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Exploring the Academic Writing Problems Faced by Pakistani PhD Students

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Abstract: Academic writing is an advanced and specialized form of communication used in academia to communicate the outcomes of scientific research. Academic writing is, hence, governed by the rules, conventions, and values of the scientific community. It is even more significant in today's knowledge based economies. Knowledge-based economies rely on continuous research and development for progress rather than the natural resources. The human capital forms the backbone of a knowledge-based economy. Hence, in such an economy, researchers and scholars enjoy great importance and academic writing skills become crucial along with research skills due to the need to share the outcomes of scientific research with the target readers. Academic writing is now viewed as a part of the research process. As per the National Education Policy (2009) of Pakistan, the nation aspires to become a knowledge-based economy. Therefore, the policy directs the universities to train scholars in disciplinary research skills as well as communication skills. However, many Pakistani studies have reported that the faculty and the students in Pakistani higher education possess inadequate command on English and writing skills. Hence, this study explored the difficulties encountered by Pakistani PhD students in academic writing and it also sought to bring to light the strategies used by the students to overcome these problems. Semi-structured interviews were used to collect data from 15 students working on their PhD thesis/synopsis. Students' writing samples were also analyzed. As per the findings, the students possessed insufficient command on academic English and research writing skills. The study explains the students' writing problems in detail and recommends that academic writing courses be taught as a mandatory part of the Master's and PhD curriculum to address this problem.

Keywords: Academic Writing, Knowledge-based economy, Research, Writing Problems, Disciplinary Discourse.

Introduction

Higher education enjoys a unique position in the 21st century. Scholars and researchers have traditionally been viewed as experts in their subjects and disciplines committed to further enhancing this expertise. They were revered and highly regarded since the dawn of civilization due to their contributions to advancing human understanding of the world. However, in the 21st century, the scholar and researcher has a special role to play in the progress of the nation (Siesfeld, Cefola, & Neef, 2009). Most of the developed

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countries possess a knowledge-based economy and the developing countries such as India and Pakistan aspire to become knowledge-based economies (Cooke & Leydesdorff, 2006). A knowledge-based economy is a unique economic system which relies on the intellectual capital of the country for progress and advancement. The intellectual capital, the researchers and skilled professionals, are tasked with producing new knowledge continuously to improve the country's performance in every domain of activity be it technology, medicine, education, industry, etc. Advanced scientific research is looked upon as the ultimate solution to address the nation's problems and put it on a path to progress and development. Continuous scientific and technological progress are crucial for creating and sustaining a knowledge-based economy.

As a result, such an economy places a huge demand on higher education which is responsible for both knowledge production and creating skilled scholars (Sum & Jessop, 2013). All the countries have fully acknowledged the importance of higher education in a knowledge-based economy, investing more in higher education and promoting university industry collaboration (Bano & Taylor, 2015). Globally, the efforts to align the higher education curricula with the demands of the economy are seen as necessary to create researchers and professionals with the required skills and competencies. A key dimension of knowledge creation is the sharing and dissemination of knowledge to contribute to the global economy and also benefit from the work of other researchers. This knowledge sharing through research publications and conference participations has created scholarly communities consisting of skilled researchers belonging to different countries, yet working together to find ways and solutions to overcome obstacles hindering progress both locally and globally. Therefore, in such a scenario, a common language of research has become essential for scholarly communication, and currently English enjoys the status of the language of research and scientific communication (Huang, 2010).

Consequently, along with good research skills and subject knowledge, researchers of the 21st century also need to be competent in English communication skills, especially academic writing (Cameron, Nairn, & Higgins, 2009). The higher education institutions (HEIs) are required to build research skills, impart disciplinary knowledge, and also teach English academic writing skills. Most of the universities all around the world mandate the student to write their PhD thesis in English. In addition, English is the universally used medium of education, especially at the postgraduate level, in many countries (Horta & Santos, 2016). Postgraduate education, particularly the PhD degree is the epitome of academic achievement in education and proves that a scholar is now fully trained to undertake a successful career in research, contributing to his/her discipline for both local and global progress. Hence, the PhD students are also required to master English academic writing skills along with disciplinary knowledge and research. The students' socialization into their discipline and scholarly identity are both assessed through their written thesis and other publications (Cotterall, 2011). Academic writing, in this sense, plays a crucial role in crafting the novice researcher's academic identity. It proves that the student has mastered the conventions, values, practices, and discourse of his field of study and now prepared to play his part in advancing the field.

However, English academic writing is challenging for both the native and non-native English speaking (NNES) pursuing postgraduate education. It is much more challenging

for the NNES students as academic writing is an advanced and specialized form of communication. Many studies have revealed that research writing is the most challenging part of the PhD research for many NNES students (Jomaa & Bidin, 2017; Singh, 2019). These studies bring to light the academic writing problems encountered by Malaysian, Iranian, Tanzanian, Chinese, and European students during the PhD thesis writing (Chang & Strauss, 2010; Jeyaraj, 2018; Komba, 2016). Furthermore, these researchers also strongly recommend reforms and other revision to the PhD curriculum to address students' academic writing struggles.

The National Education Policy (2009) of Pakistan aims to create a knowledge-based economy and thus fully acknowledges the importance of higher education. Pakistani higher education has progressed tremendously since 2002 due to the establishment of the Higher Education Commission (HEC) (Javed, Ahmad, & Khahro, 2020). It has witnessed increased student enrollments and the spread of higher education institutions. However, the most important performance indicator of higher education is the research output of the universities. Unfortunately, Pakistan is lagging behind in research when compared with its neighbors including India, Iran, and China (Meo & Jawaid, 2021). The poor quality of research produced by Pakistani scholars can be attributed to many factors ranging from corruption in education system, untrained faculty, plagiaristic practices, focus on quantity rather than quality, and incompetent academic and research writing skills (Ahmed, 2017). However, the most crucial factor behind low and unsatisfactory research output is an often ignored or overlooked factor-English academic writing skills.

Pakistani studies have highlighted that English language writing skills of both the university students and their teachers are under-developed (Irfan, 2017; Chowdhury, Behak, Hassan, & Sultana, 2022; Sultan, 2015). A study conducted at two public sector universities in Pakistani revealed that both students and teachers are in dire need of interventions such as English proficiency courses and workshops to improve their English language competence to meet the research needs of the country and participate in international research communication. Another study conducted an error analysis of the published articles of Pakistani researchers from the fields of medical sciences and social sciences. The study indicated that Pakistani researchers had limited academic vocabulary and insufficient command on grammar when considering advanced scientific communication (Sajid & Siddiqui, 2015). Other key Pakistani studies attribute Pakistani university students' lack of competence in English academic writing to the poor English language teaching practices in schools and colleges, Urdu medium schools in the country, and the use of outdated teaching methods to teach writing. However, the academic writing struggles of the PhD students is an unexplored area and this problem requires a detailed investigation to provide useful information to the concerned stake holders for taking the necessary remedial action. This study aims to address this gap and therefore investigated the academic writing problems encountered by Pakistani PhD students while writing the PhD thesis. The study also explored the strategies used by the students to address these writing difficulties. The insights provided by the study will reveal the true nature of students' writing problems, allowing the concerned stakeholders including HEC, universities, and teachers to offer the required interventions and assistance.

Review of Literature

Academic writing is a unique and distinct genre of writing. It is the type of writing that takes place in academia and its major aim is to document and communicate the findings of scientific research (Monippally & Pawar, 2008). It details the process of scientific research and the results of the research along with recommendations for the application of the research outcomes. Academic writing, therefore, reconstructs research procedures and methods, narrating the entire journey of the researcher from start to finish (Monippally & Pawar, 2008). For this reason, research writing is a sophisticated and advanced genre of communication and mirrors all the complexities and nuances of scientific research (VanAlstyne & Tritt, 1999).

The knowledge created as a result of scientific research has to be shared with the intended beneficiaries for advancement and progress. Hence, academic writing is not only an intellectual but also a social activity (Kiriakos & Tienari, 2018). It has to be engaging, empathetic, and interactive to as to better communicate with the target readers.

Hence, keeping in view the above goals of academic writing, it has certain unique components. These components are the key competencies essential for good academic writing. They are as follows.

Disciplinary knowledge is most crucial requirement for academic knowledge. In fact, academic writing requires advanced knowledge of the discipline which is usually achieved through postgraduate education. In addition to disciplinary knowledge, expertise in scientific research procedures is the second most skill required for academic writing as it disseminates the outcomes of scientific research (Badley, 2009). Scientific research, however, is based on critical thinking skills and for this reason, critical thinking forms the next key component of academic writing (Klimova, 2012). Since academic writing documents and narrates the use of advanced cognitive and intellectual skills to produce knowledge, it requires competence in many advanced writing skills which include summarizing, paraphrasing, critiquing, synthesis, argumentation, description, and narration (Monippally & Pawar, 2008).

Academic writing, as a result, has certain unique stylistic features. These features include clarity, precision, verifiability, objectivity, formality, simplicity, and conciseness. Academic writing, similar to scientific research, must be clear, objective, to the point, concise, and detail-oriented. The grammatical features of academic writing include simpler sentences with more phrasal rather than clausal constructions (Biber & Gray, 2010). Elaborate noun phrases, prepositional phrases, precise vocabulary, compound sentences, and passive voice are more common in academic writing. These features allow academic writing to achieve clarity and precision and also remain simple so as to effectively communicate complex information to the reader.

Different types of academic writing include research papers, conceptual paper, thesis, dissertations, research proposals, project reports, and term papers (Paltridge, 2004). Hence, academic writing plays a significant role in academia and higher education. It is used to share research outcomes with the world. It is also used to evaluate and assess students in higher education for the purposes of certification and award of degree (Bailey, 2015). As a result, academic writing skills are an essential requirement for scholars and

researchers. However, as already stated, academic writing, being such an advanced and sophisticated genre is very challenging for both native and NNES students training to become researchers. NNES PhD students, who aim to become scholars, particularly face different challenges in academic writing. Many studies have examined the academic writing problems faced by NNES PhD students.

According to [Lin and Morrison \(2021\)](#), NNES postgraduate students in Hong Kong had limited academic vocabulary and also made many grammar mistakes in their writing. In addition, their writing also lacked coherence and clarity. Many Malaysian studies reveal the difficulties experienced by non-native English speaking PhD students' difficulties with academic writing. A study used questionnaires to investigate the academic writing issues of 131 postgraduate students ([Singh, 2019](#)). It reported that non-native PhD students found writing the literature review, methodology, and findings sections to be the most difficult parts of the thesis. The students also faced difficulties due to intermediate command on grammar and lack of academic vocabulary. Nevertheless, the students took additional writing courses, stayed persistent and experimented with different styles of expressions to overcome their difficulties. Another Malaysian study revealed that non-native English speaking PhD students lacked knowledge about citation and its importance in academic writing ([Jomaa & Bidin, 2017](#)). Six students were interviewed and it was found that students failed to build strong arguments and create cohesive writing due to their inability to integrate information from other sources meaningfully. Another key Malaysian study highlighted that non-native English speaking PhD students struggled to comprehend the conventions of academic writing, genre specific rhetorical practices and also had weak command on English grammar ([Jeyaraj, 2018](#)). The study further reported that the students felt isolated when they wanted to discuss their problems with others and relied on patch working and translation from L1 to L2 to write their thesis. Jordanian PhD students studying at a Malaysian university found that the students experience writing anxiety due to lack of proficiency in English and past negative experiences of writing ([Al-Shboul & Huwari, 2015](#)).

An Iranian study found similar issues in the academic writing of PhD students ([Divsar, 2018](#)). It elaborated that students had weak command on syntax, lacked knowledge of rhetorical devices, and were untrained in using citation and referencing correctly. A Turkish study found similar results ([Yuvayapan & Bilginer, 2020](#)). The study investigated the Master's and PhD students' enrolled in private and public universities. The students found it difficult to achieve clarity in writing and regarded discussion and findings to be the most challenging sections of the thesis. Another Turkish study found similar results and recommended that academic writing must be taught to the postgraduate students and research methodology courses must be redesigned to include a module on research writing skills ([Ekoç, 2019](#)).

A Tanzanian study analyzed the theses and dissertations of 103 students and found that all the theses contained grammar mistakes, content organization issues, and were not at par with the acceptable standards of academic writing ([Komba, 2016](#)). In the light of the above study, non-native English speaking PhD students are found to face the following issues in academic writing during the thesis writing process:

Students lack awareness and training in using the writing process skillfully. They also

lack knowledge of academic English vocabulary and the conventions and rules of academic writing. Furthermore, the students fail to build arguments as per the rhetoric of academic writing. They lacked awareness regarding the purpose and format of the thesis document and possessed insufficient knowledge of citation and referencing. Their weakness in English grammar also posed significant problems. Students also were unaware of the rules and syntax of written English. Students showed insufficient knowledge of information search and retrieval skills and lacked sufficient critical reading and critical thinking skills.

Few Pakistani studies have explored the academic writing challenges faced by PhD students in detail and thus this study aimed to uncover how students at the PhD level deal with academic writing and what problems they face regarding academic writing.

Methodology

This study is a qualitative inquiry. Qualitative research is based on constructivism, realism, and interpretivism (Creswell & Creswell, 2017). Constructivism refers to that exploration which seeks to understand the meanings ascribed by individuals to their social phenomena. Human beings are viewed as active agents who use their cognitive skills to interpret and assign meanings to their experiences related to any given social phenomenon. Reality is not something external to an individual and neither is a researcher a passive observer and data collector. Reality is a product of human consciousness and thinking capacity and thus both researchers and participants work together to bring this reality to light. Therefore, the qualitative approach was adopted it allowed to engage in a detailed dialogue with the students to better understand the nature and scope of the problems they face, how these problems impact their experience of academic writing, and how they cope with these problems.

The study employed the case study approach. Yin (2009) defined a case study as an empirical enquiry of a contemporary phenomenon within its real life context. This study is an investigation of a crucial issue plaguing Pakistani higher education and the context of inquiry is extremely crucial to the study. Academic writing competence and practices in Pakistani higher education is a contemporary issue which is of principal significance for the country which is lagging behind others in the field of research. The unique context in which the PhD students work and the impact of this context on their academic writing performance to complete their thesis are crucial to study in order to achieve an accurate understanding of the research problem. The case study approach will enable the researcher to study real people in real situations and penetrate situations in ways that are not always susceptible to numerical analysis. The case study will be descriptive as it aims to bring to light all details of the phenomenon under study.

The study uses a multiple case study replication design. In the multiple case study designs, more than one cases are investigated. However, these cases must be similar to each other or offer contrasting data for anticipatable reasons (Yin, 2009). The multiple case study design which uses similar cases and produces similar results is termed as the literal replication design. These multiple cases need to be studied in detail to achieve a

concrete and fuller understanding of an overarching problem.

Sample

The target population of the study consists of PhD students enrolled in HEC recognized higher education institutions in Karachi, Pakistan. The study is a multiple case study. It focused on different public and private sector HEC recognized higher education institutions. The institutions were selected through convenience sampling. In the next step, the researcher selected fifteen PhD students purposive sampling. Purposive sampling is used when researchers adopt certain criteria for sampling. The criteria for selecting the PhD students is elaborated below:

1. The students must have finished their PhD course work.
2. The students must be working on their research proposal or be in the process of composing the thesis.
3. The students must have completed their PhD education recently, that is, one to six months ago.

Thus, a total of 15 PhD students form the multiple cases under study.

Research Instruments

The study used two key methods for data collection which are follows:

1. **Semi-structured Interviews:** Interviews are a cornerstone method of data collection in qualitative research. Interviews have tremendous potential to expose people's views of their social reality in great depth (Yin, 2009). Interviews are guided conversations in which researchers pursue a consistent line of inquiry with a well-defined purpose. The interview is required to be fully prepared for the interview and practice actively listening and effective probing. The interview leads to the construction of knowledge between the researcher and the participant. In-depth interviewing reveals information about the lived experiences of the people and the meanings they make of that experiences. Thus, this study opted for the interview method as it aims to study the research participants' unique views about the phenomenon under investigation. The semi-structured interview type is chosen as being a case study, the researcher will develop the interview guide in the light of the literature; nevertheless, the interviewer also intends to allow some freedom to the participants to bring up more issues related to the research problem.
2. **Students' Academic Writing Samples:** Many studies exploring students' writing abilities also include an analysis of students' writing samples to obtain deeper insights into the problems faced by students in writing.

The multiple data collection method will also allow the researcher to triangulate the results and enhance the validity and reliability of the study.

Research Procedure

The students were contacted via a phone call or email. They were emailed the interview guide and details of the research problem. When they consented to be a part of the study, the researcher made an appointment with them for the interview. The participants were interviewed in their offices or the library. Each interview later for 30 to 45 minutes. The students were then requested to provide a sample of their academic writing via email.

Data Analysis

The study used thematic analysis for the analysis of the data obtained through interviews and the writing samples. Thematic analysis is an advanced procedure that enables the researcher to systematically manage, organize, and analyze qualitative data (Howitt & Cramer, 2007). First, the data is studied and coded or labeled based on the topic it addresses; second, these codes are grouped based on similarity, and finally the codes are studied to identify overarching themes which can best explain and describe the data. Validity in a qualitative study is achieved by using accurate operational definitions of the topics under study, collecting data through more than one method for triangulation, and suspending one's own biases and prejudices. Reliability refers to the ability of a study to produce similar results when repeated by other researchers at different times. Yin (2009) proposes that reliability in a case study can be ensured by properly documenting the case study procedure so that any other researcher can not only assess the strength of the research design, but easily replicate the research procedure. This study strived to achieve both validity and reliability by basing the operational definitions of the research topic on established literature. Two data collection methods were used and the study procedure is documented as well.

Findings

The details of the participants are as follows:

Finding of the Interview

Theme 1: Students' Master's Thesis Writing Experience

All the participants possessed a research-based Master's degree except EEA6 and EES7. According to the participants, the Master's thesis writing experience was very rewarding and educational; it enhanced their confidence to undertake PhD education. However, most of the students termed thesis writing to be an extremely challenging task. They revealed that they had not been given any prior training or taught any course regarding research writing. Most of them had weak English and poor writing skills. For example, EDM10 stated, "When I wrote the introduction part, the biggest problem for me was I was unable to develop coherence and you can see I was unable to link sentence". Similarly,

MSA3 stated that due to his poor English, he needed great help in editing and revising his chapters. He took help from the writing center at his institute. Most of the students explained that their supervisors helped and guided them in academic writing by sharing good writing samples and providing feedback on their drafts.

Theme 2: Grammar-Challenges and Strategies

After the Master's thesis writing experience, the students felt confident about their grammar. However, they stated that grammar was no more an issue due to online tools such as Grammarly and the grammar and spell check feature of MS Word. They did not feel that they had to concentrate on their grammar anymore. They explained that after writing a section of the PhD synopsis or thesis, they upload their drafts on Grammarly and ran a grammar and spelling check. According to them, due to extensive exposure to academic writing, they usually found less grammar mistakes which could easily be corrected through Grammarly or MS Word grammar check feature. For instance, CAB4 remarked, "Somehow we can manage grammar mistakes". Similarly, MAB4 commented, "I found some software useful to check the language and the first is Grammarly". EDM10 stated, "Grammarly is my friend". Regarding grammar mistakes, EEA6 stated, "Definifely, I do make mistakes, but I am immediately able to correct them due to these useful software".

Most of the students revealed that their weakness in grammar was preposition usage. Three participants termed passive constructions to be challenging as well. Overall, due to Grammarly, the candidates did not seem too concerned about grammar problems. Using Grammarly was their most key strategy to overcome grammar problems.

Theme 3: Vocabulary-Challenges and Strategies

All the participants regarded formal English vocabulary to be essential for academic writing. However, a great majority of them appeared dissatisfied with their command on formal academic English. For instance, MAB1 stated, "I face real issues here". CSR8 remarked, "I would say I am not satisfied. I may be better than average but nor good". The participants complained that they possessed limited vocabulary and shared thus usually struggled to find the right word to express their thoughts and ideas effectively. Their key strategy to overcome vocabulary related problems was to find good synonyms using online tools such as Google, thesaurus, or dictionaries. EDM10 shared that she referred to literature to find the right words to express her thoughts. Similarly, EES7 also noted down useful vocabulary while she reviewed literature. However, the students felt that they needed some assistance in this regard.

On the contrary, all the students were fully satisfied with their command on their subject specific English. They credited their thorough knowledge of disciplinary English to their hard work, course work, and extensive reading.

Theme 4: Sentence Construction- Challenges and Strategies

All the students admitted that writing clear and well-formed sentences was very challenging. They stated that they struggled to express their ideas in English and could not understand how to put down their thoughts clearly in a sentence. They stated that shorter sentences were easier to write and so they avoided long sentences as they did not know how to connect ideas efficiently in a longer sentence. NDNA4 stated, "If I write long, then plagiarism occurs and it is difficult to connect". Similarly, MAB1 commented, "Because when we write long sentences, then will it be clear to the audience or not? So I think we should break a long sentence into pieces". EEA6 explained, "The sentence that you have formulated, when you review, you find that it does not impart the meaning, like, the meaning that I had in mind when I wrote the sentence, the sentence does not seem to clearly express that meaning, like, the reader may fail to understand. So, I have to reformulate the sentence". Hence, using short sentences was the students' major strategy to construct proper and grammatically well-formed sentences.

Theme 5: Coherence and Well-Organized Writing-Challenges and Strategies

Most of the participants complained that they could not create well-organized and well-connected texts. They struggled to organize ideas logically and show the connection between the ideas to support their thesis. For instance, CAB4 stated that he consulted his supervisor in such matters as it was very difficult for him to connect ideas and demonstrate how they implicitly support a certain conclusion. Similarly, MOA2 shared that connecting information borrowed from different sources to create a coherent narrative was time consuming and mentally challenging. EES7 also complained of similar problems.

Most of the participants used sentence connectors such as however, therefore, moreover, etc. to show the relationship between their ideas, while others took help from their supervisors or reviewed literature to learn how to create well-organized texts.

Theme 6: Academic Writing Features-Challenges and Strategies

Most of the students did not possess proper and detailed knowledge regarding the features of academic writing or the skills needed for good academic writing. However, almost all of them termed formality and conciseness to be the core features of academic writing. As already stated, they had limited formal vocabulary; moreover, they found concise writing really challenging. They believed that academic writing must be to the point and concise, but achieving conciseness was difficult. For example, MDN4 stated, "I have to work on conciseness. Only after 3 to 4 proofreading attempts, your message is in stable condition". Likewise, EEA6 remarked, "Sometimes being to the point can create a problem. We will fail to explain in detail or thoroughly". This comment clearly shows that EEA6 does not understand the concept conciseness and economy and this poses difficulty for him.

Another area of academic writing that most of the students found difficult was paraphrasing and summarizing. Participants including PRT5, CAH13, CSH9, and EES7 stated that they used online paraphrasing tools such as Article Rewrite, Quillbot, and ChatGPT. Nevertheless, they explained that these tools did not paraphrase material accurately and thus the students had to fix and revise the paraphrased material, but they found it easier to fix a wrongly paraphrased text compared to paraphrasing something entirely themselves. Other students suggested that more workshops should be conducted to teach different paraphrasing techniques as paraphrasing is a necessary skill to avoid plagiarism.

Theme 7: The Most Difficult Chapter of the Thesis

According to PRT5, MOA2, MDN4, CSH9, CAH13, and PSS14 literature review was the most challenging section of the thesis. While discussing the challenges of writing the literature review, MDN4 commented, "The most amount of plagiarism, you will find there". CSH9 stated that paraphrasing, critiquing past studies, and preparing a sound rationale for one's own study made literature review the most linguistically challenging chapter. Other participants had similar opinion. CAB4, EES7, PSS14, and PSF19 considered discussion to be the most challenging chapter. They explained that discussion required good writing ability as the researcher has to discuss the importance and contribution of his/her findings and compare them with other studies' findings. CAB4 stated that discussion was a challenging section because he had to defend the "uniqueness, effectiveness, cost-effectiveness, environmental friendliness" of his findings/prototype. Similarly, PSF19 commented that discussion needed more time and effort because one had to show "how those findings contribute towards the existing literature". The remaining students considered conclusion and introduction more difficult. Conclusion required summarizing and restating the main points of the previous section and due to weak paraphrasing skills, many students also considered it to be difficult. On the other hand, introduction was difficult due to the requirement of good argument building skills.

Findings of Students' Writing Sample Analysis

The students' writing samples contained numerous errors related. The first problem was related to vocabulary usage. They had rightly pointed out in the interviews that they lacked command on academic English. Many students had used informal words instead of formal vocabulary. For instance, get, done, give, instead of receive, conducted, and present. Furthermore, their writing also lacked synonym variety. Most of them repeated the same word or phrase continuously and did not replace it with a good synonym. Whenever, MAB1 discussed the contribution of other scholars, he used the word "developed" and never replaced it with a good synonym. He wrote, "The notion of G-algebra was developed by...". He again used the same word and wrote, "He also developed a criterion.". Similarly, most of the students used "and" to connect their clauses in compound sentences.

Another vocabulary related problem in their writing was the use of awkward and unsuitable words considering the context of their sentence. For example, EEA6 wrote,

“hyperactivity is the key entity for diagnoses the ADHD”. Hyperactivity is not an activity, but a factor to be considered in diagnosing ADHD.

The students had already revealed that writing syntactically correct sentences was challenging for them. Their writing samples consisted of many ill-formed sentences. The first sentence construction problem was the use of fragments. A great majority of the students’ samples contained run-on sentences. The most crucial issue regarding sentences was that the students had constructed unclear, awkward sentences in which ideas were not connected properly to impart any logical or coherent meaning. Some examples are given below: EES7 wrote, “The key contribution of this paper are, propose of an intelligent methodology for short-duration load demand forecasting (SDLDF) using dynamic mode decomposition (DMD) by extracting the meaningful, hidden tractable information from load series dataset” The above sentence has too many phrases, a wrongly placed comma, and the word “propose” used incorrectly.

EEA6 wrote, “Along this in [15], there are 6 motion sensors which are scale-driven placed on head, both legs and both arms for detecting the movement of desired body part and diagnose ADHD. This sentence begins with a wrongly written phrase and the remaining sentence does not clearly state if the cited study is described or not. Similarly, another unclear sentence is, “There are multiple studies reported about the construction of network-based models for Diabetes [9, 10, 11] by studying the gene regulatory network [12] co-activating genes [13] associated protein interaction and multiplex networks [14]”.

Also, the students’ samples’ lacked sentence structural variety. Most of them had written simple or compound sentences.

Students’ writing samples also lacked coherence. They had mentioned many studies, but failed to connect them and demonstrate how they contribute to building an advanced understanding of the research problem. In addition, sentences contain a lot of information which the students did not connect logically to support a single main idea. Despite claiming to use transitional devices, the students sample lacked connectors. Students were also unaware of different rhetorical patterns of organization such as compare and contrast, argumentation, cause effect, etc. This also led to poorly written paragraphs lacking unity and coherence. Thesis writing requires the use of many rhetorical mechanisms, but the students did not know how to write proper persuasive, cause effect, and informational paragraphs to fulfill the requirements of different chapters such as the introduction, literature review, and so on.

The participants had corrected the grammar of their samples using Grammarly or MS Word grammar check feature. Hence, their samples contained few grammar mistakes. Most of these mistakes were related to preposition usage or subject verb agreement. Some examples are given below.

PRT5 wrote, “Adnan, et al. [9] presented the regional drought identification model (ReDIM) that provide high spatiotemporal resolution drought climatology.” In this sentence, the singular form of the verb provide should be used. EDM10 wrote, “The decision of inclusion and exclusion in schools are identified at different institutional levels.” In this sentence, the subject verb agreement mistake is highlighted.

In addition, students’ samples contained many comma placement errors. They had not placed a comma after writing an introduction phrase. Commas were also missing

before the last item in a list of three or more items. Commas are also essential before a coordinating conjunction in a compound sentence. This rule was also not followed by many students. Some examples are as follows.

One student wrote, "According to [1] DMD validates higher quality precision prediction for univariate time sequences." In this sentence, a comma should be added after the introduction phrase.

Another student wrote, "Normally the students of primary and secondary classes use mobile phones and tablets for their amusement and the piece of information they grasp from them is much faster than traditional teaching methods." A comma is required after "normally" and before the coordinator "and" which is joining two clauses.

Discussion

According to the findings of the study, the students pursuing PhD education lacked the required proficiency in English language to undertake scholarly studies, and they were also not trained in academic writing which is an advanced and specialized form of research communication. As per the interviews, the students were fully aware that their writing skills were not up to the mark; however, the analysis of their writing sample reveals that the students do not fully understand the actual state of their writing problems. Hence, they require expert guidance and coaching to build their writing skills. The students indicated that their formal English vocabulary was limited and their writing samples confirmed this issue. Similarly, writing grammatically and syntactically correct sentences was also problematic for them and their writing samples fully demonstrate this problem. In addition, the students were unaware of the different rhetorical and literary mechanisms which can be used to organize information and accomplish their purpose more efficiently. For example, they lacked knowledge regarding the structure of persuasive paragraphs and this made it difficult for them to build strong arguments. These issues lead to lack of coherence in their writing.

Nevertheless, the students, without any formal academic writing training, had learnt writing on their own and this is commendable, but for scholarly communication, more command and competence is required. The reasons for students' poor writing skills can be the poor state of English language teaching in schools and colleges. In addition, no research writing skills course is taught at the Master's or PhD level. The students are expected to learn writing themselves. Furthermore, Research Methods course is taught at both the Master's and PhD level, but it focuses on research philosophies and discipline specific research methods; academic writing is not a part of this course even though students do learn a lot about the structure and format of a research paper. Nevertheless, students need more training in writing to pursue a successful career as a researcher.

Another issue was the strategies used by the students to address their writing difficulties. Using Grammarly can fix grammar but not teach grammar. In addition, a thesaurus can be used to find better word, but students need to understand that not all synonyms are interchangeable, considering the context of the sentence. Reading is a good strategy to improve writing, but students need some professional training in using reading to learn

writing. When one wants to use reading to improve writing, one is required to focus not only on the message, but also on the structure of the text to analyze how the text communicates its message.

The results of this study are consistent with other international studies. Chinese students were also found to struggle with lack of academic vocabulary similar to the students in this study (Lin & Morrison, 2021). A Malaysian study also reported that the postgraduate students considered literature review to be the most difficult section (Singh, 2019). Similarly, the current study also revealed that literature review was the most challenging section according to many students. In addition, the Malaysian students also possessed limited academic vocabulary and this made writing more challenging. The students in this study faced difficulties in creating coherent and well-organized text. Another Malaysian study reported similar results (Jomaa & Bidin, 2017). The Malaysian students also failed to write coherent texts and synthesize information meaningfully. This study's results are also consistent with Jeyaraj (2018)'s study. Both studies reported that students lacked training in using different genre specific rhetorical patterns of organization. Likewise, an Iranian study found similar issues in the academic writing of PhD students such as lack of command on syntactic rules and knowledge of rhetorical devices, (Divsar, 2018). A Turkish study found similar results, that is, students failed to produce clear and reader-oriented writing (Yuvayapan & Bilginer, 2020). Likewise, a Turkish study also found that the students at the postgraduate level lacked competence in academic writing and thus that academic writing be taught explicitly in higher education (Ekoç, 2019). Similarly, a Tanzanian study also found that PhD students' thesis contained grammar mistakes, content organization issues, and were not at par with the acceptable standards of academic writing. The current study found similar problems in students' writing samples.

Conclusion and Recommendations

The study explored the academic writing challenges faced by Pakistani PhD students. It also revealed the strategies they use to overcome these problems. Academic writing is a crucial skill for PhD students. It is also an essential component of the overall scientific research process. Knowledge and outcomes of scientific research need to be shared with the world so that continued advancement and progress can be made possible. Academic writing skills can affect a researcher's career and thus this study aimed to discover the writing problems faced by Pakistani PhD students. The study used semi-structured interviews for a detail investigation into the research problem. It also analyzed the writing samples of the students for a more thorough understanding of students' writing problems. According to the findings, the students did possess the required competence and training in academic writing to engage in advanced scholarly communication. They lacked command on syntactic rules, academic vocabulary, and could not produce coherent and well-organized texts. Therefore, the study would like to make the following recommendations.

The Higher Education Commission (HEC) is requested to take note of this problem. One solution can be to design and introduce a research writing course at both the Mas-

ter's and PhD level. These courses should teach the features, components, and different essential genres in research communication. The courses must be taught using a student-centered approach in which the teacher would coach and mentor students through guided practice and individualized feedback. The universities also need to acknowledge that academic writing is a specialized form of communication which needs to be learnt and thus students must be offered full-fledged writing courses. Workshops and seminars would be useful, but a proper course is more useful as it can teach academic writing in more detail. It is also important that academic courses should be tailored to cater to students' unique disciplinary needs as this will engage the students and arouse their interest more effectively.

Future Implications

Academic writing skills form an important part of a researcher's identity. The researcher is both the producer and disseminator of knowledge. There is a need for more researches on the attitude and perceptions of postgraduate students towards academic writing. The students have to be taught that research activity also includes sharing and conveying research outcomes for implementation in the society. Therefore, more studies should explore the different types of linguistic problems students face in academic writing and also investigate the techniques the students use to address these problems. More research information on such topics can enable the concerned stakeholders to develop useful interventions. The teaching strategies for academic writing must also be explored and investigated further as students from very diverse ethnic and cultural background engage in academic writing as a part of postgraduate education.

References

- Ahmed, M. (2017). Enough quantity: Time to focus on quality of researchers in Pakistan. *International Higher Education*(91), 24–25.
- Al-Shboul, Y., & Huwari, I. F. (2015). The causes of writing apprehension through students' perspective. *Journal of Language Teaching & Research*, 6(3), 534–544.
- Badley, G. (2009). Academic writing as shaping and re-shaping. *Teaching in Higher Education*, 14(2), 209–219.
- Bailey, S. (2015). *Academic writing for international students of business*. Routledge.
- Bano, S., & Taylor, J. (2015). Universities and the knowledge-based economy: Perceptions from a developing country. *Higher Education Research & Development*, 34(2), 242–255.
- Biber, D., & Gray, B. (2010). Challenging stereotypes about academic writing: Complexity, elaboration, explicitness. *Journal of English for Academic Purposes*, 9(1), 2–20.
- Cameron, J., Nairn, K., & Higgins, J. (2009). Demystifying academic writing: Reflections on emotions, know-how and academic identity. *Journal of Geography in Higher Education*, 33(2), 269–284.
- Chang, C. E., & Strauss, P. (2010). 'active agents of change?' mandarin-speaking students in New Zealand and the thesis writing process. *Language and Education*, 24(5), 415–429.
- Chowdhury, M. K. B., Behak, F. B. P., Hassan, M., & Sultana, T. (2022). Investigating the use of blog for teaching writing courses to undergraduates. *Journal of Education & Social Sciences*, 10(1), 17–36.
- Cooke, P., & Leydesdorff, L. (2006). Regional development in the knowledge-based economy: The construction of advantage. *The Journal of Technology Transfer*, 31, 5–15.
- Cotterall, S. (2011). Doctoral students writing: Where's the pedagogy? *Teaching in Higher Education*, 16(4), 413–425.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Divsar, H. (2018). Exploring the challenges faced by iranian tefl students in their doctoral dissertation writing. *International Journal of English Language & Translation Studies*, 6(3), 195–203.
- Ekoç, A. (2019). Difficulties faced by postgraduate students of English Language Teaching (ELT) in Thesis Writing in Turkey. *Inonu University Journal of the Faculty of Education (INUJFE)*, 20(1), 152–164.
- Horta, H., & Santos, J. M. (2016). The impact of publishing during phd studies on career research publication, visibility, and collaborations. *Research in Higher Education*, 57, 28–50.
- Howitt, D., & Cramer, D. (2007). *Introduction to research methods in psychology*. Pearson Education.
- Huang, J. C. (2010). Publishing and learning writing for publication in English: Perspectives of NNES PhD students in science. *Journal of English for Academic Purposes*, 9(1), 33–44.
- Irfan, H. (2017). The postgraduate students and the university teachers' perceptions of the gap between policy and practice of English medium of instruction (EMI) at Higher

- Education in Pakistan. *ELF Annual Research Journal*, 19, 119–136.
- Javed, Y., Ahmad, S., & Khahro, S. H. (2020). Evaluating the research performance of Islamabad-based higher education institutes. *Sage Open*, 10(1). doi: 10.1177/2158244020902085
- Jeyaraj, J. J. (2018). It's a jungle out there: Challenges in postgraduate research writing. *GEMA Online Journal of Language Studies*, 18(1), 22–37.
- Jomaa, N. J., & Bidin, S. J. (2017). Perspectives of efl doctoral students on challenges of citations in academic writing. *Malaysian Journal of Learning and Instruction*, 14(2), 177–209.
- Kiriakos, C. M., & Tienari, J. (2018). Academic writing as love. *Management Learning*, 49(3), 263–277.
- Klimova, B. F. (2012). Changes in the notion of academic writing. *Procedia-Social and Behavioral Sciences*, 47, 311–315.
- Komba, S. C. (2016). Challenges of writing theses and dissertations among postgraduate students in Tanzanian higher learning institutions.
- Lin, L. H., & Morrison, B. (2021). Challenges in academic writing: Perspectives of engineering faculty and 12 postgraduate research students. *English for Specific Purposes*, 63, 59–70.
- Meo, S. A., & Jawaaid, S. A. (2021). Performance of Pak Universities in Global Science. *Pakistan Journal of Medical Sciences*, 37(4), 927–930.
- Monippally, M. M., & Pawar, B. S. (2008). *Academic writing: A guide for management students and researchers*. SAGE Publications India.
- Paltridge, B. (2004). Academic writing. *Language Teaching*, 37(2), 87–105.
- Sajid, M., & Siddiqui, J. A. (2015). Lack of academic writing skills in English language at higher education level in Pakistan: Causes, effects and remedies. *International Journal of Language and Linguistics*, 2(4), 174–186.
- Siesfeld, T., Cefola, J., & Neef, D. (2009). *The economic impact of knowledge*. Routledge.
- Singh, M. K. M. (2019). International graduate students' academic writing practices in Malaysia: Challenges and solutions. *Journal of International Students*, 5(1), 12–22.
- Sultan, S. (2015). Syntactic errors in Pakistani undergraduate students' written English. *Journal of Education & Social Sciences*, 3(2), 245–259.
- Sum, N.-L., & Jessop, B. (2013). Competitiveness, the knowledge-based economy and higher education. *Journal of the Knowledge Economy*, 4, 24–44.
- VanAlstyne, J. S., & Tritt, M. D. (1999). *Professional and technical writing strategies: Communicating in technology and science*. Prentice Hall.
- Yin, R. K. (2009). *Case study research: Design and methods*. Sage.
- Yuvayapan, F., & Bilginer, H. (2020). Identifying the needs of postgraduate students: The first step of academic writing courses. *Journal of Language and Linguistic Studies*, 16(2), 595–611.