Ruminar

by Anisa Larassati

Submission date: 31-Oct-2024 08:59AM (UTC+0700)
Submission ID: 2485118867
File name: LE_rev_10933-Article_Text-40608-1-11-20241010.pdf (514.39K)
Word count: 7605
Character count: 45387

E-Structural (English Studies on Translation, Culture, Literature, and Linguistics)
Vol 7 No 02
p-ISSN: 2621-8844, e-ISSN: 2621-9395
http://publikasi.dinus.ac.id/index.php/estructural

Linguistic Readiness of Doctoral Candidates: A Case Study of TOEFL Policy at the Faculty of Agriculture

Hafida Ruminar[1] and Putri Gayatri[2]

[1]Universitas Brawijaya, Malang, Indonesia
[1]hafidaruminar@ub.ac.id
[2]Universitas Brawijaya, Malang, Indonesia
[2]putrigayatri@ub.ac.id

Article History: Submitted June 19th, 2024; Accepted October 8th, 2024; Published November 4th, 2024

Abstract. English language proficiency is critical for doctoral candidates, particularly in non-English-speaking countries like Indonesia, where mastery of reading and writing in English is essential for academic success. This study evaluates the effectiveness of TOEFL scores as indicators of doctoral students' abilities to comprehend and produce scientific texts in English. However, few studies have investigated how TOEFL scores represent doctoral students' reading and writing abilities in scientific texts from the viewpoints of the individuals directly engaged. Thus, this qualitative study addresses the research gap by employing semi-structured interviews with four doctoral students from the Faculty of Agriculture at a public university in Malang, Indonesia, and the Head of the Doctoral Study Program. The data were analyzed inductively using Bloom's taxonomy to assess the depth and complexity of the participants' linguistic readiness. The results were then classified based on the Bloom Taxonomy level from the fundamental knowledge comprehension to the creation of doctoral candidates' scientific articles. The study's findings underscore the need for more comprehensive assessments of English proficiency in postgraduate admissions. While higher TOEFL scores generally indicate better comprehension and writing skills, they do not consistently reflect the specific competencies required for scientific writing. This suggests that the TOEFL score may be insufficient as a sole metric for linguistic readiness. The study contributes to policy discussions by highlighting this need, particularly in disciplines requiring specialized academic writing skills.

Keywords: English proficiency; doctoral candidate; linguistic readiness; TOEFL score

Abstrak. *Kemampuan berbahasa Inggris sangat penting bagi kandidat doktor, terutama di negara-negara yang tidak menggunakan bahasa Inggris seperti Indonesia, di mana penguasaan membaca dan menulis dalam bahasa Inggris sangat penting untuk kesuksesan akademik. Penelitian ini mengevaluasi efektivitas skor TOEFL sebagai indikator kemampuan mahasiswa program doktoral dalam memahami dan menghasilkan teks ilmiah dalam bahasa Inggris. Namun, hanya sedikit penelitian yang menyelidiki bagaimana skor TOEFL mewakili kemampuan membaca dan menulis mahasiswa doktoral dalam teks ilmiah dari sudut pandang individu yang terlibat secara langsung. Oleh karena itu, penelitian kualitatif ini membahas kesenjangan penelitian dengan menggunakan wawancara semi-terstruktur dengan empat mahasiswa doktoral dari Fakultas Pertanian di sebuah universitas negeri di Malang, Indonesia, dan Kepala Program Studi Doktoral. Data dianalisis secara induktif menggunakan taksonomi Bloom untuk menilai kedalaman dan kompleksitas kesiapan linguistik para peserta. Hasilnya kemudian diklasifikasikan berdasarkan level Taksonomi Bloom dari pemahaman pengetahuan dasar hingga pembuatan artikel ilmiah kandidat doktor. Temuan penelitian ini menekankan perlunya penilaian yang lebih komprehensif terhadap kemampuan bahasa Inggris dalam penerimaan mahasiswa program doktoral. Meskipun skor TOEFL yang lebih tinggi umumnya menunjukkan kemampuan pemahaman dan penulisan yang lebih baik, skor tersebut tidak secara konsisten mencerminkan kompetensi spesifik yang diperlukan untuk penulisan ilmiah. Hal ini menunjukkan bahwa skor TOEFL mungkin tidak cukup*

sebagai satu-satunya ukuran untuk kesiapan linguistik. Studi ini berkontribusi pada diskusi kebijakan dengan menyoroti kebutuhan ini, terutama dalam disiplin ilmu yang membutuhkan keterampilan menulis akademis khusus.

Kata kunci: *kandidat doctor; kesiapan linguistic; kemampuan bahasa Inggris; nilai TOEFL*

INTRODUCTION

In this globalized academic landscape, English language proficiency has become paramount for all scholars, including doctoral students as student-researchers. Students from countries where English is not their first language, such as Indonesia, are not the exception. Proficiency in reading and writing plays a crucial role in determining their academic achievement. According to Chen (2017), the academic performance of graduate students whose first language is not English heavily depends on their ability to read and comprehend English scholarly papers. In the same vein, Zhang (2022) argues that proficiency in academic English reading is crucial for graduate students, as it enables them to stay informed of the newest advancements in their respective academic disciplines. Unfortunately, mastering reading skills to comprehend scientific articles in English is not an easy task. A study conducted by Kheirzadeh and Tavakoli (2012) revealed that although English as a Foreign Language (EFL) readers might be able to identify all the individual words in a text, it was discovered that they were unable to generate a coherent understanding of the text.

In addition to mastering proficient reading skills in English, doctoral students must possess exceptional writing skills to effectively communicate their research findings on a global scale through international publication. In recent years, there has been a growing expectation for doctoral students to publish their work in English (Langum & Sullivan, 2017), and it seems to be a challenging requirement for them, especially those who come from non-English-speaking countries (Shamsi & Osam, 2022). Novice non-native English-speaking scholars may encounter significant difficulty getting their work published in English journals since their lack of expertise is further complicated by their unfamiliarity with the language (Huang, 2010). Writing at a doctoral level necessitates a deliberate effort, and for students whose first language is not English, the process of creating and assessing their work to improve both content and structure can sometimes be difficult and time-consuming (Odena & Burgess, 2017). Thus, Tinh et al. (2021) believe that doctoral candidates should receive comprehensive training in English language proficiency to effectively communicate, write, and generate high-quality articles for publication in renowned academic publication.

In short, academia extensively utilizes English as the primary language for accessing global knowledge and publishing research. Therefore, developing exceptional reading and writing proficiency in English can significantly improve students' capacity to conduct high-quality research and effectively communicate their findings on a global scale through international journal articles. This approach, in turn, expands the impact of their scientific contributions. Consequently, in addition to offering training in English for academic purposes, graduate schools, especially doctoral programs, often request a particular Test of English as a Foreign Language (TOEFL) score as a requirement for admission. The TOEFL test has long been the primary proficiency test in the United States (Cushing et al., 2024). The TOEFL's primary objective is to facilitate the process of making high-stakes university admissions decisions (Smart, 2019). In the Indonesian setting, paper-based TOEFL is

commonly requested by numerous doctoral programs, including the doctoral program of the Faculty of Agriculture in Indonesia.

In the context of a doctoral program, TOEFL test is used to see the linguistic readiness of the doctoral program. According to Oxford Dictionary, linguistics is "the scientific study of language" (Linguistics Noun - Definition, Pictures, Pronunciation and Usage Notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com, n.d.), while readiness is "the state of being ready or prepared for something" (Readiness Noun - Definition, Pictures, Pronunciation and Usage Notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com, n.d.). Thus, in this regard, linguistic readiness pertains to the state of being ready or prepared for using the language. In other words, linguistic readiness refers to the proficiency in language that students must possess to effectively interact with academic material, actively contribute to discussions, understand lectures, and produce scholarly work at the doctoral level. Thus, this prerequisite guarantees that candidates have the essential linguistic abilities to gain knowledge, actively participate in worldwide academic discussions, and effectively convey their research discoveries on an international platform. However, although the use of TOEFL as a prerequisite for admission to institutions is widely acknowledged (Karjo & Ronaldo, 2019), it is essential to study the implications of such a prerequisite, exploring how English language proficiency, as reflected by TOEFL scores, reflects the ability of doctoral candidates to comprehend research articles and how it predicts the ability of doctoral candidates to write scientific articles.

Multiple studies have been conducted to examine the effectiveness of the TOEFL as a standardized examination for assessing the language proficiency of test takers. However, the primary emphasis of this research is to examine the validity of the test (e.g., Kyle et al., 2016; Liskinasih, 2016; O'Dwyer et al., 2018), including its content and structure (e.g., Taufiq et al., 2018), as well as its ability to predict outcomes (e.g., Mercado, 2017; Harsch, 2017). Limited studies are conducted to see how the TOEFL scores reflect doctoral students' performance in reading and writing scientific text from the perspective of both the students and the Head of the Doctoral Study Program. Thus, to address the existing research gap, the research questions for this study are as follows:

1. To what extent do TOEFL scores reflect the ability of doctoral candidates to comprehend scientific articles?
2. How do TOEFL scores predict the ability of doctoral candidates to write scientific articles?

These research questions are crucial for evaluating the current TOEFL policy in ensuring doctoral candidates' linguistic readiness. Furthermore, the evaluation will employ the framework of Bloom's taxonomy. According to Akinboboye and Ayanwale (2021), "Bloom Taxonomy is a classification of instructional objectives that teachers want the students to know. The cognitive domain in this taxonomy is fashioned to know student's cognitive level during test or examination" (p.12). The use of this framework in analyzing the data provide insights into the strengths and limitations of using TOEFL scores to measure English proficiency for doctoral candidates, especially in the Faculty of Agriculture.

METHOD

This research was conducted at the Faculty of Agriculture at a public university in Malang, Indonesia. Given the specific subject matter, a case study method was deemed suitable. Heale and Twycross (2018) argue that if a researcher desires to investigate a distinct phenomenon that arises from a

specific entity, then conducting a single-case study is justified. Case studies enable understanding the context in which faculty member perspectives are formed and implemented. The participants of this research were the head of the doctoral study program and the four doctoral students who were voluntarily involved in this research. The selection of research respondents was based on several logical considerations supporting this research's aim and validity.

The selection of students from the 2021 and 2020 cohorts, who are currently in their study years and completing their dissertations, allowed this study to obtain relevant and up-to-date data on students' experiences in overcoming English language challenges during their doctoral studies. All students selected had an average TOEFL score above 500 as the entry requirement for the doctoral program in agricultural science at the Faculty of Agriculture in one of the public universities in Malang. Their scores ensured that they met the minimum standard of English proficiency set by the program. Students completing their dissertations are at a critical stage in their doctoral studies, where their English language skills are put to the maximum test, both in understanding scientific references and writing scientific articles and dissertations. Their experiences are particularly relevant for evaluating the effectiveness of the TOEFL requirement.

Table 1 Doctoral Students' TOEFL Scores Submitted for Entry Requirements

No	Initials	TOEFL Score
1	PNS	520
2	AS	540
3	AA	587
4	CAI	530

The Head of the Doctoral Study Program, a key figure in formulating and implementing academic policies, including the TOEFL requirement for doctoral student admission, offers profound insights into the purpose and rationalization of such policies. With extensive experience and knowledge of the admissions process and academic criteria, he can provide meaningful context and background for understanding the TOEFL policy concerning students' linguistic readiness and academic success. Furthermore, his understanding of the challenges that students face in meeting English language requirements can provide perspectives on the effectiveness and, importantly, the potential for improvement of the existing policy.

By including the perspectives of the Head of the Study Program and doctoral students, this research gets a balanced view from policymakers and those affected by the policy. These perspectives are essential in getting a comprehensive picture of the effectiveness of the TOEFL policy. Using multiple data sources (the Head of Study Program and doctoral students) allows for data triangulation, increasing the research results' validity and reliability. Data from the Head of Study Program can be used to confirm or add context to student data.

Data Collection

The instruments were divided between the head of the study program and the students. The questions for the head of the study program were categorized into four main topics: English Language Proficiency Assessment via TOEFL, English Language Ability Assessment Factors, The Role of English in Academic Success, and the English Language Skills Development Approach. Meanwhile, the questions for the doctoral students were classified into two topics: TOEFL reflects the ability to understand and write scientific articles in English, and the analysis of the linguistic readiness of doctoral candidates based on Bloom's taxonomy framework.

Data were obtained using semi-structured interviews with four doctoral students and the head of the doctoral study program to gain in-depth insights into their views and experiences regarding doctoral students' English proficiency. Semi-structured interviews provide the flexibility to explore topics thoroughly and gain a rich understanding of their perspectives. The researcher first contacted one of the potential respondents to request their participation and scheduled an interview. The four respondents were selected based on the recommendation of a colleague who was also a student in the Doctoral Program in Agricultural Sciences at the Faculty of Agriculture. The interviews were conducted face-to-face and were recorded with an audio recorder, with the respondents' consent. Each interview lasted between 30 minutes to one hour.

Data Analysis

The data analysis process used Bloom's taxonomy, which systematically categorized and analyzed the information obtained from the interviews. Bloom's taxonomy is a framework often used in education to classify learning objectives into various cognitive levels, ranging from basic knowledge to deeper understanding and evaluation abilities (Bharatha et al., 2024). In the context of interview data analysis, Bloom's taxonomy can be used to understand the level of complexity and depth of responses given by respondents.

The following is an explanation of the data analysis process using Bloom's taxonomy related to the interview results:

Knowledge

At this level, the data from the interview were classified as basic information or facts about the TOEFL policy at the Faculty of Agriculture. It included an understanding of the TOEFL requirement, the admission policy, and the purpose of the policy.

Comprehension

At this level, the data were analyzed to understand how respondents interpret the TOEFL policy and how the policy affects the doctoral admission process at the Faculty of Agriculture. This part included their understanding of the policy's implications on doctoral candidates' linguistic preparedness.

Application

Analysis at this level explored how respondents related the TOEFL policy to personal experiences or concrete situations in the context of doctoral admissions at the Faculty of Agriculture. This could involve concrete examples of how the policy affects the selection process of doctoral candidates.

Analysis

The data were analyzed at this level to identify patterns or trends in respondents' responses to the TOEFL policy. It consisted of identifying factors influencing respondents' perceptions of the policy and comparisons between different points of view.

Evaluation

Data were evaluated at this level to evaluate the TOEFL policy's effectiveness in ensuring doctoral candidates' linguistic readiness. It involved an assessment of the strengths and weaknesses of the

policy based on the respondents' responses and suggestions for policy improvements or changes that may be needed.

Creation

Finally, at this level, data analysis led to conclusions and recommendations based on the interview findings. These findings included suggestions for improvements to the TOEFL policy, implications for doctoral admission practices in the Faculty of Agriculture, and directions for further research.

Using Bloom's taxonomy in the data analysis process, the researcher could glean a deeper understanding of the respondents' responses to the TOEFL policy and its implications for the linguistic readiness of doctoral candidates at the Faculty of Agriculture.

RESULTS AND DISCUSSION

This section of the article provides a comprehensive analysis of the research conducted on the linguistic readiness of doctoral candidates at the Faculty of Agriculture, focusing on the TOEFL score entry requirement. The analysis utilizes Bloom's Taxonomy as a framework to classify and examine the interview data collected during the study. This approach allowed for a nuanced understanding of the implications of the TOEFL policy on doctoral candidates' English proficiency, particularly in the context of writing and reading scientific articles.

1. Reflection of TOEFL Scores on Comprehending Scientific Articles

The first research question addressed whether the TOEFL entry requirement score reflects the doctoral student's ability to comprehend scientific articles in English. The results of the interview are presented in Table 2.

Table 2 Perceptions of TOEFL Scores in Reflecting the Ability to Comprehend Scientific Articles in English

Question	Initial of Respondents	Answer
In your learning experience, to what extent does your TOEFL score reflect your ability to understand scientific references in English? *Dalam pengalaman belajar Anda, sejauh mana nilai TOEFL Anda mencerminkan kemampuan Anda dalam memahami referensi ilmiah berbahasa Inggris?*	CAI	It reflects very much. My score is 530, which I think is standard, so my ability to understand scientific articles is also standard. I still need translation help. Overall, I can understand the reading, but if I need to go into detail, that's where I struggle. I still use platforms like Google Translate. However, Google Translate's results usually don't match the terminology in my field, so I sometimes have to double-check and work on it myself without any platform assistance. So yes, I think my TOEFL score highly reflects my ability to understand scientific references. I got the highest score in the Reading section on the TOEFL test.

		(*Sangat mencerminkan. Karena nilai saya 530, yang menurut saya itu standard ya, jadi ya kemampuan saya memahami artikel ilmiah ya standard juga. Jadi masih perlu bantuan translate. Jadi secara garis besar, saya bisa memahami bacaan, namun jika harus detail itu yang saya kesulitan. Saya masih menggunakan bantuan paltform, seperti Google Translate. Namun, biasanya kan hasil google translate tidak sesuai dengan bidang saya istilahnya, jadi ya terkadang tetap harus dicek lagi dan dikerjakan sendiri tanpa bantuan Google Translate atau platform yang lain. Jadi ya menurut saya nilai TOEFL saya sangat mencerminkan kemampuan saya dalam memahami bacaan referensi ilmiah. Pada test toefl, saya mendapatkan nilai tertinggi di bagian Reading.*)
	AA	Generally speaking, using the TOEFL PBT can measure and reflect my reading ability. I also once took an English course where I was taught how to understand scientific texts, such as through scanning and skimming. However, because my field is agriculture, I sometimes struggle with vocabulary outside of the agricultural field. (*Kalau secara general menggunakan TOEFL PBT itu dapat mengukur dan mencerminkan kemampuan reading saya. Selain itu, saya dulu pernah mengambil kursus bahasa Inggris dan diajari cara memahami sebuah teks ilmiah, yaitu dengan cara scanning dan skimming. Namun, karena bidang saya adalah pertanian, jadinya saya juga kadang agak kesulitan memahami kosa kata yang di luar bidang pertanian.*)
	AS	In my opinion, the reading section in the TOEFL already reflects my ability to understand scientific references. Usually, when reading a scientific article, especially for dissertation references or assignments, I always read the abstract first, then directly look at the graphs or data presented, and then the conclusion. *(Kalau menurut saya, untuk reading section dalam TOEFL sudah dapat mencerminkan kemampuan saya dalam*

		memahami refernsi ilmiah. Biasanya dalam membaca artikel ilmiah, khususnya untuk referensi disertasi atau tugas saya, saya selalu membaca abstrak nya, kemudian langsung melihat grafik atau data yang disajikan, kemudian conclusion.)
	PNS	I think my last TOEFL score is sufficient to reflect my reading ability. When understanding scientific articles, I usually read the abstract and then interpret the data or graphs in the article. Since my field is agriculture, I generally need to read the data results. For specific or difficult words, I usually skip them, or sometimes I look them up on Google Translate. Then I usually look at the conclusion to understand the core of the scientific article I'm reading. (*Menurut saya, nilai TOEFL yang kemarin saya dapatkan sudah cukup mencerminkan kemampuan reading saya. Dalam memahami artikel ilmiah biasanya saya membaca bagian abstrak, kemudian mengintepretasikan data atau grafik yang terdapat dalam artikel tersebut. Karena bidang saya pertanian, biasanya yang saya perlukan adalah membaca hasil data. Untuk kata – kata yang spesifik atau sulit biasanya saya lewati, atau terkadang saya mencari artinya di Google Translate. Kemudian saya biasanya melihat bagian conclusion untuk memahami inti dari artikel ilmiah yang saya baca.*)

Based on the interview results, one of the respondents, CAI, said that her TOEFL score might reflect her actual English ability to comprehend scientific articles. However, she thought that getting 530 reflects average skills, and she still needs help with the Translation platform to understand the articles. This finding indicates that while TOEFL scores correlate with basic reading comprehension skills, they may not fully capture the capacity to critically analyze and synthesize complex scientific texts (O'Dwyer et al., 2018).

On the other hand, students with higher TOEFL scores, in this case, AA and AS, generally demonstrated better comprehension skills, enabling them to understand complex texts and integrate information effectively into their research. When conducting interviews, CAI, PNS, and AS highlighted practical strategies for understanding scientific articles. These strategies included reading the abstract, interpreting graphs depicting research results, and reviewing the conclusion. They also mentioned using Google Translate to look up unfamiliar words. However, the strategies applied by those three respondents were aligned with the academic reading strategies by Antonelli & Donelli

(2020), which propose the use of frameworks like PICOS (population, intervention, comparison, outcomes, and study design) to guide students in evaluating research papers.

The association between high TOEFL reading scores was significantly associated with the ability to comprehend academic texts across various disciplines, which is supported by Ginther & Yan (2018). The study discusses how reading, listening, writing, and speaking skills, assessed in the TOEFL, are considered sub-skills in general language proficiency. This finding aligns with the idea that the reading section of the TOEFL exam, which includes passages on topics from natural sciences to social sciences, reasonably measures a student's reading comprehension skills.

2. Reflection of TOEFL Scores on Writing Scientific Articles

The second research question addresses how TOEFL scores predict the writing ability of doctoral candidates when it comes to scientific articles, and the interview results are delineated in Table 3.

Table 3 Perceptions of TOEFL Scores in Reflecting the Ability to Write Scientific Articles in English

Question	Initial of Respondents	Answer
Based on your learning experience, to what extent do your TOEFL scores reflect your ability to write scientific articles in English? *Dalam pengalaman belajar Anda, sejauh mana hasil nilai TOEFL Anda mencerminkan kemampuan Anda dalam menulis artikel ilmiah dalam bahasa Inggris?*	CAI	In my opinion, my TOEFL test scores do not reflect my ability to write scientific articles in English. My weakness is writing in English. I cannot relate the grammar tested in TOEFL to the writing of articles. When writing scientific articles, I usually write them in Indonesian and use translation services. If I have to write a scientific article, besides using grammar, the most challenging part for me is writing the conclusion. I always struggle with the conclusion section. (*Menurut saya, nilai tes TOEFL saya tidak dapat mencerminkan kemampuan menulis artikel ilmiah dalam bahasa Inggris. Kelemahan saya adalah menulis dalam bahasa Inggris. Saya tidak bisa mengkaitkan grammar yang ada di tes TOEFL untuk digunakan dalam penulisan artikel. Dalam menulis artikel ilmiah, biasanya saya menulisnya dalam bahasa Indonesia, dan menggunakan jasa penerjemahan. Jika harus menulis artikel ilmiah, selain penggunaan grammar, bagian yang menurut saya paling sulit adalah menulis kesimpulan. Saya selalu kesulitan membuat bagian kesimpulan.*)
	AA	First, I want to clarify that there are different types of TOEFL, like PBT, iBT, and others. For the doctoral program admission at UB, using TOEFL PBT is acceptable. However, in my opinion,

		TOEFL PBT does not reflect writing ability. If the focus is on writing, it is better to use TOEFL iBT, as it better represents our writing skills in English. Personally, I have taken the TOEFL iBT, and the results met the writing standards. I am not an expert in writing scientific articles in English, but I can do it. This is proven by the two scientific articles I have published in international journals. (*Sebelumnya saya ingin mengklarifikasi dulu bahwa jenis TOEFL kan bermacam macam, ada PBT, ada iBT, dan lainnya. Untuk syarat masuk S3 Pascasarjana UB, penggunaan TOEFL PBT tidak masalah. Tapi menurut saya, TOEFL PBT tidak dapat mencerminkan kemampuan untuk menulis. Jika ingin fokus ke writing, sebaiknya menggunakan TOEFL iBT, itu lebih merepresentasikan kemampuan menulis kita dalam bahasa Inggris.* *Saya pribadi sudah pernah mengambil TOEFL iBT, dan hasilnya sudah memenuhi standar dalam hal writing. Untuk menulis artikel ilmiah bahasa Inggris, saya bukan termasuk expert, tapi saya bisa. Terbukti dari dua artikel ilmiah bahasa Inggris yang sudah publish di jurnal internasional.*)
	AS	In my opinion, the Paper-Based TOEFL Test, which I used for admission to the postgraduate program, does not reflect my writing ability because it only tests grammar, not writing skills. However, I can write scientific articles in English because I have done so several times for publication in international journals. If there is an English training program, especially for scientific writing, it should focus on writing the introduction, as I sometimes struggle to connect ideas from previous research to the latest research, such as linking sentences together. (*Menurut saya nilai TOEFL Paper Based Test yang saya gunakan untuk syarat masuk ke Pascasarjana tidak bisa mencerminkan kemampuan menulis saya, karena di test tersebut hanya diujikan tentang grammar bukan kemampuan menulis. Tapi untuk menulis artikel ilmiah dalam bahasa Inggris, saya bisa karena sudah beberapa kali menulis untuk*

		publikasi di jurnal internasional. Namun, jika ada pelatihan Bahasa inggris, seperti penulisan artikel ilmiah, sebaiknya ditekankan pada penulisan introduction, karena saya kadang juga kesulitan untuk menyambungkan ide dari peneliti sebelumnya kemudian ke penelitian yang terbaru seperti menyambungkan kalimat-kalimatnya.)
	PNS	In my opinion, my TOEFL test scores do not reflect my ability to write scientific articles in English, especially since the TOEFL PBT does not include a writing test, only a grammar test. During my doctoral studies, I rarely used English for my assignments, such as reviewing articles, as all were done in Indonesian. Therefore, my English writing skills are not well-practiced. However, I can write scientific articles in English with the help of Google Translate. *(Menurut saya, nilai test TOEFL saya tidak bisa mencerminkan kemampuan saya menulis artikel ilmiah dalam bahasa Inggris. Apalagi di TOEFL PBT tidak ada test menulis dalam bahasa Inggris, hanya tes grammar saja. Selama berkuliah S3, saya jarang menggunakan bahasa Inggris untuk tugas tugas saya, seperti mereview artikel, semua dalam bahasa Indonesia. Sehingga, kemampuan menulis bahasa Inggris saya kurang terlatih. Tapi saya bisa menulis artikel ilmiah dalam bahasa Inggris, menggunakan bantuan Google Translate.)*

The data indicated a mixed correlation between TOEFL scores and the ability to write scientific articles in English. While two respondents, AA and AS, with high TOEFL scores exhibited strong writing skills, others struggled despite meeting the entry requirements. This discrepancy suggests that TOEFL scores alone may not be a definitive indicator of writing proficiency for scientific purposes.

Several studies support these findings, highlighting that standardized tests like TOEFL primarily assess general academic English skills rather than specific competencies needed for scientific writing. For instance, a study by Ling et al. (2014) demonstrated that while TOEFL scores correlate with general writing abilities, they do not necessarily predict the ability to write discipline-specific academic texts. Ihlenfeldt & Rios (2023) examined a meta-analysis on the validity of English language proficiency assessments for college admissions to identify their strengths and weaknesses. The findings of this study highlight that standardized English language proficiency assessments, including the TOEFL, prioritize the development of reading, writing, listening, and speaking skills, which are critical for effective communication at the college level. However, they do not focus on the particular competencies required for scientific writing.

In this study, the Postgraduate Program at the Faculty of Agriculture is not a TOEFL organizer but only requires a certificate of TOEFL results as an entry requirement for Doctoral admission. Certificates or TOEFL Score reports from the TOEFL Paper Based Test are acceptable for admission requirements. The paper-based TOEFL exam includes two parts of written structure: students must analyze the grammar used in academic or particular contexts and error analysis. However, these tasks do not fully replicate the demands of writing scientific articles, which require a deep understanding of field-specific terminology, complex argumentation, and adherence to rigorous formatting and citation standards.

3. Analysis of Linguistic Readiness of Doctoral Candidates Based on Bloom's Taxonomy Framework

In this section, we analyze the findings concerning the linguistic readiness of doctoral candidates based on Bloom's Taxonomy framework. The primary objective of this research was to examine the correlation between English language proficiency, evaluated through TOEFL scores, and the doctoral candidates' capacity to engage in academic demands, ranging from fundamental knowledge comprehension to the creation of scientific articles to be published in the reputable International Journal.

1. Knowledge and Comprehension (Levels 1 and 2 of Bloom's Taxonomy)

The initial phases of data analysis, categorized under Knowledge and Comprehension in Bloom's Taxonomy, involved compiling basic information about the TOEFL policy and understanding how it influences the doctoral admissions process. Interviews with the head of the doctoral study program and doctoral students revealed an agreement that the TOEFL score requirement was primarily instituted to ensure that candidates possess a minimal proficiency in English, which is deemed necessary for engaging with global scientific communities.

Most respondents acknowledged the rationale behind this requirement. However, there was a significant variation in perceptions about its adequacy in assessing actual linguistic readiness. While the policy aims to standardize English proficiency levels among prospective students, doubts remain about whether the TOEFL scores accurately reflect candidates' abilities to engage with complex academic materials. This finding aligns with the study by Mustafa & Anwar (2018), which found that TOEFL scores can lead to misjudgment. Their findings highlight the debate on using TOEFL scores to measure students' readiness for academic challenges.

2. Applying (Level 3 of Bloom's Taxonomy)

Based on the interview, applying this knowledge in writing coherent and well-structured scientific articles showed mixed results. While some students could apply their understanding effectively, others struggled with the nuances of scientific writing, indicating that a high TOEFL score does not automatically translate to proficiency in academic writing. The challenges in applying knowledge to write coherent scientific articles are evident in various studies. A study by Mirallas (2021) focuses on students' perceptions of a scientific writing course in an EFL context, indicating that proficiency in academic writing involves more than just language proficiency as assessed by tests like TOEFL. It implies that while a high TOEFL score may reflect language competence, it may not directly translate to proficiency in academic writing, requiring specific skills and strategies beyond language proficiency alone.

3. Analyzing and Evaluating (Levels 4 and 5 of Bloom's Taxonomy)

Students with higher TOEFL scores demonstrate a stronger ability to analyze and critique scientific articles, indicating a clear correlation between linguistic proficiency and critical thinking skills (Kalantar, 2023). This proficiency enables them to evaluate research methodologies and engage in critical discussions about the findings, showcasing a deeper level of comprehension and interaction with the material (Chen & Lin, 2023). Our interview data provided valuable insights into the effectiveness of the TOEFL policy. One of the respondents, with the initials AA, made a compelling point. He stated that using the TOEFL PBT score, which is still accepted at the Faculty of Agriculture, cannot reflect a person's ability to write in English. The Faculty of Agriculture should have required TOEFL iBT test results to have more qualified doctor candidates. Other respondents, CAI and PNS, supported his viewpoint, highlighting a common concern. It became evident that while the TOEFL requirement, specifically TOEFL PBT, serves as a useful preliminary screening tool, it does not comprehensively address all facets of language proficiency needed for doctoral studies. Most respondents pointed out that the ability to pass a standardized test does not equate to the ability to write or comprehend academic papers effectively and that a more holistic approach to assessing language proficiency, such as through writing samples or interviews, may be more beneficial.

4. Creating (Level 6 of Bloom's Taxonomy)

At the highest level of Bloom's Taxonomy, the ability to create original research proposals or articles was not suitably linked to TOEFL scores. This lack of correlation emphasizes the multifaceted nature of scientific writing and the need for skills beyond language proficiency (Bridgeman et al., 2016; Staples et al., 2018). Bridgeman et al. (2016) explore the limitations of using English language assessments to predict academic performance, emphasizing that these evaluations may overlook the complex skills necessary for scientific writing. Furthermore, Staples et al. (2018) reveal the differences in writing demands between standardized exams and academic writing, affirming that TOEFL scores may not directly correlate with the ability to create original research proposals or articles. While linguistic proficiency is fundamental, creating original scientific content requires diverse cognitive abilities. The head of the Doctoral Program highlighted that beyond language skills, doctoral candidates must possess critical thinking, abstract reasoning, and the capability to synthesize information into new concepts.

These findings have significant implications for academic institutions and educators, particularly for the head of the Doctoral Program at The Faculty of Agriculture. A comprehensive approach to nurturing doctoral candidates is necessary, and he plays a crucial role. As the interview with him revealed, linguistic proficiency is essential, and therefore, routine seminars or English academic writing workshops are not just beneficial but crucial. By fostering creativity, critical thinking, and writing skills, these initiatives can significantly enhance the originality and productivity of scientific research writing.

Based on Bloom's taxonomy framework, analysis of doctoral candidates' linguistic readiness at this level sheds light on the relationship between TOEFL scores in predicting academic performance. TOEFL PBT measures English competence, especially in grammar knowledge and reading comprehension; doubts persist about its sufficiency in effectively capturing candidates' readiness for academic challenges. Its application, more specifically in scientific writing, varies. There are cases of suboptimal writing performance from some candidates who scored high in TOEFL, indicating the reality that there is a need for skills beyond basic language proficiency. Moreover, while higher TOEFL scores are correlated with better reading skills, TOEFL PBT may overlook key competencies

required for doctoral studies, such as academic writing and critical analysis. It is even more evident at the highest level of Bloom's Taxonomy, where the creation of original research proposals or articles is not adequately predicted by TOEFL scores, highlighting the need for a more holistic approach to evaluating linguistic readiness. These findings suggest that academic institutions should use more assessment tools, such as writing samples or interviews, and prepare doctoral candidates for research through academic writing workshops and seminars.

CONCLUSION

The findings revealed several critical insights into the relationship between TOEFL scores and the linguistic readiness of doctoral candidates at the Faculty of Agriculture. The investigation revealed that although TOEFL scores offer a basic assessment of English language competency, they do not fully capture analytical and critical reading abilities to understand complex scientific text. Moreover, the research indicated no correlation between the paper-based TOEFL scores and the ability to write scientific articles. Higher TOEFL scores were generally associated with more structured and coherent writing, yet this was not solely a reliable indicator of scientific writing proficiency. The particular demands of scientific writing were challenging even for students with high TOEFL scores, such as using specific field terminology and constructing complex arguments.

Furthermore, the head of the doctoral study program at the Faculty of Agriculture thought that the policy should look beyond the TOEFL score and consider factors such as the student's academic performance, writing skills, and ability to communicate effectively in English. In his opinion, those factors would provide a more accurate evaluation of student's linguistic readiness and better prepare them for the demands of doctoral studies. Based on the findings, some policy implications and recommendations can be drawn. Firstly, the Faculty of Agriculture should adjust the English Proficiency score requirements to be more relevant for doctoral candidates, for example, by providing a minimum requirement for TOEFL iBT scores or other English Proficiency Tests that test students' writing skills. This adjustment is crucial as it will ensure doctoral candidates have the necessary language skills for academic success. Secondly, the Faculty of Agriculture should urgently facilitate English training for doctoral students, focusing on the specific language skills required for academic success. Future research could explore the effectiveness of various language support for postgraduate students in Indonesia, such as academic writing workshops, English study groups, and other language mentoring programs.

REFERENCES

Akinboboye, J. T., & Ayanwale, M. A. (2021). Bloom taxonomy usage and psychometric analysis of classroom teacher made test. *African Multidisciplinary Journal of Development*, *10*(1), 10-21.

Antonelli, M., & Donelli, D. (2020). Reading and understanding scientific articles. *The Clinical Teacher*, 17(6), 612-616. https://doi.org/10.1111/tct.13159

Bharatha, A., Ojeh, N., Fazle Rabbi, A. M., Campbell, M., Krishnamurthy, K., Layne-Yarde, R., & Majumder, M. A. (2024). Comparing the performance of Chat GPT-4 and medical students on MCQS at varied levels of Bloom's Taxonomy. *Advances in Medical Education and Practice*, 15, 393-400. https://doi.org/10.2147/amep.s457408

Bridgeman, B., Cho, Y., & DiPietro, S. (2016). Predicting grades from an English language assessment: the importance of peeling the onion. *Language Testing*, 33(3), 307-318. https://doi.org/10.1177/0265532215583066

Chen, K. T.-C. (2017). An exploratory study of NNES graduate students' reading comprehension of English journal articles. *Reading in a Foreign Language, 29* (1). http://hdl.handle.net/10125/66726

Chen, Q., & Lin, A.M.Y. (2023). Facilitating the Comprehension of Academic Content in the TOEFL iBT Test Preparation Classroom. In: Raza, K., Reynolds, D., Coombe, C. (eds) *Handbook of Multilingual TESOL in Practice*. Springer, Singapore. https://doi.org/10.1007/978-981-19-9350-3_23

Cushing, S. T., Ren, H., & Tan, Y. (2024). The Use of TOEFL iBT® in Admissions Decisions: Stakeholder Perceptions of Policies and Practices. *ETS Research Report Series*.

Ginther, A., & Yan, X. (2017). Interpreting the relationships between TOEFL iBT scores and GPA: language proficiency, policy, and profiles. *Language Testing*, 35(2), 271-295. https://doi.org/10.1177/0265532217704010

Harsch, C., Ushioda, E., & Ladroue, C. (2017). Investigating the predictive validity of TOEFL iBT® test scores and their use in informing policy in a United Kingdom university setting. *ETS Research Report Series*, *2017*(1), 1-80.

Heale, R., & Twycross, A. (2018). What is a case study?. *Evidence-based nursing*, *21*(1), 7-8.

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.

Ihlenfeldt, S. D., & Rios, J. A. (2023). A meta-analysis on the predictive validity of English language proficiency assessments for college admissions. *Language Testing*, 40(2), 276-299. https://doi.org/10.1177/02655322221112364

Kalantar, O. S. (2024). Attaining C1 Level Scores in TOEFL iBT: From Challenges to Needs. *International Journal of Language Testing (IJLT)*. https://doi.org/10.22034/ijlt.2023.414966.1287

Karjo, C. H., & Ronaldo, D. (2019). The validity of TOEFL as entry and exit college requirements: Students' perception. *Eleventh Conference on Applied Linguistics (CONAPLIN 2018)*

Kheirzadeh, S., & Tavakoli, E. (2012). The Causes of Reading Difficulty: The Perception of Iranian EFL Post-graduate and Under-graduate Students. *Journal of Language Teaching & Research, 3*(1).

Kyle, K., Crossley, S. A., & McNamara, D. S. (2016). Construct validity in TOEFL iBT speaking tasks: Insights from natural language processing. *Language Testing, 33*(3), 319-340.

Langum, V., & Sullivan, K. P. (2017). Writing academic English as a doctoral student in Sweden: Narrative perspectives. *Journal of Second Language Writing, 35*, 20-25.

Ling, G., Powers, DE & Adler, R.M. (2014). Do TOEFL iBT® Scores Reflect Improvement in English-Language Proficiency? Extending the TOEFL iBT Validity Argument. *ETS Research Reports Series*, 2014: 1-16. https://doi.org/10.1002/ets2.12007.

Linguistics noun - Definition, pictures, pronunciation, and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. (n.d.). https://www.oxfordlearnersdictionaries.com/definition/english/linguistics?q=linguistics

Liskinasih, A. (2016). The validity evidence of the TOEFL test as a placement test. *Jurnal Ilmiah Bahasa dan Sastra, 3*(2), 173-180.

Mercado, V. (2017, April). Using TOEFL sub-scores to predict SPEAK test outcome: A multivariate Bayesian model. In *2017 Systems and Information Engineering Design Symposium (SIEDS)* (pp. 192-197). IEEE.

Mirallas, C. A. (2021). Students' perceptions of a scientific writing course: SFL Genre Pedagogy in an EFL context. *Signo*, 46(86), 86-102 https://doi.org/10.17058/SIGNO.V46I86.15900

Mustafa, F. & Anwar, S. (2018). Distinguishing TOEFL Score: What is the lowest score considered to be a TOEFL score?. *Pertanika Journal of Social Sciences and Humanities*, 26(3), 1995 - 2008.

O'Dwyer, J., Kantarcıoğlu, E., & Thomas, C. (2018). An investigation of the predictive validity of the toefl ibt® test at an English-medium university in Turkey. *ETS Research Report Series*, 2018(1), 1-13. https://doi.org/10.1002/ets2.12230

Odena, O., & Burgess, H. (2017). How doctoral students and graduates describe facilitating experiences and strategies for their thesis writing learning process: A qualitative approach. *Studies in Higher Education, 42*(3), 572-590.

readiness noun - Definition, pictures, pronunciation, and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. (n.d.). https://www.oxfordlearnersdictionaries.com/definition/english/readiness?q=readiness

Shamsi, A. F., & Osam, U. V. (2022). Challenges and support in article publication: Perspectives of non-native English speaking doctoral students in a "Publish or No Degree" context. *Sage Open, 12*(2), 21582440221095021.

Smart, J. (2019). Affordances of TOEFL writing tasks beyond university admissions. *Assessing Writing, 41*, 80-83.

Staples, S., Biber, D., & Reppen, R. (2018). Using corpus-based register analysis to explore the authenticity of high-stakes language exams: a register comparison of TOEFL iBT and disciplinary writing tasks. *The Modern Language Journal*, 102(2), 310-332. https://doi.org/10.1111/modl.12465

Taufiq, W., Santoso, D. R., & Fediyanto, N. (2018, January). Critical analysis on TOEFL ITP as a language assessment. In *1st International Conference on Intellectuals' Global Responsibility (ICIGR 2017)* (pp. 226-229). Atlantis Press.

Tinh, D. T., Thuy, N. T., & Ngoc Huy, D. T. (2021). Doing Business Research and Teaching Methodology for Undergraduate, Postgraduate, and Doctoral Students-Case in Various Markets Including Vietnam. *Ilkogretim Online, 20*(1).

Zhang, X. (2022). A Study on EFL graduate students' academic English reading strategies. *Open Journal of Modern Linguistics, 12*(6), 799-812.

ACKNOWLEDGMENT

The author would like to thank the head of the doctoral study program and the four doctoral candidates at the Faculty of Agriculture who were willing to participate in interviews for this research voluntarily.

Ruminar

ORIGINALITY REPORT

9%	7%	4%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	repository.uin-malang.ac.id Internet Source	2%
2	www.citethisforme.com Internet Source	1%
3	Submitted to Program Pascasarjana Universitas Negeri Yogyakarta Student Paper	<1%
4	core.ac.uk Internet Source	<1%
5	www.sciencegate.app Internet Source	<1%
6	Ambadasu Bharatha, Nkemcho Ojeh, Ahbab Mohammad Fazle Rabbi, Michael Campbell et al. "Comparing the Performance of ChatGPT-4 and Medical Students on MCQs at Varied Levels of Bloom's Taxonomy", Advances in Medical Education and Practice, 2024 Publication	<1%
7	Submitted to University of Arizona Student Paper	<1%

8	experts.umn.edu Internet Source	<1%
9	"Second Handbook of English Language Teaching", Springer Science and Business Media LLC, 2019 Publication	<1%
10	A.H.G. Kusumah, C.U. Abdullah, D. Turgarini, M. Ruhimat, O. Ridwanudin, Y. Yuniawati. "Promoting Creative Tourism: Current Issues in Tourism Research", CRC Press, 2021 Publication	<1%
11	Submitted to Universiti Malaysia Sabah Student Paper	<1%
12	discovery.dundee.ac.uk Internet Source	<1%
13	worldwidescience.org Internet Source	<1%
14	Jordi Heeren. "Academic and general language proficiency in post-entry language assessment", ITL - International Journal of Applied Linguistics, 2024 Publication	<1%
15	Ling, Guangming, Donald E. Powers, and Rachel M. Adler. "Do TOEFL iBT ® Scores Reflect Improvement in English-Language Proficiency? Extending the TOEFL iBT Validity	<1%

	Argument : Do TOEFLiBT ® Scores Reflect Improvement in English-Language Proficiency?", ETS Research Report Series, 2014. Publication	
16	dspace.unive.it Internet Source	<1 %
17	repository.upi.edu Internet Source	<1 %
18	stars.library.ucf.edu Internet Source	<1 %
19	Submitted to Newcastle College Group Student Paper	<1 %
20	Virginia Langum, Kirk P.H. Sullivan. "Writing academic english as a doctoral student in sweden: narrative perspectives", Journal of Second Language Writing, 2017 Publication	<1 %
21	dergipark.org.tr Internet Source	<1 %
22	eprints.nottingham.ac.uk Internet Source	<1 %
23	livrepository.liverpool.ac.uk Internet Source	<1 %
24	psasir.upm.edu.my Internet Source	<1 %

25	quizlet.com Internet Source	<1%
26	Fateme Chahkandi. "Doctoral students' perceptions of the English language proficiency completion criteria in Iran: making a case for English for General Academic Purposes (EGAP)", Journal of Applied Research in Higher Education, 2024 Publication	<1%
27	Fitzgerald, Lauren. "The Oxford Guide for Writing Tutors", Oxford University Press Publication	<1%
28	Jim McKinley, Heath Rose. "The Routledge Handbook of Research Methods in Applied Linguistics", Routledge, 2019 Publication	<1%
29	Reka R. Jablonkai, Eniko Csomay. "The Routledge Handbook of Corpora and English Language Teaching and Learning", Routledge, 2022 Publication	<1%
30	Sachiko Yasuda. "Does “more complexity” equal “better writing”? Investigating the relationship between form-based complexity and meaning-based complexity in high school EFL learners' argumentative writing", Assessing Writing, 2024 Publication	<1%

31	Sara T. Cushing, Haoshan Ren, Yi Tan. " The Use of ® in Admissions Decisions: Stakeholder Perceptions of Policies and Practices ", ETS Research Report Series, 2024 Publication	<1 %
32	Slobodanka Dimova. "English language requirements for enrolment in EMI programs in higher education: A European case", Journal of English for Academic Purposes, 2020 Publication	<1 %
33	Spiros Papageorgiou, Sha Wu, Ching-Ni Hsieh, Richard J. Tannenbaum, Mengmeng Cheng. " Mapping the ® Test Scores to China's Standards ofEnglish Language Ability: Implications for Score Interpretation and Use ", ETS Research Report Series, 2019 Publication	<1 %
34	ebin.pub Internet Source	<1 %
35	essay.utwente.nl Internet Source	<1 %
36	files.eric.ed.gov Internet Source	<1 %
37	journal.uniku.ac.id Internet Source	<1 %

38	jsi.cs.ui.ac.id Internet Source	<1 %
39	link.springer.com Internet Source	<1 %
40	rumahpengetahuan.web.id Internet Source	<1 %
41	scholarspace.manoa.hawaii.edu Internet Source	<1 %
42	www.researchgate.net Internet Source	<1 %
43	Kristian Adi Putra, Nur Arifah Drajati. "Post Pandemic L2 Pedagogy", Routledge, 2021 Publication	<1 %
44	Submitted to Dordt University Student Paper	<1 %

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		