

Reviewer Perceptions of Englishes in the *International Journal of Nuclear Security*

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Rachel Ann Brooks

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Abstract

Linguistic bias in academic publishing, the idea that a manuscript would be rejected due to its language alone, is a growing area of concern and study. Scholars are particularly concerned that EAL (English as an Additional Language, often referred to as “non-native”) writers face this bias more than first-language English authors. The research on linguistic bias relies on understanding the perceptions about language that belong to reviewers, authors, and other parties involved in publication. This MA thesis project investigates peer reviewer perceptions of English language usage in the manuscripts that they review using the *International Journal of Nuclear Security* (IJNS) as the site of research. Data sources came from an anonymous online survey and peer reviews from published IJNS manuscripts. Findings show that the participants, reviewers for nuclear security academic research, do notice language usage in manuscripts and consciously decide how to respond to perceived errors. Reviewers also seem to expect authors to use some standard, correct language when writing English-language manuscripts for international, academic publication, but none defined exactly what the standard or correct language was. These results suggest that IJNS and other international, academic, English-language publications should communicate clearly with reviewers about what is expected of them regarding comments about language in reviews and what the publication’s understanding of correct language is. The larger conversation about linguistic bias may be more productively conducted if it is shifted to a conversation about standard and nonstandard language rather than focusing on the native/non-native author divide.

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Chapter 1: Introduction

In the international academic publishing world, writing in English is a valuable skill, as English usage in academic publishing continues to dominate most fields of international academic study (Cargill & Burgess, 2017; Curry & Lillis, 2004, 2018; Hyland, 2020; Lillis & Curry, 2006, 2010). This includes the field of nuclear security, consisting of nuclear-security-related research from nuclear physics and facility cybersecurity to historical world politics and current government policy. The international field of nuclear security is largely conducted in English, and authors in that field want to publish in English to widely disseminate their research and gain credibility for publishing in an English-medium journal. In the fields that study English used in international academic publishing, a scholar's knowledge of English for academic purposes is referred to as "linguistic capital," a skill that provides advantages to authors when participating in the "linguistic market" of publishing internationally in English (Koerber & Graham, 2016, p. 65). Nuclear security scholars participate in the linguistic market dominated by English internationally, and they gain "linguistic capital" as their knowledge of and experience with English grows. Nuclear security researchers use their linguistic capital when writing for international nuclear security publications like the *International Journal of Nuclear Security* (IJNS), an open-access academic journal in the nuclear security field. The journal exclusively publishes in English, and editors see a variety of Englishes since the authors come from a variety of linguistic backgrounds.

I am one of the editors for IJNS; I have volunteered with them since 2019. In 2020, I was chosen for a fellowship position as part of my Master's program, which allowed me to manage the daily editorial duties for the journal. In that position, I frequently edited submissions, communicated with authors and reviewers, and read reviews to write decision letters for

submissions. I became familiar with the writing style of many authors, the comments that reviewers most frequently made, and the editorial work necessary to publish manuscripts in IJNS. I began to feel passionately that the scholars in nuclear security across the world deserved to have a voice in the linguistic market of English in international publication, regardless of their English linguistic capital, and I could help them achieve their goal of international publication. In my mind, the journal moved from a job to a passion project, offering my skills to aid researchers across the world.

In my experience working with manuscripts for the journal, I have noticed that many of the authors published in IJNS are international authors – that is, they are not from the U.S., where the journal is managed. In order to publish their research internationally, some of those authors must write in a language that is possibly not the one that they are most familiar with. In the context of this study, English users who did not learn English as a first language but who now use it as an additionally-learned language are referred to as English as an Additional Language (EAL) users (Cargill & Burgess, 2017; Flowerdew, 2019; Hultgren, 2019; Hyland, 2016a). To examine how the global dominance of English in the publishing world affects authors who use EAL, researchers look at how EAL writers approach writing in English and how publishers and reviewers perceive differences in the writing of EAL authors compared to authors who speak English as their first language. This research, particularly that which Theresa Lillis and Mary Jane Curry publish (Curry & Lillis, 2004, 2013, 2018; Lillis & Curry, 2006, 2010, 2015), has been helpful for the IJNS editorial team in their assistance to publish EAL authors in the journal. IJNS editors learn about Lillis and Curry's language brokering methods. Language brokers help authors in their journey to publication. Language brokering acts include professional editors editing authors' manuscripts before they are published, colleagues reading

through an author's manuscript before they submit it to a publisher, and friends or family checking the grammar before the author pursues publication (this will be further discussed in Chapter 2) (Curry & Lillis, 2013; Lillis & Curry, 2006, 2015). Their research also aids editors' understanding about international academic publication and the struggles that many international authors face when trying to publish their work (Curry & Lillis, 2004, 2013; Lillis & Curry, 2006, 2010, 2015).

Recent research has shown that EAL authors in various academic fields of study claim that first-language authors have an advantage, as they have more knowledge and experience with the standardized Englishes that are used in publications (Cargill & Burgess, 2017; Flowerdew, 2019; Politzer-Ahles et al., 2016, 2020). Though no language can ever be truly standardized and concrete, and no language or dialect is inherently more valuable than another, American and British Englishes seem to be the standards that many academic publications use judging from English-language journals in multiple different fields (IJNS uses American English). This can lead to journal reviewers and publishers preferring manuscripts written by first-language writers over EAL writers, a situation of linguistic bias against nonstandard Englishes. These claims are apparent in the research done by Curry and Lillis (2004) and Flowerdew (2000), among others, which mentions EAL authors believing that some of the issues they experience with publishing in English come from their disadvantage using English as an additional language instead of using their first language.

“Linguistic bias” (also referred to as “linguistic injustice”) is the scholarly term applied to the act of judging a manuscript based solely on its language rather than its content (Flowerdew, 2019; Hultgren, 2019; Hyland, 2016a, 2016b, 2018; Politzer-Ahles et al., 2016, 2020; Soler, 2020). Authors who do not write using the accepted, expected, or standardized language that an

academic publisher uses or that peer reviewers expect to see may face judgement against their manuscript based on their nonstandard writing rather than based on the content of the manuscript itself. Linguists studying linguistic bias have not reached a consensus on the existence of linguistic bias in academic publishing, nor what its causes would be, as I discuss in Chapter 2. Linguistic bias remains a relevant topic of study and an important factor to consider when running an academic journal. Academic publishing grows into an increasingly important metric with which to measure scholars' research output and opportunities for promotion (Cargill & Burgess, 2017; Curry & Lillis, 2004, 2013, 2018; Lillis & Curry, 2006, 2010), and scholars become more concerned with gatekeeping practices that could exclude minority groups from publishing in academia (*Anti-Racist Scholarly Reviewing Practices: A Heuristic for Editors, Reviewers, and Authors*, 2021). The managing editor of IJNS, Dr. Russel Hirst, was aware of these claims of linguistic bias in academic publishing research, and under his leadership, no submissions were ever rejected based on English language usage alone, and every author received as much editorial help with their English as needed, no matter how long the process took.

My experience working for IJNS over the past three years directly influenced the conception of this research project. I became interested in how the authors and reviewers perceived "correct" English in the submissions that I would edit and how these perceptions could relate to the studies on linguistic bias. I saw frequent comments from reviewers about the quality of the language, and in a global communications class where we had real clients to edit for, most of my clients wanted us to edit their language use rather than edit for clarity, organization, or other compositional concerns. Since IJNS aims to allow an opportunity for authors who might typically struggle to publish in English-language journals, I wanted to know if reviewers for

IJNS truly focus their comments on content rather than language concerns, as requested in the message that IJNS sends to request a reviewer for a manuscript. Out of this question was born another: what do reviewers consider to be errors in the language of a manuscript they review, and how do these errors influence their perceptions of a manuscript's quality? To answer these questions, I conducted a study to better understand how different Englishes are perceived by these reviewers. This study consists of a survey for IJNS reviewers to complete and analysis of reviews from published IJNS manuscripts. The goal of this study is to investigate reviewer perceptions of Englishes used in IJNS, as this journal publishes authors from a variety of linguistic backgrounds. Additionally, this study could contribute to the ongoing conversation about linguistic bias in academic English-language publishing.

1.1 Overview of Chapters

This thesis consists of five chapters. Chapter 1 introduces the research topics of EAL authors, linguistic bias in international academic publishing, and this thesis project, including IJNS as the site of research and how I became interested in this research through my role as an editor for that journal. I also briefly introduce the research questions and goals of this project. In Chapter 2, I review relevant research about English for Academic Purposes, English for Research Publication Purposes, and authors who use EAL in academic publishing. In these sections, I explain my reasoning for using the term EAL instead of the more widely-known English as a Second Language (ESL) or English as a Foreign Language (EFL) and my decision to not use “native” versus “non-native” terminology. I also discuss standardized language ideology to better understand the concept of a correct or standard language in academic publishing and its relation to linguistic bias. I then detail the research debating about the potential

existence of linguistic bias in academic publishing, including qualitative studies. Chapter 2 concludes with research relevant to IJNS, including research on linguistic brokers and academic brokers in academic publishing.

Chapter 3 describes the methodology for this project, including IJNS as the research site for conducting a survey and examining written peer reviews from previously-published IJNS manuscripts. The chapter also discusses population demographics for the survey respondents and the process of data analysis for the reviews and the survey responses. Chapter 3 concludes with a statement on my positionality as the researcher in this project. I provide the results of this study in Chapter 4 and discuss how these results answer my research questions and are relevant to linguistic bias research and international academic publishing. I begin by presenting results related to how reviewers define English language proficiency and errors in academic writing, then transition to how proficiency and errors influence their perceptions of manuscripts. I finish Chapter 4 with an analysis of how reviewers believe they can or cannot identify EAL authors. Chapter 5 places these results and the discussion of this study into the context of IJNS and international English-language academic publishing. I conclude this thesis with suggestions for IJNS to implement in the future regarding its communication with authors, reviewers, and editors to continue to prevent any potential linguistic bias from entering the journal's publishing process.

Chapter 2: Literature Review

This study aims to investigate the perceptions that peer reviewers have about the manuscripts written by researchers (both EAL and English first-language) in the nuclear security field that the reviewers read for IJNS. Studying these perceptions could contribute to an ongoing conversation about linguistic bias in academic publishing. In this chapter, I provide an overview of important concepts to understand what linguistic bias is and the conversation about it in academic publishing. I first discuss the various relevant terms used in international English studies, as many of these terms are frequently used in this thesis. I also consider the fields of English for Academic Purposes (EAP) and English for Research Publication Purposes (ERPP), which are two research areas involved in studying international English writing for academic publication. Next, I review research about the writing and publication processes for EAL authors to better understand how these authors' writing and publication processes compare to that of first-language English authors. I then discuss various studies that have produced results related to linguistic bias. I conclude this chapter with how these studies specifically influenced this thesis and the relevant research that influences editorial operations at IJNS.

2.1 Terms Used in the Literature on Language Use and Learning

Throughout the literature on English language learning and usage, multiple similar terms refer to slightly different categories of English users. I primarily use EAL to refer to any English user who communicates with English as their additionally-learned language rather than their first-learned, childhood language. English as a Second Language (ESL) indicates that a user has learned English as their second language and has the intention to learn the language in order to communicate in English-speaking communities. ESL can refer only to English learned

specifically as the second language, but ESL can also refer to users who learn English as their third, fourth, etc., language to communicate in English-speaking communities (Lightbown & Spada, 2018). Used to refer to EAL speakers more broadly than ESL, English as a Foreign Language (EFL) refers to users who learn English as a foreign language in a location that does not primarily use English to communicate, and the language is usually learned in a classroom-like setting and not intended to be used in English-speaking communities for primary communication (Lightbown & Spada, 2018). EAL encompasses both of these English learning situations, allowing for a more inclusive acronym than simply using ESL or EFL.

In language learning studies, many scholars use the terms native and non-native to refer to speakers who learned a language in their childhood in a geographical or sociocultural location where the language is primarily spoken and learned, and the native speaker is fully proficient in that language (Lightbown & Spada, 2018). However, native versus non-native can be a controversial distinction for a few reasons: firstly, native speakers of a language can vary based on the dialect they speak and the context in which they use the language; and secondly, non-native users of a language can reach “native-like” fluency in a language that is not their first-learned, childhood language (Lightbown & Spada, 2018). Additionally, calling a speaker a non-native user of a language carries a connotation of deficiency, a lesser status of knowledge or ability than a native user of a language (Selvi, 2011; Suárez, 2000). To avoid the potentially contentious language of native and non-native, I instead refer to speakers as first-language English users and EAL users. I only use native and/or non-native when referring to a source that uses those terms.

2.2 EAP and ERPP

Investigating linguistic bias requires research from the field of English for Academic Purposes (EAP) to build an understanding of how the English language is used internationally in academic communication. EAP is the specifically academic use of English to communicate, including “to study, conduct research, or teach” (Flowerdew & Peacock, 2001, p. 8). This can happen on a small scale, such as students using English at their school but in no other contexts, or it can happen on a wider scale, such as international publications and conferences operating with English as the preferred language. Today, many academic fields use English as the language to communicate globally. English currently acts as the lingua franca for most international academic fields of study. Scholars such as Flowerdew and Peacock (2001) have researched for the past few decades on how EAP is used globally, including how EAP is used and shaped by non-native English speakers (e.g., Mauranen, 2012).

Using EAP across journals and databases allows for wide readership while also reducing the need for as much translation done by publishers. Many of the large academic journals with attractive impact factors and indexing are published only in English (Cargill & Burgess, 2017; Curry & Lillis, 2013, 2018; Lillis & Curry, 2010). A journal’s impact factor indicates on average how many times the work in that journal has been cited in a year, and some database indexing services (where journal articles get listed in databases) have more recognition and respect in various academic fields. Therefore, writing in English gives scholars a higher probability to be published in a journal with a high impact factor or indexed in a reputable database. However, publishing in EAP journals places the burden of translation onto the EAL author(s), who may or may not have sufficient access to English language translation assistance. Curry and Lillis (2013) note that a successful translation strategy “seems to reflect the resources available to [the

author(s)]” (p. 106), suggesting that EAL authors with more access to English language assistance will more likely create a successful English-language manuscript.

Even more specific than EAP is the field of English for Research Publication Purposes (ERPP), which seeks to study international academic English specifically used for publication (Cargill & Burgess, 2017). Journal publication falls under the scope of ERPP, which studies the diverse and nonstandard English languages that academic journals receive in thousands of submissions. Traditionally, journals have provided or outsourced copyediting services for nonstandard English submissions, but Cargill and Burgess’s (2017) collection questions whether this is an appropriate or successful response to the multiple Englishes used in ERPP, and they provide research articles on multiple authors’ experiences with ERPP. Burgess notes that for many EAL authors, the process of writing in English extends beyond using the language successfully and into “meet[ing] anglophone expectations of epistemological rigour [*sic*]” (p. 4). This means that simply using the language functionally is one aspect of ERPP writing, and composing in ways that are expected and valued in the English language are another aspect of the writing process.

2.3 EAL Writing for Publication

Researchers who publish in English as their additional language likely face an additional process compared to first-language English users: learning an additional language in order to publish their research (Cargill & Burgess, 2017; Flowerdew, 2000, 2019; Lillis & Curry, 2010; Politzer-Ahles et al., 2016). Because journals want the language of the manuscripts they publish to match a certain standardized language (i.e. American English, British English), writers must ensure that their language fits the style that the journal publishes in. EAL authors may have to

work more with how they use the language and compose written texts in English, as Cargill and Burgess (2017) suggest, compared to writers who use English as their first language, who may write in the target journal's language more easily and quickly than EAL authors. Therefore, EAL authors could be seen as at a disadvantage in research publication (Flowerdew, 2000).

If using the language functionally is only a part of the publication puzzle, EAL scholars also must understand the rhetorical and compositional practices that make up English-language research writing. Kate Cadman's chapter, "Transcultural strategies for teaching ERPP writing, research design, and resistance to epistemic erasure," in Cargill and Burgess' (2017) collection, discusses how the growth of ERPP worldwide may correlate to the colonization and dominance of Western knowledge and argument structure in non-Anglophone locations. To publish acceptable manuscripts in English-language journals, EAL authors must be trained in the research practices of the Anglophone world. Not only must a manuscript be written in the expected English language, but it must also:

- be clearly supported by a sufficient amount of appropriately collected data
- emerge from an academy-recognised [*sic*] and validated data analysis procedure
- provide specific answer/s to the driving research question/s and/or fulfil stated objectives
- be directly related to established anglophone knowledge bases and theoretical positions (Cadman, 2017, p. 45).

These compositional issues run far deeper than the grammatical and syntactical use of a language, moving into the construction of the research project and development of an argument.

Of course, different levels of English language familiarity can play a part in an EAL author's writing process, which has been found in different studies. For example, Koerber and

Graham (2016) interviewed 12 non-native English researchers in health and medical fields. They separated the participants into three categories: researchers who had learned their scientific field(s) in English and therefore only knew how to communicate about it in English, researchers who primarily use English in their science work but incorporate their native language into daily activities at work, and researchers who cannot communicate their science in English and so must hire a translator. Each group viewed English usage in their careers differently, approaching the writing process with different levels of familiarity with the language. All of the participants understood that English is the most valuable language to use in international communication, but the participants who required translators thought of the language as separate from the subject, while the participants who learned science entirely in English thought of their subject matter and the English language as directly intertwined and inseparable. This study concludes that researchers who used both English and their native language in science research were able to consciously choose which language they could communicate in, but they felt the pressure to use primarily English so as to be most successful in their international communication (Koerber & Graham, 2016).

Similarly, Soler (2019) studied authors' perceptions of publishing in English by interviewing Swedish researchers studying English linguistics or political science. Like in Koerber and Graham's (2016) study, some participants noted that since they had learned their field of study in English, they would struggle to write about it in their first language (Soler, 2019). As some interviewees specifically study English linguistics, they must publish in English since it is the language used in the field internationally – their choice in publication language is limited by their topic. But, the political science researchers felt it more of a choice to publish in English rather than their native language in order to reach a wider international audience.

According to Soler (2019), since these scholars wrote about Swedish political issues, using English sometimes felt like a limitation in their writing mainly because they often had to think about how to effectively express their meaning and frame their research in English rather than Swedish.

In many studies using the term non-native for EAL authors, the authors were able to publish in English easier when they were geographically in similar locations as the English-speaking publications, such as countries that primarily use English for communication and scholarly discourse (Flowerdew, 2000; Hyland, 2016a; Koerber & Graham, 2016). Flowerdew's (2000) study noted that discourse community and legitimate peripheral participation in a field are key to one's ability to communicate and publish in their field, especially for non-native English authors. Legitimate peripheral participation is when a scholar studies and/or works in a physical location where the discourse community operates, and they are able to observe the discourse community's practices. The interviewees in Soler's (2019) study commented on the importance of networking within their field of study to better understand the publication standards, an observation that Lillis & Curry (2010) make in their work as well: "participation in both local and transnational networks seems to be highly desirable, if not essential" (pp. 68-69). Likewise, Koerber and Graham (2016) mentioned that non-native English researchers who had studied in English-speaking countries were able to publish in English easier, and this was probably related to their geographic, social, and cultural proximity to the English publications. These studies suggest that non-native English authors who experience and learn English in their discourse communities and geographic proximity, and therefore cultural and sociolinguistic proximity, to English publications experience less linguistic-related publication struggles.

Additionally, an EAL writer's access to academic and literacy brokers determines their success in publishing. "Broker" is a term coined by Curry and Lillis in their various research publications about international EAL authors and the editorial practices used to publish EAL writing (Curry & Lillis, 2013, 2018; Lillis & Curry, 2006, 2010, 2015). Brokers are the individuals who aid in the publication of an author's writing, such as editors and reviewers (Lillis & Curry, 2006, p. 4). There are generally three types of brokers: academic, language, and nonprofessional. Each broker serves a different but parallel purpose: the academic brokers aid authors with content and organization, language brokers focus on the communication and linguistic aspects, and nonprofessional brokers are typically related to the author and work as proofreaders to aid in the language as far as they are able. A large majority (73%) of brokers fall under the academic category, with language next (24%) and nonprofessional last (3%) (Lillis & Curry, 2006, p. 14). All of these brokers participate in the "mediation" of the text's production in some way, aiding EAL authors in their journey to publish their writing (Lillis & Curry, 2010).

2.4 Linguistic Bias

Understanding standard language ideologies could allow researchers to study linguistic bias more fully. "Standard" or "standardized" language is a term often thrown around in English grammar classes and academic writing, but it does not refer to any single, monolithic language. At the most basic definition, a standardized language "consists of the imposition of uniformity upon" a language (Milroy, 2001, p. 531). Standard languages by definition must remain unchanging once a standard has been decided upon, but this end goal is impossible (Milroy, 2001), as languages constantly change and never remain static. Therefore, the conclusion can be drawn that standardization in reality is a constantly-evolving process, and true, unchanging

standardization of a language is impossible. A standard language ideology involves the belief that a language can be standardized, despite the fact that this is not possible and that standards change as the language changes. Additionally, a standard language is created from a language already spoken, and it is no speaker's native language because it is created and reinforced externally from the natural linguistic development and use of a language (Milroy, 2001).

A standardized language can become a prestige dialect, offering its speakers a social advantage in using the standard language (Milroy, 2001). As mentioned in Chapter 1, the standard language becomes the "linguistic capital" that authors can use in the "linguistic market" of international English-language academic publishing (Koerber & Graham, 2016, p. 65). Standardization does have benefits. It allows users to communicate with anyone who knows the standard language, creating a single language of communication. This can have social, economic, and political benefits because a larger group of people are able to easily communicate with one another (Milroy, 2001). But, the concept of standardized language entirely relies on the ideology of a group of language users agreeing on one correct, static version of the language (Milroy, 2001). This infers that the users of the language decide what the nonstandard (or incorrect) versions of the language are, and they justify and enforce the standard/correct language by excluding or denouncing speakers who do not use it. Standardization ideology suggests that the dichotomy between standard/nonstandard and correct/incorrect is rife with the potential for prejudice, bias, and privileging of a single language over others.

Attempts to standardize the English language began centuries ago and continue today. As several academics and institutions aimed to standardize the English language into one uniform, unchanging language, English continued to grow and change, creating the idea of a correct (standard) version of English that we must return to or remain speaking and making all other

nonstandardized Englishes incorrect. English users can see the continuing effects of English standardization in academia today. In Lillis and Curry's (2015) study, the reviewers largely thought of English as a single standardized language – a “stable standard semiotic resource” (p. 134) – that authors either knew well or needed assistance with. This language “is construed as an object governed by shared, easily identifiable and therefore non-contestable conventions” (p. 138). If reviewers consider English to be standardized and therefore having only one correct version, then reviewers may be biased against Englishes that do not match the standard that they expect to see in academic English writing.

An emerging area of research focuses on the academic peer reviewers' views of nonstandard Englishes in manuscripts rather than the authors' perspectives and processes (e.g., Hyland, 2020; Hyland & Jiang, 2020; Lillis & Curry, 2006, 2010, 2015; Matsuda & Tardy, 2007; Politzer-Ahles et al., 2020; Tardy & Matsuda, 2009). This research comes from the observation from many EAL authors that some English-mediated academic journals, particularly the peer reviewers for manuscripts, can be biased against manuscripts written with English that sounds like it is from an EAL user (Curry & Lillis, 2004; Flowerdew, 2000). As peer review is a vital step in the publication process and can be key to an author's ability to publish their writing, linguistic bias in peer reviews is a serious accusation that deserves investigation (Lillis & Curry, 2015). Many scholars have questioned whether this observation could be true. Cadman believed that “methodological rigour [*sic*]” in English is more to blame for rejections than the language use itself (Cadman, 2017, p. 36). Lillis and Curry (2015) have questioned “whether English or language figures at all as a significant issue,” (quoted in Cadman, 2017, p. 36). Hultgren (2019) suggests that bias against non-native language is a “red herring” for the true problem of unequal resources and access to research across the world (p. 2).

In 2016, Ken Hyland published an article claiming that linguistic bias in academic publishing was simply a “myth,” and the native versus non-native dichotomy “functions to demoralize EAL writers and ignores the very real writing problems experienced by many L1 English scholars” (Hyland, 2016a, p. 59). Hyland presents some important points in his article, namely that many of the studies reporting authors’ sentiments that they struggle with writing in English does not negate that many first-language English authors can feel the same with their own English writing. Many EAL writers are accomplished and confident in their successful English writing. Also, these studies claiming linguistic bias were small-scale, subjective reports from authors themselves and therefore not yet applicable to general EAL populations worldwide. Hyland also points out that academic English writing is no one’s “native” language, including so-called “native” English speakers. Hyland claimed that the more important difference between authors who struggled to write and publish and authors who felt confident in their abilities was the amount of time and experience they had in their own academic discourse community. But, many other scholars published articles in response pointing out the gaps in Hyland’s argument and demonstrating ways linguistic bias does appear in academic publishing (Cargill & Burgess, 2017; Flowerdew, 2019; Politzer-Ahles et al., 2016, 2020).

In response to Hyland, Politzer-Ahles et al. (2016) published a short article explaining what linguistic privilege means for both native and non-native English users, primarily that native English users may experience unearned benefits from the nature of their native knowledge of the language, that even the privileged population can experience difficulties related to their language, and that non-native English users can still find success and equal knowledge. These are all points that Hyland had used to claim that linguistic privilege did not exist (Hyland, 2016a), but Politzer-Ahles et al. (2016) reframed the definition of privilege to show that these are

the precise reasons that linguistic privilege does exist. Just because native speakers can face difficulties in writing does not negate the possibility that non-native speakers may face more difficulties in publishing. Flowerdew (2019) also published a response article to Hyland, arguing that dismissing the linguistic difficulties non-native English authors face simply because of other existing EAL issues is a “mistake” (p. 250). Native English users may be able to write in academic English with more ease or familiarity than non-native English users, who have to learn the language on top of the academic register, putting them at a disadvantage compared to native English authors (Flowerdew, 2019; Politzer-Ahles et al., 2016).

Hyland responded to Politzer-Ahles et al. (2016), defending his original position and clarifying his understanding of linguistic privilege in academic publishing (Hyland, 2016b). He states that linguistic privilege definitely exists, but we do not have “convincing evidence for systematic disadvantage or prejudice against L2 writers” (p. 9). He concedes that publishers often do not publish “poor English” (p. 10), but it is not out of a malicious or punitive intent to preserve English grammar. He concluded with a call for further research and more empirical data into linguistic bias in academic publishing. More recently, Hyland revised his 2016 articles for a book chapter in which he stated much of the same arguments (Hyland, 2018), and again states that there is little evidence of linguistic bias against non-native English users in two related articles analyzing peer reviews (Hyland, 2020; Hyland & Jiang, 2020).

Soler (2019, 2020) claims that this “either-or” approach to linguistic bias – either linguistic bias exists due to linguistic factors or it does not – is not a productive argument in which to participate. Rather, a “both-and” approach incorporates linguistic and non-linguistic factors into the existence of linguistic bias, noting that both Hyland (2016a, 2016b) and Politzer-Ahles et al. (2016) present arguments of equal importance to be considered together rather than

at odds. But, scholars such as Hyland (2016a, 2016b, 2018) and Politzer-Ahles et al. (2016) still disagree about how and if this can be proven definitively with research, and how large of an effect linguistic bias might actually have on international English publications. These scholars also disagree about why linguistic bias might exist when considering that native English speakers struggle to write, too, and as Cadman (2017) and Hultgren (2019) suggest, many international manuscripts are rejected because of their quality of research rather than solely on the use of language. These (at times heated) responses to Hyland and his own responses to those responses show the large disagreement that scholars still face when seeking to prove that linguistic bias exists or could exist. Through this debate, many scholars (Cargill & Burgess, 2017; Flowerdew, 2019; Politzer-Ahles et al., 2016, 2020; Soler, 2019, 2020; Strauss, 2019) seem to agree that linguistic bias very well could exist in international English academic publishing. The possibility is certainly there.

2.5 Research with Linguistic Bias-Related Findings

Outside of scholarship on linguistic bias theory and anecdotal evidence, multiple studies detail the results intended to gather data about what reviewers think about the manuscripts they review, what they think of the authors of the manuscripts, and what they think of the language used, particularly nonstandard language, in the manuscripts. Tardy and Matsuda (2009) created a study to find how reviewers attempt to construct an author's identity while reviewing a manuscript. The study did not focus specifically on linguistic bias, but the results showed that some reviewers do speculate on an author's linguistic background while reviewing their writing. Hyland and Jiang (2020) examined "harsh" peer reviews, discovering what makes up a critical or rude review. The article states that "while negative comments on style or language are

common...the quality of the language rarely seems to be a decisive factor in rejection” (p. 2). Soler’s (2019) study of authors’ publication experiences note that interviewees recount rude or harsh peer reviews, but there is no evidence that these comments stem from the author’s use of English in the manuscript. While these two studies seek to determine reviewer opinions and biases, they do not examine directly or solely how linguistic bias may be present. Hyland and Jiang even go so far as to claim that it is not present at all, despite language comments being a frequent occurrence.

Lillis and Curry (2015) also analyzed written peer reviews, looking for whether reviewers mentioned “English” or “language” problems. More than half of the reviews mentioned “English” or “language” as “significant problems,” and a majority of these noted that the language was likely “English being used as a ‘foreign language’ or by ‘second language users’” (pp. 133-134). Many reviews suggested that a native English user could assist the authors with their writing (p. 136). It is important to remember, though, that if the reviewers are referring to a standardized English language ideology, no native English speaker uses the standardized language as their native language (Milroy, 2001). While Lillis and Curry’s results relate to the argument about linguistic bias, the study did not set out at the start to examine if reviewers were biased against nonstandard English language. The reviewers mentioning language problems cannot truly be experimentally related to the journal’s decision to accept or reject the manuscript.

Two other studies focus more specifically on linguistic bias in reviewer comments. Strauss (2019) interviewed eight reviewers for linguistic journals, asking directly about how they view and react to nonstandard English in the manuscripts that they review. All reviewers mentioned that they do notice nonstandard language and make conscious choices about their response to it. While some reviewers believe that nonstandard English is not something that they

should comment on, others said that they feel an obligation to help EAL writers with their language. Still, others felt that they had a responsibility to protect and uphold academic English standards (Strauss, 2019). All three of these positions show that reviewers note what they believe to be nonstandard language and consciously decide what to say (or not say) about it.

Politzer-Ahles et al. (2020) also conducted a study directly measuring linguistic bias in reviews. Multiple reviewers read and rated abstracts that differed only in linguistic style, one a standardized English abstract and the other a nonstandard-sounding abstract. The abstracts had the same scientific content, so the differences in ratings should only be due to language. Results showed that nonstandard, and therefore non-native-sounding, abstracts were potentially more likely than their corresponding standard, native-sounding abstracts to be rated as lower quality (Politzer-Ahles et al., 2020). This suggests that reviewers could be biased toward more standard, native English language in academic publications. This study was exploratory, an example of potential future research, and so these results are not yet definitive, as the method needs a lot of refining. Unfortunately, the authors faced multiple technical errors in the administration of their survey, but they noted that the method showed promise if it were to be repeated. Both Politzer-Ahles et al. (2020) and Strauss (2019) attempt to directly examine linguistic bias in academic publishing, and both show results in favor of linguistic bias's existence.

2.6 Studying Language Perceptions in IJNS

As discussed in this chapter, no consensus among scholars has yet been reached about whether or not linguistic bias exists in international English-language academic publishing. This is still a continuing debate with no complete agreement among scholars studying international English usage in academic publishing. To determine whether linguistic bias has the possibility to

exist, the literature review in this chapter suggests that scholars still need to understand the language ideologies that could drive linguistic bias in academic publishing, decide what kinds of methods could reliably measure the presence of linguistic bias, and perform studies on a wide variety of international academic discourse communities who use English to publish their research.

Drawing on the relevant studies above, language ideologies continue to be highly relevant in the search for evidence for linguistic bias. Language ideologies must continue to be examined in the conversation about linguistic bias, as the two highly correlate. As part of the continuing examination of English language ideologies and its relation to bias, this year, a coalition of authors in technical communication and rhetorical studies published an open-source article providing a heuristic for anti-racist academic publishing practices (*Anti-Racist Scholarly Reviewing Practices: A Heuristic for Editors, Reviewers, and Authors*, 2021). This document calls attention to biases that journal editors and reviewers may hold against marginalized authors in academia, leading to fewer publications from English-speaking Black, Indigenous, and People of Color (BIPOC) authors. Though this document very necessarily focuses on the problems faced by first-language English authors marginalized for racial reasons, many of the ideas can be applied to EAL authors in academia and the linguistic bias they face. This document shows that the issue of linguistic bias continues to be relevant to academic publishing and research, as well as the fields of rhetoric, composition, and linguistics. Continuing to study how reviewers perceive language errors and correctness (and therefore the existing language ideologies) in publishing can contribute to the ongoing debate about linguistic bias in academic publishing, thereby allowing a foundation for publishers to then debate how to solve the problem.

Additionally, this current review of literature shows that many of these studies related to reviewer perceptions of language were based on reviews and editorial practices for academic journals in the fields of linguistics, writing/composition, and rhetoric (e.g., Matsuda & Tardy, 2007; Politzer-Ahles et al., 2020; Tardy & Matsuda, 2009). This is just a small collection of discourse communities out of thousands that use English as an international publication language. Studying additional fields and a variety of populations, such as reviewers and journals in the nuclear security field who are not currently represented in the research on language perceptions, would be valuable to study for breadth of research. Specifically, this study seeks to investigate perceptions of Englishes in IJNS, in which many EAL reviewers review many EAL manuscripts in nuclear security. It also aims to contribute to the body of knowledge attempting to elicit what reviewers think about the language used in manuscripts in academic English-language publishing. This thesis research could help IJNS understand how editors could better assist authors with comments from reviewers about language issues in their writing.

As discussed in Chapter 1, IJNS emerged in part from the growing sentiment from EAL authors in nuclear security that felt they had a difficult time publishing in international, scholarly, peer reviewed journals (Hirst, 2020). One of the founders of IJNS introduced in Chapter 1, Dr. Russel Hirst, noted that international authors needed a journal that would provide them an opportunity to publish in English while also recognizing that English may not be their strongest language of written communication. Instead of rejecting manuscripts with difficult-to-understand English writing or forcing authors to find their own English-language copyeditors, IJNS editors work one-on-one with authors to help them write in academic American English. This is a standard that, as earlier discussed, exists only in ideologically-constructed traditions of English writing, but is the expected publishing language in the journal's situation as an academic journal

published by an American university. Editors help with anything from small grammatical or spelling typos to larger organizational or compositional issues. IJNS editors act as language brokers for international EAL authors.

At IJNS, peer reviewers and editorial board members are classified as academic brokers, and the assistant, associate, and managing editors are classified as language brokers. To actively combat the possibility of linguistic bias from the editorial standpoint, IJNS editors do not judge the value of a submission based on their use of English. Instead of putting the priority on fixing grammatical issues, IJNS editors first look to the stylistic issues of developing an argument, clearly explaining evidence and ideas, and organizing a manuscript in a way appropriate for academic composition (Hirst, 2020). Once a well-composed article is achieved, IJNS editors then copyedit the manuscript for grammatical issues.

As nearly all of the current IJNS editors are not a part of the nuclear security field, language brokering is as far as they can help; academic brokering, largely consisting of comments on content, is left to the peer reviewers. But, as Lillis and Curry (2006) note in their various studies, academic brokers often frame their comments on content in terms of “language,” which can create some confusion about their focus versus the language brokers’ focus on linguistic language. Scientists in the English age of Enlightenment noted that language and content are linked, stating that the clarity or transparency of language correlates to the “clarity and rationality of thinking” (Lillis & Curry, 2010, p. 124). Though these Enlightenment scientists acknowledged that no one particular language should be viewed as superior to another language, they still understood that style and clarity – often considered linguistic factors of composition – affect the content of the writing. Some academic peer reviewers today still comment on language-related issues like style and composition yet claim that they do not care

about the author's language or stylistic choices, only their scientific content (Lillis & Curry, 2010). Academic brokers have long attempted to separate language and content, but in practice, the separation is not clear.

As linguistic brokers, IJNS editors want to better understand how nuclear security reviewers – the academic brokers – perceive the various Englishes used in manuscripts in order to help authors during the revision process meet the expectations of nuclear security scholars who read these publications. Editors need to understand when comments from reviewers are addressing language-related issues, both linguistic and content-related. This thesis project emerged from that need to understand reviewer expectations and perceptions of Englishes in IJNS manuscripts. This study aims to discover three major areas of inquiry: what IJNS reviewers perceive as English language errors, how those errors influence their perceptions of a manuscript's quality, and what this research could add to the growing body of studies on linguistic bias in academic publishing. To answer these questions, I conducted a research project consisting of an analysis of written peer reviews for published manuscripts and a survey of peer reviewers, using IJNS as the site of research, which is described in the following chapter.

Chapter 3: Methodology

This project is designed to investigate how reviewers for the *International Journal of Nuclear Security* (IJNS) perceive the use of the English language in the manuscripts submitted to the journal. My specific research questions for this thesis project are as follows:

1. What do IJNS reviewers perceive as English language errors in manuscripts that they review?
2. How do the perceived errors influence a reviewer's perception of the quality of the manuscript?
3. What implications from this study can contribute to the operation of IJNS and international English-language academic publishing?

To address these research questions, I designed a study that included two components of data collection. I analyzed the written reviews of manuscripts published in IJNS, looking for comments on English language-related issues. Additionally, I conducted an online anonymous survey that asked IJNS reviewers about their perceptions of English language issues in the manuscripts they peer review for nuclear security-related academic journals. This study was approved by the Institutional Review Board (IRB) at the University of Tennessee, Knoxville (approval form available in Appendix A). In what follows, I discuss the research context, data sources, data analysis, and researcher positionality.

3.1 Research Context

The *International Journal of Nuclear Security* is an open-access, peer-reviewed, academic journal that publishes manuscripts related to various research in nuclear security, from historical politics to nuclear science. This spans disciplines from nuclear physics to human

reliability to historical and political relationships between nuclear-capable governments. IJNS was started by Dr. Howard Hall (Professor of Nuclear Engineering in the UTK nuclear engineering department, Director of the UT Institute for Nuclear Security, and Senior Fellow and Director of Global Security Programs for the Howard H. Baker Center for Public Policy) and Dr. Russel Hirst (Associate Professor of Technical Communication in the UTK English department, now retired). Since its inception in 2015, the journal has been published in collaboration with the UT Libraries' Tennessee Research and Creative Exchange (TRACE) publication system. In 2021, IJNS became the first UT VOL journal (Volunteer, Open-Access, Library-Hosted) to be indexed in Scopus. While Dr. Hall provided the technical knowledge and contacts in the nuclear security field, Dr. Hirst managed the editorial activities for the journal and trained student volunteers in technical editing for academic documents. Additionally, Dr. Hirst grew his own network of nuclear security professionals around the world, creating a vast interdisciplinary list of nuclear security researchers to contribute to journal activities. Dr. Hirst used the journal as an opportunity to provide students hands-on learning experiences with technical communication in science and technology. He also produced a research article about writing for publication in nuclear security (Hirst, 2020). Dr. Hirst, who has supported the journal for 7 years, will retire as managing editor in 2022.

The journal publishes on a continuous publication model (articles are published whenever they are completed and ready for publication). It usually publishes one issue per volume each year consisting of anywhere from five to 13 articles and zero to five book reviews. IJNS publishes most of the submissions received – the acceptance rate is not definitively known, but I estimate that it is very high. However, few submissions are published with no or only minor revisions of the initial submission. Most submissions undergo extensive revisions based on

reviewer comments and editor revisions and comments. Book reviews are not peer-reviewed, but all articles are peer-reviewed unless otherwise noted in the table. Occasionally, IJNS also publishes a special issue alongside its annual issue themed around a particular research area in nuclear security. Currently, IJNS has seven volumes, and a breakdown of these volumes is available in Table 3.1. Special Issue 2.2 came out of the Astechnova Conference in 2015, Special Issue 6.2 was themed around the INSEN organization in honor of its 10th anniversary, and Special Issue 7.2 was themed around the research that women perform in nuclear security and the career circumstances women in nuclear security face.

As this is an international journal, IJNS receives submissions from authors around the world who use a variety of Englishes. English is the current lingua franca in fields related to nuclear security, so most authors publish in English as their language of international research communication (Hirst, 2020). Unlike many academic journals that provide only basic copyediting (though frequently not even that), IJNS editors thoroughly copyedit all submissions and revise the text for clarity, organization, and composition. Editors frequently communicate with authors to ensure that the most understandable English language is used to report the research in the manuscript.

IJNS and its publisher, The University of Tennessee Libraries, do not have a language designated as the standard of publishing. However, the expectation within the journal is to publish in American English because the journal is based in the United States. Because IJNS sees such a variety of Englishes in submissions, journal editors must revise each accepted manuscript to fit the journal's publication language. Unlike other academic journals, IJNS editors copyedit as well as comment on the organization and composition of each submission, working with the

Table 3.1*IJNS Publications*

| Volume & Issue | Publication Year | Number of Articles | Number of Book Reviews |
|------------------------|-----------------------|--------------------|------------------------|
| 1.1 | 2015 | 9 | 0 |
| 2.1 | 2016 | 13 | 0 |
| 2.2^a | 2016 | 5 | 0 |
| 2.3 | 2016 | 10 | 0 |
| 3.1^b | 2017 | 8 | 3 |
| 4.1^c | 2018 | 7 | 4 |
| 5.1 | 2019 | 5 | 4 |
| 6.1 | 2020 | 7 | 2 |
| 6.2^d | 2020 | 7 | 0 |
| 7.1^c | 2021-22 (in progress) | 9 | 5 |
| 7.2^d | 2021-22 | 7 | 0 |

^a special issue of conference papers, none formally peer-reviewed

^b includes student competition 1st, 2nd, 3rd place winners (judged by peer reviewers) and 1 special opinion editorial (not peer reviewed)

^c includes student competition 1st place winner (judged by peer reviewers)

^d special issue, all articles formally peer-reviewed

authors to revise the paper to best communicate the authors' meaning. This could mean that a submission is ready to be published after one round of mostly copyediting, or the submission could be extensively rewritten by both the editor and the authors to negotiate the best wording for the text.

Because IJNS is an international journal which primarily publishes authors who write in English as an Additional Language (EAL), this study considers how reviewers perceive language errors in IJNS submissions before any language editing takes place from the IJNS team. Often, I observed that reviewers comment about language-related issues in the manuscripts that they review for IJNS. Interestingly, many of these reviewers are EAL speakers themselves. This journal presents the opportunity to ask a population of reviewers, both EAL and first-language English users, how they define English language errors, how they comment on them, and how they affect their perceptions of the manuscript's overall quality.

3.2 Data Sources

3.2.1 Reviews

To understand what peer reviewers perceive and choose to comment on, I examined the reviews that peer reviewers have written and submitted. To assure the quality of research content in submissions, editors request that individuals in a similar area of knowledge as the submission read through and comment on the content of the submission. The comments that they turn in to the editors are referred to as reviews. As noted in multiple studies of reviews and my own observation of reviews from IJNS submissions, reviewers do not limit their comments to content and research methodology, but many also include comments on the composition and language of a submission (Flowerdew, 2000; Hyland & Jiang, 2020; Lillis & Curry, 2006; Strauss, 2019).

Analyzing reviews of manuscripts that have been published in IJNS could generate a better understanding of the reviewers' perspectives on language errors and the ways in which they communicate these errors to the editors and authors. Like Hyland and Jiang's (2020) study on "harsh" peer reviews and Lillis and Curry's (2006) study of peer reviewer comments, I read reviews and coded these reviews based on the error types mentioned by reviewers.

To select written peer reviews for analysis, I looked at reviews submitted for manuscripts that had already been published in IJNS. To manage my sample size, I limited my analysis to reviews from the manuscripts published in volumes 1 through 5. This corresponds to 53 manuscripts published in seven issues released from 2015 to 2019. I chose this time period because it covers the beginning of the journal up to the point that I joined the IJNS editorial team in 2019. Therefore, I have not seen any of these manuscripts or reviews before they were published, and I did not participate in the editorial process for any of these manuscripts. However, because these reviews come from the earliest portion of the journal's publications, these reviews consist of reviewers from the U.S., U.K., and other primarily-English-speaking countries reviewing manuscripts by authors who are also from the U.S., U.K., and other primarily-English-speaking countries. In the first few volumes of IJNS, the publications skewed toward authors from the U.S. and U.K. The breakdown of these issues and the number of reviews per manuscript is in Table 3.2. In these seven issues, a total of 44 manuscripts produced a total of 89 reviews for analysis. Manuscripts without reviews will not be included in the analysis, as they do not contribute to the total number of reviews analyzed.

Table 3.2*Number of Manuscripts and Reviews per Volume and Issue*

| Volume and Issue | Number of Peer-Reviewed Articles | Number of Reviews per Manuscript | Total Number of Reviews per Issue |
|------------------|----------------------------------|----------------------------------|-----------------------------------|
| 1.1 | 9 | 2 ^a | 17 |
| 2.1 | 13 | 2 ^a | 25 |
| 2.2 | 5 | 0 | 0 |
| 2.3 | 10 | 0-3 ^b | 12 |
| 3.1 | 5 | 2 ^a | 9 |
| 4.1 | 6 | 2 | 12 |
| 5.1 | 5 | 2 ^c | 14 |

^a except for 1 manuscript with 1 review

^b 4 manuscripts had 2 reviews, 2 manuscripts each had 3 reviews but 1 of the 3 was a repeat submission of the same review, and 4 manuscripts had 0 reviews (unknown reason)

^c 3 manuscripts had 2 reviews, and 2 manuscripts had 4 reviews where the same 2 reviewers reviewed both the initial and revised versions of the manuscript

3.2.2 Survey Description

To learn what reviewers from IJNS think about the English language usage in the manuscripts that they review, I conducted an anonymous survey through Qualtrics asking reviewers for nuclear security academic journals various questions related to their perceptions of English language usage. The survey method was chosen to reach a diverse population of international reviewers while maintaining participant anonymity. Participants could be reviewers for any nuclear security journal, not just IJNS. As Hyland (2016a, 2016b) and Politzer-Ahles et al. (2016, 2020) note, surveys rely on the honest answers of participants, which can be subjective, hence their call for more “objective” or “empirical” studies. The conclusions drawn from this survey depend on whether the participants answer honestly or if they write what they would think is a “correct” or “expected” answer. Because of this, surveys like this one can be seen as still very subjective. While I think there is a need to create those more objective studies, qualitative surveys can also create meaningful knowledge. As far as I was able to determine, a survey specifically analyzing reviewer perceptions of language has not been performed in the nuclear security field by the time of completing this project.

The survey was anonymous, not even collecting the IP addresses of participants. The survey was designed so that participants first read the Informed Consent (see Appendix B) and must have agreed to participate before continuing to view the survey. Each question in the survey was required, but participants could put “N/A” or some other text indicating they did not wish to answer the question in the free response boxes or multiple-choice questions with an “other” option and a text box. By making all questions required, I hoped to receive responses in the free-response text box questions that would clarify the participant’s reasoning in selecting their answer for the Likert scale questions. The survey was designed to take about 20 minutes for

participants to complete, and it was beta tested by three professors in English rhetoric, composition, language learning, and/or linguistics and one Ph.D. student in English rhetoric, writing, and linguistics before I finalized the survey. Based on their comments, I revised survey questions to eliminate the use of “native” and “non-native,” clarified questions to ask about the specific use of English in academic publications, and reworded questions that beta testers suggested revising for clarity. I discuss the changes made during beta testing below when relevant to the description of a survey question.

The survey existed in three sections: screening questions, questions designed to elicit reviewers’ perceptions of the English language in manuscripts, and demographic questions. The two screening questions in Part 1 verified that participants had reviewed academic manuscripts in nuclear security, as well as asked if they had reviewed specifically for IJNS. If they had not said that they had reviewed manuscripts in nuclear security before, the survey ended after Part 1. Part 2, investigating reviewer experiences with English in manuscripts they review, contained a mix of free response questions, Likert scale questions (5-point strongly disagree to strongly agree), and multiple-choice questions. Part 3 consisted of demographic questions. The full survey can be found in Appendix B.

Part 2: Researcher Experience focused on how reviewers define English proficiency in academic writing, what they perceive to be errors, and whether they can tell if an author is writing in English as a first language or writing in EAL. The first set of questions asks reviewers to define English language proficiency in academic writing. In the beta test, testers recommended specifying academic writing in this question since it is a specific genre of writing. As previous studies show (such as Lillis & Curry, 2015), many reviewers expect to see a correct or standard language in academic English publications, and this first set of questions aims to

determine what characteristics this correct/standard language has for each participant. This question also allowed for participants to define proficiency in terms of methodological and compositional quality, as multiple studies have suggested that reviewers expect more than the grammatical use of English in an English-language paper; they also expect to see Anglophone methods of argument building, research design, and explanation of evidence (Cargill & Burgess, 2017). Each survey participant's definition of proficiency aided in my understanding of the rest of that participant's answers through the rest of the survey.

Next in the first section of Part 2, participants selected to what degree they agree or disagree with the statements, "I believe that English language proficiency is an important part of the quality of a manuscript that is published in English," and "I believe that English language proficiency is an important part of the quality of the research conducted in the manuscript published in English." These two questions showed how participants consider language proficiency in relation to writing quality, separated by the quality of the overall manuscript and specifically the quality of the research project itself. Each of these questions was followed up by a free-response request for the participant's rationale for their Likert scale selection to better understand why they chose their answer for the Likert scale question. Having a free response answer after the scale question gave me a fuller picture of the participant's thoughts and purpose in the answer to the scale questions, so almost every Likert scale question in the survey was followed by a free response question relating to the participant's answer to the preceding Likert scale question. These questions were required, but participants could indicate if they did not want to answer the question.

The second set of questions focused on what reviewers consider to be language errors in manuscripts and their role as reviewers in noting these errors. After eliciting their definition of

proficiency, I then wanted to find out what participants perceived to be errors in that proficiency. The first question asked participants to select from a list which categories they consider to be language errors in English academic writing. These categories were the same as the ones listed in section 3.3.1, which I created based on Ferris's (2006) study on common error types in EAL student writing (quoted in Bitchener & Ferris, 2011; Ferris & Hedgcock, 2013). Since I am particularly interested in how EAL reviewers perceive errors, I wanted to use common EAL writing errors to guide participant answers. Most of the errors in the multiple-choice list have a short description of what the error type is, as most of the participants were not scholars in language and may not have been familiar with grammatical terms in English.

Next in this section was a Likert scale question stating, "Reviewers should note and/or correct language errors in a manuscript they are reviewing," followed by a free-response question asking reviewers when they comment on language errors in a manuscript. These two questions illuminate how participants respond to perceived errors, as Strauss (2019) shows that reviewers notice perceived errors and consciously decide how to respond to them. To end this section, participants answer a Likert scale question stating, "A journal should reject a paper that has English language errors after being reviewed, even if the content is reviewed well and academically sound." This question begins to investigate the presence of linguistic bias – a manuscript rejected because of its linguistic features rather than its research content (Flowerdew, 2000; Hyland, 2016a; Politzer-Ahles et al., 2016).

The final section of Part 2 questioned whether reviewers can identify if a writer is using English as their first language or if they are using EAL. A Likert scale question states, "I can identify if the author(s) of a manuscript use English as an additional, second, or foreign language, or if they use English as a first language." This terminology was chosen so as to avoid

the language of “native/non-native” speaker, as suggested by a beta tester. This question is followed by a free-response question asking participants to explain their answer to the Likert scale question, particularly asking them to describe how they identify EAL writers versus first-language writers. The free response question’s specificity was suggested during beta testing to guide participants toward the information I was seeking from their answers. Tardy and Matsuda’s (2009) survey found that some reviewers speculate on an author’s linguistic background while reviewing a manuscript, and I wanted to see if my participants do the same.

Part 3: Demographics asked participants various questions relating to their professional and geographical situation. Tardy and Matsuda’s (2009) study inspired multiple-choice questions about the participant’s age range, job position (options include various levels of educational instructors, graduate student or post-doctoral, government researcher or staff, law enforcement, or other), and average experience reviewing and publishing manuscripts each year, as well as a multiple-select question that asked about the participant’s specific research areas in the field of nuclear security. The categories in the nuclear security field are based on the areas of research that IJNS publishes, as listed on the website (*Aims & Scope*, 2021):

- science and/or technology research
- nuclear operations, intelligence, and/or security
- policy, law, and/or diplomacy
- education and training
- networking, engagement, and/or promotion of nuclear security-related topics.

Collecting this information allowed me to potentially connect answers from Part 2 to a participant’s profession, experience in their field, and experience with the academic publishing world. I hypothesized that reviewers with more experience in the academic publishing world

and/or more familiarity with academia would likely know what was expected from the English language in manuscripts, influencing the comments they made in their own reviews.

The larger demographic connections I aimed to make, however, came from the questions regarding a participant's geographic location, first language, and uses of English. Participants selected where they learned English (school, work, home, or more than one of these), provided their first language in a free response box, and answered what variety of English they use to communicate in work (i.e. American English, British English, etc.). By determining what the first languages of reviewers were and what variety of English they used, I wanted to connect an author's own English use with their ability to determine what another author's English use was. For example, an EAL reviewer may identify EAL authors due to their familiarity with EAL language style or first-language English writing, or a first-language user could identify EAL authors due to noticing differences between EAL and first-language English writing. Also, different Englishes have different grammatical and syntactical rules, possibly influencing a reviewer's understanding of what an error is in academic English for publishing.

Participants also selected the geographical region that they primarily live and/or work in, as this can influence their English usage. These regional categories were based on the international population that I was targeting and the regions typically discussed in international nuclear security. Since I was targeting a relatively small discipline of scholars spread out across the world, the IRB was very concerned that I may have been able to pick out who participants were if I asked questions too specific about their location. So, I compromised and made the regional categories broader, based on continental location. But, as I have observed from my work editing manuscripts for IJNS, the conversations around and research about nuclear security differ within some of these broad regional categories, particularly the vast expanse of Asia. Since these

regions group together based on nuclear security-related research, I wanted to group regional locations by those specific discourse communities within nuclear security. To better account for the wide variety of regional conversations in Asia, I separated the region based on common geographical and political categories. The geographic region options listed in the survey are as follows:

- North America
- South or Central America or the Caribbean
- Europe
- Africa
- South Asia, Southeast Asia, or Oceania
- East Asia, Central Asia, or West Asia
- Other (please provide general geographical category)

Generally, locating the participants geographically supplements the data on their first language and the variety of English that they use to provide a fuller picture of their English linguistic history and experience. To confirm the proper terminology and borders for the Asian regions, I consulted the “Regions of Asia” list on the University of Pittsburgh Library System’s website (Lemery, 2021) and created descriptions of each region’s geographical borders based on the information provided in the corresponding Wikipedia pages (“Central Asia,” 2021; “East Asia,” 2021; “South Asia,” 2021; “Southeast Asia,” 2021; “Western Asia,” 2021).

3.2.3 Survey Participant Recruitment

To recruit survey participants, I reached out directly to former and current IJNS reviewers, included a survey call in the IJNS newsletter, and had journal colleagues send the

survey call to their nuclear security contacts. I accessed reviewer contact information through the IJNS bepress Digital Commons platform, providing me with a list of 136 unique reviewer email addresses. This list consisted of every person who had submitted a review for an IJNS manuscript since the journal's start in 2015 to the time of downloading the list in September 2021. I contacted reviewers directly using the IJNS email account (with permission from the managing editor). I sent four total emails to these reviewers: an initial message in September 2021, and then a follow-up message in October, November, and December 2021. The message used to ask participants to take the survey can be found in Appendix C.

I also solicited participants through the bimonthly IJNS newsletter, as the newsletter reaches a wider audience than the list of reviewers I retrieved from the IJNS platform. In addition to posting each newsletter on the publicly-available IJNS website, each newsletter is sent out by me using the IJNS email account to a list of emails created by asking IJNS authors, submitters, and reviewers if they would like to be added to our newsletter mailing list. Two newsletters contained the message requesting survey participants on the first page of the newsletter: *Vol. 3 / September and October 2021* sent in late October 2021, and *Vol. 3 / November and December 2021* sent in mid-December 2021. The text of this message is available in Appendix C.

Some of these newsletter subscribers may not be directly in the nuclear security field, and others may not be reviewers for nuclear security publications, but this newsletter still presented an opportunity to reach professionals in the nuclear security field that may not have previously reviewed manuscripts for IJNS. Some of the emails are likely repeats from the reviewer list, but the majority are not present in the list of reviewers. In October 2021 when the first participant request appeared in the newsletter, the list consisted of 178 emails. Some of these emails are

multiple addresses for people who indicated they would like to receive the newsletter at more than one of their email addresses. Additionally, this list includes current and former IJNS editors, a few faculty members in the English department at UT Knoxville, and professionals in various nuclear security-related research areas around the world.

I also requested that two of my journal colleagues send my message to request participants (either the email version or the newsletter version). Dr. Russel Hirst, as the managing editor of IJNS, sent the message to some of his contacts in international nuclear security, including leaders of international nuclear security organizations and nuclear security educational programs. Ashley Humphrey, IJNS Associate Editor and Editorial Liaison for the Special Issue for Women in Nuclear Security at the time of this thesis project, also emailed contacts she has in nuclear security and posted on her professional LinkedIn page, where she connects with international nuclear security scholars. They both reached out to their contacts in January 2022.

3.2.4 Survey Participant Demographics

When the survey closed on February 1, 2022, 37 people responded to the survey. Of those 37 responses, two did not pass the screening questions to move onto the next section of the survey. Two others did not respond after the Informed Consent agreement at the beginning of the survey, and five did not complete the survey after passing the screening questions. This produced a total of 28 survey responses completed from the beginning to the end. The response rate cannot be calculated since I am not sure of how many people my colleagues shared my message with, how many people accessed the newsletter through the IJNS website, and how many nuclear security researchers shared the message with their peers. But, if I were to estimate the response

rate based only on the reviewer list (136 emails) and the newsletter list (178 emails) without accounting for email addresses that appear in both lists, it would be very low (around 9%). This section provides an overview of the participants' demographic information, and Chapter 4 discusses demographics in relation to the results when relevant.

Though all 28 participants indicated that they have reviewed a manuscript for any academic, peer-reviewed journal in nuclear security, four (14%) noted that they had not reviewed specifically for IJNS. In addition, six participants (21%) stated that they were on an editorial board for an academic nuclear security publication. A slight majority of participants (68%) have been reviewing academic manuscripts for nuclear security for four or more years, and about half (54%) review two to four manuscripts per year while less (32%) review only one per year. As for their own experience as an author in nuclear security, a majority (86%) of participants publish three or less of their own peer-reviewed, academic manuscripts per year.

All participants were aged 30 or older with almost all (96%) falling in the range of 30-69. A majority (79%) of participants selected "education and training" as a nuclear security career field that they participate in, as shown in Figure 3.1. This figure compares to the data in Figure 3.2, showing that almost half (54%) of participants holding the primary job title of professor or other educator (i.e. lecturer, instructor, faculty, etc.). Participants who work in governmental or nongovernmental organizations as officials, staff, or researchers made up about a third (36%) of the responses, and three participants identified themselves as "other," providing the titles of director, independent consultant, and research fellow.

Participants came from all continents except South America and Antarctica. As shown in Figure 3.3, the majority of participants came from North America and Asia (10 participants/36% each). Similarly, about a third (36%) of participants indicated that English is their first language.

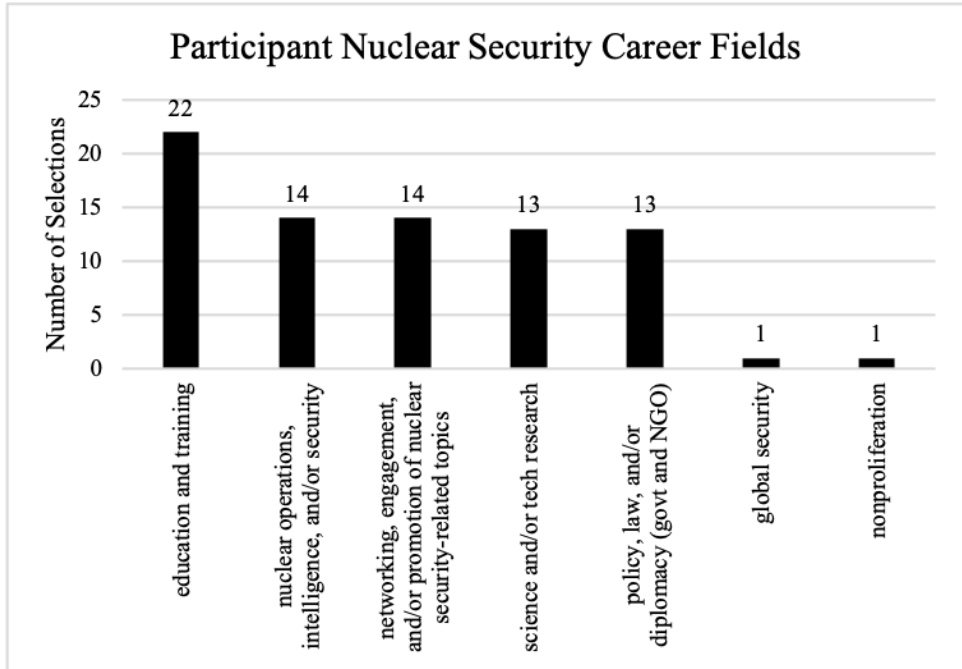


Figure 3.1

Participant Nuclear Security Career Fields

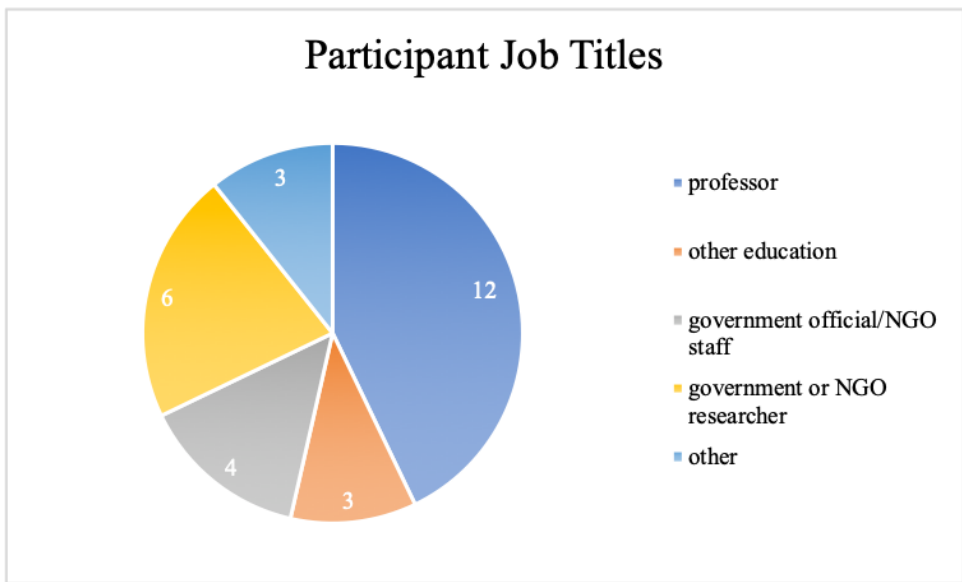


Figure 3.2

Participant Job Titles

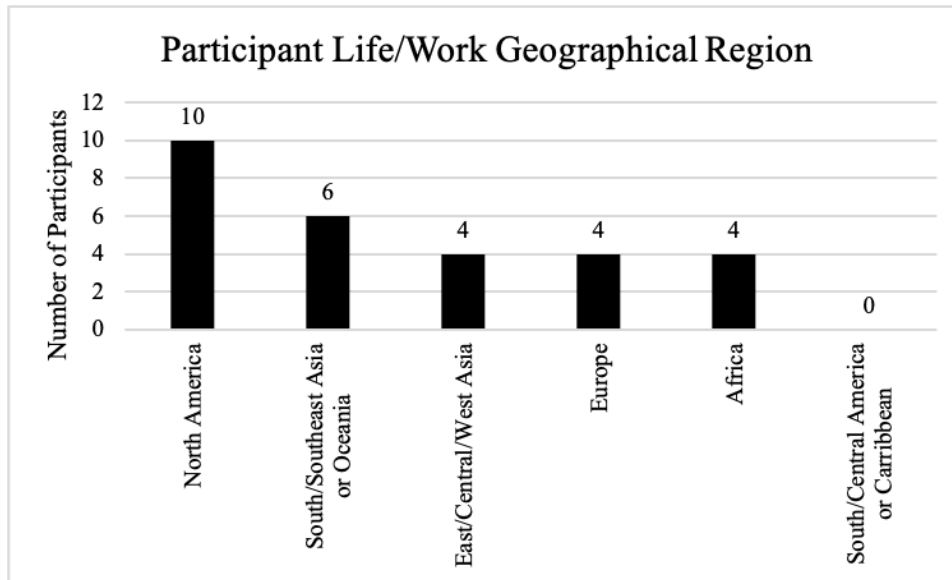


Figure 3.3

Participant Life/Work Geographical Region

The majority of participants (64%) identified a language other than English as their first language. EAL participants listed various languages as their first, including French, Dutch, Italian, Arabic, Aghem, Yoruba, Urdu, Pashtu, Hindi, Odiya, Vietnamese, Korean, and Filipino.

All 10 English first-language speakers selected “home” as one of the categories where they learned English, as well as five EAL speakers (as shown in Figure 3.4). The majority of participants, consisting of both English first-language and EAL speakers, selected formal educational settings as a location where they learned English (86% selected primary/secondary school, and 61% selected university). Twelve participants (nine of whom were EAL users) indicated that they learned English in part through their work, and seven (which includes six EAL) participants stated that they learned English in part through self instruction. Nearly all participants (89%) responded that they use American/U.S. English and/or British/U.K. English to speak and write with: 17 American English and 13 British English, and five of these participants noted that they use a “mix” of both dialects. Other English dialects mentioned include Canadian English, Indian English, and Vietnamese English.

3.3 Data Analysis

3.3.1 Reviews

All review data was anonymized by not recording a reviewer’s name, which manuscript the review corresponded to, or any quotes from the review. As editors of IJNS have access to all of this information, I did not want other editors to easily determine which manuscripts I pulled reviews from to analyze. In order to preserve the identities of the reviewers and the manuscripts that they correspond to, I numbered each review 1 through 89 and recorded if the review mentioned English language-related issues, what type of issues were mentioned (categorized by

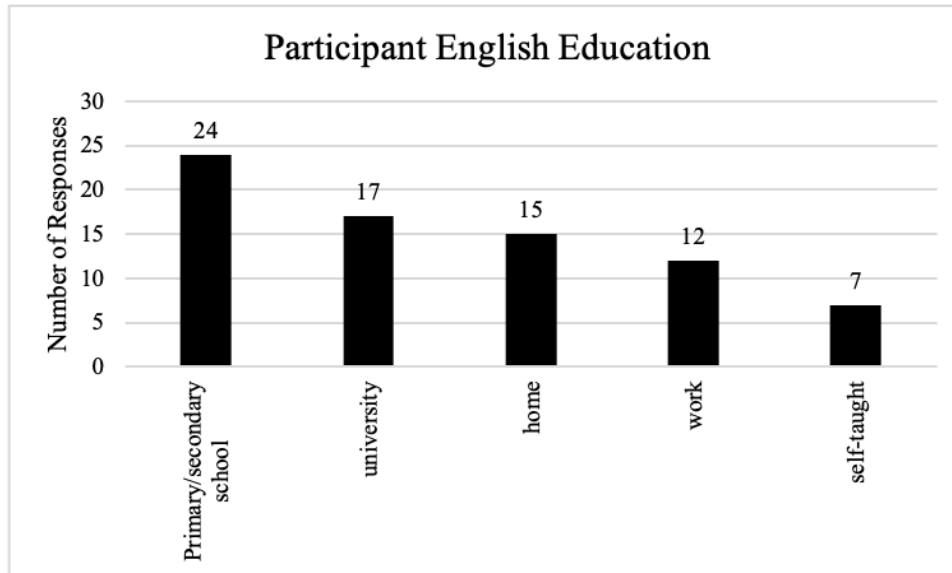


Figure 3.4

Participant English Education

error type as discussed below), and how often that type of comment was mentioned if it was more than once.

For each review, comments about language were categorized by error type based on the error types noted in L2 writing by Ferris's (2006) study on the types of language errors noted by instructors in L2 students' class writing (quoted in Bitchener & Ferris, 2011; Ferris & Hedgcock, 2013). Since I was particularly interested in how authors using EAL could be perceived as writing with errors, I wanted to base the error types I looked for around common EAL errors in English. From Ferris's (2006) list, I condensed some of the error types into related types (i.e. one category for verbs compared to Ferris's verb tenses and verb forms, combining all sentence about sentence structure into one category instead of separate categories for fragments and run-ons, etc.), and kept the rest in the list as they appeared. These error types included:

- Spelling: comments on or correcting how a word is spelled
- Verb tenses or forms: comments on or correcting verb tenses (past/present/future) and/or verb forms (how the word is literally formed to indicate tense, plurality, etc.) in the text
- Subject-verb agreement: comments on or correcting the subject-verb agreement throughout the text
- Sentence structure: comments on or correcting how a sentence is written
- Pronoun usage: comments on the pronouns used in the manuscript, including comments indicating the reviewer is unsure what the pronoun is referring to in the sentence
- Punctuation: comments on or correcting punctuation usage in the manuscript, including quotation marks, periods, commas, etc.
- Articles: comments on or correcting missing or improperly used articles “a,” “an,” and/or “the”

- Word choice: comments on the appropriateness, correctness, or accuracy of a word used in the manuscript
- Informal style not appropriate to the academic genre: comments on the use of idioms, colloquialisms, or writing with an informal tone that the reviewer considers inappropriate for academic writing
- Other (give description)

Any comments or corrections not fitting into one of the specific categories above was put into the “other” category with a short description of what the comment was referring to. This could be anything from a general comment about how the grammar was incorrect throughout the paper to specific comments about citation formatting errors.

3.3.2 Survey

I analyzed the answers to the Likert scale questions to determine the number and percent of participants that selected each scale option for each question. Free-response answers were qualitatively coded for emerging themes in the responses, as modeled after Matsuda et al. (2013). These themes included how participants defined language proficiency and errors in English academic writing, how important proficiency is in writing and research, when and why reviewers decided to comment on the language in a manuscript, and how they identified EAL writing in a manuscript. For example, some participants defined proficiency in terms of clarity and readability, while others framed it in grammatical and syntactical use of language. Most participants agreed that proficiency is important to a manuscript’s quality, though for various reasons, such as how clearly the content is communicated through proficient language or meeting the expectations of the language used in academic publishing.

Based on the individual responses to the survey questions and these emerging themes, I created a coding scheme for each survey free response question. Each free response question has its own coding scheme, which allowed me to tailor the codes for each question to the themes found in each individual question. The coding scheme was created by first identifying themes in a survey question's responses, organizing the responses into codes based on those themes, and then describing in a table the key words, phrases, and themes in responses correspond to which codes. For example, to create a code for Question 1a (How do you define English language proficiency in academic writing?), I first identified themes derived from the responses to this question. These themes included describing English language proficiency as a clear or understandable message or how clearly or understandably the language communicates the message. Based on these themes, I created a code called "clarity" with the description, "proficiency as how clear/understandable the message is, how clearly/understandably the language is used to communicate." I then inserted this description of "clarity" into the coding scheme for Question 1a. An example of a response coded "clarity" is "To express ideas in a language that is easily understandable without confusion." In the coding scheme for Question 1a, I pasted this response into the column labeled "clarity." The coding scheme for each question can be found in Appendix D.

To ensure that my coding scheme was reliable, I followed the intercoder reliability (ICR) process used by Saenkhum (2016). This process involves another person coding the results of the free responses in the survey using the same coding scheme that I created to examine how clearly the codes describe the themes found in the survey responses. I asked a peer (a Ph.D. student in English Rhetoric, Writing, and Linguistics at UT Knoxville) to code a small selection of the survey responses using my coding scheme for the free response questions. For each of the five

free response questions (1a, 1c, 1e, 2c, and 3b), I randomly selected six responses, ensuring that at least one response from each code was included. The second coder and I had a short meeting where I explained the survey I conducted, the responses received, the coding scheme I created, and what the coder would do using a small selection of responses from the survey. The second coder then placed each of the selected responses for each question into the coding scheme(s) I provided to them. I compared my coded responses to my peer's coded responses to look for areas where we agreed in coding and areas where we disagreed. I totaled the number of coded responses that we agreed on (chose the same code for the response) and the number of coded responses that we disagreed on (chose a different code for the response, or left out a code from a response if it contained more than one). An overall reliability percentage was calculated by dividing the number of agreements by the total number of agreements plus disagreements using the following formula:

$$reliability \% = \left(\frac{\text{number of agreements}}{\text{number of agreements and disagreements}} \right) \times 100$$

According to Miles and Huberman (1994) and Saenkhum (2016), 80% reliability should be aimed for in ICR. This ICR process resulted in an average of 84% reliability of my coding scheme for all five coded questions when analyzing my coded responses and those of my peer. The second coder and I had only one or two disagreements with the selected responses for each coded question. The selected responses from Question 1a had 88% reliability using the coding scheme and the above equation (seven agreements and one disagreement from my peer not including a response in a code), Questions 1c and 2c codes had 86% reliability (six agreements and one disagreement from my peer not including a response in a code), and Questions 1e and 3b had 80% reliability (eight agreements and two disagreements from my peer not including a response in a code). After analyzing the disagreements between myself and my peer, I elected

not to recode the responses that we disagreed on, as they were not coded incorrectly, but instead the second coder judged the responses as applicable to only once code rather than the multiple codes the response applied to. Overall, this coding scheme reliability was considered sufficient since all questions reached reliability equal to or above 80% in the first round, so the ICR process was not repeated.

3.4 Researcher Positionality

As stated in Chapter 1, I am the current Davis Fellow Associate Editor for IJNS, a position I have held both years of my MA degree at UTK (Fall 2020 – Spring 2022). However, this research took place outside of that role. I kept my duties as Davis Editor separate from my MA thesis research, but my position as Davis Editor allowed me to access reviews and reviewers. I was given permission from the managing editor of IJNS, Dr. Russel Hirst, and permission from the University of Tennessee's IRB to use my IJNS resources for my project (IRB approval form available in Appendix A), and I used my editorial access to the IJNS bepress Digital Commons publishing website to gather reviews and a list of reviewers. I also used my access to the IJNS email account to send out solicitation emails to reviewers and my position as a newsletter editor to reach IJNS supporters who may not have been on the list of reviewers. My role as an IJNS editor allowed me a greater degree of familiarity with the types of language used and the topics covered in written peer reviews. This potentially assisted with my analysis of these reviews even though I had not seen the specific ones used in my analysis before this project. My understanding of the IJNS editorial process also gave me insight into typical academic publishing expectations (such as peer review, editorial and formatting work, and communications between editors, authors, and reviewers). This understanding occasionally

influenced the conclusions drawn for some of the responses in the survey (such as the responses related to the editorial process in academic publications).

The Davis Editorial Fellowship, funded by the Department of English at UTK, provides an opportunity for graduate students to gain experience in editing and producing academic journals. One student each academic year is selected to be the Davis Editor for IJNS. The IJNS Davis Editor currently works directly under the Managing Editor to perform the daily activities of the journal. This includes assigning editors and requesting peer reviews for submissions; communicating with authors, editors, and other journal contributors; leading twice-monthly meetings with the editorial staff; and tracking the status of each submission until publication. In exchange for dedicating five hours per week to the journal in the fall and spring semesters, a Graduate Teaching Associate receives a course release (teaching one less course) in one semester while maintaining their full stipend.

As an assistant editor, I contributed to the 2019 regular issue (5.1), and as Davis Editor, I led the production of regular issue 7.1. In 2020, I was the Editorial Liaison for the Special Issue on INSEN (6.2), an organization in nuclear security promoting education, and in 2021-22, I served as the Publication Editor for the Special Issue for Women in Nuclear Security (7.2). In addition to Davis Editor duties, I continued my previous work volunteering as the managing editor of the bimonthly IJNS newsletter, coordinating contributions and authoring sections of the newsletters before sending them to the subscriber list. I also edited submissions as needed. A new set of tasks separate from the Davis Editorial Fellowship became necessary in 2020, as IJNS needed a new Publication Editor to format, organize citations, and publish all submissions. I learned these tasks and took over the Publication Editor position during my Davis Editorial Fellowship. Over the three years I have worked for IJNS, I have become very involved in the

journal's progression and sustainability. I am passionate about the journal's purpose to provide English publication possibilities for authors who may otherwise struggle to publish in international English academic journals, and I enjoy working with EAL authors.

Chapter 4: Results and Discussion

Chapter 4, which combines the results and discussion, consists of three sections of results from the survey and the analysis of reviews, as well as discussion of how those results answer the research questions presented in Chapter 3. Rather than presenting the results in order of their appearance in the survey, I wanted to report the results as they relate to the three research questions. First, I present the results of the survey and analysis of reviews that are related to how reviewers define English language proficiency and errors in academic writing (the first research question in this project). This aligns to survey questions 1a and 2a as well as observations from written peer reviews. Next, results related to the second research question, reviewers' perceptions of proficient language and errors in manuscripts, are presented and discussed. This includes results from survey questions 1a, 1b, 1c, 1d, 1e, 2b, and 2c. Finally, this chapter concludes with the results and discussion of questions 3a and 3b, which asked participants if they believed they could identify EAL authors versus first-language English authors.

4.1 Perceptions of Errors

My first research question was about what IJNS reviewers perceive as English language errors in manuscripts that they review. To be able to answer this question, I first needed to know what participants defined as an error and what they defined proficient writing to be. In the survey, I asked participants to define proficiency and identify what they perceive to be errors in English academic writing. Their responses gave me insight into their own definitions and perceptions of proficiency and error, allowing me to better understand their responses throughout the rest of the survey. I also compared the perceived errors from the survey results to the errors

identified by reviewers in written peer reviews from IJNS published manuscripts to see if similar errors were identified in both methods.

4.1.1 Participant Definitions of Proficiency

Question 1a asked participants, “How do you define English language proficiency in academic writing?” Four major themes appeared in the free-response answers for this question: clarity, effectiveness and efficiency, correctness, and the importance of proficiency. Thirteen responses (46%) mentioned clarity as an important characteristic of proficient language in academic writing. In these responses, participants frequently mentioned proficient academic writing as “understandable.” Readability was a prominent concern for participants when considering proficiency in academic writing. Rather than focusing on grammar or word choice specifically, these responses take a more holistic view of proficiency as offering readable and understandable content.

Five responses (18%) included a mention of efficiency, effectiveness, or concision. Responses defined proficiency as language used “effectively and efficiently” or “effective style.” Similar to clarity, the effectiveness or efficiency of language refers to not only how clearly the message is communicated to the reader, but also how concise the writing is. One response defined proficiency as “the ability to convey information in a concise simple English language,” another response also notes concision explicitly, and yet another describes concise language as “simple expression with shortest way possible [*sic*],” which concise language often aims to be.

Clarity, efficiency, and effectiveness are all terms that could apply to how well an author is grammatically using a language to communicate, but it could also refer to how well an author is describing and explaining their research without regard to the grammatical correctness of the

language. For the participants who indicated that clarity or effectiveness were the most important aspects of proficient language, they do seem to be referring to the linguistic usage of the English language, but an element of proficiency as understandable research appears in some of these responses. Some of these responses include, “consistent with the jargons of the discipline,” “able to structure their arguments in a cohesive way,” and “clear and concise language that policymakers can act on it to improve global peace and stability [*sic*].” These examples all define proficiency in terms of field-specific knowledge or composition rather than just linguistic elements. This part of this study’s results aligns with the research on linguistic bias that claims that bias comes not from only linguistic factors but also from authors not meeting the expectations of English-language academic publishing in their composition and/or methodology, potentially as a result of unequal access to research and participation in the discourse community (Cadman, 2017; Hultgren, 2019; Hyland, 2016a).

Fourteen responses (50%) noted the use of “correct” language, including grammatical correctness. This was the most-often-mentioned theme in the free response answers to Question 1a. Multiple responses indicated that “correct” language or the “rules” of English grammar must be followed to be considered proficient writing. As discussed in Chapter 2, referring to a single correct language indicates a standardized language ideology, or the belief that there is one correct or standard way of using a language, and it must be used by all (Milroy, 2001). Similar to Lillis and Curry’s (2015) study, the participants of this survey also seem to suggest that there are rules to follow to use English correctly. If any authors do not follow these rules or use the correct language, then they are perceived as not using English proficiently.

One aspect that these survey responses do not include, however, is specifically what correct language is. Like Lillis and Curry (2015) found in their study, reviewers seem to think of

English as having one correct, unchanging version that should appear in academic writing. But, there are hundreds of English dialects used throughout the world, and all have their own grammar rules or standardized language. In this study, I cannot assume what each respondent considers to be correct language, though the dialect of English they indicated they use most frequently (a demographic question asked in the survey) and the categories they consider to be errors in academic writing (discussed in section 4.1.2) could help determine their understanding of correct. The most frequently mentioned varieties of English that participants write with for academic purposes were American/U.S. English (61%) and British/U.K. English (46%). Five participants indicated that they use a mix of both U.S. and U.K. English. Since these are the most commonly used varieties according to participants from this study, the “rules” or “correct” language that most participants refer to in their responses are likely from one of these varieties. Additionally, all 28 participants said that they learned English at least partially through formal schooling (primary/secondary and/or university), which would include learning English grammar and rules in a classroom setting. This can also lead to learners having an idea of what correct English language is. Whatever standard language reviewers expect to see, they are clearly agreeing that there is one correct or universal English language to use in academic writing (Milroy, 2001).

Finally, responses didn’t directly define what English language proficiency in academic writing was but instead emphasized the importance of having proficient language in academic writing. Because these responses did not answer the first research question about defining proficiency, I have chosen to discuss the responses coded “importance” from Question 1a in section 4.2.1, which is about results related to the importance of proficiency in English-language academic writing.

4.1.2 Participant Definitions of Errors

Having established an understanding of what participants thought to be proficient academic writing, I also sought to find out what participants identified as language errors in academic writing. Question 2a asked, “What do you identify as a language error in a manuscript in English academic writing?” This was a multiple choice question with the option of selecting as many choices as the participant wanted, as well as the option to create their own multiple choice option. The results of this question are shown in Figure 4.1.

Out of 28 total responses, participants most frequently selected sentence structure errors (93%) and word choice errors (86%) as errors they notice in academic manuscripts. According to these results, participants note pronoun usage errors the least. Five participants added their own choices using the “other” selection, and four of those relate to poorly-defined technical words or jargon. One “other” response noted identifying errors in the “flow” of an argument, including the transitions between paragraphs.

This survey data compares interestingly to the analysis of the written peer reviews from manuscripts published in IJNS volumes 1 through 5 (data shown in Figure 4.2). While many comments on the reviews were about sentence structure issues (usually about an unclear or confusing sentence), it was not the majority like in the survey responses. Comments on or edits of spelling (usually noting the use of U.K. or U.S. spelling) and punctuation occurred more in the reviews than comments on sentence structure. Comments on word choice errors (using the wrong word, suggesting another more appropriate word, etc.) occurred most frequently. Errors sorted into the “other” category amounted to the highest number of comments. These “other” comments included general notes on how “well written” a manuscript was overall, a vague comment that

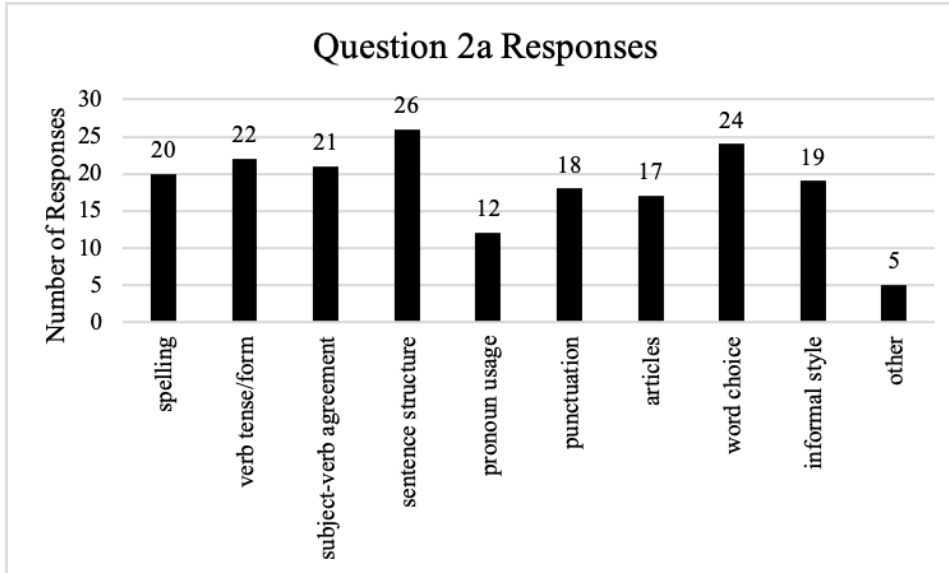


Figure 4.1

Types of Errors Identified by Participants

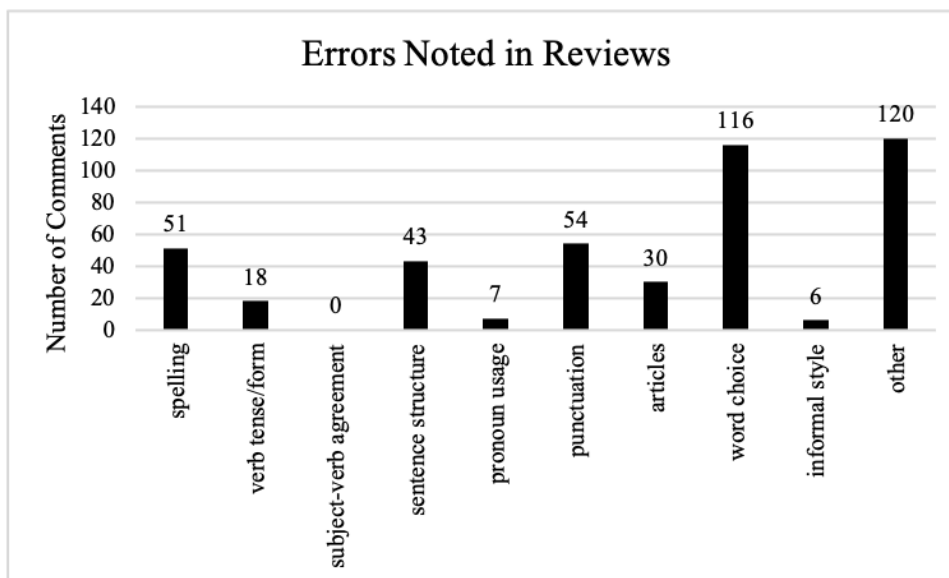


Figure 4.2

Types of Errors Identified in Reviews

the grammar should be corrected or an editor should look through the manuscript, or acknowledging that the text or citation formatting was incorrect.

Some of the language-related errors that reviewers commented on in the written peer reviews were difficult to understand if they were only related to the use of the English language, or if they were also influenced by the content and field-specific knowledge that the reviewers were analyzing. For example, sentences that were noted as “unclear” could have referred to how the sentence was worded or structured, or it could have referred to an unclear description of the information in the sentence. Reviewers’ suggestions on word choice could refer to how the word is used in the English language, or it could refer to how the word is used in the research field. General comments on how “well” the manuscript was written could refer to how the language was used and composed, but it could also refer to writing “well” about the topic. While these reviews offered a look into what reviewers comment on related to language use in academic manuscripts, they did not demonstrate a clear separation of language and content in reviewer comments. Curry and Lillis (2013) make this observation in their research, noting that academic brokers (such as reviewers) include comments on both language and content. As some scholars suggest, these comments could be more focused on the content and methodology of the research rather than the grammatical correctness of the language (Cadman, 2017; Hultgren, 2019; Hyland, 2016a, 2020). This seems to be one of the largest arguments against the existence of linguistic bias. Since scholars cannot tell if linguistic factors alone influence a reviewer’s perception of a manuscript’s quality, scholars cannot definitively state that linguistic bias exists in academic publishing.

4.2 Influence of Perceived Errors

Now knowing what reviewers perceive to be errors and proficient writing, I moved on to my second research question: how do the perceived errors influence a reviewer's perceptions of the quality of the manuscript? From analyzing 89 of the reviews for published IJNS manuscripts, 65 (73%) had at least one comment about language usage in the review. Reviewers were clearly noticing perceived errors and deeming them important enough to acknowledge those errors in their reviews, like Strauss (2019) found in their interviews with experienced peer reviewers. This is reflected in studies from Lillis and Curry (2015) and Hyland and Jiang (2020), where their examinations of peer reviews revealed frequent comments on language issues. However, both of the studies from Lillis and Curry (2015) and Hyland and Jiang (2020) made sure to state that they could not claim that these language comments had any influence over a reviewer's overall impression of a manuscript or their recommendation to accept or reject it. Likewise, the reviews from my study were not able to explain exactly how those errors influenced the reviewer's perceptions of the manuscript.

In this thesis project, the survey responses offered more information about a reviewer's perceptions of or choices to comment on errors where only analyzing peer reviews could not provide this insight. Survey participants had the opportunity to indicate the importance of proficient writing in academic manuscripts and research, as well as when and why they comment on errors while reviewing manuscripts. The results related to the importance of proficiency and how reviewers respond to and perceive errors are presented in this section.

4.2.1 Importance of Proficiency

To elicit how important participants think proficiency is in academic manuscripts, I asked two Likert scale questions in the survey, each with its own follow-up free response question to allow the participants to expand on their Likert scale response. Additionally, some of the responses from Question 1a (defining proficiency) offered commentary on the importance of proficiency.

In Question 1a (discussed in section 4.1.1), some participants did not define proficiency or list its characteristics but instead highlighted the importance of proficient language use in academic writing. Others noted the importance of proficiency as well as defining it. Six responses (21%) mentioned that proficiency in academic writing was an important skill, though four of these noted that it is not the most important factor when reviewing a manuscript. One participant said that since they “fully expect many manuscripts to be from non-native English speakers who may also not have the resources to go through a strong editing process,” they ignore perceived errors or a lack of proficiency as long as “the context is understandable.” But, two responses were not as forgiving. One participant said that since “English is the dominant language in the world,” an author must be proficient when using the language in academic writing. Another stated that since the field of nuclear security relies on clear communication to “improve global peace and stability,” academics must be proficient in the language they use to communicate.

These few responses to Question 1a seem to indicate that while participants agree that proficiency is important, they disagree about exactly how important it is in academic writing. What was found in this study mirrors the argument about linguistic bias currently occurring in the academic publishing community. While Hyland and Jiang (2020) notice multiple comments

about language in peer reviews, they do not believe that these language comments are important enough to affect the decision to accept or reject a manuscript, thereby causing instances of linguistic bias. Politzer-Ahles et al. (2020), on the other hand, theorize that language influences a reviewer's perspectives enough so that manuscripts written in nonstandard English are potentially rated lower than standard English manuscripts, and therefore linguistic bias could exist. Both sources agree that reviewers are aware of language differences in academic writing, but they disagree on the effect these differences have in academic publishing. My study agrees with previous studies in that reviewers notice language usage in academic writing but again shows that reviewers disagree on just how important language proficiency is to the quality of a manuscript.

Directly after defining proficiency, the first Likert scale question (Question 1b) asked participants to rate their agreement with the following statement on a scale including strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree: "I believe that English language proficiency is an important part of the quality of a manuscript that is published in English." The majority of participants (79%) answered that they strongly agree with the statement, and 89% selected one of the "agree" options. No participants selected either "disagree" option, with 11% choosing the neutral "neither" option (see Figure 4.3). Based on this data, most participants agree that English proficiency is important to the quality of an academic manuscript.

The free response answers describing participants' reasoning for their level of agreement (Question 1c) offer further insight into why participants believe that English language proficiency is important. Fourteen responses (50%) to Question 1c mentioned that language proficiency matters for the effective communication of content in academic writing. They say

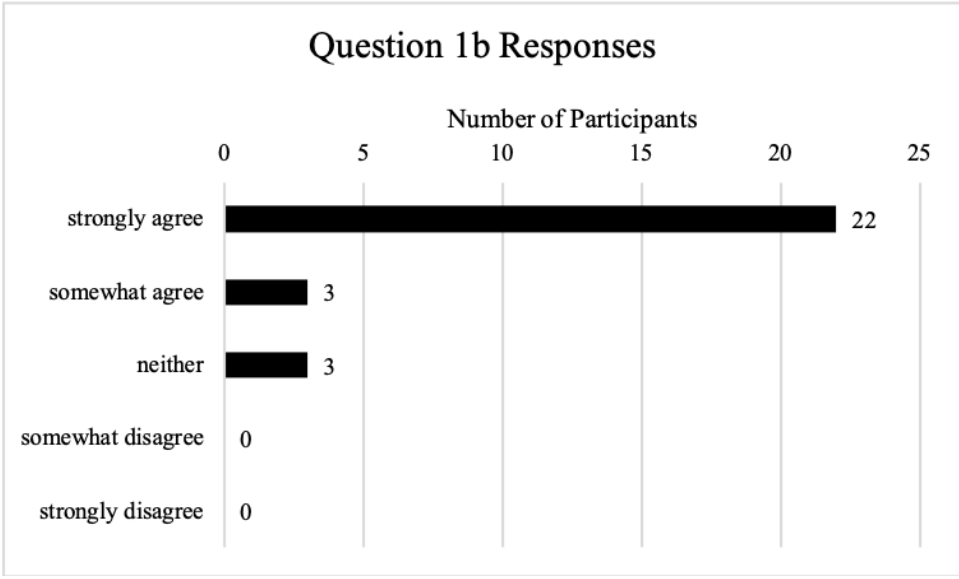


Figure 4.3

Participant Responses to Question 1b: “I believe that English language proficiency is an important part of the quality of a manuscript that is published in English.”

that an author must be proficient in the language that they are writing in so that they can communicate the content of their research. Participants noted that if language proficiency is lacking in a manuscript, the content is harder to read and understand. One response broke down this connection clearly: “Shared knowledge requires shared understanding and share[d] understanding requires contextual agreement and shared contextual agreement requires linguistic shared understanding.” This result suggests that since the communication of knowledge requires a shared method of communication, proficiency in that method of communication can influence how well that knowledge is shared.

Four participants (14%) noted that the language proficiency of a manuscript directly influences their view of the quality of that manuscript. Beyond sharing content, language proficiency reflects the credibility of the author and the quality of their writing. Another four responses state that language proficiency is an expectation of academic publishing. While they do not say that language proficiency influences their perceptions of the quality of a manuscript, it does indicate if the manuscript is or is not worthy of academic publication. Three of these responses pointed out language editing as its own step in the process of writing and publishing academic manuscripts. Highlighting language proficiency as an expectation of academic publishing aligns with the comments from Politzer-Ahles et al. (2016) and Hyland (2016b) on how journals tend to not publish manuscripts with “poor” English language. Since language proficiency is apparently important to academic publishers, some reviewers consider it to be important as well.

Out of 28 responses, only four participants (a separate four from the ones in the paragraph above) emphasized that they do not include language proficiency in their evaluation while reviewing but instead focus on analyzing and commenting on the content of the

manuscript. These participants attempt to separate language and content as much as they possibly can while reviewing, effectively focusing their responsibility as a reviewer on the content and leaving language work for the editors, as Lillis and Curry (2015) explain in their research. Since they are reviewing manuscripts for research content, they opt to leave their comments on the technical aspects of the research rather than the technical aspects of the writing. One participant explains that their rationale for not judging language proficiency is that “so much of the industry is from non-native English speakers, and, thus, demands tolerance for poor grammar when English is not their first language...all out of a sense of equity.” Though they still identify proficient language, they choose not to spend time on it in reviews because they do not want to disadvantage EAL authors. These results mirror Hyland’s claim that as the number of EAL authors and reviewers increase, reviewers and editors, who are also more frequently EAL users themselves, may tolerate more nonstandard Englishes in academic publications (2016a, 2020). As more publishing gatekeepers accept nonstandard Englishes, the chance for linguistic bias to occur is reduced. However, this claim does not mean that these participants do not consider language proficiency to be important (as discussed earlier in this section). Three of the four responses mentioned earlier in this paragraph reference language proficiency as important, whether due to the need for understandable communication or expectations of academic publishing. Hyland notes that some studies have shown that reviewers do not comment on language because it is the problem but instead because it does not match what is expected to appear in academic writing (2016a).

The next Likert scale question (Question 1d) slightly changed the wording of Question 1b, asking instead if English language proficiency is important specifically to the quality of the research in a manuscript. The scale question read, “I believe that English language proficiency is

an important part of the quality of the research conducted in the manuscript published in English.” The responses show a broader range of agreement than the previous Likert scale question, but most participants (75%) still agreed with the statement either strongly or somewhat. Only three participants (11%) disagreed with the statement. Also, instead of the participants overwhelmingly strongly agreeing like the last Likert scale question, the balance between strongly agreeing and somewhat agreeing became more even in this question. This is shown in Figure 4.4.

Participants’ reasons for selecting their answers to the Likert scale question (provided in the responses to Question 1e) largely fell into two categories: English language proficiency is intertwined with quality research, or English language proficiency is not connected to the quality of the research presented in a manuscript. Eight participants (29%) wrote responses indicating that English proficiency and research quality were highly related. Some of these responses argued that since the international nuclear security field is published mostly in English, nuclear security researchers must know English in order to learn and create nuclear security research. Knowledge of the field and knowledge of the language are intertwined and inseparable. These answers bring to mind Koerber and Graham’s (2016) study which showed that EAL scholars who learned their field entirely in English used their field-specific knowledge only in English. Their research knowledge is dependent on their knowledge of English. Similarly, this compares to Soler’s (2019) study that found that EAL scholars who learned their field in English struggled to write about it in any other language, again showing the strong relationship between English and research.

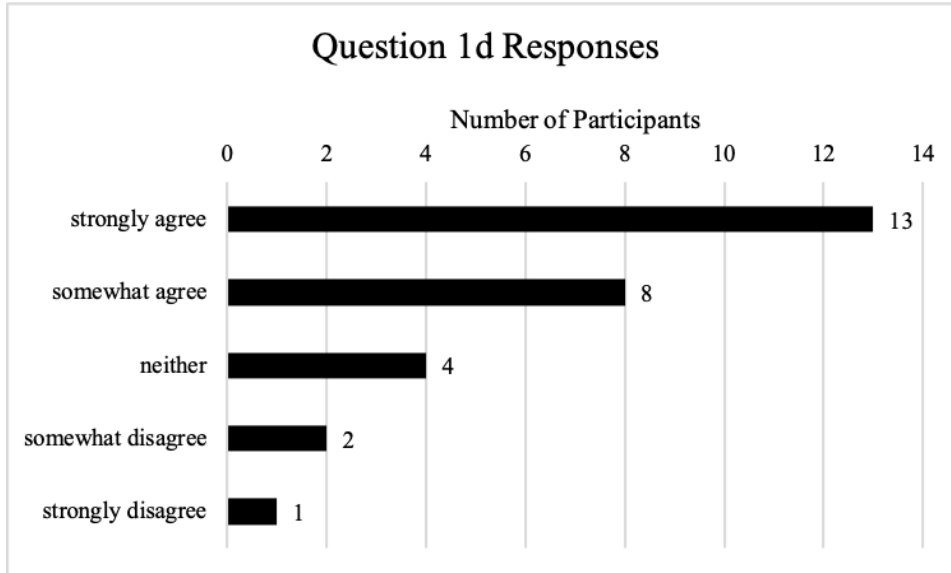


Figure 4.4

Participant Responses to Question 1d: "I believe that English language proficiency is an important part of the quality of the research conducted in the manuscript published in English."

Nine responses (32%), however, claimed the opposite, stating that English proficiency is not connected to the quality of research in a manuscript. These responses often referenced EAL authors who conduct and write about research in languages other than English. The quality of their research is not dependent on their knowledge of English – a more “equitable approach in an international setting,” as one response suggests. One participant stated that for EAL researchers, “English language proficiency should not be a major obstacle to contribute to knowledge... Good articles in one language can be translated to other languages.” Other participants separated language proficiency from research by identifying it as a separate process, saying language proficiency is not “important at the draft stage, or even submission stage,” and that any language “deficiency can be overcome.” In Koerber and Graham’s (2016) study, the researchers who learned their research fields in a language other than English made a conscious choice to write in English or in the language they learned their research field in. English was not intertwined with their knowledge, but it was a different part of the writing process where they chose how to communicate. In fact, as suggested in Soler (2019), translating research into English after performing it in another language could feel like a limitation to an EAL author since they believe they could most effectively express their knowledge in a language other than English.

These survey responses also suggest that as long as the research itself is valuable, the language proficiency does not have to be a major concern. This is an argument that many researchers use to decry the existence of linguistic bias. Cadman (2017) focuses her theory on reviewers identifying deficient research methodologies, Hultgren (2019) believes that reviewer comments come from noticing a lack of resources to compose complete research, and Hyland and Jiang (2020) state that even if reviewers comment on language, the comments that contribute to their perception of the manuscript all relate to the content rather than the language. These are

all theories that refute the existence of linguistic bias because their research shows that reviewers place their focus on content-related aspects of a manuscript rather than linguistic-related aspects.

Two common themes that appeared in many responses to Question 1e were that the proficiency of the language could change the reviewer's perception of the quality of the research and that proficient language more effectively communicates the research, contributing to its apparent quality. Most of these responses did not definitively state that English proficiency was either intertwined or totally separate from research quality, but instead they commented on how proficiency and research were still connected to one another. Six responses (21%) noted that an author's language proficiency could influence how the reviewer perceives the quality of the research in the manuscript. This is similar to participants' comments in Question 1c that language proficiency reflects a manuscript's quality. These survey responses suggest that if an author uses language proficiently, then their research comes across as higher quality, as well as their writing abilities. These results also suggest that proficiency changes the perception of their knowledge about academic research and writing, as one response points out: "sometime[s] we confuse creative English writings with research writings." Therefore, an author's proficiency in research writing reinforces the perception that they understand how to do quality research.

These results resemble the potential conclusions of Politzer-Ahles et al. (2020) in their exploratory study to more objectively determine if language proficiency influences reviewers' perceptions of academic writing. If linguistic factors can influence the reviewer's thoughts on the content of a manuscript, then linguistic bias could potentially occur. The reviewer's comments may still focus on the content, but the language used is one of the factors that influenced their comments on content. Politzer-Ahles et al. (2020) showed preliminary evidence for this occurrence by measuring how standard versus nonstandard language affected how reviewers

rated conference abstracts (as described in Chapter 2). Since the abstracts contained the same research content and differed only in language, the results could reveal how language influenced a reviewer's perception of the abstract's quality. Their results showed a potential tendency for standard-language abstracts to be rated higher than nonstandard-language abstracts, and since the variable of content was controlled for in the study, linguistic factors could be the reason for this difference between standard and nonstandard language.

The second theme, proficient writing helps more effectively communicate research, follows the pattern of Question 1c responses as well. Language proficiency matters for the communication of research content in an academic manuscript, and effective communication leads to better understanding the research content. Nine responses (32%) to Question 1e highlighted how proficient language best communicates research content. As one participant argues, "Without proficiency in language, flow of argument, findings and expression of the outcome would not be clearly conveyed." Another participant comments, "Many of the problems with reviews extends from poor English language manuscript submissions that makes it hard for the reviewer to understand [*sic*]." These responses suggest that lacking language proficiency – and therefore lacking communication of content – affects how well the reviewer can understand the research and their ability to adequately evaluate that research.

These results again relate the importance of language proficiency for the communication of content and therefore fit the research stating that reviewers focus on content rather than linguistic factors. Rather than consciously focusing on the language used in a manuscript, reviewers still consciously focus only on the content. But, since an author's language proficiency can affect how well the content is communicated, some reviewers' comments may be about linguistic elements of a manuscript. Again, language and content cannot be cleanly separated

from one another, like reported in Curry and Lillis (2013). But, in this argument, language comments are not the focus – the reviewer’s focus always centers on the research content. In this case, these responses focusing on research content from my study are similar to the results of studies from Hultgren (2019), Hyland (2016a, 2016b, 2018, 2020), Hyland and Jiang (2020), and Cadman (2017) in the responses’ focus on content over language. All of these sources claim that reviewers’ comments on EAL manuscripts come from noticing a lack of thorough research possibly due to lack of resources, or from not understanding methodological or compositional practices in English-language academic publications. These concerns center around research content, just as many of the responses in my study do.

4.2.2 Reviewers’ Responses to and Perceptions of Errors

After learning what reviewers perceive to be errors and how these errors can influence their perceptions of academic manuscripts, I wanted to know how reviewers respond to the errors they find while reviewing. First, I asked participants to rate their agreement to the following statement in Likert scale Question 2b: “Reviewers should note and/or correct language errors in a manuscript they are reviewing.” While a larger percentage of participants disagreed than in any of the preceding Likert scale questions (29%), the majority of participants (61%) agreed with this statement either strongly or somewhat, as shown in Figure 4.5.

To understand the answers that participants selected in Question 2b, Question 2c asked, “When do you comment on language errors in a manuscript?” While a few responses kept it short and to the point – “during drafting,” “always,” “before publishing” – most responses addressed whether or not it was the reviewer’s responsibility to note or correct errors. Thirteen

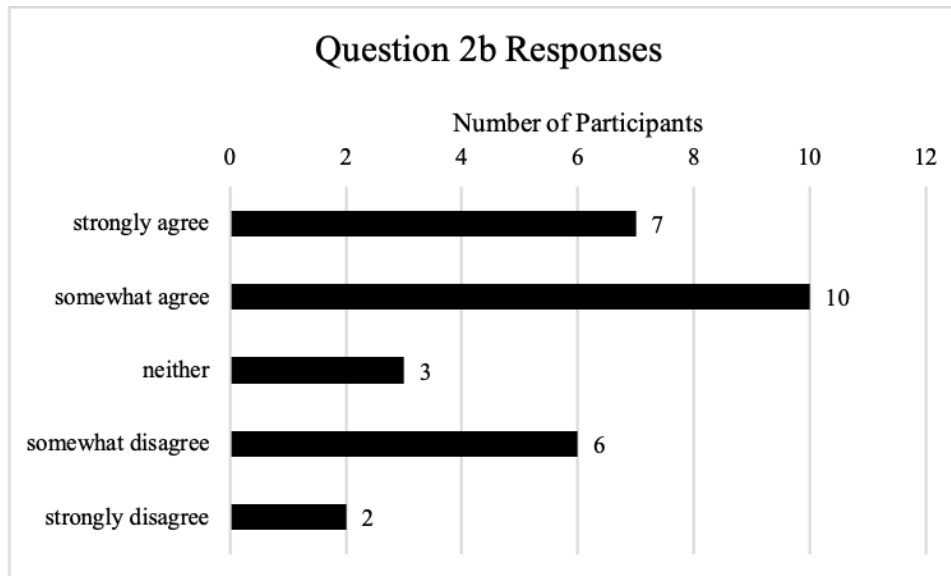


Figure 4.5

Participant Responses to Question 2b: “Reviewers should note and/or correct language errors in a manuscript they are reviewing.”

responses (46%) designated the role of a reviewer as analyzing content and the role of an editor as correcting errors in the use of the language, similar to how Lillis and Curry have defined their academic and literacy broker roles in their research (Curry & Lillis, 2013; Lillis & Curry, 2006, 2010, 2015). But, as some pointed out, language errors can make the reviewer's job more difficult to do. One participant said,

Although the role of the reviewer is to improve content, it is often hard to appreciate content if the language of communication is poor. A wrongly worded concept could significantly change the content of the paper and thus [is] hard for the reviewer to judge the correctness and appropriateness of the content.

Another response stated, "This is like a chicken and egg dilemma. A poorly written manuscript in English blurs or obscures the academic soundness thus making it hard for the reviewer to evaluate the content." Though these participants believe that reviewers should focus on the content in manuscripts, they acknowledge that proficient and correct language is an important part of communicating and understanding that content. Once again, reviewers are unable to totally separate their comments on the content of research from their comments on the language used.

Similarly, eight responses (29%) made it clear that while it is not their responsibility to do so, they do frequently comment on language errors in the manuscripts that they review. Many responses said that the responsibility for correcting language errors lies on the authors and editors, but reviewers can assist in this if they would like. Out of 28 responses, six (21%) explicitly mentioned that they only comment on or correct minor language errors, and only as they feel comfortable doing so. If the error is a more complex issue, or if they do not feel confident in their corrections, the reviewer will leave the error for the editors to address. One of

these responses said, “I believe it is the responsibility of the author to have external assistance in language editing before submission.” These reviewers leave “major” corrections to authors and the editors that the authors engage, as it is the responsibility of the editors and/or authors to do so.

A few responses in this category (reviewers can correct, but are not responsible to do so) were a little surprising to me as an editor because they placed the blame for errors on journal editors rather than manuscript authors. Being familiar with IJNS’s publication process, I assumed that editors for other academic journals also edited manuscripts after they had been reviewed by peer reviewers, accepted by the publication, and revised by the authors. It is one of the last steps in the composition of a manuscript before publication. If a manuscript needs heavy revisions or is not accepted based on the reviews, then it is not worth the editor’s time to thoroughly edit a submission in its initial stages before these revisions have been completed. But, some of the participants in this survey expected manuscripts to be fully edited before it was sent to them for review. One response said, “most publishing houses have copy editors who can correct the manuscript before sending it to [the] reviewer,” indicating that editing should be done before the peer review stage. Another participant was more frustrated with this process, stating,

I usually scold the editor for passing such a piece of shit on to me to review. I will correct a few errors and then I give up. I was enlisted for my ability to technically assess the manuscript. Look up the definition of “edit” (editor) [*sic*].

Calling a manuscript “a piece of shit” because of its language errors certainly suggests that this reviewer feels strongly about a manuscript’s quality when they receive it for review. Based on this comment, it is not clear if language errors are the only reason that they would label a manuscript so harshly. While they are clearly referring to language in some capacity since they

are referring to work that editors should do, they do not explicitly state that language is the only reason that they would call a manuscript “a piece of shit.” But, their comment does seem to support the potential existence of linguistic bias because language is definitely involved in their evaluation of a “piece of shit” manuscript. For both of these comments referring to editors, they evidently do not think that it should be the responsibility of the reviewer to correct language errors because others are tasked to do that job. There might be visible here a breakdown in communication between journal editorial leadership and peer reviewers. If reviewers are under the impression that editing takes place before the reviewing stage, I understand how a manuscript filled with perceived errors could make a reviewer frustrated.

These responses related to a reviewer’s responsibility to correct language errors fit into the descriptions of language and academic brokers in Lillis and Curry’s research (Curry & Lillis, 2013; Lillis & Curry, 2006, 2010, 2015), as well as Strauss’s (2019) findings. As Lillis and Curry (2015) suggest, reviewers who do not believe that it is the responsibility of the reviewer to correct language errors likely believe that they are able to (at least somewhat) separate language from content. As academic brokers, they clearly focus their role on the academic knowledge in a manuscript. The responses in my study seem to agree with this separation of roles into academic (reviewer) and language (editor) brokers. However, as shown in Lillis and Curry (2006, 2015), academic brokers still comment on language in manuscripts related to both linguistic errors and content-focused language errors. Likewise, some participants in the Strauss (2019) study stated that they often do correct language while reviewing manuscripts – it is part of their role as reviewers. Participants in my study also reflect this line of thinking, where academic and language brokering roles combine into one role for the reviewer. Other reviewers mentioned correcting errors only when they were major or frequent, similar to other participants in my

study. The responses in this present study show that while some academic brokers consciously choose to comment on language, others cannot truly separate language and content comments, as Curry and Lillis (2013) observe.

Analyzing the reviews from published IJNS manuscripts also showed the different responses reviewers have toward errors. While most of the 65 reviews that contained language comments/corrections had 10 or less (35, or 54%, with only one or two language comments and/or corrections), a few reviews contained numerous (more than 10) comments on language issues and corrections of problems. One review contained 58 comments and corrections, and another had 59. Often, these reviews with many comments/corrections were noting issues that repeated throughout the manuscript rather than different types of errors in each comment or correction. These reviews contained more specific, detailed, and thorough corrections than the reviews with just a couple comments related to language, showing a slightly different response to errors while reviewing. These reviews show academic brokers who vary in the number of linguistic comments made, suggesting differing degrees of responsibility to correct language in manuscripts.

Another Likert scale question (Question 2d) asked participants to rate their agreement to the statement, “A journal should reject a paper that has English language errors after being reviewed, even if the content is reviewed well and academically sound.” As shown in Figure 4.6, a slight majority (54%) disagree with this statement either somewhat or strongly. Though many participants agreed earlier that English language proficiency is important to a manuscript’s quality, many seem to disagree that a manuscript should be rejected for its language proficiency alone, indicating that it is not an irreparable issue in academic manuscripts. However, seven

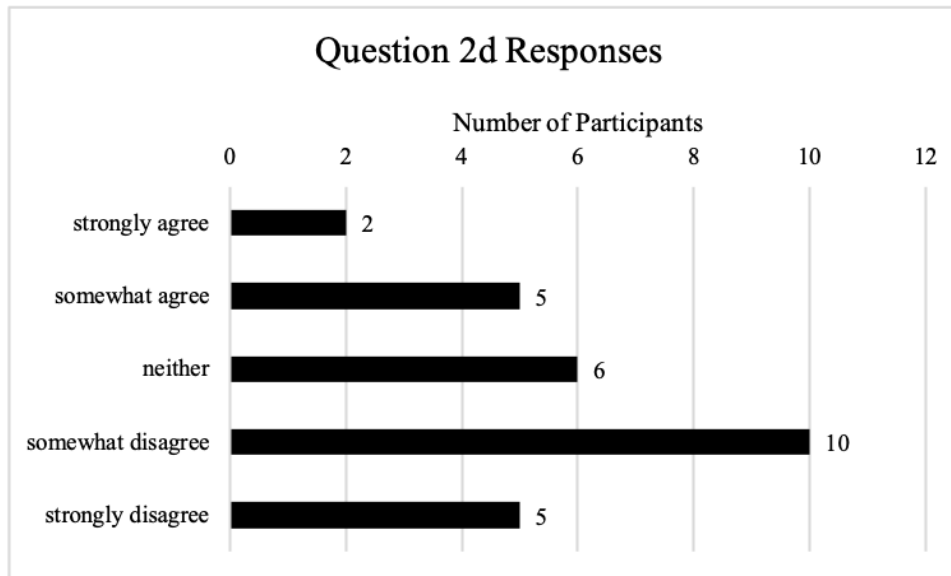


Figure 4.6

Participant Responses to Question 2d: “A journal should reject a paper that has English language errors after being reviewed, even if the content is reviewed well and academically sound.”

participants agreed with the statement, showing the importance they place on language proficiency in academic manuscripts.

The answers to this Likert scale question seem to support the theory that language use alone is not a determining factor when accepting or rejecting a manuscript for publication (Hultgren, 2019; Hyland, 2018; Hyland & Jiang, 2020). Hyland is the most frequent proponent of this theory, claiming that no evidence exists to show that linguistic factors alone influence how reviewers recommend manuscripts to be accepted or rejected. Lillis and Curry (2015) include a disclaimer in their study of peer reviews, admitting that even though academic brokers comment on the linguistic elements of a manuscript, they cannot conclude that language alone affects the reviewer's perceptions of the manuscript. One of Hyland's (2016a, 2016b) criticisms about linguistic bias research is that it is subjective, and no proof of linguistic bias can be found in subjective methods such as interviews and surveys. Many researchers call for more objective tests to attempt to measure linguistic bias in academic publishing (Hyland, 2016a, 2016b, 2018; Politzer-Ahles et al., 2016, 2020).

4.3 Identification of EAL Authors

As part of the second research question about reviewers' perceptions of errors in manuscripts, I also wanted to know if reviewers believed they could identify if an author was using English as their first language or using EAL. A Likert scale question asked participants to show their level of agreement to the statement, "I can identify if the author(s) of a manuscript use English as an additional, second, or foreign language, or if they use English as a first language." The responses (shown in Figure 4.7) indicate that a majority of participants (79%) believe they can identify authors' language usage as EAL or first-language while reviewing manuscripts. In

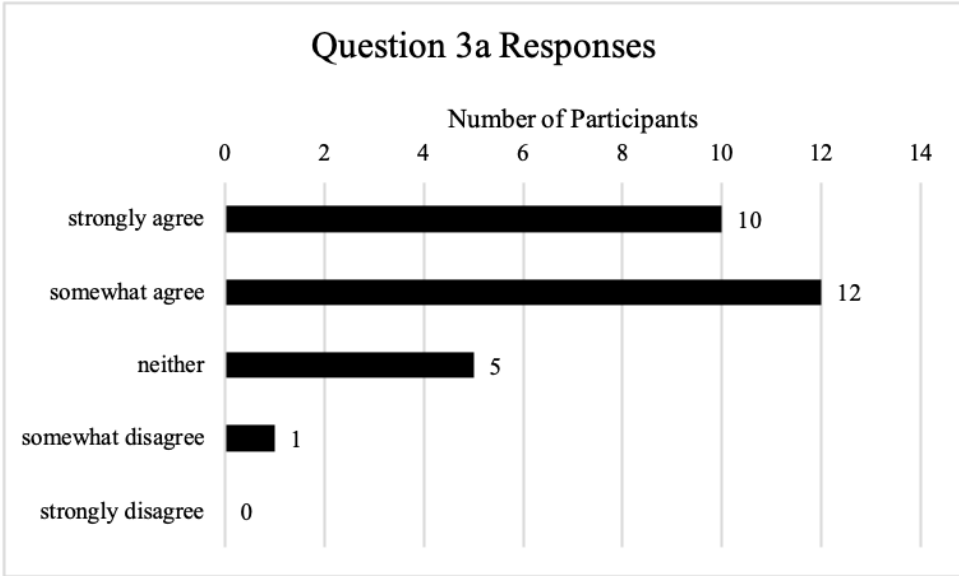


Figure 4.7

Participant Responses to Question 3a: “I can identify if the author(s) of a manuscript use English as an additional, second, or foreign language, or if they use English as a first language.”

much of the research I have read about linguistic bias, most of the studies talk about EAL authors' perceptions that they are disadvantaged (Cargill & Burgess, 2017; Flowerdew, 2000, 2019; Hultgren, 2019; Hyland, 2016a, 2018; Politzer-Ahles et al., 2016), but little research directly asks reviewers if they can identify EAL writing. In Tardy and Matsuda's (2009) study, participants stated that they do often speculate on authors' linguistic backgrounds while reviewing manuscripts. Some of the participants of that study specifically speculated on if an author was using English as their first language or EAL. Likewise, Lillis and Curry (2015) observed that most of the texts they examined that contained language comments also mentioned the writing in relation to English being used as a second or foreign language. The responses to Question 3a suggest that participants in my study not only speculate about identity, but they also believe they can identify authors' linguistic backgrounds.

A free response question immediately followed the Likert scale question, asking participants to expand on their answer to Question 3a and specifically, "How do you identify authors who use English as a second, additional, or foreign language compared to authors who use English as a first language?." Ten participants (36%) responded with comments about "incorrect" grammar or syntax giving away a "non-native" English writer. Responses listed specific errors like "the proper or improper [use] of the article 'the,'" "odd word choice and syntax," and "spelling errors," as well as generally stating that various grammatical errors are an indicator of an EAL author. Grammar is mentioned as one sign that a participant in Tardy and Matsuda's (2009) study used to identify EAL authors. A few responses also referenced "incorrect" language as a result of obvious translation: "there are sentences that are syntactically incorrect as the author tries to translate from native language to English [language]," and "The manuscript would look like a bad translation from another language." A few of these participants

mentioned recognizing translations from other languages into English based on their own knowledge of another language and how those translations frequently appear syntactically when translated into English. One participant stated,

since my mother tongue is within the group of Latin languages, I recognize quite well a sentence construction originally conceived in Spanish/French/Italian/Portuguese and translated into English through specific indicators, such as use of passive verbs or complex structure of interconnected sentences.

While this is not a guaranteed way to identify translated language, it does make sense how a reviewer's own experience with specific languages and translating them into English might help them better identify EAL authors.

Four other participants (14%) referred more vaguely to how the language is used in their identification of EAL authors. These included statements like, "due to the usage of the language," "how they use universal (general) English language vocabulary, idiom, catchall phrases, etc.," and "it just sounds off..." These unspecific reasons suggest that grammatical and syntactical factors are not the only indicators that reviewers use to identify EAL authors from first-language authors. How the language is used overall provides a clearer picture of the author's linguistic identity than any one linguistic element can provide. The response, "it just sounds off..." indicates that a reviewer's unconscious knowledge of the language can determine their perception of whether an author is using EAL or English as a first language.

While these responses included comments about language usage, it cannot be assumed that these comments alone would influence a reviewer's suggestion to accept or reject the manuscript. These reviewers claim that they can identify EAL authors, but what effect this identification has on the reviewer's perceptions of the manuscript is not clear. As Hyland's

(2016a, 2018) studies pointed out, reviewers don't explicitly state that language is a major deciding reason for their suggestion to accept or reject a manuscript. The present study's results also support Hyland's (2016a, 2018) studies since the majority of responses to Question 3a disagreed with a journal rejecting a manuscript for language errors only. Having understood from previous questions about the participants' views on language proficiency and errors, no participants explicitly stated that errors or poor proficiency caused them to suggest rejection of a manuscript. While proficiency and errors can influence how the reviewers perceive the manuscript, it does not seem to be a reason for reviewers to reject manuscripts.

Only three responses (11%) stated that they were not able or it was difficult to identify EAL writing versus first-language English writing, and two others (7%) mentioned checking the author's name, institution, or geographic location as part of identifying EAL authors if this information is visible for reviewers to see (non-linguistic factors). Five responses clearly stated that either they don't try to look for differences, or they attribute these differences to "native" and "non-native" authors equally, as both make errors. A participant that implied both of these ideas said, "There is no correlation for me. A native speaker can have a poor written English [*sic*]." Another focused on their indifference toward determining EAL versus first-language writers, stating, "I have not a care what is the authors' first second or nth languages are [*sic*], as long as what they present to me is as close...to perfect as is possible." These participants had a wide range of agreement to Question 3a – two selected "somewhat agree," one "neither," one "somewhat disagree," and one "strongly disagree" – but in their responses to Question 3b, all emphasized their indifference toward these errors as "native" versus "non-native" issues.

These responses most strongly support Hyland's (2016a, 2018) argument that the distinction between native and non-native authors is not an influential factor when reviewers

suggest acceptance or rejection of a manuscript. Hyland (2016a) claims that the idea that native speakers “own and control their mother tongue” (p. 61) is flawed. Stating that only EAL authors make errors ignores the fact that native English authors can struggle with writing, too. He points out that native speakers often make errors when using their own language. Non-native language users are not the only speakers who make language errors. This is a statement that three participants in the present study responded with in Question 3b. Two noted that native users of English make errors just like non-native speakers, and one commented that non-native users of English can have the same level of proficiency as native English users. While the majority of participants seem to discern EAL writing from English first-language writing, a few do seem to support Hyland’s original reasoning against linguistic bias.

The results in this chapter provide answers to the first two research questions in this project. IJNS reviewers perceive English language proficiency as clear, understandable communication; grammatically correct and following rules; efficient and effective; and/or important to have in academic writing. They define errors broadly, but most participants focus on sentence structure and word choice errors in manuscripts while reviewing. Reviewers perceive language errors and proficiency in differing ways: some think that language proficiency matters only for how well the content is communicated, while others believe that proficient language reflects the quality of the manuscript itself. Reviewers are split on how they respond to reviews. While most comment on errors, many do not believe it is their responsibility to do so. Many reviewers even believe that they can identify EAL writing versus English first-language writing. This information can help IJNS editors understand what reviewers focus on when reviewing manuscripts for the journal. It can improve the communication about expectations between editors, reviewers, and authors. In the final chapter, I discuss how these results answer the third

research question about how the implications of this study contribute to the operation of IJNS and international academic English-language publishing.

Chapter 5: Conclusions

Chapter 4 revealed what nuclear security reviewers consider to be errors and proficient language and how those errors and proficient language affects their perceptions of manuscripts. It also related these results to the literature discussed in Chapter 2. To answer my third research question, “What implications from this study can contribute to the operation of IJNS and international English-language academic publishing?,” I now analyze those results to understand how they relate to IJNS and international English-language academic publishing. By discerning reviewer perceptions, I can better understand the expectations that IJNS reviewers may have when they receive an IJNS manuscript to review.

In this final chapter, I begin by explaining what the results and discussion in Chapter 4 could mean to IJNS specifically. Next, I provide suggestions for the editorial leadership at IJNS to maintain editorial services to authors and improve relationships with reviewers. I also discuss what this project could imply in the larger field of international English-language academic publishing. I conclude with a discussion of the questions that still remain to be answered after the completion of this project, what future work could be done, and my plans to continue to work with IJNS.

5.1 Implications for IJNS

The results of this study have direct implications for how IJNS reviewers currently perceive the manuscripts that they review. The results from this project suggest that most IJNS reviewers do pay attention to the language used in manuscripts. While they do not all agree on how to define language proficiency or how important language proficiency is in academic writing, most participants stated in some way that they do consider language proficiency when

reviewing manuscripts. All of the responses that mentioned grammar in their perceptions of proficient writing or identification of EAL authors seem to base their definition of proficiency on some standard, correct version of English. This suggests that reviewers expect to see what they consider to be correct language in the manuscripts that they review for IJNS. However, all of the responses mentioning correct grammar or following the rules of English grammar did not define what these rules are or how the language is correct. I cannot assume what each participant considers correct, rule-following English, either, considering there are multiple varieties of English used across the world with differing grammatical rules. Since most participants responded with U.S. or U.K. English as their primary English written language, it may be safe for me to assume that IJNS reviewers largely expect to see manuscripts that follow the grammatical styles of U.S. or U.K. Englishes.

IJNS reviewers may be falling into standardized language ideologies with their expectation of a single standard, correct English grammar. As discussed in Chapter 2, standardized language ideologies promote the belief that a language can be uniform and unchanging (Milroy, 2001). For a standardized language to work, though, all users of the language must agree on what the correct version of the language is. Since IJNS reviewers indicated that they use a few different English languages in their writing, all reviewers may not agree on what the standard, correct English language is for journal manuscripts. This can present a problem when international reviewers comment on perceived language errors in manuscripts written by international authors. Reviewers may be commenting on things that are not truly incorrect in the author's English language, or they may be identifying problems that are not really problems to IJNS editors.

Other than defining proficient language as grammatically correct, participants were largely concerned with how clear and understandable the language is in a manuscript. Rather than expecting language to follow rules or be correct, these reviewers want language that is simply understandable and clearly communicating the research. While this does not mean that reviewers don't pay attention to grammar and correct language usage, they may not consider it to be the most important factor of proficient language. Another possibility is that clear, understandable language could be intertwined with correct grammatical usage. Many reviewers' responses indicated that the division between language and content is not definitive, as the two are often related. Because clarity and correctness cannot be totally separated, both must be considered in manuscripts that IJNS publishes to meet reader expectations.

5.2 Suggestions for IJNS

At the time of completing this thesis project, IJNS is transitioning its editorial leadership, which could potentially affect how the journal is run in the future. While we (the current editorial members) are excited for the many new changes and opportunities that IJNS will have, we also have worried that the journal could lose some of the important author assistance programs that we currently perform. Based on this thesis research project and the implications drawn from the results, I suggest that IJNS continues to offer free editorial services to all authors and better communicates the journal's expectations about language more clearly to both authors and reviewers.

IJNS has always offered an opportunity for EAL authors to publish their work regardless of their English-language academic writing skills or financial situation, and this is an important aspect of the ethos of the journal that must be maintained. While linguistic bias continues to be

relevant in academic publishing, EAL authors still often feel as if they are at a disadvantage (Cargill & Burgess, 2017; Curry & Lillis, 2004; Flowerdew, 2000, 2019; Hultgren, 2019; Hyland, 2016a; Politzer-Ahles et al., 2016; Strauss, 2019). To prevent any potential linguistic bias in IJNS, editors should continue to thoroughly edit all IJNS manuscripts to help authors communicate as clearly and correctly as possible, as their peers expect to see. If many of the issues of inequality that EAL authors experience are actually due to a lack of research resources or discourse community participation, then IJNS reviewers should provide comments to improve the gap in knowledge while editors provide edits so the language meets discourse community expectations.

Since many IJNS reviewers indicated that they expect to see correct English language – essentially expecting a standard language to be used in a manuscript for IJNS – but no one standard was agreed upon in the responses to this study, IJNS would benefit from clearly communicating to the authors, editors, and reviewers the journal’s language expectations and available assistance. Currently, IJNS includes a page on their website about the formatting requirements for submissions (though these are rarely followed in initial submissions). There is no mention of what standard language is expected, though. To help guide both authors and reviewers on IJNS’s language expectations, resources should be provided on the website to clearly state the publication language (American English), links to the style guide used, and other resources related to the style guide that authors can find for their own use. The IJNS website could include resources and pages that explain grammatical aspects of the style guide and provide advice for composing and organizing research manuscripts.

IJNS should also communicate with the reviewers to explain the submission, review, and editing process that is used. Since IJNS offers thorough and free editorial services for all

manuscripts, this editing process takes place after a manuscript has been accepted and sufficiently revised by the authors based on the reviewers' comments. Editors must know if the content of a manuscript is sufficient enough to be published in IJNS before proceeding to edit. Reviewers are key in this process, as they are the subject-matter experts that inform the editors if a manuscript can be published in the journal and what revisions will be needed first. Some of the responses in this project seemed to indicate some confusion about the order of reviewing and editing. Reviewers receive manuscripts exactly as they are submitted to the journal, which is before professional editors do any work. If reviewers are aware of this process and know that editors will take care of any language issues present, they may feel less inclined to comment on or correct language issues because they know that it is not their responsibility to do so, and everything will be corrected by a professional before publication.

5.3 Implications for International English-Language Academic Publishing

The implications for IJNS can be widened to apply to English-language academic publications around the world. If IJNS reviewers are expecting to see a certain standardized English language in manuscripts, international reviewers in other academic fields expect to see standardized language usage, too. Lillis and Curry's (2015) study suggested as much. When considering the entire world of international English-language academic publishing, though, the possibilities for standardized Englishes to choose from are vast. While many international publications will list their style guide on their website or in their submission information, many other publications do not. Most seem to use American or British Englishes, but it might help both submitting authors and reviewers to know which standard is expected for each manuscript they write or review. At the least, journals should clearly communicate what they define as standard

language since no singular standard language holds the same definition across the world (Milroy, 2001).

Just as standard language expectations may differ across academic fields, publication processes may differ as well. Reviewers in one international field may perform slightly different roles to reviewers in another international field, and publication practices may differ across languages. This could lead to reviewers commenting on language errors in a manuscript when that is not what is expected of them. It could also lead to reviewers believing a manuscript was sent too early to them, as it was not grammatically corrected before they reviewed it. This misunderstanding, as seen in a few responses in Chapter 4, can cause reviewers to become frustrated. To prevent this frustration and misunderstanding, international English-language publications should communicate their expectations more clearly to the reviewers and authors that associate with them. Explaining standard language expectations as well as the typical publication process would aid both authors and reviewers. Authors should understand what kind of language the journal publishes in before they submit anything and they should be made aware of resources they may be required to use if they do not meet those expectations. Also, reviewers should know what is and is not their responsibility to comment on or correct. For each publication that a reviewer assists with, they should understand the journal's expectations for the manuscript, as well as where the manuscript is in the submission and revision process. This could help reduce misunderstandings or frustrations from reviewers.

As discussed in Chapter 2, in the larger conversation about linguistic bias in international English-language academic publishing, the argument mostly centers around the difference between EAL and first-language authors (in which native and non-native are frequently-used terms). The assumption in this conversation is that EAL authors have the disadvantage of using a

language other than their first, and first-language authors have an advantage by using the language natively. But, this may not be the most productive way to talk about linguistic bias in academic publishing. Like some scholars suggest (Hyland, 2016a, 2016b, 2020; Politzer-Ahles et al., 2016, 2020; Soler, 2019), not all native users write in perfectly correct language (whatever that means to the reviewers who expect to see rules being followed), and many non-native users can use a language as proficiently as a native user. This dichotomy doesn't represent the whole picture of the linguistic bias issue. At the core of it is discrimination against nonstandard language usage. While EAL authors may use nonstandard Englishes, first-language users also use nonstandard Englishes. EAL authors may have to overcome more obstacles in the international publishing process, but the real issue is not where an author is from or what language is their first – the real issue is whether an author uses the standard language that the reviewers or editors expect to see. Examining standardized language ideologies and how they act in international, English-language, academic publishing would offer a platform to understand how linguistic bias could exist, which scholars still disagree on today mostly because of how the argument is framed in terms of native/non-native users.

This study offers no definitive answer on whether linguistic bias exists or not. Much like the studies that came before this one, linguistic bias cannot be clearly stated as present or not present. But, the results of this study can add to the growing research on the peer review process and the perceptions that reviewers have about the manuscripts they are given. This study adds information on how reviewers define language proficiency in English academic writing, what they define to be errors in manuscripts, and how these perceptions of proficiency and errors affect their job as reviewers. These are insights that academic publishing fields outside of nuclear security can use to better understand what their reviewers might expect to see. This area of

research investigates a genre that is typically a more secretive process in academic publishing. The information in this study is valuable to help better understand the peer reviewers who take part in this process and who hold a great amount of power in academic publishing. If academic publishing is to be accused of gatekeeping practices, then the gatekeepers, including the reviewers, must be investigated and better understood in order to assess this claim.

5.4 Further Questions and Future Work

While this study provided answers to the three main research questions, new areas of inquiry emerged that further research could help answer. Throughout the analysis of results, I noticed the recurring theme of reviewers being unable to completely separate language and content while reviewing. This is a theme that has appeared in linguistic bias-related research (see Chapter 2). So many reviewers described how clarity of language and effective communication of research are connected, but there seems to be little research on exactly how these two composition concepts are connected so closely. In the larger argument about linguistic bias, scholars seem to be searching for how linguistic bias could exist alone, separate from reviewer judgements on content. Some scholars deny the possible existence of linguistic bias because they claim that the reviewers only focus on content and never linguistic elements alone. But, if these two concepts are intertwined and inseparable, linguistic bias could still exist even if it is connected with a reviewer's evaluation of content. A reviewer may refer to the content of a manuscript, but their perception of the language used could affect their perception of the content, as some participants in this study replied in the survey. Future studies of peer reviewers could focus on defining the differences and connections between content and language to gain a better understanding of how these two ideas are apparently divided by reviewers and linguistic bias

scholars. If no clear division between the two can be found, then the connection between the concepts could explain why reviewers cannot completely separate the two ideas and why scholars cannot agree on the potential existence of linguistic bias in academic publishing.

As this study consisted of more subjective self-reports from reviewers, the question of the existence of linguistic bias is still unanswered. Many scholars studying academic publishing agree only that more objective studies must be done before any statements about the existence of linguistic bias can be made. I agree that more objective studies, ones that do not rely on self-reports from reviewers and authors, are necessary for this argument to progress, but I also know that truly objective studies do not really exist, especially in qualitative research. In this particular argument about linguistic bias, how objective a study is comes down to its research design. While research asking participants directly about their thoughts and beliefs is still valuable and adds new information to the field, it would also be valuable to gather information on participants' perceptions that they unconsciously have or to measure their perceptions of something rather than ask them directly for their opinion of their perceptions. Rather than collecting different types of data to prove that linguistic bias could exist, scholars could collect the same data on reviewer perceptions using different methods, allowing for more objective collection methods.

To gain this kind of more objective data regarding how reviewers perceive and comment on errors in manuscripts, a study could be conducted similar to the exploratory study of Politzer-Ahles et al. (2020), where reviewers read abstracts or manuscripts with identical technical content but differing in how they use English language, and then the reviewers decide whether they recommend the abstract or manuscript for publication or conference presentation. Reviewers could also review multiple abstracts or manuscripts with varying English languages to

see if nonstandard-language texts include more linguistic comments or corrections than their standard counterparts. This kind of study could also better inform IJNS editors about exactly what reviewers consider to be correct language. Rather than reviewers self-identifying classifications of errors, an analysis of the corrections they make when reviewing standard versus nonstandard writing could better reveal the type of correct language that they look for.

Additionally, future studies could include larger populations of participants. The present study included a relatively small number of participants from a small field of research, so future studies could focus on larger fields. It may also be helpful to have participants from journals that do not follow the same editorial process as IJNS. Since IJNS provides free editorial assistance to all authors, encourages reviewers not to address language issues, and screens reviews for language comments, IJNS is already actively combatting any potential linguistic bias. More data from journals that do not have these practices could provide more insight into the perceptions reviewers have about language and how those perceptions might influence a journal's decision for a manuscript. This could also inform IJNS about the success of their editorial aids in preventing any potential linguistic bias in their publication process.

I now close my time as a graduate student at UT, and with that, I end my tenure as the Davis Editor for IJNS. For two and a half years, I have led the day-to-day operations of the journal, but it is now time for me to pass this role on to the next Davis Editor. However, I am not planning to leave the IJNS editorial team. For the foreseeable future, I will continue to be the Publications Editor for the journal, working on the technical aspects of publishing journal manuscripts and creating guides to ensure quality control. As leadership shifts within the editorial board, I hope to help both new and old editorial members through this transition period. This study has confirmed that IJNS has dedicated, intelligent reviewers who are passionate about

their research and assisting their peers with research publications. This international community works to keep the world safe from nuclear disasters – the least IJNS editors can do is facilitate the international spread of their valuable knowledge, regardless of the English language they use to write.

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Appendix

Appendix A. IRB Approval Form

September 02, 2021

Rachel Ann Brooks
UTK - College of Arts & Sciences - English

Re: UTK IRB-21-06542-XM

Study Title: Reviewer Perceptions of Englishes in the International Journal of Nuclear Security

Dear Rachel Ann Brooks:

The Human Research Protections Program (HRPP) reviewed your application for the above referenced project and determined that your application is eligible for **exempt** review under 45 CFR 46.101. Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if the information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Category 4ii: Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects.

Your application has been determined to comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects.

Therefore, this letter constitutes full approval of your application (version 1.0). You are approved to enroll a maximum of 300 participants. Approval of this study will be valid from 09/02/2021.

Approval Information:

Application v 1.0, Exempt Categories 2 and 4(ii), Waiver of Documentation of Consent (Survey), Waiver of Consent (Secondary Data Analysis), n=300

- Appendix F: Informed Consent v 1.1
- V2 Appendix B Invitation Messages to Participants v 1.1
- Appendix A: Survey with Informed Consent in Qualtrics v 1.0

Any revisions in the approved application, consent forms, instruments, recruitment materials, etc., must be submitted to and approved by the IRB prior to implementation. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Approval of this study is valid for three years. If a Study Update Form is not submitted in iMedRIS and approved by the IRB prior to 09/01/2024, the study will be automatically closed by the IRB and no further study activity will be permitted until a Study Update Form is received. Please be sure to also submit a Study Closure Request (Form 7) when all research activity, including data analysis, has been completed.

Sincerely,



Lora Beebe, Ph.D., PMHNP-BC, FAAN
Chair

Appendix B. Survey with Informed Consent

IJNS Reviewer Survey

Start of Block: Informed Consent

Informed Consent. **Consent for Research Participation**

Research Study Title: Reviewer Perceptions of Englishes in the *International Journal of Nuclear Security*

Researcher(s): Rachel Brooks, University of Tennessee, Knoxville
Dr. Tanita Saenkhum, University of Tennessee, Knoxville

We are asking you to be in this research study because you have completed a review or have been asked to review a manuscript for the *International Journal of Nuclear Security*. You must be at least 18 years old to participate in the study. The information in this consent form is to help you decide if you want to be in this research study. Please take your time reading this form and contact the researchers to ask questions if there is anything you do not understand.

Why is the research being done?

The purpose of the research study is to investigate reviewers' perceptions of English language usage in manuscripts in the *International Journal of Nuclear Security*. We are giving you the information below so you can decide if this relationship will affect your decision to be in this study:

Rachel Brooks, the Principal Investigator of this research study, is currently the Davis Editorial Fellow for the *International Journal of Nuclear Security*, which is a portion of her Graduate Teaching Associate stipend through the University of Tennessee, Knoxville Department of English. Part of her responsibilities as Davis Editor include requesting reviewers for journal manuscripts and communicating with them, as well as writing manuscript decision letters sent to authors. She does not make the decisions on accepting or rejecting manuscripts; rather, she follows the comments and suggestions from reviewers, editors, and the managing editor of the journal. She also distributes the bimonthly newsletter for the journal using a database of email addresses.

This survey has been designed in such a way that she will not be able to determine who answers it, even though she frequently requests reviewers and communicates with them - it is totally anonymous. Additionally, the time Rachel spends on this research study will not overlap with her paid position with the journal. Her editorial work for the journal will be kept entirely separate from this research study, which will contribute to her thesis. Because the survey answers are anonymous, this study will not influence her current and future work with the *International Journal of Nuclear Security* or her communications with any

reviewer, author, board member, or other individual related to journal activities.

What will I do in this study?

If you agree to be in this study, you will complete an anonymous online survey. The survey includes questions about how you perceive English language while reviewing a manuscript and should take you no more than twenty (20) minutes to complete. If you do not want to answer a question, please state that in the free-response text box for the question.

Can I say “No”?

Being in this study is your decision. You can stop up until you submit the anonymous survey. After you submit the anonymous survey, we cannot remove your responses because we will not know which responses came from you. Either way, your decision will not affect your relationship with the *International Journal of Nuclear Security* or the editors of the journal, or the services that you receive from the journal.

Are there any risks to me?

We do not know of any risks to you from being in the study that are greater than the risks you encounter in everyday life.

Are there any benefits to me?

We do not expect you to benefit from being in this study. Your participation may help us to learn more about reviewers’ perceptions of English language usage in manuscripts submitted to the *International Journal of Nuclear Security*. We hope the knowledge gained from this study will benefit others in the future.

What will happen with the information collected for this study?

The survey is anonymous, and no one will be able to link your responses back to you. Your responses to the survey will not be linked to your computer, email address or other electronic identifiers. Please do not include your name or other information that could be used to identify you in your survey responses. Information provided in this survey can only be kept as secure as any other online communication. Information collected for this study will be published at the University of Tennessee, Knoxville, presented in a thesis defense, and possibly presented at professional conferences and published in an academic journal.

Will I be paid for being in this research study?

You will not be paid for being in this study.

Who can answer my questions about this research study?

If you have questions or concerns about this study, or have experienced a research related problem or injury, contact the researchers:

Rachel Brooks, rbrook31@vols.utk.edu

Dr. Tanita Saenkhum, tsenkhum@utk.edu

For questions or concerns about your rights or to speak with someone other than the research team about the study, please contact:

Institutional Review Board

The University of Tennessee, Knoxville

1534 White Avenue
Blount Hall, Room 408
Knoxville, TN 37996-1529
Phone: 865-974-7697
Email: utkirb@utk.edu

Statement of Consent. I have read this form, been given the chance to ask questions and have my questions answered. If I have more questions, I have been told who to contact. By clicking the “I Agree” button below, I am agreeing to be in this study. I can print or save a copy of this consent information for future reference. If I do not want to be in this study, I can close my internet browser.

- I agree
- I do not agree

Skip To: End of Survey If Consent for Research Participation Research Study Title: Reviewer Perceptions of Englishes in the... = I do not agree

End of Block: Informed Consent

Start of Block: Part 1: Reviewer Experience

About the Survey

The purpose of the research study is to investigate reviewers' perceptions of English language usage in manuscripts in the *International Journal of Nuclear Security*. This survey consists of three parts. Part 1 is about your experience as a reviewer, part 2 is about your perceptions of English usage in academic manuscripts, and part 3 is demographic information. All information is anonymous and cannot be connected to anyone.

Part 1

Reviewer Experience

This section asks questions about your involvement in the past with the *International Journal of Nuclear Security*.

Please answer all questions to the best of your ability.

Screening Question 1. Have you ever reviewed a manuscript for any academic, peer-reviewed journal? (This can include the *International Journal of Nuclear Security*.)

Yes

No

Skip To: End of Survey If Have you ever reviewed a manuscript for any academic, peer-reviewed journal? (This can include th... = No

Screening Question 2. Have you ever reviewed a manuscript for the *International Journal of Nuclear Security*?

Yes

No

End of Block: Part 1: Reviewer Experience

Start of Block: Part 2: Reviewing for the International Journal of Nuclear Security

Part 2

Reviewing for the *International Journal of Nuclear Security*

This section asks about your perceptions and processes as a peer reviewer in academic, peer-reviewed journals, especially when reviewing for the *International Journal of Nuclear Security*.

Please answer all questions to the best of your ability. If you do not want to answer a question, please say that in the free response question's text answer box.

1a. How do you define English language proficiency in academic writing?

1b. Use the scale to answer how much you agree or disagree with the statement below.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I believe that English language proficiency is an important part of the quality of a manuscript that is published in English. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

1c. Please provide your rationale for selecting your answer to question 1b.

1d. Use the scale to answer how much you agree or disagree with the statement below.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I believe that English language proficiency is an important part of the quality of the research conducted in the manuscript published in English. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

1e. Please provide your rationale for selecting your answer to question 1d.

Page Break

2a. What do you identify as a language error in a manuscript in English academic writing?
(Select all that apply.)

- Spelling
 - Verb tenses or forms
 - Subject-verb agreement (singular subject of a sentence, including noun or pronoun, must correspond with a singular verb; plural subject must correspond with a plural verb)
 - Sentence structure (including run-on sentences, comma splices, and sentence fragments)
 - Pronoun usage (including being unsure what the pronoun refers to in the sentence)
 - Punctuation (for example, not using quotation marks correctly)
 - Articles ("a," "an," and "the")
 - Word choice (for example, using a word incorrectly)
 - Informal style not appropriate to the academic genre (including idioms and colloquial expressions)
 - Other (please specify)
-

2b. Use the scale to answer how much you agree or disagree with the statement below.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Reviewers should note and/or correct language errors in a manuscript they are reviewing. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2c. When do you comment on language errors in a manuscript?

2d. Use the scale to answer how much you agree or disagree with the statement below.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| A journal should reject a paper that has English language errors after being reviewed, even if the content is reviewed well and academically sound. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3a. Use the scale to answer how much you agree or disagree with the statement below.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I can identify if the author(s) of a manuscript use English as an additional, second, or foreign language, or if they use English as a first language. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3b. Please explain your thoughts on your answer to question 3a. How do you identify authors who use English as a second, additional, or foreign language compared to authors who use English as a first language?

End of Block: Part 2: Reviewing for the International Journal of Nuclear Security

Start of Block: Part 3: Demographics

Part 3

Demographics

This section asks about your background that is important to this research study. All information is anonymous and cannot be connected to anyone.

Please answer all questions to the best of your ability. If you do not want to answer a question,

please say that in the free response question's text answer box or select "other" and say that in its free response box.

4. What is your age range?

- 18-29
 - 30-49
 - 50-69
 - 70+
-

5. What area(s) of nuclear security do you generally work, specialize, or research in? (Select all that apply.)

- Science and/or technology research
 - Nuclear operations, intelligence, and/or security
 - Policy, law, and/or diplomacy (government and non-governmental organizations)
 - Education and training
 - Networking, engagement, and/or promotion of nuclear security-related topics
 - Other (please provide general field)
-

6. What is your job title or general position? (Please select your primary job title if you have more than one.)

- Full Professor
- Associate Professor
- Assistant Professor
- Retired or Emeritus Professor
- Other educator (including instructor, teaching faculty, lecturer)
- Graduate student or Post-Doctoral Researcher
- Government official or non-governmental organization staff
- Researcher at government or non-governmental organization
- Law enforcement or security officer
- Other (please give a general description or title)

7. What geographical region do you primarily live and/or work in?

- North America
- South or Central America or the Caribbean
- Europe
- Africa
- South Asia (from the Himalayas, Karakoram, and Pamir Mountains to the Indian Ocean), Southeast Asia (south of China, southeast of India, and northwest of Australia), or Oceania (Australia, New Zealand, and islands of the Pacific Ocean)
- East Asia (China, Mongolia, Korea, and islands of the northern Pacific Ocean), Central Asia (from Caspian Sea to China and Mongolia, from Pakistan and Iran to Russia), or West Asia (Middle East)
- Other (please provide general geographical area)

8. What is your first language(s)?

9. Where did you learn English? (Select all that apply.)

- Primary and/or secondary school
 - University
 - Home
 - Work
 - Self-taught
 - Other (please specify)
-

10. What variety of English do you speak or write in? (For example, American English, British English, South African English, Singaporean English, etc. This does not have to be the English you speak based on your physical location, nor will the researchers associate this answer with your physical location nor ethnic background.)

11. How long have you been reviewing manuscripts in the field of nuclear security?

- less than 1 year
 - 1 to 3 years
 - 4 to 6 years
 - 7 to 9 years
 - more than 10 years
-

12. How many manuscripts do you review for academic, peer-reviewed nuclear security journals each year?

- 1 manuscript per year
 - 2 to 4 manuscripts per year
 - 5 to 7 manuscripts per year
 - 8 or more manuscripts per year
-

13. How many manuscripts of your own do you submit/publish to academic, peer-reviewed journals each year?

- less than 1 manuscript per year
 - 1 manuscript per year
 - 2 to 3 manuscripts per year
 - 4 to 5 manuscripts per year
 - 6 or more manuscripts per year
-

14. Are you on any editorial boards for academic journals in the field of nuclear security?

- Yes
- No

End of Block: Part 3: Demographics

Appendix C. Messages to Recruit Participants

Initial email:

Dear Reviewer,

I am writing to ask you to participate in a survey study for a thesis project about English language usage in English language publications in the nuclear security field. The goal of this study is to better understand the English language-related elements that reviewers in this field look for in manuscripts submitted for publication.

If you have reviewed a manuscript for the *International Journal of Nuclear Security* or other similar journals before, I would appreciate your response to these survey questions. The survey should take no more than 20 minutes to complete. The link is below:

https://utk.co1.qualtrics.com/jfe/form/SV_6ScILaBFo7pKjBk

Please read the Informed Consent section at the beginning of the survey carefully. I am the current Davis Editorial Fellow for the *International Journal of Nuclear Security*, but this research is occurring outside of my role with the journal. The survey is entirely anonymous, and so I will not be able to identify any participants. Participation in this survey will not affect your relationship to *IJNS* in any way. The journal manager of *IJNS*, Dr. Russel Hirst, has kindly allowed me to use *IJNS*'s email to send my survey link for this personal thesis project.

If you have any questions or concerns, you can contact Rachel Brooks (rbrook31@vols.utk.edu) and Tanita Saenkhum (tsaenkhum@utk.edu).

Thank you for your participation,

Rachel Brooks

Principal Investigator

University of Tennessee, Knoxville

rbrook31@vols.utk.edu

Dr. Tanita Saenkhum

Co-Principal Investigator and Faculty Advisor

University of Tennessee, Knoxville

tsaenkhum@utk.edu

Follow up reminder emails:

Dear Reviewer,

This is a reminder to participate in a survey study for a thesis project about English language usage in English language publications in the nuclear security field.

If you have already completed the survey, thank you! Please disregard this reminder if so.

The goal of this study is to better understand the English language-related elements that reviewers in this field look for in manuscripts submitted for publication.

If you have reviewed a manuscript for the *International Journal of Nuclear Security* or other similar journals before, I would appreciate your response to these survey questions. The survey should take no more than 20 minutes to complete. The link is below:

https://utk.co1.qualtrics.com/jfe/form/SV_6ScILaBFo7pKjBk

Please read the Informed Consent section at the beginning of the survey carefully. I am the current Davis Editorial Fellow for the *International Journal of Nuclear Security*, but this research is occurring outside of my role with the journal. The survey is entirely anonymous, and so I will not be able to identify any participants. Participation in this survey will not affect your relationship to *IJNS* in any way. The journal manager of *IJNS*, Dr. Russel Hirst, has kindly allowed me to use *IJNS*'s email to send my survey link for this personal thesis project.

If you have any questions or concerns, you can contact Rachel Brooks (rbrook31@vols.utk.edu) and Tanita Saenkhum (tsaenkhum@utk.edu).

Thank you for your participation,

Rachel Brooks

Principal Investigator

University of Tennessee, Knoxville

rbrook31@vols.utk.edu

Dr. Tanita Saenkhum

Co-Principal Investigator and Faculty Advisor

University of Tennessee, Knoxville

tsaenkhum@utk.edu

Initial newsletter article (September/October edition):

Call for Survey Participants

By Rachel Brooks, Davis Editorial Fellow and Principal Investigator

I am writing to ask you to participate in a survey study for a thesis project about English language usage in English language publications in the nuclear security field. The goal of this study is to better understand the English language-related elements that reviewers in this field look for in manuscripts submitted for publication. If you have reviewed a manuscript for the *International Journal of Nuclear Security* or other similar journals, I would appreciate your response to these survey questions. The survey should take no more than 20 minutes to complete. Please read carefully the Informed Consent section at the beginning of the survey. I am the current Davis Editorial Fellow for the *International Journal of Nuclear Security*, but this research is occurring outside my role with the journal. The survey is entirely anonymous, and so I will not be able to identify any participants. Participation in this survey will not affect your relationship to *IJNS* in any way. The journal manager of *IJNS*, Dr. Russel Hirst, has kindly allowed me to put this request in our bimonthly newsletter for this personal thesis project. If you

have any questions or concerns, you can contact Rachel Brooks (rbrook31@vols.utk.edu) and Tanita Saenkhum (tsaenkhum@utk.edu). Thank you for participating in this survey study!

Survey link: https://utk.co1.qualtrics.com/jfe/form/SV_6ScILaBFo7pKjBk

Second newsletter article (November/December edition):

Reminder Call for Survey Participants

By Rachel Brooks, Davis Editorial Fellow and Principal Investigator

I am writing to ask you to participate in a survey study for a thesis project about English language usage in English language publications in the nuclear security field. If you have already completed the survey, thank you for your participation! If not, I would love to have more participants complete the survey by the end of December 2021. The goal of this study is to better understand the English language-related elements that reviewers in this field look for in manuscripts submitted for publication. If you have reviewed a manuscript for the *International Journal of Nuclear Security* or other similar journals, I would appreciate your response to these survey questions. The survey should take no more than 20 minutes to complete. Please read carefully the Informed Consent section at the beginning of the survey. I am the current Davis Editorial Fellow for the *International Journal of Nuclear Security*, but this research is occurring outside my role with the journal. The survey is entirely anonymous, and so I will not be able to identify any participants. Participation in this survey will not affect your relationship to *IJNS* in any way. The journal manager of *IJNS*, Dr. Russel Hirst, has kindly allowed me to put this request in our bimonthly newsletter for this personal thesis project. If you have any questions or

concerns, you can contact Rachel Brooks (rbrook31@vols.utk.edu) and Tanita Saenkhum (tsaenkhum@utk.edu). Thank you for participating in this survey study!

Survey link: https://utk.co1.qualtrics.com/jfe/form/SV_6ScILaBFo7pKjBk

Appendix D. Survey Coding Scheme

To create coding schemes for each free response question in the survey, I first read through the responses for each question and noted the themes that appeared. These themes were then organized into codes, which were placed at the top of a table. Examples of codes listed at the top of the table for Question 1 include “clarity” and “correctness.” Responses that fit into a code based on their themes were copied and pasted into that code’s column in the table. For example, the response to Question 1a, “The basic grammar rule is observed and the sentences are clear enough to be understood in one reading,” was copied and pasted into the column titled “correctness” since it referred to grammar. If a response contained more than one theme and therefore was placed into more than one code category, the response was pasted into multiple columns in the table, and pertinent aspects of the response were highlighted in each of the code columns it fit into. In the example above, the response was also coded “clarity” because it referenced understandability, and it was therefore also included in the column for the code “clarity.” I followed the same process for the rest of the codes in each question. Since each question produced responses with different themes, I opted to create a unique coding scheme for each free response question. The following tables contain the coding schemes created for all five survey free response questions.

Table D.1

1a. How do you define English language proficiency in academic writing?

| Code | Description |
|--------------------------|--|
| Clarity | Proficiency as how clear/understandable the message is, how clearly/understandably the language is used to communicate |
| Correctness | Proficiency as grammatical/syntactical correctness, “right” way of using the language, references “rules” or “conventions,” having “mastery” or “command” of the language |
| Efficiency/effectiveness | Using language “efficiently” or “effectively,” “efficiency” or “effectiveness,” concision or brevity |
| Importance | Proficiency as an important part of a manuscript, looking for a certain level of proficiency (or allowing for a lack of proficiency, if it is noted as not the most important thing to have) |

Table D.2

1b. Use the scale to answer how much you agree or disagree with the statement below. - I believe that English language proficiency is an important part of the quality of a manuscript that is published in English.

1c. Please provide your rationale for selecting your answer to question 1b.

| Code | Description |
|---|---|
| Proficiency matters for communication of content | Readability, understandability, clarity; bad language makes it harder to understand the content |
| Reviewer focused on content, not language | Focus on technical aspects, methods/concepts/ideas, content communication is more important than proficiency, excusing errors |
| Proficiency as expectation of academic publishing | Expect/important to see proficient language for academic submissions/publications (specifically mentioning the genre of academic publication) |
| Proficiency reflects quality | Quality of manuscript related to proficiency, credibility, good perception of proficient language and bad perception of incorrect language |

Table D.3

1d. Use the scale to answer how much you agree or disagree with the statement below. - I believe that English language proficiency is an important part of the quality of the research conducted in the manuscript published in English.

1e. Please provide your rationale for selecting your answer to question 1d.

| Code | Description |
|--|--|
| English is vital to/intertwined with research | Depends entirely/vital/relies on English, powerful/important tool, poor English means lack of research quality, important to academic style |
| English is not connected to research quality | Translation is fine in research, research can be done in other languages, non-native users can produce successful research in English/aren't all proficient in the language, knowledge or quality aren't related to language, proficiency is not important, not essential or equitable |
| Proficiency changes the perception of the research | Affect reader's view of the research quality, presentation and perception; poor language loses credibility; expectation of publishing that needs to be met or it suggests lack of knowledge of the genre |

Table D.3 cont.

| | |
|---|---|
| Proficiency helps communicate research more effectively | Quality of communication/dissemination, poor language is harder to understand/read (and good is easier), common method of communication needed to share research, importance of clear/effective communication |
|---|---|

Table D.4

2c. *When do you comment on language errors in a manuscript?*

| Code | Description |
|--|--|
| After agreeing that it is the responsibility of the reviewer, provided a simple time frame | Only answers the question “when” in the free response with a straightforward, simple answer to exactly when/how often they correct; appears after agreeing that it is the reviewer’s responsibility in the preceding Likert scale question |
| Placing the blame on editors/explicitly stating errors should be taken care of before reviewers see it | Manuscript should be edited before reviewers see it, stating it is an editor’s job to correct errors before sending it to reviewers |

Table D.4 cont.

| | |
|--|--|
| <p>Reviewers focus on content, and editors focus on language</p> | <p>Editors/authors/researchers correct language, reviewers correct content/subject matter and focus on research quality; reviewers recommending editorial assistance instead of correcting language; reviewers aren't always qualified to make corrections; it's not the reviewer's job/responsibility; reviewers correct only related to the communication/clarity of meaning</p> |
| <p>Reviewers comment on/correct language, but it's not their responsibility/job to do so</p> | <p>Mentions that they as the reviewer do comment on language, but they know they don't have to/it isn't their job to do so; places responsibility on the authors to check language/have it checked for them even as they still note errors; states that there shouldn't be errors at the submission stage (but agrees in the Likert scale that reviewers should correct errors); comments on egregious/extraordinary errors; notes correcting but their Likert scale answer was "disagree," so they do not think it is their responsibility to do so</p> |

Table D.4 cont.

| | |
|---|---|
| <p>Reviewers comment on minor language issues when comfortable but direct to editors for all other errors</p> | <p>Noting lack of confidence/comfortability/knowledge, so they don't correct (especially if they mention non-native users); comments on only a few minor errors but not big or systemic ones; claims only minimal editing by reviewers is necessary</p> |
| <p>Reviewers changing language can unintentionally change an author's meaning</p> | <p>Reviewers can have a hard time judging what is correct/should be correct when errors are present, correcting anything could make the problem worse by unintentionally changing meaning</p> |

Table D.5

3a. Use the scale to answer how much you agree or disagree with the statement below. - I can identify if the author(s) of a manuscript use English as an additional, second, or foreign language, or if they use English as a first language.

3b. Please explain your thoughts on your answer to question 3a. How do you identify authors who use English as a second, additional, or foreign language compared to authors who use English as a first language?

| Code | Description |
|--|---|
| Grammatical/syntactical errors and recognizing translation from another language | Noting a particular grammatical feature, saying non-native language looks like a translation from another language, generally replies with grammar or syntax errors/differences (or just “errors”), word choice errors or disconnections, general mention of different “style/language” |
| Checking location/affiliation | Checking or identifying the author’s country or institution/organization, possibly the author’s name, and making assumptions about native language based on that |
| Generic comment on “usage” of language | Generic “usage” or “universal/general” language use, unspecific statement of it “sound[ing] off” |

Table D.5 cont.

| | |
|--|---|
| Difficult or not able to recognize | Difficult to or not able to identify non-native versus native authors |
| Can identify, but don't care and/or noting that native speakers can have the same problems | No correlation, don't care, don't try to identify, native speakers can make errors/have poor language too, non-native speakers can have excellent proficiency too |
| Personal experience (including with other languages) helps them recognize EAL writing | Mentions their knowledge of other languages and how they recognize translations into English from those languages, or how they have experience with international manuscripts that helps them recognize translations from other languages |

Vita

Rachel Brooks is graduating from the University of Tennessee, Knoxville with her Master of Arts degree in English Rhetoric, Writing, and Linguistics. She held the position of Davis Editorial Fellow for the *International Journal of Nuclear Security* for both years of her MA degree program. Rachel has accepted a job as a Technical Writer/Editor at Oak Ridge National Laboratory. She hopes to assist STEM researchers at the lab, including many EAL authors, with their academic publications, proposals, and other writing projects. Rachel will also continue volunteering and working for IJNS as the Publications Editor and a newsletter managing editor.