“Because I had trouble managing my time, I sent my second essay late”</i> . Eko
		<i>“I spent a lot of time reading just for the article after finding one that was fascinating.”</i> Bambang
		<i>“The assignment was given a bit more time, but I completed it in less than 24 hours which I believe that was not a good thing.”</i> Triono
		<i>“I am working on my essay very nearly the deadline submission like a day or two beforehand”</i> . Rina
		<i>“I usually begin working on my essay assignments as soon as the due date approaches”</i> . Fira
Students' language proficiency	<i>overuse of passive sentences</i>	<i>“My lecturer pointed out that I overused the passive voice in the text.”</i> Tutik
		<i>“my problem is I like to write in passive forms and use simple presents all the time”</i> - Budi
		<i>“I have no idea why I prefer to use the passive voice lots”</i> . Tutuik

	poor knowledge and lack of technical vocabulary	<i>"I find it hard to determine which words are academic and which are noy, such as differentiating between GET vs OBTAIN". Budi</i>
		<i>"... because I discovered a lot of words that I had never used before."</i>
		<i>"due to my lack of vocabulary, ..."</i> Budi
		<i>"I find it difficult at first to understand new terms related to environmental studies". Tutik</i>
		<i>"I find it challenging to comprehend complex vocabulary when reading an article". Triono</i>
		<i>"There are several terms that I don't understand". Yanti</i>
	word repetitions	<i>"Due to my limited vocabulary, I am unable to use many distinct words. As a result, I repeatedly use the same words". Yanti</i>
		<i>"using the same word again will make it appear repetitive, so that's the challenge". Ani</i>
		<i>"I always repeat the same word". Budi</i>
		<i>"..., I frequently use the same words". Budi</i>
		<i>"When quoting other people's words, I like to use the word "said" but my lecturer advised me to substitute another word." Novi</i>
		<i>"how to not repeat the same word is another challenge in essay writing for me". Ani</i>
		<i>"Due to my narrow vocabulary, I am unable to employ numerous distinct words. Because of this, I consistently use the same word again and again". Yanti</i>
		<i>"Due to my narrow vocabulary, I am unable to employ numerous distinct words. Because of this, I consistently use the same word again and again". Yanti</i>
	grammatical errors	<i>"My big challenge in writing is always about grammar". Rina</i>
		<i>"..., as is typical for deadliners. I made numerous grammatical errors as a result". Ani</i>
		<i>"what frequently occurs is the absence of auxiliary verbs or the incorrect use of nouns or adjectives". Ani</i>
		<i>"my problems usually deal with auxiliary verbs and singular and plural forms". Ani</i>
		<i>"...incorrect connection, which changes the meaning". Ani</i>
	difficulties in finding equivalent words in English	<i>"When I think of an idea in Indonesian, I struggle to translate it into English because I can't seem to come up with a suitable word for it". Ani</i>
		<i>"I wondered whether to utilize complex sentences or sophisticated vocabulary to explain the meaning in English." Eko</i>
		<i>"finding English equivalents for Indonesian words can be very challenging at times". Budi</i>
	L1-Indonesian interference	<i>"Writing academic essays in English is difficult since I continuously think in Indonesian." Tutik</i>
		<i>"I struggle to decide what to write next because my thoughts are still in Indonesian". novi</i>
	clarity and coherence	<i>"My teacher said that my text was unclear and unstructured". Sri</i>

Structure and content		<i>"It may appear challenging to ensure that ideas from one paragraph flow into the next while writing". Yanti</i>
		<i>"my main challenge when writing academic essays is figuring out how to write something that is both easy to read and understand and coherent". Lilis</i>
		<i>"There were a few things left out of the conclusion, so the reader didn't get the information very well". Budi</i>
		<i>"I have some problems explaining complicated ideas. I prefer utilizing advanced, precise terminology than long sentences for clarity, and I am afraid if I write in a long sentence the idea gets lost. Herein lies my problem to use short or long sentences". Budi</i>
		<i>"It is very difficult to construct coherent, concise sentences". Sri</i>
		<i>"Sometimes I use lengthy, rambling sentences that seem to be beating around the bush rather than being strictly to the point". Sri</i>
		<i>"My teacher said that my text was unclear and unstructured". Sri</i>
		<i>"Sometimes I include too much information, which causes the text to be unclear and unrelated to the subject". Tutik</i>
		<i>"I spent five hours writing a paragraph that was completely incoherent". Rina</i>
		<i>"It may appear challenging to ensure that ideas from one paragraph flow into the next while writing". Ani</i>
	writing conventions	<i>"Because my lecturer feels uncomfortable with brackets in the text, I have to use a footnote". Tutik</i>
		<i>"When I was an undergraduate student, I frequently used footnotes, but now I'm required to use body notes written in Harvard style". Ani</i>
		<i>"It is not permitted to cite sources using footnotes in my department". Bambang</i>
Cognition and affect	lost ideas and being stuck	<i>"...particularly when I get stuck and have no idea what to write". Ani</i>
		<i>"I struggled to decide what perspective to take on the topic ...". Rina</i>
		<i>"I have everything there, but I need one more page to finish, so I don't know what to write". Budi</i>
	difficulties in transferring thoughts into writing	<i>"I constantly struggle when I have a lot of ideas but no idea how to put them into sentences." Triono</i>
		<i>"How I interpret my thoughts to my lecturer is a problem for me." Eko</i>
		<i>"Putting the idea into sentences takes a while". Ani</i>
		<i>"The most difficult aspect, in my opinion, is putting ideas into words". Budi</i>
		<i>"I received a lot of information, but I don't know how to write". Ani</i>
	diffidence	<i>"Previously, I struggled to express my arguments with confidence". Budi</i>
	exhaustion	<i>"Sometimes I'm too tired to edit my writing, so I just send it right away". Eko</i>

		<i>"It was too much for me when we started writing ten-page essays for each subject in semester two". Novi</i>
		<i>"Writing on the topic of political issues makes me depressed". Triono</i>
		<i>"When I failed to meet the required text length, I became very stressful". Novi</i>
		<i>"My brain can easily become overheated when I'm writing". Fira</i>
		<i>"It was too much for me when we started writing ten-page essays for each subject in semester two." Novi</i>
		<i>"due to the Covid pandemic, it was an opportunity to take an online course in the second semester. As a result, even subjects that weren't scheduled to write any essays at the start of class had to turn in essay assignments for the final semester". Novi</i>
		<i>"There are many assignments given by the lecturer, making it difficult to complete them all". Triono</i>
		<i>"There was a subject course which required three essays". Tutik</i>
		<i>"Some lecturers gave essay assignments to us in endless tasks". Triono</i>
		<i>"We were given a lot of assignments in semester three, and I did not have the energy to finish them". Yanti</i>
		<i>"...seems like I don't have much time, so I write it in a rush". Ani</i>
	<i>impatience</i>	<i>"I am stuck in writing due to lack of motivation". Rina</i>
	<i>lack of motivation</i>	<i>"I am stuck in writing due to lack of motivation". Rina</i>
		<i>"While writing, I came upon an article that cannot be downloaded. Suddenly, I lost the desire to write further." Rina</i>
		<i>"When I realized that the essay's submission deadline is tomorrow, and I haven't finished writing it, I became less motivated to finish the assignment". Yanti</i>
		<i>"I am just super lazy to check my writing". Tutik</i>

Challenges IGSs face in academic essays in English regarding the category of the subject course

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
Sources	<i>limited access to data sources</i>	<i>"The problem is that the data I found was only available in French and was not publicly accessible". Triono</i>
	<i>difficulties in finding credible sources</i>	<i>"Finding reliable sources of information is a significant challenge". Bambang</i>
		<i>"My biggest challenge is I need to find out reliable evidence to support my arguments which seems difficult". Novi</i>

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
	<i>insufficient references from the lecturers</i>	<i>"During semester two, my lecturer did not provide sufficient references". Budi</i>
Essay topics	<i>long quest for assigned topics</i>	<i>"Since we can choose any topic for our essay, it can be difficult. Particularly when the topic is completely unfamiliar. I could spend hours researching this topic alone". Lilis</i>
		<i>"I struggle to find an essay topic". Yanti</i>
		<i>"Given that I know nothing about the issues in my subject course, I have to start from scratch when studying them." Novi</i>
	<i>students' limited topic knowledge</i>	<i>"I was assigned a topic about Green Corporations talking about a film industry, a subject about which I know absolutely nothing". Novi</i>
		<i>"At that time, I found it difficult because I did not have many experiences about the subject and I learnt from the very beginning". Budi</i>
		<i>"I find it difficult to write essays since I do not have a solid foundational framework in international relations". Eko</i>
		<i>"I know nothing about my field of study, particularly when it comes to urban and regional planning". Novi</i>
		<i>"..., a subject about which I know absolutely nothing. Finding the data seems very difficult to me". Novi</i>
		<i>"I have never written a lengthy English text before". Budi</i>
	<i>mismatch in topic perspective</i>	<i>"Due to the fact that I must adhere to my lecturer's ideas, which are mostly European in nature and completely at odds with my background as a citizen of an ASEAN country, combining these two different aspects in my essay is rather difficult". Lilis</i>
		<i>"It's very challenging for me when I get security-related topics because I'm not familiar with them. This will result in a longer impact on writing time". Ani</i>
		<i>"... because I was given a topic with a communication theme that I completely did not understand and was still new to me, so I have no clues what to write". Tutik</i>
		<i>"It would take me a long time to finish my essay when the given topic was unfamiliar." Novi</i>
		<i>"Writing on the topic of political issues makes me depressed". Triono</i>
		<i>"When given a topic on the middle-income trap that compares Hungary and Indonesia, I had no idea what it was about". Novi</i>

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
		<i>“Given that I know nothing about the issues in my subject course, I have to start from scratch when studying them.”</i> Novi
Essay requirements	<i>deadline completion</i> <i>unrealistic lecturer expectations for academic writing quality</i>	<i>“My score was reduced because I was late to submit my essay”.</i> Eko
		<i>“It is possible that the essay initially received a 5 but was later downgraded to a 4 due to poor grammar”.</i> Ani
		<i>“My lecturers in the International Relations program wanted the students to write well-written academic texts with a lot of requirements”.</i> Tutik
		<i>“One of my lecturers noted that a critical component in evaluating our essays was grammatical accuracy”.</i> Yanti
		<i>“There is one lecturer who is very strict about grammar as the fundamental criteria when evaluating our essays.”</i> Sri
		<i>“One professor I take classes from is very strict about grammar”.</i> Tutik
		<i>“My lecturers in the International Relations program wanted the students to write well-written academic texts with a lot of requirements”.</i> Tutik
		<i>“By email, my lecturer described the requirements for essay assignments and mentioned that one of them is grammar.”</i> Ani
		<i>“One lecturer had a reputation for being extremely strict when assigning essays, expecting us to cover every possible angle”.</i> Budi
		<i>“Grammar is a crucial component that is evaluated along with the International Relations Theories.”</i> Ani
	<i>adherence to text length requirements</i>	<i>“One requirement is in regard to text’s length. Having a lengthy text will result in a lower grade.”</i> Eko
		<i>“I have to meet one of requirements relating to the number of pages”.</i> Ani
		<i>“Because we must adhere to the required number of words and pages, the final essay assignment became difficult”.</i> Eko
		<i>“One requirement is in regard to text’s length. Having a lengthy text will result in a lower grade.”</i> Eko
		<i>“Our essay will be graded on five different criteria. We must tally up one point for each. If we fail to provide, say, 10,000 words for word category, our score will be reduced. When we write for 10% longer than those accepted numbers, the score is reduced by 0.75, and when we write for 20% longer, the score is reduced by 0.25.”</i> Eko
	<i>the level of critical analysis</i>	<i>“I didn't receive a good grade for my second semester essay because there was inadequate critical analysis”.</i> Sri

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
	adherence to topic relevance criteria	<i>"Once you fail to relate the topic of your essay assignment, your score will be reduced. However, you will get a five if you succeed". Ani</i>
		<i>"I received a grade 4 because the discussion is unrelated to the topic that is being discussed. Tutik</i>
		<i>"I received a grade of three because my sentences do not relate to one another". Budi</i>
	meeting general task descriptions	<i>"In my department, if a paper is unrelated to the particular topic, it will immediately receive a low grade". Tutik</i> <i>In the Employer Branding course, the lecturer gave us a general topic. Based on my previous studies in Indonesia, I thought that it was related to companies. But here in Hungary, it seemed more focused on the employee psychology. So, I wasn't sure if my essays met the lecturer's expectations. That was one of my challenges in the first year-study and I didn't really understand how lecturers typically evaluated the essays. Rina</i>
Subject-teacher competencies	subject-teachers' low English proficiency	<i>"Some of the professors in my department have trouble speaking or writing English". Sri</i>
		<i>"I experienced Some Hungarian lecturers are difficult to understand when explaining the materials". Ani</i>
		<i>"To be honest, I feel that some lecturers are not proficient either in writing or speaking English". Lilis</i>
		<i>"In my experience, I face several lecturers who are difficult to understand in terms of English". Budi</i>
		<i>"They may be having difficulties because English is not their first language." Budi</i>
		<i>"Not every lecturer in my department is fluent in English". Bambang</i>
	lecturers' poor language awareness	<i>"The lecturers in my department don't pay much attention to language use or grammar". Lilis</i>
		<i>"Some professors do not even pay attention to our grammar". Ani</i>
		<i>"Our lecturers are not really into academic writing". Lilis</i>
		<i>"Grammar is not something that many lecturers in our department pay much attention to. As long as I can explain the essay's main point, I will be okay". Budi</i> <i>"Never do I get language-related feedback". Sri</i>

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
		<i>"In my department, the lecturer did not assess the language aspects but rather the content". Novi</i>
		<i>"My lecturer doesn't seem to care about the language issues." Bambang</i>
		<i>"Grammar is not something our lecturers focus on when evaluating our essays". Yanti</i>
	<i>lack of clarification and corrective feedback from lecturers</i>	<i>"The score is just quantitative, so I'm hoping receiving the qualitative part will show where it falls short and where it excels". Lilis</i>
		<i>"I sometimes question how I receive that grade. I am clueless as to which sections of my text are strong and which need improvement". Sri</i>
		<i>"No feedback was given instead of score". Budi</i>
		<i>"I sometimes question how I receive that grade. I am clueless as to which sections of my text are strong and which need improvement". Sri</i>
		<i>"Our lecturer gave us a good grade of 5 but did not explain how we arrived at that result." Tutik</i>
		<i>"My lecturer gave me just a grade; nothing more." Bambang</i>
		<i>"My lecturer gave us nothing more than a score". Triono</i>
		<i>"Unfortunately, I only received score without any corrective feedback". Novi</i>
		<i>"I wished I had received more thorough comments on my Human Resources essay task". Novi</i>
	<i>team teaching's lack of consistency</i>	<i>"The course of English for academic writing has two lecturers. As a result, when giving an essay task, the lecturer A assigns the task with their own requirements while the lecturer B corrects the task differently. We are perplexed since the two lecturers are not communicating well with one another". Triono</i>
	<i>lecturers' poor awareness of plagiarism</i>	<i>"No lecturers in my department provide instruction on how to write an appropriate and efficient essay without plagiarizing". Yanti</i>
		<i>"... plagiarism is 15% or less. It was difficult because our lecturer did not teach us how to avoid copying another person's work". Ani</i>
	<i>lecturers' slow response</i>	<i>"I submitted my paper multiple times, but my lecturer never responded. So, I was forced to wait for a while. I only worry that my lecturer did not read my email". Triono</i>
Subject-course instruction	<i>technical problems during online learning</i>	<i>"I found online learning difficult because technical problems seem to happen during the class, such as unstable internet connection, frozen video,</i>

Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
		<i>unclear sounds/voice making me difficult to understand the subject material". Triono</i>
	<i>unclear instruction</i>	<i>"The explanation is vague in some way". Lilis</i>
	<i>discomfort of virtual learning</i>	<i>"I do not enjoy online learning". Triono</i>

Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies

Category 3: The Institutional Policies		
Sub-categories	Themes	Extract examples
Issues in relevance to English academic writing related courses	<i>absence of an English for Academic Writing course</i>	<i>"We do not have a class of English for academic writing". Budi</i>
	<i>insufficient course content</i>	<i>"I hoped that by enrolling in English for academic writing and communication, I would learn about fundamental theories relating to international relations that could be applied in the field of social science situations. Sadly, there were no international relations theory-related issues raised in this discussion. The subject mainly discussed general research paradigms". Eko</i>
	<i>overlapping content between the Research Methods and the English for Academic Writing course</i>	<i>"In the third semester, we enrolled in a research methods course that would primarily focus on the thesis research design. Unfortunately, the course appeared to be the same as the course of English for academic writing that we enrolled in semester 2". Eko</i>
Online database and library provision	<i>inaccessible online databases and journals due to off-campus residency</i>	<i>"Since we are no longer living in the campus dormitory, we are no longer able to access the campus internet to download online journals that were once automatically downloadable; instead, only abstracts are now available". Tutik</i>
	<i>lack of an English source database in the university library</i>	<i>"The majority of books at the university library are in Hungarian, and there are very few in English". Triono</i>

Challenges Indonesian graduate students face in writing English academic essays with regard to institutional policies

Category 4: External factors		
Sub-categories	Themes	Extract examples
Technical challenges	<i>lost internet connection</i>	<i>“Suddenly, the internet connection was interrupted, while I was searching for relevant sources during the writing process. This disruption made me feel unmotivated to continue my writing activities”. Triono</i>
	<i>unsupported equipment</i>	<i>“I remembered that my lecture wanted me to include statistical analysis using SPSS, but due to technical issues with my laptop, I was unable to install the software”. Triono</i> <i>“I have technical problems with my laptop”. Rina</i>
	<i>distraction during writing</i>	<i>“I use my mobile phone and can't leave it far away from me, which makes it difficult for me to finish my writing in a timely manner.” Rina</i>
Time management	<i>long time writing due to unfamiliar topics</i>	<i>“It would take me a long time to finish my essay when the given topic was unfamiliar.” Novi</i>
		<i>“It took more than two weeks to write on a new topic ...”. Novi</i>
		<i>“It's very challenging for me when I get security-related topics because I'm not familiar with them. This will result in a longer impact on writing time”. Ani</i>
	<i>short-time allotments</i>	<i>“Every week, we are required to submit an essay on the assigned topic, and we are given only three days to complete it.” Ani</i>
		<i>“In the past, I felt that it was not enough to write a certain number of pages in a month”. Ani</i>
		<i>“It took more than two weeks to write on a new topic and it was not enough”. Novi</i> <i>“There are some courses that provide a really tight deadline”. Tutik</i>

Appendix B - Indonesian Graduate Students' Support in English Academic Writing at Hungarian Universities

Category 1: Institutional Policies		
Sub-categories	Themes	Extract examples
Availability of academic writing related courses	available courses in English for academic writing	<i>"We have a class of English academic writing, in which we get assignments to write essays and have them corrected every week"</i> . Ani, B2-level
		<i>"In the second semester, we have an Academic Writing and Communication course offered in a hybrid format, combining both online and in-person sessions"</i> . Eko, C1-level
		<i>"We are required to enroll in an English academic writing class in semester 2"</i> . Eko
		<i>"In semester 2, we received English academic writing under the name Academic Writing and Communication"</i> . Eko
		<i>"We have a class of English academic writing where we get assignments to write essays and have them corrected every week"</i> . Ani
		<i>"In my department, there is an English academic writing course but I didn't register because it wasn't mandatory"</i> . Lilis
		<i>"Actually, my department does not offer a course in academic writing in English, but we can enroll in another program, such as one in the education department, which is part of the same faculty as mine."</i> Yanti
	available courses to support thesis writing	<i>"We have taken a course on how to write a thesis, including how to conduct a literature review and other thesis-related tasks"</i> . Budi
		<i>"At my faculty, academic writing is offered as an elective course, which I chose not to take. However, a thesis writing course is compulsory and must be completed later in the program"</i> . Lilis,
		<i>"We have a special class for thesis writing"</i> . Lilis
		<i>"I only received a class of research methods in semester 1"</i> . Bambang
		<i>"In the third semester, we enrolled in a research methods course that primarily focus on the thesis research design"</i> . Eko

Accessible learning platforms	the accessibility of universities' digital libraries	<i>"I usually look for references ... such as the university library website". Lilis,</i>
	public access to academic information via Moodle, Neptun, Microsoft Teams and Canvas	<i>"Due to online learning, we are required to submit our essay via Moodle". Budi, B2-level</i>
		<i>"I can find task requirements relating to Middle East and EU in Microsoft Teams". Eko, C1-level</i>
		<i>"We must carefully read the essay requirements that are posted on Moodle or Canvas". Yanti, B2-level</i>
		<i>"Our lecturer has uploaded all references to Moodle and Neptun". Budi</i>
		<i>"Due to online learning, we are required to submit our essay via Moodle". Budi</i>
		<i>"We uploaded our essay to the system in university platform called Moodle. Then, the tasks will be processed for the percentage of plagiarism familiarity using Urkund". Eko</i>
	the provision of automatic plagiarism checking tools with Urkund	<i>"When we submit our essay, it is automatically processed by Urkund, a plagiarism detection tool provided by our university. The essay must past through this system before it is officially considered submitted." Tutik, B2-level</i>
		<i>"Besides Moodle, our university offers Urkund, a plagiarism detection system that helps assess the similarity index required by our lecturers". Eko, C1-level</i>
	free access to download online subscribed journals with students' institutional accounts and the university's internet connection	<i>"I can easily access and download online articles using my institutional account, as the university's Wi-Fi automatically log me and grants access to the articles". Rina, C1-level</i>
Obtainable academic engagement	the university research-based participation	<i>"I frequently participated in a research week event during first day as a university student. I had to write up an essay every week to be submitted at the event". Bambang, B2-level</i>
		<i>"There is a community-based research project in our faculty, in which each group is required to submit a proposal". Lilis, C1-level</i>
	joining in a conference and forum on publication events	<i>"Following my lecturer's suggestion, I submitted my paper to both the faculty conference and an essay competition". Ani, B2-level</i>

		<i>"I have written three draft articles for publications and one of them is for an international conference". Bambang, B2-level</i>
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Category 2: The Subject Course		
Sub-categories	Themes	Extract examples
Students' perceived improvement in English academic writing	subject-teachers' motivating encouragement	<i>"My lecturer said that producing good writing takes time, so do not rush". Ani, B2-level</i>
		<i>"I received "good job" from my lecturer". Yanti</i>
	feedback on language concerns	<i>"My lecturer said that if I did not fix my grammar, he would not understand what I was trying to explain". Ani, B2-level</i>
		<i>"When giving feedback, my lecturer is very thorough, covering everything from the writing structure to the grammar". Tutik</i>
		<i>"I received really detailed feedback, and one of the evaluations concerned grammar". Tutik</i>
		<i>"My lecturer is great because he provides feedback in a detailed manner that clarifies both the grammar and content. As a result, I am greatly encouraged and motivated to write better in the future". Yanti</i>
	guidance on essay content development	<i>"I received feedback from the lecturer, who mentioned that: I already marked your assignment and next time you have to improve how to structure the idea". Rina, C1-level</i>
		<i>"Our lecturers provide guidance on writing structure, covering key aspects such as the abstract, background of the study, literature review with foundational theories, and the conclusion". Budi, B2-level</i>
	the allocation of free time for student consultations	<i>"Our lecturers are open to scheduling appointments and willingly allocate their free time to provide us with feedback on our essay assignments." Budi, B2-level</i>
	accessible and timely lecturer feedback through digital platforms	<i>"We received feedback from the lecturer via quick message uploaded to the system a few days from the submission, including our grade that we can see it in Microsoft Word". Eko, C1-level</i>
		<i>"We can see our feedback, which is compiled in a folder from the lecturer based on our Neptun codes". Triyono, C1-level</i>

Essay topics	students' perceived relevance of assigned topics	"My favorite topic makes it easier for me to complete the assignment quickly, and finding references is not a problem". Tutik, B2-level
		"My topic, which is related to the European Union and the ASEAN nations, is simple to find resources". Budi
		"I can write the essay faster if I choose a topic I relish". Budi
		"Since I had already written on the subject in semester 1, I encountered no difficulties when given the same assignment in the following semester". Triono
		"From the assigned topic, I was able to learn a lot of new vocabulary, which helped me improve the quality of my writing". Budi, B2-level
		"It all depends on the topic. The more familiar I am with the given topic, the faster I accomplish it. I once managed to complete five pages in less than eight hours". Triono
		"Because the topics are all familiar, completing the task is rather simple and fast". Lilis
		"Fortunately, I was assigned a topic that interest me and was eager to write that task. As a result, I received a high score". Lilis
	integration of assigned topics with master's thesis	"The topics selected for our essays are intended to provide an overview of our future thesis project. Since my essays in the first semester focused on the sustainability of palm oil production, I plan to develop this into my research thesis, with a focus on comparing European and Indonesian policies". Budi, "The intention behind the topic we choose is to ultimately support the formulation of our thesis". Budi
	Sources	secondary sources provided by lecturers "To assist us in developing our assigned topics, our lecturers provide a selection of secondary sources, including comprehensive lists of recommended articles for our references". Budi, B2-level "After each class session, my lecturer uploads a reading list via Moodle, which

		<i>we can use as secondary sources to support our essays</i> ". Tutik, B2-level
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Category 3: The Student's Prior Knowledge Experiences in EAW		
Sub-categories	Themes	Extract examples
Educational background and achievements	pursuing higher studies in an English medium university	<i>"During my undergraduate studies in Malaysia, I used English, including for writing essay assignments and my bachelor's thesis"</i> . Triono, C1-level
	receiving external peer feedback on academic work	<i>"I received a lot of feedback from the reviewers at the faculty conference that I submitted my paper to"</i> . Ani, B2-level
English language proficiency development	gaining learning experience for IELTS	<i>"IELTS helped me learn a lot of things, including how to use academic vocabulary, how to properly elaborate sentences, and how to use verb tenses"</i> . Lilis, C1-level
		<i>"While preparing for the IELTS, I developed and understanding of context-specific vocabulary usage in business contexts such as sales, where I learned to distinguish between terms like 'buying' and 'purchasing'". Bambang, B2-level</i>
	working as an IELTS instructor	<i>"I taught IELTS while pursuing my master's degree."</i> Triono, C1-level
		<i>"Teaching IELTS has supported and enhanced my ability to write academic texts in English"</i> . Lilis, C1-level
	attending an English language course	<i>"I used to join a class of English at English First (EF). As a result, I grew up in an environment that encouraged me to learn English"</i> . Rina, C2-level
Academic writing development	producing research writing in English	<i>"I used to be a research assistant who frequently worked on English-language reports"</i> . Novi, C1-level
		<i>"I had the opportunity to contribute a book chapter through a program provided by the National Research and Innovation Agency of Indonesia"</i> . Eko, C1-level
	completing a course in English academic writing	<i>"I had a class of English academic writing when I was as an undergraduate student"</i> . Sri, B2-level

	during undergraduate studies	<i>“When I was an undergraduate student in Indonesia, I enrolled an English academic writing class”</i> . Eko
		<i>“I referred to my undergraduate thesis as a reference when writing up a literature review for my master’s thesis”</i> . Ani
		<i>“During my bachelor's study at one Indonesian state university, I enrolled an English academic course”</i> . Eko
Cultural adaptation and mobility	gaining experience through student exchange	<i>“I found different structures in academic writing while participating in student exchanges in Malaysia and Japan”</i> . Rina, C1-level

Appendix C – Attitudes Indonesian Graduate Students Have Regarding EAW

<i>Category 1: Positive attitudes towards the class of English for academic writing in a non-native English speaking environment</i>	
<i>Themes</i>	<i>Extracts</i>
perceived importance and desired integration of the academic writing class within the curriculum	(1) “The academic writing class is currently optional. <u>It would be beneficial</u> if the course could be made as a mandatory or highly encouraged subject...”. [Lilis] (2) “I believe <u>it would be preferable</u> if the academic writing course was made available in the first semester, once students begin writing academic essay assignments”. [Ani] (3) “<u>It would be advisable</u> if the academic writing class was part of the curriculum rather than an optional extracurricular activity with only four meetings”. [Novi]
significant advantages	(4) “... the outcomes were <u>very helpful</u>”. [Ani] (5) “... because it has a lot to offer in terms of helping to <u>improve our writing</u>, particularly when it comes to writing essays”. [Yanti] (6) “An Academic writing course <u>clearly affects</u> my academic writing skills”. [Novi] (7) “I <u>received incredibly useful feedback</u> on my submitted essay for the academic writing course...”. [Triono] (8) “By writing essays per session every week, <u>I have been able to improve</u> my academic writing skills”. [Tutik] (9) “It (the course) helped me <u>increase my vocabulary</u>”. [Novi] (10) “My ability to read in English has <u>undoubtedly improved</u> as a result of being pushed to do so, especially in terms of vocabulary”. [Budi] (11) “Because I write academic essays frequently, I may <u>naturally increase</u> my vocabulary for each essay I write. [Budi] (12) “My ability to read in English has <u>undoubtedly improved</u> as a result of being pushed to do so, especially in terms of vocabulary. [Budi] (13) “In terms of academic writing skills, I believe that <u>my ability has improved</u> slightly but not significantly”. [Lilis] (14) “Writing in English was challenging at first but now that I've had a lot of practice writing essays, <u>it comes more naturally to me than writing in Indonesian</u>”. [Bambang] (15) “The class of English for academic writing provides <u>numerous advantages</u> including ...”. [Eko]
value of international perspectives in	(16) “...because students studying in Hungarian higher education <u>come from all over the world</u>. As a result, exchanging ideas

the academic writing class	on how to write well-written academic essays is extremely beneficial”. [Novi] (17) “An English academic class provides <u>a standardizing perception of different writing knowledge...</u>” [Ani] (18) “Because of our <u>varied educational backgrounds</u>, I believe this course helped international students to unite our thoughts ...”. [Ani] (19) “I have participated in students exchange several countries and I found <u>academic writing convention of those countries is sort of different</u>”. [Rina]
Category 2: Positive attitudes towards English academic essay assignments	
beneficial necessity for skill development	(20) “I hardly ever wrote in English while I was a student in Indonesia, so <u>I was forced to</u> do it here”. [Lilis] (21) “When presenting ideas on PowerPoint slides, <u>I've learned how crucial it is</u> to avoid using lengthy sentences”. [Eko] (22) “An English academic writing course is <u>really essential</u> for the students of International Relations when writing academic essays ...”. [Bambang] (23) “<u>If we are not given any writing assignments</u>, I believe that our ability to write academic essays will not improve, especially in terms of our lexical resources”. [Ani] (24)
Social benefits	(25) “We also had <u>the ability to work in groups with other international students</u> to prepare an academic group essay”. [Budi] (26) “Grammar mistakes in essay writing may be <u>more tolerated</u> because we are studying in a non-English speaking country”. [Triono]
supported practical academic writing assignments with a specific topic	(27) “We had to submit <u>an essay with a chosen topic</u> relevant to writing structures each week”. [Tutik] (28) “...how to improve our writing quality by submitting essays every week, as well as how to <u>write a good essay structure and a review of the scientific literature</u> in particular. [Tutik] (29) “During the class of academic writing, <u>we need to write an essay with a specific topic, for example, research background in the first week and literature review in the second week</u>. By writing essays per session every week, we learned how to develop our essay...”. [Ani]
prospective assistance for the academic future	(30) This course is one way to aid <u>our future thesis research</u>”. [Eko] (31) “One reason I'm taking this course is <u>to help with my thesis</u>”. [Tutik] (32) “This course will help me with both my essay writing assignments and <u>my thesis</u> writing”. [Ani]

	(33) “I believe that completing academic essays each semester aids in our <u>preparation for thesis writing</u>”. [Lilis] (34) “...aside from that, this course is extremely beneficial in preparing us to support our career in <u>pursuing a doctoral degree program</u>, for example”. [Budi] (35) “Writing an academic essay can assist us in producing <u>an article for publications</u>”. [Ani]
valuable aids to inexperienced students in academic writing	(36) “One of my classmates who was unknowledgeable in academic writing <u>struggled in writing academic essays</u>”. [Bambang] (37) “...exchanging ideas on how to write well-written academic essay ...for those with <u>no background in English academic writing</u>”. [Sri]
a source of enjoyment	(38) “Writing in English is <u>fun</u>, and I <u>enjoy</u> it. I would rather write an essay than take a test”. [Yanti] (39) “I am <u>super happy</u> that my writing complies with the lecturer's requirements”. [Budi]

Appendix D – The Strategies the Students Employ in Writing Academic Essays in English

Category1: Pre-Writing

Phases	Strategies	Extract examples
Planning	drawing up a timetable	<i>“At the beginning of the course, I listed all my writing assignments along with their deadlines so I could plan my time effectively”</i> . Tutik
		<i>“I made a list of essay assignments given at the beginning of the class”</i> . Yanti
	brainstorming	<i>“Before I begin writing, I usually spend some time thinking through different ideas and directions I could take in the essays”</i> . Sri
		<i>“First, I need to think about what I want to write”</i> . Yanti
	recalling previous knowledge	<i>“Since I’ve written about this topic before, I can reuse some ideas and build on what I already know”</i> . Budi
		<i>“I have prior writing experience with the subject”</i> . Lilis
	preparing the writing environment	<i>“I cannot focus if I am tired or hungry, so I make sure to rest and eat before I sit down to write”</i> . Rina
		<i>“I need to take a bath first and eat before I start writing”</i> . Rina
		<i>“I must smell pleasant and be fresh”</i> . Rina
Understanding and refining the topic	looking up keywords in academic database	<i>I searched for keywords related to my topic in the CEU online library to see what kind of research had already been done”</i> . Sri
	preliminary reading of current/highly cited articles	<i>“I usually start by finding the most recent and highly cited articles so I can understand the current trends or academic conversation around my topics”</i> . Novi
		<i>“I did some preliminary research on current issues about the given topics”</i> .
	narrowing down the topic	<i>“The assigned topic was too general, so I had to focus on a specific viewpoint that I could manage within the word limit”</i> . Tutik
		<i>“I’ve been given a broad topic and must narrow it down”</i> . Tutik
	looking for definitions of key terms	<i>“To make sure I understand the core idea, I look up clear and academic definitions of key concepts like “Chicken Game Theory”</i> . Ani
	consulting with the lecturer	<i>“When I struggled to find reliable sources, I scheduled a consultation with my lecturer to clarify the topic direction”</i> . Budi
		<i>“If I couldn’t find enough information, I asked the lecturer for assistance”</i> . Budi
	asking for help from classmates	<i>“I discussed the topic with my classmates who had a better grasp of it, and they helped me understand the key points”</i> . Eko
		<i>“Due to a difficult topic, I asked my friend to help me explain the topic”</i> .
		<i>“I borrow my friend’s course notes”</i> . Sri

Phases	Strategies	Extract examples
	watching explanatory content (e.g., YouTube)	<i>"When academic sources were too complex, I watched short YouTube explainers to get a general understanding before reading more deeply".</i> Lilis
		<i>"Sometimes I seek the topic on YouTube about the topic".</i> Ani
		<i>"I looked for an interview segment on YouTube".</i> Ani
Information gathering and source management	in-dept database research for evidence collection	<i>"I searched for scholarly articles on Google scholar to collect evidence and understand different angles".</i> Bambang
		<i>"I read several information from the European commission and ASEAN websites".</i> Ani
		<i>"Usually, I read papers from Google Scholar because it provides a lot of credible sources".</i> Lilis
		<i>"I use the university library website to assess information and ..."</i> Lilis
		<i>"...but also, would read the official website to obtain information such as EU portals, CNN, BBC, or the Jakarta Post".</i> Ani
		<i>"Using Wikipedia is valid as long as we cite it in our references".</i> Ani
		<i>"I can download e-books from the Lib-Gen website".</i> Ani
		<i>"...read as many journal articles as possible".</i> Ani
		<i>"I downloaded some journals from J-store and Sci-Hub".</i> Tutik
	using institutional access (VPN, subscriptions)	<i>"By logging into my university account, I could access paywalled articles on ScienceDirect for my essays".</i> Lilis
		<i>"Some articles are blocked due to my residency, so I use a VPN to access them through a private connection".</i> Tutik
		<i>"Entering my institutional account allows me to download the article from Science Direct".</i> Triono
		<i>"To download restricted articles, I must now use a VPN".</i> Triono
	using teachers' suggested readings	<i>"I used the reading list uploaded on Moodle by my lecturer as a starting point for gathering sources".</i> Budi
		<i>"My lecturer has provided reading recommendations in Moodle that I can use for my references".</i> Tutik
	creating and managing a source database	<i>"I save all the articles I find into folders categorization by theme, so I can easily retrieve them later when writing."</i> Eko
		<i>"I compile all available information and store it in a database."</i> Bambang
Academic reading and note-taking	reading abstract only	<i>"I quickly skim the abstracts to decide whether an article is useful before reading it in full".</i> Novi
		<i>"I only read the abstract from each article I have found".</i> Novi

Phases	Strategies	Extract examples
		<i>"Usually, the abstract appears when I search for the source of the article. So, I read that before downloading the article."</i> Novi
	selecting relevant information	<i>"From each article, I pick out the points that directly relate to my argument and ignore unrelated sections".</i> Lilis
		<i>"I must select relevant information to put into the text".</i> Ani
	using digital tools (Ctrl+F, dual screens)	<i>"I use Ctrl+F to quickly find specific terms in long PDF articles, as it saves a lot of time".</i> Sri
		<i>"I also split my screen so I can read articles on one side and write notes or draft on the other at the same time".</i> Yanti
		<i>"I use control+F to find the word ...".</i> Sri
	highlighting	<i>"While reading, I highlight key points and quotes that I might want to use in my essays".</i> Lilis
		<i>"I ...highlight relevant information".</i>
	taking notes	<i>"I summarize each source in my own words while noting useful quotes and their page numbers".</i> Lilis
		<i>"I take notes on every aspect of the literature I have read and ...".</i> Ani
		<i>"I simply copy and paste the source in Onenote apps to keep track of where I got the information."</i> Eko
	organizing key points	<i>"After collecting notes, I arrange them by theme or argument to create a logical structure for my writing".</i> Lilis
		<i>"... organize key points into a logical order".</i> Tutik
	writing summaries	<i>"I write a concise summary of each article's main argument so I can easily remember its relevance later".</i> Budi
		<i>"I make detailed summary of the article".</i> Tutik
	translating	<i>"When I find a useful article in a different language for example in Chinese, I translate the article into English first so I can fully understand and use it for my essay. Ani</i>
		<i>"I translated the article because it was written in Chinese".</i> Ani
	making an annotation	<i>"I wrote short summaries and evaluations for each source in an annotated bibliography to keep track of their value".</i> Triono
		<i>"I created an annotated bibliography as well".</i> Eko
	skimming and scanning	<i>"I skim through articles to see if they cover ideas or theories that directly connect with my topic".</i> Budi

Phases	Strategies	Extract examples
	synthesizing	<i>"I often quickly scan the text to ensure that the ideas are relevant to my topic". Eko</i>
		<i>"I grouped and combined findings from multiple articles related to China to build a stronger argument". Eko</i>
		<i>"I only synthesized information on topics relating to China". Ani</i>
	re-writing theories with own words Paraphrasing	<i>"Sometimes I restate theoretical concepts in my own words to make sure I understand them and to avoid plagiarism". Eko</i>
		<i>"Sometimes I rewrite the theory from the articles I've read". Ani</i>
Structuring and organizing content	mind mapping	<i>"I crate a mind map with arrows and branches to visually organize the relationship between ideas." Sri</i>
		<i>"I represent the idea with some arrows." Sri</i>
	designing a general layout	<i>"I usually sketch a rough outline of my essay's structure like introduction, body paragraphs, and conclusion, before I start drafting". Eko</i>
		<i>"...layout starts from the beginning". Novi</i>

Category 2: The writing stage

Phases	Strategies	Extract examples
Preparatory stages	drawing an outline	<i>"Before starting my draft, I created a detailed outline to organize my main ideas and arguments". Tutik</i>
		<i>"I made an outline so I could start writing". Lilis</i>
	managing the drafts	<i>"I wrote several drafts and saved each version in a separate folder to track my progress". Lilis</i>
		<i>"I wrote several drafts and put them into a folder". Bambang</i>
Research and information management	using a Google search engine	<i>"I often use Google to find background information or clarify unfamiliar concepts before deeper research". Triono</i>
		<i>"Google is a big help to me". Yanti</i>
	attempting to use Google Translate	<i>"When I don't understand a sentence or word in a foreign article, I use Google Translate to get a rough idea". Tutik</i>
		<i>"Sometimes when I'm confused, I use the help of Google Translate". Ani</i>
	consulting dictionaries	<i>"I utilize the Google-Oxford Dictionary to find definitions and synonyms when I'm unsure about word usage". Eko</i>

Phases	Strategies	Extract examples
		<i>"I searched for a word in the Google dictionary that means 'a man who runs for a war', and I found the word 'belligerent', which sounded unfamiliar to me". Eko</i>
		<i>"I use thesaurus to search for the word". Triono</i>
		<i>"I usually search on the Google-Oxford dictionary ...". Triono</i>
	keeping notes in OneNote	<i>"I store all my research notes in OneNote so I can easily organize and retrieve sources later". Eko</i>
		<i>"I rarely write in my notebook because I keep everything in OneNote apps. So, I can easily trace everything back without worrying about where I got the source. Eko</i>
Text-length fulfilment	writing long sentences	<i>"To meet the word count, I sometime write longer sentences with multiple clauses". Budi</i>
		<i>"I use long sentences in my writing to meet word count requirements".</i>
	footnoting	<i>"I include footnotes to add extra explanations without interrupting the main text and help meet word count". Yanti</i>
		<i>"To fulfil word requirements, I use footnote". Tutik</i>
	expanding paragraphs	<i>"I add more supporting details and explanations to extend my paragraphs when needed". Budi</i>
		<i>"Of course, I make the paragraph longer by adding some detailed information". Tutik</i>
Content development	providing examples	<i>"To support my arguments, I include concrete examples like product cases or real-world applications". Ani</i>
		<i>"I provide an example of how Agua is a reusable bottle...this will serve as evidence for my argument". Budi</i>
	defining concepts	<i>"In my introduction, I define key concepts clearly to guide the reader". Eko</i>
		<i>"I separate into three parts: defining the concepts, ...". Eko</i>
	relating to a theory	<i>"I aligned specific sections of my writing with theoretical frameworks we learned in our course". Lilis</i>
	remaining neutral	<i>"When addressing controversial topics, I try to remain neutral and present balanced arguments like in my Hijab essay writing". Lilis</i>
	providing results in numbers	<i>"I present data in numerical form to support the claims in my analysis". Budi2</i>
		<i>"The results typically have to be presented as numbers". Novi</i>

Phases	Strategies	Extract examples
	creating sub-topics	<i>"To organize my idea better, I divided my writing into subtopics during the drafting stage". Novi</i> <i>"I usually create several subtopics during the drafting process to help me structure my essay". Lilis</i>
	presenting personal viewpoints	<i>"I occasionally insert my personal views to make the essay more reflective or unique". Bambang</i> <i>"I briefly add my personal opinions". Bambang</i>
	using discourse markers	<i>"To improve flow, I use connectors like 'however' and 'in addition' between paragraphs". Yanti</i> <i>"I add a conjunction such as "moreover", "however" to explain previous sentences". Ani</i>
	using new and specific vocabulary	<i>"After reading academic articles, I try to incorporate new, disciplines-related vocabulary into my writing". Tutik</i> <i>"I am conscious of using specific vocabulary, such as the fact that in my field, "purchasing" is frequently substituted for "buying". Bambang</i> <i>"I used new vocabulary I have learnt from the article". Tutik</i>
Language and stylistic enhancement	using passive forms	<i>"I use passive voice to emphasize something like when the actor is unknown or less important than the action". Triono</i> <i>"I use passive forms to emphasize something". Triono</i>
	code switching	<i>"Depending on the topic and audience, I switch between English and French to express my ideas more effectively". Eko</i> <i>"Depending on the topic, I may use either English or French". Triono</i>
	using fixed phrases	<i>"I rely on common academic phrases like 'this is mainly because' to link ideas clearly". Ani</i> <i>"I always use phrases like "this is mainly because" to connect each sentence...". Ani</i>
	learning from other people's writing	<i>"I analyse well-written papers to understand how others structure arguments or use academic language". Tutik</i> <i>"I usually learn how other people have written". Tutik</i> <i>"I also look at my friend's essay to compare his/her writing style". Ani</i> <i>"I also review my classmates' essays to compare writing style and see how they approach similar topics". Tutik</i>
	employing writing tools	<i>"Grammarly often recommends more precise or varied vocabulary, which helps improve my word choice". Bambang</i>

Phases	Strategies	Extract examples
		<i>"Typically, Grammarly suggests alternatives for words or phrases that I can modify". Yanti</i>
	replacing repetitive words	<i>"When I notice repeated words, I look for synonyms using an online dictionary to improve variety". Ani</i> <i>"I usually search on the Google-Oxford dictionary to find a synonym by typing X means on Google". Novi</i>
Visual and citation support	utilizing in-text citations	<i>"I include in-text citations whenever I quote or paraphrase sources to give proper credit". Novi</i> <i>"For the quotations, I typically utilize in-text citations". Tutik</i>
	adding charts, figures, or tables	<i>"I tend to use visuals like graphs and tables to make my arguments more persuasive and clearer". Novi</i> <i>"I include charts to support my analysis". Novi</i>
	automatic citations	<i>"I employ Mendeley to generate citations and manage my bibliography efficiently". Sri</i> <i>"I cite with the help of Mendeley". Eko</i> <i>"I utilized an automatic reference from Microsoft Word and Google cite for my citations and references". Eko</i>
Text revision and editing	re-reading the text after writing several paragraphs	<i>"After writing a few paragraphs, I reread them to check flow and clarity". Sri</i> <i>"I read the text again after writing three paragraphs to ensure that ...". Lilis</i> <i>"I re-read the text to ensure that I have covered everything". Budi</i>
	deleting redundancy	<i>"If a paragraph feels repetitive or unnecessary, I remove it during revision". Ani</i> <i>"If the text is too lengthy, I occasionally erase it". Lilis</i>
	reorganizing paragraphs	<i>"I reorganize paragraphs if structure doesn't seem logical or smooth". Eko</i> <i>"I usually rearrange the text if it seems not logical". Novi</i>
	breaking complex sentences	<i>"When sentences become too long or confusing, I break them into shorter ones". Tutik</i> <i>"If a sentence is longer than one and a half lines, I have to stop writing it". Lilis</i>
	operating error detectors	<i>"I use Microsoft Word's spelling and grammar tools to catch common errors while writing". Eko</i>

Phases	Strategies	Extract examples
		<i>"I activate the automatic correction features in Microsoft Word". Eko</i>
		<i>"I can fix grammar and punctuation with the help of automatic correction features in Microsoft Word". Eko</i>
		<i>"I use Grammarly to correct typos and grammar". Rina</i>
	proofreading	<i>"Before submission, I proofread my essay using tools like Grammarly". Budi</i>
	making immediate corrections	<i>"I did proofread with Grammarly". Rina</i>
		<i>"As soon as I spot an error, I correct it immediately instead of waiting". Lilis</i>
Academic assurance	citing sources	<i>"If there is a mistake, I will fix it right away". Lilis</i>
		<i>"To prevent plagiarism, I always credit the source when I use someone else's ideas or words". Budi</i>
	paraphrasing with tools	<i>"To prevent plagiarism, I must cite the original source whenever I use someone else's words". Budi</i>
		<i>"I use tools like Quillbot to help me paraphrase without losing the original meaning". Yanti</i>
	writing long sentences to avoid plagiarism	<i>"I've used Quillbot a few times for paraphrasing..." Yanti</i>
		<i>"I sometimes construct longer sentences with more of my own commentary to ensure originality". Yanti</i>
		<i>"I often use longer sentences with multiple clauses to ensure that my writing is original and avoid unintentional plagiarism". Yanti</i>
	performing plagiarism checkers	<i>"Of course, I make the paragraph longer". Budi</i>
		<i>"Before submission, I run my paper through plagiarism checkers like Edubirdie". Tutik</i>
		<i>"I always check my plagiarism rates through a Bibme website". Tutik</i>
		<i>"Edubirdie helps me check the rate of plagiarism". Tutik</i>
Motivation and mindset management	complying with course requirements	<i>"Grammarly will suggest several options to modify sentences and fix the issue of plagiarism" Tutik</i>
		<i>"I remind myself that writing an essay is essential for passing the course". Budi</i>
	calling family	<i>"Writing an essay is one of the tasks you must complete to pass the course". Budi</i>
		<i>"When I lose motivation, I talk to my family for emotional support and encouragement". Rina</i>
		<i>"I call my family when feeling demotivated". Rina</i>

Phases	Strategies	Extract examples
	writing in a quiet space	<i>"When I feel frustrated, I go to the library because it helps me focus".</i> Lilis
		<i>"I visit the library when I'm frustrated".</i> Lilis
		<i>"I need to be more focused, so I have to write in a quiet room".</i> Lilis
		<i>"I could not write at home, so I went to a café shop".</i> Budi
	taking a few days off	<i>"If I experience writer's block, I stop writing for two to three days before starting up again".</i> Rina
		<i>"If I experience writer's block, I stop writing for two to three days before starting up again".</i> Rina
	avoiding rushing	<i>"I try not to rush writing at the last minute because it hurts creativity".</i> Lilis
		<i>"I came to realize that we cannot write in a mad rush. For instance, don't think that tomorrow is the deadline, so we have to write quickly. As a result, coming up with an idea may be challenging".</i> Lilis
	thinking about readers	<i>"I think about how my lecturer will perceive the essay, so I aim for clarity".</i> Budi
		<i>"The lecturer will read my essay, so I need to make sure everything I said is clear".</i> Budi
	stress relief	<i>"Listening to music helps me relax before I start writing".</i> Tutik
		<i>"It was difficult to start writing without listening to the music".</i> Rina
	producing one-page per day	<i>"I set a goal to write one page per day to keep consistent progress".</i> Rina
		<i>"I have to write at least one page per day".</i> Budi
	building confidence	<i>"Over time, I've gained confidence in my writing by reflecting on my progress".</i> Budi
		<i>"..., I have realized that my writing isn't that horrible".</i> Budi
	striving for good grade	<i>"My motivation is to get the highest grade possible, so I push myself to do better".</i> Rina
		<i>"One goal is to achieve a five".</i> Budi
	meeting deadline	<i>"Even if I'm not in the mood, I finish the essay on time to meet the deadline".</i> Yanti
		<i>"Whether I like it or not, I have to finish my essay by the deadline".</i> Eko

Category 3: The post-writing stage**Table 45**

Strategies IGSSs utilize in English academic writing in the post-writing stage.

Phases	Strategies	Extract examples
Revision and final check	external review	<i>“Before submitting the essay assignment, I met with my lecturer to get feedback and make final improvement”</i> . Budi
		<i>“I asked a friend to read my draft and point out confusing sections or awkward phrasing”</i> . Triono
		<i>“I asked for help from my friend to proofread my essay”</i> . Rina
	plagiarism analysis	<i>“Before submitting, I ran a plagiarism check to ensure originality and avoid accidental copying”</i> . Novi, C1-level
		<i>“I check plagiarism before submission and ...”</i> Tutik
		<i>“Grammarly will suggest several options to modify sentences and fix the issue of plagiarism”</i> . Bambang
	final review of content, structure, formatting	<i>“Before submission, I check the text’s length, structure, and references to make sure everything meets the assignment criteria”</i> . Tutik
		<i>“The last thing I do is simply check my grammar”</i> . Novi
		<i>“I will make sure I have achieved the aims of ...”</i> . Ani
		<i>“I need to double-check the text’ length to see if it meets the requirements”</i> . Triono
		<i>“I reviewed the assignment brief to check that I addressed all the required objectives before submission”</i> . Ani
Post-submission reflection	celebrating completion and recovery	<i>“Once I submitted the assignment, I took time to relax and reward myself after the intense effort”</i> . Rina
		<i>“I need to finish it and then get some sleep”</i> . Budi

Appendix E - A Semi-structured Interview Guide of Indonesian Graduate Students' Academic Writing Experiences in a Non-Native English-Speaking Environment

Dedy Subandowo

1. Academic Background

- 1.1 Does your university require a specific level of English proficiency?
- 1.2 What is your current level of English proficiency?
- 1.3 What are your thoughts on the English requirements for pursuing a master's degree at your university?
- 1.4 Do you think your English proficiency helps you write academic essays?
- 1.5 Did your subject teachers at your university in Hungary teach you any academic writing skills? If so, do you find these skills useful? Why or why not?
- 1.6 Have you ever had experience writing an academic text before attending university in Hungary?

2. Academic Writing Experience

- 2.1 How often were you required to submit essay assignments in your studies?
- 2.2 What types of writing were included in your assignments?
 - a. Were they related to research reports, essays, or other types of academic writing such as literature reviews, research journals, case studies, or research papers?
 - b. Were there any specific criteria or guidelines provided by your lecturers for writing these assignments?
(Note: *Criteria may include word count, use of background materials such course notes, academic journals, literature review, or relevant studies.*)
 - c. What was the expected deadline for completing the assignments?
- 2.3 What challenges did you face before or during the writing process?
- 2.4 How did overcome these challenges?
- 2.5 How did perceive the writing assignments in your courses? Describe your experience in terms of the task itself, rather than your emotional state. (For example: *stressful, difficult, satisfying, enjoyable, neutral, etc.*)

3. Writing Strategies

- a. How did you begin writing? Describe your writing process (e.g., reading, drafting/outlining, writing, revising).
- b. Did you use a specific structure or pattern in your writing? Why?
- c. What were the key factors when you organized the content of your writing?
- d. Did you have any difficulties during this process? If yes, how did you solve the problems?
- e. What strategies did you utilize to improve your academic writing?
- f. Did you use any writing software?
- g. To what extent did writing software help you cope your writing challenges?
- h. How long did it usually take you to write an academic essay? (e.g., 1 hour, 2 hours, or more)
- i. How did you avoid plagiarism? Did you ever have any problems with plagiarism?
- j. In your opinion, what linguistic features did you use to express your ideas in your writing?
- k. Did you experience any English-related issues while writing essays?

(For examples: *technical vocabulary, verb tenses, sentence structure, paraphrasing, etc.*)

- l. Before submitting your academic essay assignments to your professor, what did you usually do?

4. Faculty Support for Academic Writing

- a. Did your faculty provide any support to help improve your academic writing? If yes, what kind of support was offered? (e.g., *English for academic writing courses, access to plagiarism detection tools*)
- b. In your opinion, is it necessary to have a class of English for academic writing as part of your studies?
- c. To what extent does the class of English for academic writing help improve your writing skills?

5. Academic Writing in a Non-native English Speaking Environment

- a. Do you agree that doing a master's program in Hungary has had a positive or negative impact on your academic writing?
- b. Did you find it more difficult to write in English while studying in Hungary? In what situation was it more challenging?
- c. What were your expectations regarding academic writing in your first year compared to your second year of study?
- d. Did your expectations change during the course of your studies?
- e. How would you describe your academic writing in your first year compared to your second year?
- f. What are the main differences in your academic writing between these two periods?

6. Writing Feedback

- a. Did your professors give you feedback on your paper?
- b. What did the feedback usually involve?
- c. Why do you think the feedback was important?
- d. Did the feedback help you improve your writing? If yes, how did it help develop your writing? If no, what did you do to improve your writing instead?

Appendix F – A Follow-up Interview Checklist Guide of Writing Strategies

Dedy Subandowo

Aims

This interview checklist is designed for the basis of content-based interview in addressing writing strategies employed by Indonesian graduate students enrolled in the field of Social Science and Economics studies at Hungarian universities. The interview questions are a basis for comparison of students' writing strategies in three semesters of their residency.

1) How did you organize your writing process?	Semester		
	1	2	3
• Drafting			
• Writing			
• Revising			
• Finalizing			
• Submitting			
• Other			
2) What did you do before writing your submitted essays?	Semester		
	1	2	3
• Brainstorming			
• Mind mapping			
• Searching for the literature			
• Reading widely			
• Synthesizing what has read			
• Ordering notes			
• What else			
3) What aspects did you pay attention to when evaluating your writing assignments?	Semester		
	1	2	3
• Goals			
• Idea			
• Grammar			
• Vocabulary			
• Punctuation			
• Spelling			
• Reference			
• Other			
4) What did you do when reading relevant materials?	Semester		
	1	2	3
• Mark important parts			
• Write short notes			
• Summarize important sections			

• Write down theories			
• What else...			
5) What activities did you undertake to develop your essays in each assignment?	Semester		
	1	2	3
• Re-reading			
• Proofreading			
• Defining terms			
• Employing writing software			
• Extending the content of writing			
• Other			
6) What were your reasons for revising your academic essay assignments?	Semester		
	1	2	3
• Improving clarity			
• Improving style			
• Developing content			
• Correcting errors			
• Rearrange the text			
• Reducing length			
• Other			
7) How did you cope with language difficulties of your submitted texts?	Semester		
	1	2	3
• Using your L1 knowledge			
• Translating from L1-L2			
• Paraphrasing			
• Finding synonyms			
• Other			
8) How did you seek access to resources for each assignment?	Semester		
	1	2	3
• Libraries			
• Dictionaries			
• Books			
• Journals			
• Internet			
• News			
• Google Scholar			
• Social media (e.g., YouTube)			
• What else			
9) How did you proofread your submitted texts?	Semester		
	1	2	3
• Native speakers of English			
• Peers			
• Writing tools (e.g., Quillbots, Grammarly)			
• Other			

10) What types of software did you use to improve your submitted papers?	Semester		
	1	2	3
• Digital dictation			
• Grammar checkers			
• Plagiarism checkers			
• Citation generators			
• Google translate			
• Dictionary			
• Microsoft word			
• Other			
11) What challenges did you face in the production of your submitted texts?	Semester		
	1	2	3
• Time management			
• Writing convention			
• Seeking the resources			
• Understanding the content of literature			
• Feeling insecure			
• Experiencing stress			
12) How did you try to cope with the challenge?	Semester		
	1	2	3
• Getting feedback from the teacher			
• Asking for help from peers/classmates			
• Joining seminars/workshops/presentations			
• Drawing previous experiences			
• Borrowing other students' assignments to see the writing format			
• Relaxing and enjoying something			
• Keeping high self-motivation and confidence			
• Writing in a comfortable and quiet place			
13) What benefits did you get from the submitted assignments?	Semester		
	1	2	3
• Improving writing skills			
• Mastering new vocabularies			
• Expanding specialist subject knowledge			
• Acquiring English knowledge			
• Communicating with another person in the academic context			
• What else			
14) Is there anything about your writing strategies that I haven't asked but you would like to share?			
15) What did you learn from your academic writing experience?			
16) Do you think that your writing strategies have improved over the past two years?			

Appendix G - A Letter of Consent



Pázmány Péter Katolikus Egyetem
Bölcsészet- és Társadalomtudományi Kar
Doktori és Habilitációs Iroda
 1088 Budapest, Mikszáth Kálmán tér 1 Tel: 1/235-3036
 Intézményi azonosító: FI79633

Letter of Consent

Dear Participants,

My name is Dedy Subandowo and I am a doctoral student of applied linguistics at Pázmány Péter Catholic University. I am conducting research on *Challenges in Academic Writing of Indonesian Graduate Students in a Non-native English Speaking Environment*. Your participation in this research helps me capture experiences and situations of Indonesian graduate students in producing essays during the study in Hungarian universities in Budapest.

If you agree to participate in my research study, the following will occur you are asked to send four documents relating to your study in four semesters from the academic year 2019/2020 to 2020/2021. One essay file must be sent each semester and contain at least 1000 words or more. Your essay should be a subject requirement in your class that has been submitted to your professor.

Your decision whether or not to participate in this study is voluntary and will not affect our relationship. If you choose to participate in this study, you can withdraw your consent and discontinue participation at any time without prejudice.

I will keep the record of your essays as confidential as possible. No individual identities will be used in any reports or publications resulting from the study. All data including essay and audio files will be given codes and stored separately from any names or other direct identification of participations. Research information will be kept in locked files at all times. Furthermore, I am the only one who has access to the information and files.

You are making a decision whether or not to participate in my research study. Your signature below indicates that you have decided to participate in the study after reading all of the information above and you understand the information in this form, have had your questions answered and have received a copy of this form for you to keep.

As the voluntary participant of my study, I will present you my research outcomes after this research project has completely accomplished.

Thank you very much for your participation.

Date:

Participant

Researcher

Appendix H – Research Ethics



Doctoral School of Linguistics

Institution ID: FI79633
1 Mikszáth Kálmán tér, 1088 Budapest

7th May 2025

To Whom It May Concern,

This is to confirm that the empirical research in Dedy Subandowo's PhD thesis titled 'Challenges in Academic Writing: A Mixed-Methods Study of Indonesian Graduate Students in a Non-native English Speaking Environment' fully meets the ethical standards of Pázmány Péter Catholic University.

According to the Quality Assurance Regulations of the Doctoral School of Linguistics, '[t]hroughout the entire process of doctoral studies and degree acquisition, it is necessary to conform to the norms and ethical standards of academic practice, and to take into account the opinions of representatives in the disciplinary discourse community.'

Yours sincerely,

Prof. Dr. András Cser DSc

Chair, Doctoral School of Linguistics

