



Research Article

Identifying Writing Factors Influencing the Acceptance of Research Papers in English-Language Journals

Shahrzad Chahardahcherik¹, Mohammad Bavali^{*2}, Leila Akbarpour³

1. PhD Candidate of TEFL, Shiraz Branch, Islamic Azad University, Shiraz, Iran

2,3. Assistant Professor of Applied Linguistics, Shiraz Branch, Islamic Azad University, Shiraz, Iran

* Corresponding author: Mohammad Bavali, Email: mbv157@gmail.com

Introduction

English has undoubtedly emerged as the dominant language for academic publishing. A significant number of high-impact journals are presently published in English, and scholars from

around the world are greatly concerned with having their research articles accepted in these journals (Moreno, 2021). Among various academic genres, the research article remains the dominant form within academia, particularly the empirical research

article which holds significant relevance for many scholars (Hyland, 2009). Globalization not only enhances the potential for richer scholarly discussions by expanding the body of academic literature but the participation of non-native English speaker researchers also deepens understanding, brings to light previously overlooked topics in mainstream discourse, and alters rhetorical conventions (Canagarajah, 1996). While this trend is partly fueled by advancements in technology, the surge in publishing is primarily due to a significant rise in the number of researchers, with 7.8 million full-time equivalent researchers in 2013 marking a 21% increase since 2007. The United States remains at the forefront of global research paper production, accounting for roughly 23%, while China has ascended to second place with 17% of global output, followed by the UK (7%), Germany (6%), Japan (6%), and France (4%). Therefore, five nations contribute to 63% of the world's journal articles while 23 countries collectively represent 90% (Thomson Reuters, 2012; Ware & Mabe, 2014). The Islamic Republic of Iran ranked 17th in the world in terms of science production based on the latest statistics released by the Scopus database (Akhondzadeh, 2013).

Scholars globally are being encouraged to communicate their research outcomes to broader and more varied audiences. The notions of "knowledge transfer," "knowledge dissemination," "impact," and analogous concepts have now become integral components of research evaluation. While English for Research Publication Purposes (ERRP) has emerged as a recognized subfield of English for Academic Purposes (EAP), it paradoxically remains a remarkably under-explored area. The critical discourse surrounding the status of English in scholarly communication was sparked by the publication of Phillipson's *Linguistic Imperialism* (1992) and Pennycook's *Cultural Politics of English* (1994). The phrase "publish or perish" is undoubtedly more pertinent today than it has ever been. A natural outcome of this phenomenon is that newcomers in academia frequently experience burnout early in their journeys. Engaging in publishing during a doctoral program is often perceived as an additional burden on top of the primary responsibility of writing a thesis (Kwan, 2010). Consequently, doctoral candidates are often

counseled and increasingly mandated, to publish before their graduation (Habibie, 2016). However, the endeavor of academic publishing is fraught with challenges; for Ph.D. candidates; it signifies entering the unknown area (Paltridge & Starfield, 2016) of a novel, intricate, and frequently opaque domain.

An additional ethical consideration asserts that it is morally wrong to conduct research particularly involving human subjects, without sharing their voices and the research outcomes with a broader audience (Wellington, 2003). Academic journals serve as gatekeepers within their respective fields and are therefore expected to maintain a high level of rigor in their evaluative processes. It is consequently not unexpected that a large number of articles face rejection (Rugg & Petre, 2004), with many of those that are published requiring substantial revisions before acceptance. Non-native English speaker researchers frequently need to allocate considerable amounts of time and financial resources to create manuscripts that meet the standards set by reviewers, board members, and editors of mainstream journals who are often situated in affluent nations and possess a high level of proficiency in English (Salager-Meyer, 2014). Non-native scholars from Iran face the need to become part of the academic community by acquiring both the necessary language skills and the specific genre associated with this community. However, they often struggle to do so and are unable to publish the findings of their research in reputable and peer-reviewed journals (Tharirian & Sadri, 2013). Moreover, the existing political unrest and severe economic sanctions in Iran have exacerbated the challenges faced by Iranian researchers in publishing their work and have significantly restricted their availability of scholarly resources, online databases, and educational aids despite the country's robust and longstanding higher education infrastructure and a vibrant intellectual cohort (Shashok & Handjani, 2010).

On a related note, Ammon (2012) argues that due to significant linguistic barriers and a refusal to engage in linguistically "unfair" scientific communication, many non-Anglophone contributions are excluded from international forums resulting in an imbalanced scientific development. However, other authors, such as

Ferguson et al. (2011) counter this claim by suggesting that evidence should be presented to support the existence of linguistic inequality, as native English-speaking scholars may also face difficulties in acquiring strong academic literacy. However, additional determinants significantly influence this undertaking including the author's proficiency in employing the rhetorical and discursal conventions of the discipline, resilience, spatial and social remoteness from the Anglophone center, and the extent of internationalization within the author's specific field of study (Lillis & Curry, 2014).

Although situated within a global context, academic writing invariably represents a localized endeavor that unfolds within specific academic communities. This practice is both executed and acquired through concrete interactions with designated texts and particular individuals, thereby reflecting the influence of distinct cultural traditions and methodologies for addressing issues. This process entails various stages such as crafting the research in a manner suitable for publication, identifying an appropriate journal, adhering to the specified requirements and formats of the chosen journal, composing a submission letter or email, addressing any feedback received (unless outright rejection necessitates seeking an alternative journal), self-revising or seeking assistance, persisting in revisions when requested, potentially engaging in negotiations with editors or reviewers, and awaiting the editorial verdict with patience (Ferguson et al., 2011). It is important to consider the researchers' specific recurring challenges with publishing academic papers and the underlying reasons for these challenges (Moreno et al., 2011). The investigations recognize the fact that the research article is not a homogeneous genre and demonstrate that each section of the research article possesses a distinct linguistic and rhetorical configuration which results in certain sections being more challenging to write compared to others (Flowerdew, 1999).

Despite the detailed and increasingly precise descriptions of academic texts provided by English for academic purposes research limited attention has been paid to the actual publishing obstacles encountered by non-native researchers (St John, 1987; Moreno et al., 2012). This along with the

small-scale nature of the existing studies and their lack of rigorous informant selection procedures results in a lack of systematic information on non-native researchers' writing challenges (including causes) concerning their proficiency level and publication experience. Moreover, few studies explore the comparative complexity of different sections within the research article which may pose challenges for researchers. The other distinctive feature of this study is concentrating on the Iranian context which has not been explored in previous studies on non-Anglophone contexts. The academic writing of multilingual scholars has been the focus of an expanding body of research; however, most studies have concentrated on textual characteristics rather than the academic literacy practices and experiences of the writers themselves (e.g., Wellington, 2003; Gosden, 1996).

The purpose of this study was to investigate and identify the experiences of Iranian doctoral engineering students in the process of submitting their research papers to journals. Specifically, the study aimed to explore those aspects of research paper writing that received comments for revision or were ultimately rejected by journals. Moreover, the research aimed to identify and analyze which specific sections of the research paper presented greater challenges for these students in terms of writing difficulties. The existing literature, however, has not adequately addressed the various types of writing issues that non-native researchers face concerning writing different sections in research articles. Mastering the research article genre entails a deep understanding of rhetoric, linguistic skills, and cognitive abilities to effectively navigate through various sections. By focusing on these key areas the study intends to provide a comprehensive understanding of the hurdles faced by Iranian students in the publication process. Through a comparative analysis of the responses from researchers whose papers underwent revision and those whose papers were rejected outright, this study identifies common themes, issues, and challenges that may contribute to whether certain factors consistently lead to revision requests or rejections and whether there are specific parts of the papers that cause the great challenge and effort to be accomplished. This study aims to answer the following research questions:

- 1- What are the linguistic and non-linguistic factors contributing to the rejection and revision requirements of academic papers authored by Iranian Ph.D. holders in engineering when submitted to English journals?
- 2- What is the perceived hierarchy of difficulty among the various sections of an academic paper for Iranian researchers?

Literature Review

Flowerdew's (1999) study demonstrated that composing the introduction/literature reviews and discussions/conclusions in English was particularly demanding for multilingual researchers; it was perceived as potentially crucial to the acceptance or rejection of their articles regardless of the quality of their actual findings. Furthermore, Bitchener and Basturkmen's (2006) studies on the relative complexities associated with different sections of the research article for Chinese researchers revealed that students had a narrower understanding of the purpose of the discussion section as a result of their limited proficiency. Mur-Dueñas's (2012) study on research paper manuscripts of Spanish social scientists in English as a second language highlights the need for authors to revise their introduction to clearly outline the study's contribution for publication. However, the study by Pérez-Llantada et al. (2010) directs attention toward the discussion section since it is deemed the most crucial by online research article readers; this section was increasingly perceived as more challenging to compose compared to other sections, especially in English-medium journals, as noted by Moreno et al. (2012).

Some scholars have investigated the reasons behind the rejection or revision requirements of research papers indicating that technical issues including methodological flaws, insufficient data analysis, or inappropriate use of statistical techniques were a major contributing factor. Gosden (1996) found that science journal editors expressed issues such as non-native authors' lack of clarity in results sections, methodological issues, and submission timelines compared to L1 authors. Ågerfalk (2014), and Griffiths and Ian (2016) showed that the issues were related to the deficiencies in the research methodology. El-Omar

(2014) highlighted critical issues including flawed statistical analyses, inadequate sample descriptions, flawed design/methodologies, absence of innovation and coherent message, limited scope, restricted audience, poorly elucidated rationale, perplexing graphs, and insufficient tables or figures, among others. Byrne (2000) deduced that the primary cause for rejection was the design, closely followed by the methodology section.

Belcher's (2007) investigation attributed these outcomes to issues related to journal writing conventions and the author's writing features, a lack of familiarity with relevant topics, literature, and journal expectations. Mungra and Webber (2010) and Kourilova (1996) revealed that the most frequent comments on Italian medical researchers' papers primarily focused on scientific content as well as lexical and grammatical errors, clarity, and verbosity or repetition. Dong (1998) noted that researchers faced challenges in organizing their arguments, selecting relevant content, and using evidence to support claims. Gosden's (1996) study of the English writing practices of Japanese researchers discovered that the revision processes primarily involved addressing grammatical and sentence structure errors as well as improving vocabulary.

Abdi and Azizi's (2020) analysis of the nature of the revisions made to the manuscripts by Iranian Ph.D. students in applied linguistics revealed that the most common type of modifications were related to discourse, followed by grammar and vocabulary revisions. Gholami and Zeinolabedini (2017) examined the first drafts of 60 research articles in the field of medical science and revealed that journal editors and reviewers paid more attention to discursual errors compared to other categories. Tharirian and Sadri's (2013) examination of the reviewers' feedback on research articles submitted by Iranian researchers in three distinct fields of engineering, medicine, and social sciences revealed that most of the comments were made on content-based defects such as procedural infelicities, poor study design, or ignoring the literature. Riazi and Bahrami (2009) concluded that scholars in the hard sciences faced language problems primarily in the introduction and discussion sections of their papers while scholars in the soft sciences struggled with expressing

themselves fluently and developing argumentative skills. Both groups also faced challenges in revising and editing their written articles. Language problems identified in these studies included a limited vocabulary, punctuation errors, and inadequate sentence structures.

Studies conducted by (Tardy, 2004; Flowerdew, 1999) on scholars from non-Anglophone contexts revealed that peer review comments introduced bias through a negative authorial voice which represented the reviewer's opinion of the author. Hyland (2016) conducted attitude surveys with EAL speakers and found that a majority of journals tend to exhibit prejudice against them when encountering non-standard language. He referred to this as linguistic injustice and contended that it stemmed from an outdated reverence for the linguistic proficiency of native speakers leading to a lack of confidence or hope among non-native writers. This perspective failed to acknowledge the challenges that even novice L1 English researchers encounter in their writing. By analyzing 192 published articles written by non-native speakers in eight different journals and comparing them to papers written by native speakers from the same journals, Martinez (2017) discovered some lexical words and phrases that were employed less frequently by non-native speakers.

Method

Design

The present study applied a quantitative-descriptive design using quantitative data. An adapted questionnaire was employed as a measuring instrument. The participants were required to answer all the items of the questionnaire honestly, giving their perceptions about their past experiences in submitting their papers to English journals and challenges in writing each section of the research paper.

Participants

The participants of this study were selected based on Krejcie and Morgan's (1970) table through purposeful snowball sampling; 303 students were recruited from a diverse selection of higher education institutions, including State and Azad universities in Iran in different fields of engineering of both genders (n=110 females and n=193 males).

The inclusion criteria included possessing Iranian nationality, affiliating with Iranian institutions of higher education at the Ph.D. level, having practical experience in publishing research papers in English journals, being the main author of the manuscript in terms of implementing alterations to the manuscript and subsequently resubmitting it to the targeted scholarly periodicals. The majority of respondents had completed their Ph.D. program at the time of the survey (n=179), the remainder of the respondents were almost evenly distributed amongst second-year students (n=69), third-year (n=23), fourth-year (n=30) and their first year of Ph.D. program (n=2). The majority of the participants had published 1-8 articles in English journals (n=242), while 61 participants' articles were in the review process and submitted to English journals. The analyses revealed that 292 respondents reported having published their article as a corresponding author over the preceding five years.

Table 1.

Demographic Information of the Participants

Basic Characteristics		
Gender		
Female	Frequency	Percentage
	110	36.3
Male	193	63.7
Academic Level		
Frequency Percentage		
Graduated	179	59.1
Fresh students	2	.7
Sophomore students	69	22.8
Junior students	23	7.6
Senior students	30	9.9
published articles		
Number of articles	Frequency	Percentage
1-2	185	61.8
3-8	61	20.1
In the process of publishing	57	18.7
Experience of outright rejection of articles		
	Frequency	Percentage
YES	159	52.5
NO	144	47.5
Publishing articles in English journals as a corresponding author		
	Frequency	Percentage
YES	292	96.4
NO	11	3.6

Instrument

The questionnaire was the only instrument used to collect the data. The questionnaire was adopted from the ENEIDA project originally designed by Moreno (2011). After conducting a thorough literature review to identify existing questionnaires related to the research aims, we selected a well-established questionnaire that had been previously validated in similar studies (Moreno et al., 2012; Gea Valor et al., 2014). However, since it was originally developed in a different cultural context, it was adapted to suit the specific needs of the present study population. At least two people translated the items first (forward translation). Then the work of these two independent translators was reviewed by a third expert and the translation was finalized. In the third step, the translated materials were translated back into the original language by two different experts (back translation), and the final version of the scale was obtained after these translations were examined by a third independent expert. The original questionnaire was in the English language and consisted of 154 items divided into 7 domains. 30 items were selected from the original questionnaire covering the following areas: (i) the personal, professional, demographic, and academic background; (ii) the self-reported level of competence in the use of English (as L2); (iii) the past experiences in publishing research articles in English-medium journals in terms of revision requirements or outright rejection by journal gatekeepers, (iv) the most and least challenging sections of a research paper to write.

Procedures for Data Collection and Data Analysis

The study was based on an analysis of a questionnaire consisting of 30 items. The adopted questionnaire was converted into a digital format compatible with the social media widely used in Iran (WhatsApp and Telegram) as well as email. Clear instructions were provided along with a specified deadline for completion. This study was conducted between January 2022 and January 2023 among Ph.D. students in diverse fields of engineering in Iran. The permission to distribute the questionnaire to the participants was obtained from the dean of the engineering faculty; then the final draft (Persian version) of the questionnaire was printed and distributed among participants who

were physically available at institutions. A total of 303 responses were received *and* those that met the predetermined quality standards were selected for further analysis. The responses were exported to a Microsoft Excel spreadsheet for further statistical analyses. The analysis of data was conducted in two distinct phases. The initial phase involved modifying and validating the questionnaire and the second phase entailed identifying the patterns of revision and rejection requirements upon submission of papers to an international journal among Ph.D. students in Iran as well as determining the problems of writing each section of a research paper. Data collected was analyzed using both quantitative/descriptive methods through the SPSS program (version 25) to elicit findings following the objectives, questions, and overall purpose of the research. The data was calculated based on the average score, the most dominant point, and the percentages of each scale based on responses to the 30-question survey and reported through descriptions and qualitative interpretations. The researcher initially employed a 5-point Likert scale in the questionnaire to collect data which included “Never, Rarely, Sometimes, Often, Very often”; in reporting the results, the researcher consolidated some of the response categories to create a more succinct and accessible presentation of the data; the values for “never” and “rarely” were combined into a single category, as well as “often” and “very often” into another. This yielded three levels of perceptions: “Rarely, Sometimes, Often”. The items with a response rating above 50 percent as a threshold were selected for inclusion in the analysis since items with higher ratings were more indicative of the respondents’ opinions or attitudes.

Procedure

Given the relevance and applicability of the questionnaire to the research objectives written permission to adapt and validate the questionnaire was obtained from the questionnaire developer via e-mail before the conduct of the study. The validity and reliability of the designed questionnaire were tested and further modifications were made to the questionnaire to ensure acceptable validity and reliability estimates. Confirmatory factor analysis (CFA) was used through AMOS (Analysis of Moment Structures) to test the hypothesized model

and confirm it to make sure that the identified factors accounted for the variation in the data. Following the validation phase the survey instrument was administered to participants.

Results

Phase 1: Psychometric Evaluation

Content validation

The content validity of the questionnaire was examined through the judgment of the expert committee. The survey was translated and implemented into the Persian language as all participants had more competency in it as their first language to competently complete the survey. Before the finalization of questions, two experts in the area of editing/educational research/authors were consulted to check if the questions could elicit the required response types. A pilot test of the adapted questionnaire was conducted with a small sample of Iranian doctoral engineering students. A panel of two experts in the field of the English language assessed the relevancy or representativeness, clarity, and comprehensiveness of the items of both the paper-based and online iterations of the questionnaire and confirmed that the questionnaire items were pertinent in terms of content and the overall design and arrangement of both versions. However, some items needed to be moved to the demography section for better organization and clarity.

Table 2.

Descriptive Statistics of the Variables

Variable Groups	N	Min	Max	Mean	SD
EGP	214	2.80	4.60	3.6720	.48900
ESP	214	2.40	4.60	3.5514	.48515
Previous experiences of publishing in English	214	1.00	4.20	2.6159	.93243
Students' skills in writing each section of the paper	214	2.36	4.27	3.3381	.44611
Valid N (listwise)	214	2.65	3.71	3.1826	.32997

Normality of the Data

The status of the data in terms of normal distribution was investigated using measures of Skewness (a measure of the degree of symmetry in the variable distribution) and Kurtosis (the degree of tailedness in the distribution of the variable) for each subscale. In line with Kline's (2015)

Face Validity

A panel of two academicians reviewed the questionnaire item by item and provided feedback on the clarity of the content, the language, the wording employed, and the overall structure of both the traditional paper-based version as well as the electronically accessible version of the questionnaire and found that it was easy to understand and relevant to the participant's experiences.

Prerequisites of Conducting Confirmatory Factor Analysis

The Mean Value of Indicators and Variables of the Study

Before the CFA test was performed the data was checked to meet some conditions to perform factor analysis. Descriptive data of the study were used to examine the means, the standard deviation, and the range of each variable describing the minimum and maximum values of the variables under consideration in the study. They were applied to test whether the items in each hypothesized grouping contained approximately the same proportion of information about the construct being measured. As the results show the high mean and low standard deviation indicate that most values are clustered around the mean suggesting a more consistent and reliable measure.

recommendations, the absolute values of the Skewness and Kurtosis of all the items in this study were within the acceptable range of (± 2.0). The results of the normality test demonstrated that the data was normally distributed across all the variables (Table 3).

Table 3.
Mean, Standard Deviation, and Results of Skewness and Kurtosis Indices

Variable groups	N	Mean	SD	Skewness	Skewness/SD	Kurtosis	Kurtosis/SD	Normality
Publishing experience	214	2.6159	.93243	-.142	.166	-1.003	.331	normal
ESP	214	3.5514	.48515	.476	.166	.033	.331	normal
EGP	214	3.6720	.48900	-.192	.166	-.808	.331	normal
Expertise in writing each section of the paper	214	3.3381	.44611	-.962	.166	-.171	.331	normal

The Existence of a Correlation between Items and Constructs

In this stage, a Pearson product-moment correlation coefficient examined the existence of a correlation between each variable and each factor as a requirement for the implementation of the

CFA test. This was addressed by looking for coefficients more than 0.3. There were many of them and a strong correlation was found among all the subscales in the instrument ($p < .05$) so factor analysis was entitled to be run (Table 4).

Table 4.
Correlation matrix of research components and variables

Variable groups	N=214	Writing abilities	Publishing experiences	ESP	EGP	Total
Publishing experiences	Pearson correlation	.559**	1	.102	.210**	.860**
	2.sided sig. level	.000		.138	.002	.000
Writing abilities	Pearson C.	1	-.559***	-.421**	-.489	-.556
	2.sided sig.		.000	.000	.000	.000
ESP	Pearson C.	-.421**	.102	1	.874	.320**
	2.sided sig.	.000	.138		.000	.000
EGP	Pearson C.	.489**	.210**	.874**	1	.464**
	2.sided sig.	.000	.002	.000		.000
Total	Pearson C.	-.556	.860	.320	.464	1
	2.sided sig.	.000	.000	.000	.000	

Reliability of the Questionnaire

Before establishing the construct validity, the internal consistency of the questionnaire was measured through the estimation of Cronbach’s alpha. The analysis showed that the questionnaire had high reliability ($\alpha = 0.964$) and considered that the instrument had an excellent internal consistency adequate for the scale constructed from the original questionnaire adopted in this study which followed Westfall (2014) who noted that a correlation coefficient of about 0.8 should be considered high enough to judge the instrument as reliable for the study (Table 5).

Table 5.
Reliability Statistics

Number	Cronbakh Alpha
150	0.964

Reliability of Questionnaire Items

The value of Cronbach’s alpha for ‘if item deleted’ by examining ‘corrected-item-to-total’ correlations was calculated. Table 6 shows that all the variables of the ‘corrected-item-total’ correlation had acceptable values and deleting any of the questionnaire items would not increase the current correlation coefficient. The findings suggest that all the individual items in each factor achieved good fit parameters and that all the items were suitable because they did not exceed the prescribed infinite range.

Table 6.
Reliability of the data

Items	Alpha if item deleted	Corrected Item-Total correlation	Scale variance if item deleted	Scale mean if item deleted
17	.964	.269	4665.300	457.26
18	.964	.313	4659.511	457.17
19	.964	.283	4674.598	456.49
20	.964	-.281	4710.980	457.32
72	.965	-.344	4747.972	458.83
73a	.964	.108	4679.837	458.30
73b	.964	.639	4597.435	457.80
73c	.963	.840	4510.836	457.34
73d	.963	.854	4530.266	457.32
73e	.963	.703	4545.340	457.51
74a	.964	.643	4602.930	458.42
74b	.963	.655	4559.814	457.77
74c	.963	.713	4547.730	457.81
74d	.963	.711	4550.016	458.24
75	.964	-.119	4702.144	456.83
76	.965	-.493	4744.166	457.11
77	.965	-.294	4728.989	457.17
78	.964	.383	4655.567	457.04
79	.965	-.396	4741.900	457.04
80	.965	-.261	4719.011	457.48
81	.965	-.632	4768.225	457.02
82	.965	-.434	4739.264	457.60
83	.965	-.445	4754.633	457.59
84	.965	-.585	4772.089	457.10
85	.965	-.313	4729660	457.36

Factor Structure of the Adapted Questionnaire

To examine the validity of the questionnaire and indicators, CFA was used to investigate the association between each dimension of the anticipated mode. To validate the questionnaire

and its components, structural equation modeling was employed utilizing the Amos software. The results of each factor before and after model modifications are depicted in the following diagram (Figure 1).

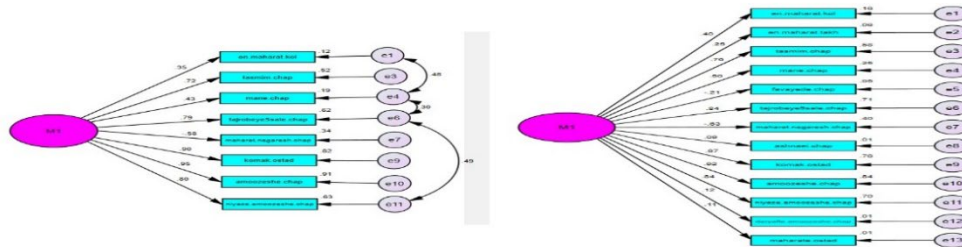


Figure 1. CFA of the model before & after modification

The results of Table 7 show that all indicators, except for one (specific competence in English) exhibited acceptable factor loadings. Additionally, since the factor loadings of the questionnaire indicators were above 0.40 the indicators of the variable of the study were validated. Model modification was performed to achieve the minimum value of three indicators and the highest possible overall goodness-of-fit in the present study. The factor loadings and covariance among the four

factors were found to be statistically significant at ($p \leq 0.01$) with more asterisks indicating greater significance. Consequently, the modified indicators of goodness-of-fit were demonstrated in Table 7.

Table 7.
The adapted questionnaire's factor structure with standardized estimates

	Factor loading Stage 1	P	Factor loading Stage 2	P
EGP	.402	*	.351	*
ESP	.254	-	-	-
Publishing experiences	.840	***	.789	***
Writing abilities	-.630	***	-.583	***

Confirmatory Factor Analysis (CFA): Verifying the Factorial Structure

CFA was conducted using Amos software since there was a strong model assumption. With CFA, the variance of a previously proven structure was investigated with a new data set. To assess the scale's fit, various fit indices and their corresponding criteria were employed. These indices encompassed the Chi-square test statistic with relevant degrees of freedom and significance level, the χ^2/df ratio, the root mean square error of

approximation (RMSEA), the comparative fit index (CFI), and the Parsimonious fit index (PCFI). It was recommended that for a good fit, the Chi-square test should yield a non-significant result ($p > 0.05$). A χ^2/df ratio of 2 or lower signifies a good fit with values under 5 considered acceptable (Barrett, 2007). An RMSEA below 0.05 indicates an excellent fit while values between 0.05 and 0.08 are deemed acceptable, 0.08 to 0.1 are marginal, and above 0.1 are poor. The CFI ranges from 0 to 1; values between 0.90 and 0.95 indicate a very good fit, with values close to 0.9 showing a relatively good fit (Bentler, 1990). Regarding the PCFI, values of > 0.50 are generally acceptable, with a maximum allowance of > 0.90 . Considering the satisfactory results from indices such as GFI and CFI, as well as an acceptable value for PCFI it was found that the goodness of fit for the measurement model displayed a reasonably good fit to the data (Table 8).

Table 8.
Model fit indices

Model fit	Indicator name	The value obtained	The value obtained before model modification	Optimal level after model modification	Excellent	Result
Absolute	Ratio of χ^2/df	27.701	11.564	Less than 5	Less than 3	Unacceptable
	Sig. level	.000	.000	.00P	.01P	Unacceptable
	RMSEA	.354	.223	Less than .08	Less than .05	Unacceptable
Relative fit index	GFI	.466	.828	More than .50	More than .95	Acceptable
	CFI	.371	.860	More than .50	More than .90	Acceptable
Parsimonious fit index	PCFI	.309	.522	More than .50	More than .90	Acceptable

Phase 2: Descriptive Statistics Participants Perceived Proficiency in Reading and Writing for Academic Purposes of English

Participants were requested to indicate their perceived competence in the essential skills of reading and writing in the English language. Students' responses to each of the items were valued from low to high based on a 3-point Likert scale. The analysis revealed that a great number of the participants (85.5%) expressed satisfaction with their reading skills, with less than (19%) considering themselves as intermediate, while no participants self-evaluated their reading proficiency as low. In

terms of writing about (70.0%) of the participants disclosed low proficiency levels, with (6.6%) rating their skills as very good. These results highlight a deficiency in students' writing abilities necessary for publication in global academic journals (Table 9).

Table 9.
Engineering students' self-reports of proficiency in English for academic purposes

Level	Low		Intermediate		High	
	N	%	N	%	N	%
Writing skill	212	70.	71	23.4	20	6.6
Reading skill	0	0	56	18.5	247	85.5

The next item focused on the issue of bias towards non-native English speaker researchers in academic contexts due to their linguistic or cultural backgrounds. Overall, the majority of the participants (60.5%) expressed that the evaluation of their manuscripts has been rather biased whereas a limited percentage of respondents (24.6%) disagreed with the statement. About (23.5%) rated “sometimes” which reflects a moderate level of perceived disadvantage encountered in publishing their work (Table 10).

Table 10.
Perceived inequalities and research publishing challenges

	Frequency	Percentage
Rarely	70	24.6
Sometimes	67	23.5
Often	148	60.5
Missing data	18	5.5

Then the respondents reported their experience of the outright rejection of their research papers by journals. A higher percentage of respondents’ papers (52.5%) had been rejected at least once by journals before getting published and to a lesser extent (47.5%) had not experienced the outright rejection by the journal gatekeepers (Table 11).

Table 12.
Aspects required to revise in international journals

Items	Never/Rarely		Sometimes		Often/Very Often	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
My articles have been accepted with barely any changes.	220	72.6	30	9.9	63	17.5
My articles could be accepted provided that I make changes to the content of the study.	177	60.2	98	33.3	19	6.5
I make changes to the content of the study. (e.g., design, methods, use of statistical tests, etc.)	51	16.9	47	15.5	205	67.7
My writing must closely reflect the conventions expected by the journal I chose to report my research.	88	29.0	42	13.9	173	57.1
I revise some features of my writing (e.g., sentence length, complicated ideas or paragraphs, grammatical, stylistic, or vocabulary errors.	91	30.1	69	22.8	143	47.2
I follow the journal’s instructions of style more closely. (e.g., tables, figures, page layout, fonts)	163	53.8	77	25.4	63	20.8

The next section investigated the factors leading to the rejection of research papers in English journals and identified three primary contributors

Table 11.

	YES	NO
Frequency	159	144
Percentage	52.5	47.5

Frequency of Revision and Rejection Themes

Next, the most recurrent difficulties experienced by the students in writing their research papers and the subsequent publication process were identified. As the results show, the success rates of most of the students when writing in English were relatively low (72.6%) with less than a third (17.5%) succeeding in having their paper published with hardly any changes. In terms of the influencing factors, over two-thirds of respondents (67.7%) reported that existing flaws in certain areas of their research (e.g., design, methods, use of statistical tests) led to revision requirements. More than half of the respondents (57.1%) mentioned that they were required to adhere to standard writing conventions. Less than half of the researchers (47.2%) reported the need to revise the linguistic features of their writing. The item of making changes to the scientific content of the papers was rated by most respondents (60.2%) as the least influencing factor. A smaller portion of respondents (20.8%) were required to make changes to the tables, figures, and layout of their papers (Table 12).

(Table 13). It was revealed that the authors’ inability to adhere to the expected writing conventions of the target journal was reported by (72.5%) of

respondents as an influencing factor. The other important factor was presumed methodological flaws in the research design, with (65.6%) of participants acknowledging this issue. Lastly, (51.8%) of respondents highlighted the impact of

specific writing features which also played a crucial role in paper rejection. To a lesser extent (26.1%) the adjustment of the journal style guide (e.g. tables, figures, page layout, fonts, etc.) resulted in the initial rejection of the manuscripts.

Table 13.
Reasons for rejection in international journals

Items	Never/Rarely		Sometimes		Often/Very Often	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Presumed flaws in certain areas of the research contents. (e.g., design, methods, use of statistical tests, etc.)	104	34.5	82	27.2	198	65.6
My failure to reflect the writing conventions, expected by the journal (e.g., putting my research into a wider theoretical context, appropriately reviewing the literature, clearly expressing my contribution to the field, making sure my conclusions fit my objectives, etc.).	65	21.5	18	6.0	219	72.5
Features of the writing (e.g., sentence length, complicated ideas or paragraphs, grammatical, stylistic or vocabulary errors)	104	34.3	42	13.9	157	51.8
My failure to follow the journal's instructions of style (e.g., tables, figures, page layout, fonts)	200	66.1	24	7.9	79	26.1

The next section of the questionnaire focused on identifying the most challenging sections of a research paper for non-native researchers (Table 14). The percentages above 50% as a threshold for acceptable value were reported which represented a significant barrier for the non-native researchers in the publication process. Accordingly, the seven

main areas highlighted were, in order of difficulty, introduction (81.8%), correspondence with editors (79.8%), literature review (78.8%), methodology (74.6%), responses to reviewers' comments (70.3%), discussion (69.6%), and conclusion section (55.1%).

Table 14.
The most challenging sections to write

Items	Low		Average		High	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Abstract	---	---	200	66.0	103	34.0
Introduction	25	8.3	30	9.9	248	81.8
Theoretical background or Literature review	30	10.4	31	10.8	227	78.8
Materials and methods (the methodology)	46	15.2	31	10.2	226	74.6
Results	49	16.2	82	27.1	172	56.7
Discussion	49	16.2	42	13.9	212	69.9
Conclusion	37	12.3	99	32.7	167	55.1
Acknowledgments	125	42.2	126	42.6	45	15.2
Cover Letter	83	27.5	128	42.4	91	30.2
The responses to reviewers' comments	45	15.6	41	14.2	204	70.3
The correspondence with the editor during the evaluation process	48	15.8	13	4.3	242	79.8

Discussion

The present study aimed to investigate the challenges faced by Iranian doctoral engineering students in the process of submitting research papers to English-language international journals. By examining the common patterns and themes in required revisions and rejections as well as the self-reported writing challenges, the study contributed to a deeper understanding of the unique issues faced by these students. Aligned to Moreno et al. (2012) less than one-third of respondents achieved publication with minimal alterations, while more than half were requested to revise their manuscripts. Similar to the results of the studies conducted by Belcher (2007), Canagarajah (1996), and Flowerdew (1999) a significant proportion of participants reported experiencing inequalities during the submission process. Maniati and Jalilifar (2018) found that certain editors have developed prejudiced perspectives towards the Iranian scientific society due to a rise in the quantity of academically dishonest publications authored by Iranian researchers in recent times. In line with Riazi and Bahrami (2009), Iranian scholars faced inequalities due to the political influence exerted by the governments of Anglophone countries in most international journals.

Regarding the revision requirements of the papers upon submitting papers, results were consistent with studies by Mur Duanes (2012), Ferguson et al. (2011), and Hanauer and Englander (2011) who revealed that negative comments were highly related to style or design, methods, statistical tests, followed by writing conventions expected by the targeted journal, and lexico-grammatical features; they emphasized the significance of structural, linguistic, and technical aspects in the submission process. The results of the present study showed that revisions in design, method, and statistical tests surpassed those in grammar and vocabulary which was in contrast to the findings by López-Navarro et al. (2015) research showing that the changes made were related to sentence-level information, word order, and the selection of an alternative lexical item. In harmony with Gea Valor et al. (2014) and Lillis and Curry's (2006) findings, the scientific content of the research paper, the tables and graphs used in the study, and the fonts of

their writing were the least influencing factors leading to research revision requirements.

Consistent with the findings of the research by (Lillis & Curry, 2014; Paltridge & Starfield, 2016; Tardy, 2004) the main reasons put forward by editors and reviewers in the case of rejection were related to factors such as not conforming to journal's preferred style or format, flaws in design, method, and statistical tests, and manuscripts' poor writing style. This indicates that, despite the importance of using appropriate discourse features to the reviewers of international English journals in the field of engineering, the main reason for rejection was related to not following the writing conventions of the target journals. These same three factors were found to play a significant role in both the revision requirements and the rejection of manuscripts by English journals. However, their relative importance varied between the two outcomes with a higher percentage of rejections attributed to these factors compared to feedback for revision. In contrast to Kibert (2015), this study considered linguistic features of a paper as less significant than discourse-level ones. Furthermore, most participants indicated that the tables and graphs utilized in their research papers did not lead to the rejection of their papers.

Regarding the self-reported challenges in writing each section of the research paper, the results highlighted the spectrum of challenges faced by non-native researchers. The results conformed to Flowerdew's (1999) findings of the order of difficulty in writing different sections of a research paper. Consistent with Sitompul and Anditasari (2022), the introduction section posed the highest challenge since it required presenting the information in a way that showed how this particular work fitted into the existing scientific literature. In harmony with Lane and Tang's (2016) results, non-native students faced hurdles in corresponding with journal editors and responding to their comments emphasizing that cultural discrepancies were an important issue that influenced the success of getting one's paper published. However, two sections "corresponding with editors" and "responding to reviewers' comments" required different skill sets. Consistent with Thomas's (2013) findings, the methods section rated as the fourth most demanding section contributed to the

rejection of the research papers, as well. In conformity with Martin et al. (2014) study, the abstract section was the least challenging section to write. The order of difficulty of sections of a research paper was different from that of Martin et al. (2014) and Moreno et al. (2012) findings who reported the order of challenging sections as the discussion, introduction, conclusions, and theoretical framework.

Conclusion

This study has explored the current situation of Iranian doctoral students in several fields of engineering regarding publishing in English medium international journals. Utilizing a survey, we have examined attitudes, experiences, and challenges in composing and submitting the research papers. Specifically, the study revealed common patterns in the format and structure of review reports that Iranian authors should take note of. It was also discovered that proficiency in academic writing in the English language holds significant importance. Therefore, it is essential to recognize that English writing for research might be the foremost priority for publication in English journals.

The findings suggest that the process of publishing in academic journals presents a considerable challenge. The present research indicates that the peer review process significantly impacts the academic journey of non-native scholars in specific ways. The discourse surrounding the interpretation and response to evaluative feedback from reviewers ought to be prioritized within engineering writing educational curricula. The overall results certainly point to the critical role that journal writing conventions play in academic publishing; although, other factors also play a crucial role in the peer-review process. It highlights the importance of a holistic approach to academic writing, encompassing both the technical and linguistic aspects. The primary components of academic programs ought to encompass an emphasis on discourse features within academic writing specific to the field of students. This includes aspects such as typical sentence structures, methods for articulating ideas clearly, appropriate stylistic and rhetorical approaches, strategies for organizing paragraphs, as well as grammar and

vocabulary. In conclusion, we concur with Bhatia (2006) who emphasizes that explanations of grammar based on genres help learners comprehend the underlying principles of the text genres they must engage with in reading and writing tasks.

The continued prevalence of English in academic writing necessitates the implementation of prompt actions to address linguistic inequities. This entails the pivotal contribution of unbiased reviewing in the rejection of a paper deemed suitable for publication. Among these actions, one concerns the necessity for editors/reviewers to exhibit increased flexibility in accepting discourse patterns that may be perceived as irregular by members of the Anglophone international community (Ammon, 2012). An exceptionally beneficial instructional methodology that could assist EAL writers in comprehending the communicative nature of the research writing and its various components should be predicated on a genre-based pedagogical approach which entails an initial exploration of the socio-cultural milieu in which the research article is situated. This should subsequently be accompanied by the explicit instruction of the functions and linguistic structures characteristic of standard academic compositions, particularly the most demanding sections identified by our respondents with particular attention to intercultural disparities. These findings can guide novice researchers (such as graduate students) in enhancing their research projects. It is suggested that forthcoming studies concentrate on writing research papers in English (as a second language) compared to Persian (as a first language), as well as a detailed elucidation of the criteria for, or attributes of, a well-crafted manuscript.

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