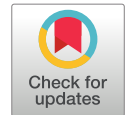# Alman Dili ve Edebiyatı Dergisi
Studien zur deutschen Sprache und Literatur

Research Article

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Exploring Reporting Verbs in German Research Articles by Indonesian Writers

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Genita Cansrina [1] 🆔 ✉, Eva Tuckyta Sari Sujatna [1] 🆔 , Susi Yuliawati [1] 🆔 & Noor Hasnoor Mohamad Nor [2] 🆔

[1] Padjadjaran University, Faculty of Cultural Sciences, Bandung, Indonesia
[2] Universiti Malaya, Academy of Malay Studies, Kuala Lumpur, Malaysia

Abstract
Citation practices play a significant role in research articles. Reporting verbs enable writers to effectively incorporate sources into their writing and cite other authors' work while expressing their own opinions. Nevertheless, the use of reporting verbs is frequently done without evaluation, particularly by non-native speakers, as seen in the overuse of the verb 'say' to present other people's views thus making their work monotonous and repetitive. The present research aims to find how Indonesian writers cite and evaluate the thoughts of previous researchers through the use of reporting verbs in German research articles. This study employs a mixed-method design with a corpus-based approach. Reporting verbs found were identified in their frequency and distribution with the help of Sketch Engine. The findings of the study showed, that the most frequently used reporting verbs fell into the discourse acts, followed by cognition and research acts. This indicates that Indonesian writers tend to focus more on presenting and communicating information in the text. In addition, they explore almost all evaluative functions of each category of reporting verbs. However, they demonstrate a strong preference for Discourse Acts and show limited variation in evaluative stance. The results of this study might increase Indonesian writers' understanding of the importance of reporting verbs and raise their awareness of using reporting in their writing that are more indicative of their stance towards the information being referred to.

Keywords
distribution · frequent · evaluative function of reporting verbs · German research article · Indonesian writers

✉ Corresponding author: Genita Cansrina g.cansrina@unpad.ac.id

Introduction

Research articles act as an important genre in science in communicating the research results. Researchers spread their knowledge not only through lectures but also through the publication of their discoveries in scientific journals (Lee & Tan, 2023). Thus, it is the task of scientists not only to find ways to experiment but also how to present the results of experiments so that they appear understandable and credible to others, including when they refer to previous research results in the same field. A rhetorical lexical device that enables writers to attribute content to other sources is reporting verbs (Wen & Pramoolsook, 2021). This ability to cite and refer to the work of others is a must-have for researchers to make a convincing case for themselves and their research. They can also negotiate their relationship with the discourse community by giving existing literature propositional content and showing they can adapt to the community knowledge (Hyland, 1999). This competence is a complex task even for those second language speakers with relatively high proficiencies in lexis and grammar of English (Loi & Lim, 2019), thus, in fact, many researchers, especially non-native speakers, find it difficult to use the right reporting verbs in their writing (Malá, et al., 2022; Tham & Nhi, 2021; Yeganeh & Boghayeri, 2015). Hyland (2002, p. 116) emphasizes the results of research by Bruce (1989), non-native speakers often use naive citations without evaluation by overusing the word 'say' to introduce the quotes. This might be because writers from different cultures use previous works in their arguments in very different ways (Hyland, 2002).

According to Duszak (1994), writing in a second language also shows the effect of the learner's first language (Loi & Lim, 2019). Therefore, Duszak (1994) believes that non-native speakers may create academic English prose that is unclear to an English audience because they employ discoursal patterns that are characteristic of their own tongue but unfamiliar with English (Loi & Lim, 2019). This causes the text become monotonous and too repetitive so that the audience is not very interested and pays little attention. In contrast to Hyland (2008), who argues that one of the problems non-native speakers face in the citation of claims is that they must take "definite and self-assured" positions without any hint of "fuzziness", which is often found in academic

writing (Bloch, 2010). Meanwhile, each choice of claim contains the value of the stance taken by the writer, which can be divided into two categories that Bloch (2010) calls attitude towards the claim and strength of attitude towards the claim. The first category states whether the writer agrees or disagrees with the claim, while the second category indicates the degree of agreement or disagreement (Bloch, 2010). Thus, Bloch (2010) continued, that although students may make grammatically correct and acceptable choices, the rhetorical impact of their claims may be compromised if the reporting verbs are inappropriate.

Since research on reporting verb usage in English written by non-native speakers is typically done in this field, the current study focuses on the reporting verbs used in German research articles published by Indonesian writers. Based on Hyland's (2002) category of reporting verbs, the framework from Kruse (2010) was used for this investigation. To direct the investigation, this research aims to explore the evaluative functions of reporting verbs scattered in German research articles.

Literature Review

Reporting verbs play a key role in academic writing (Wen & Pramoolsook, 2021). These verbs function as linguistic devices help to frame the relationship between the writer and cited sources. Not only synthesizing and incorporating outside materials into their writing efficiently (Febriyanti & Yuliawati, 2024), reporting verbs also convey the types of activities undertaken by previous researchers and provide an evaluation of the reported information (Wen & Pramoolsook, 2021). In German, reporting verbs are known as 'Verben des Referierens' or 'Verben des Berichtens' (Kruse, 2010). A significant amount of scientific texts deal with what others have said or written. Kruse (2010) gave an example therefore, often researchers don't have to write about acidic meadows, but about what different authors said about acidic meadows. For this reason, the writers find these narrative representations challenging because they have to combine the statements of various other authors in their text.

In the past ten years, research has been conducted in this area such as Yeganeh & Boghayeri (2015); Un-udom & Un-udom (2020); Kongpetch (2021); Tham & Nhi (2021);

Wen & Pramoolsook (2021); Fayyaz & Abdulaziz (2022); Huang (2022); Matte & Stumpf (2022); Raningrum et al. (2022); Lee & Tan (2023); and Febriyanti & Yuliawati (2024). Various types of academic text in different fields were used as a corpus in the studies on the topic of reporting verbs, for example introduction chapter in bachelor and master theses in applied linguistics and teaching methodology (Wen & Pramoolsook, 2021); Portuguese-language research articles published in national journals, in hard science (engineering, exact sciences, health sciences) and soft sciences (applied social sciences and humanities) by Matte & Stumpf (2022); undergraduates thesis in applied linguistics (Huang, 2022); short essays written by Indonesian undergraduate students (Febriyanti & Yuliawati, 2024); and research articles in Second Language Acquisition (Yeganeh & Boghayeri, 2015).

A study by Agbaglo & Bonsu (2022) investigated reporting verbs used in the literature review sections in fifteen master's theses by Ghanaian lecturers, published in the Economics discipline. Using AntConc software, they analyzed the way reporting verbs are used based on Hyland's taxonomy. While Fayyaz & Abdulaziz (2022) investigated the use of reporting verbs by Pakistani writers, Lee & Tan (2023) and writers explored this from different countries. The two last studies mentioned below were written by Indonesian writers. Raningrum et al. (2022) used a corpus introduction section of research articles in English published in nationally recognized publications with authorized low (SINTA-6 and SINTA-5) and medium (SINTA-4 and SINTA-3) rankings, while Febriyanti & Yuliawati (2024) used a corpus of short essays by Indonesian undergraduate scholars. Both of studies focus on the frequency analysis of reporting verbs across semantic categories following the framework of Francis, et al. (1996). As a result, the students use predominantly the Think verbs category, followed by Argue, Show, and Find verbs (Febriyanti & Yuliawati, 2024). Similarly, the result of research conducted by Raningrum et al. (2022) showed that Indonesian writers of low-ranking journals used more Find and Think verbs. These results have implications, as the Indonesian writers may demonstrate a lack of evidence-based thinking due to the overuse of verbs from the Think verbs category and they are suggested to use more Argue verbs (Febriyanti & Yuliawati, 2024).

Based on the previous research results, it can be said that the use of appropriate reporting verbs is always a challenge for non-native writers. Wen & Pramoolsook (2021) noted that, according to the findings of their study, non-native writers still lack sufficient understanding of the importance of reporting verbs and their rhetorical function. Furthermore, studies on reporting verbs, to date, have been conducted mostly in English and are limited by the size of the corpus used. Given this constraint, this study should investigate the evaluative function of reporting verbs in 85 German research articles by Indonesian writers. It is important to mention here that the term 'author' is used to refer to the source or the writer whose work is being reported, and 'writer' refers to the Indonesian writer who is reporting information of the previous study.

In the academic discourse community, writers are required to explicitly acknowledge the words and ideas of other sources by citing them (Kongpetch, 2021). The object of this study is the reporting verbs used in integral citations, as demonstrated by the following example: "Noom-ura (2013) reported that Thai secondary school teachers of English found teaching writing the most challenging for them" (Kongpetch, 2021). The sentence employs the format "the reported author + reporting verb", in other words, the reported author is positioned as the subject and is followed by a reporting verb (Kongpetch, 2021). Furthermore, he mentioned other patterns in using reporting verbs such as passive voice like "…was described by X (2019) as …", substituting a reporting noun for a reporting verb like "Y's (2019) claim that …", or using a noun phrase like "Based on X (2029)'s framework, …" or a prepositional phrase "In Y (2019)'s view…". However, nouns derived from verbs were excluded in this study.

Following Thompson & Ye (1991) and Thomas & Hawes (1994), Hyland (2002, p. 118) classified reporting verbs into three distinct processes according to the type of research activity. These three reporting verb activities are accompanied by the writer's evaluation of his/her assertions, as illustrated by the table below:

Table 1

Evaluative Function of Reporting Verbs according to Hyland (2002)

Research Acts		Cognition Acts	Discourse Acts	
findings	factive	positive critical tentative neutral	doubt	tentative
	counter-factive			critical
	non-factive		assurance	factive
				non-factive
procedures			counters	

Reporting verbs with Research Acts category are related to research conducted in the real world, explain the stages or methods used, and describe the action taken by authors to arrive at their findings (observe, discover, notice, show) or procedures (analyze, calculate, assay, explore, compare, demonstrate, examine, investigate). The findings category is further divided into three types, namely factive verbs, counter-factive verbs, and non-factive verbs. Factive verbs are verbs that express the writer's acceptance of the author's research results. These verbs include demonstrate, establish, show, solve, or confirm. Meanwhile, counter-factive verbs are verbs that describe the author's denial of the results of previous research. Hyland (2002) gave the verbs fail, misunderstand, ignore, and overlook as examples of counter-factive verbs. And non-factive verbs are the third option in expressing the author's stance without a clear signal of attitude regarding the reliability of previous research results. These non-factive verbs are represented by find, identify, observe, or obtain as examples mentioned by Hyland (2002). Verbs with the procedures subcategory have no evaluation value of previous research, as these verbs convey the authors' activity in their research process.

Cognition Acts are concerned with the writer's mental processes related to the reported information. It deals with the mind and is often used to express the writer's stance or attitude towards the information being reported, for example, believe, conceptualize, suspect, view, consider, doubt, suggest. They typically represent writer's interpretation and are subjective. The verbs in the Cognition Acts category provide four options in determining the writer's attitude towards the cited author. The writer can create a positive attitude, meaning accepting the cited material as truth through the verbs

agree, concur, hold, know, think, or understand. Another option is to take a tentative view of the cited material by using the verbs believe, doubt, speculate, suppose, or suspect. The writer also can use another alternative, which is a critical attitude, such as disagree, dispute, or do not think. Finally, the writer can show a neutral attitude through propotional verbs like picture, conceive, anticipate, or reflect.

Discourse Acts deal with how information is presented and organized within the text. These verbs set the provided facts in the larger framework of the author's argument. They show how the cited work relates to the writer's own idea. These involve linguistic activities and focus on the verbal expression of cognitive or research activities (Hyland, 2002). Examples of these verbs are argue, claim, emphasize, propose, report, ascribe, discuss, hypothesize, and state. In the Discourse Act category, Hyland (2002) divides the evaluative function of verbs in this category into three subcategories. First, is subcategory doubt, where the writers use this verb to show uncertainty or doubt about the truth of the statement being referred to. The doubt subcategory has two types of verbs based on the level of doubt or skepticism shown by the writer, namely tentative and critical. Tentative verbs show uncertainty more subtle or speculative way. Writers are not entirely sure, but they do not explicitly criticize the statement. Examples of tentative verbs are postulate, hypothesize, indicate, intimate, suggest, imply, speculate, or propose. While the other type of verb has a critical evaluative function, which is a verb that shows more assertively and critically. The verbs that represent the critical evaluative function are question, doubt, challenge, evade, exaggerate, not account, and not make a point. In addition to doubt, writers can choose another option in the Discourse Acts, which is assurance. Assurance verbs introduce the cited material in a more positive way and use more convincing verbs. This verb, by Hyland (2002), is further divided - based on the level of factuality- into factive and non-factive. Confirm, affirm, prove, show, know, or realize are examples of factive verbs. While non-factive verbs are represented by assume, argue, suggest, or hypothesize. Non-factive verbs show a strong belief or opinion but do not fully consider the sentence as a fact. The last subcategory in Discourse Acts is counters. This verb is used to express disagreement or objection to

a cited statement or statement made by another author. Examples of this verb are deny, critique, challenge, attack, question, warn, refute, and rule out.

In accordance with Hyland (2000), Kruse (2010) presents a grouping of reporting verbs in German as shown in Table 2 below:

Table 2

The Categories of Reporting Verbs in German based on Kruse (2010)

Forschungshandlungen (Research Acts)	Kognitive Akte (Cognition Acts)	Diskursive Handlungen (Discourse Acts)
untersuchen (examine), zeigen (show), demonstrieren (demonstrate), belegen (prove), vergleichen (compare), entdecken (discover), prüfen (test), erforschen (explore), herausfinden (find out)	von einer Frage ausgehen (start from a question), darstellen (present), vermuten (assume), begründen (justify), konzipieren (conceptualize), nennen (name), Hypothese aufstellen (hypothesize)	These aufstellen (put forward a thesis), behaupten (assert), postulieren (postulate), widerlegen (refute), widersprechen (contradict), in die Diskussion bringen (bring into the discussion), berichten (report), auf jemand verweisen (refer to someone), sich auf ... beziehen (refer to something), sich abgrenzen (differentiate), erwähnen (mention)

The German language has a very differentiated vocabulary and a wide range of expressions to deal with referencing. Anyone who reviews academic literature will often be overcome by the desire to criticize it (Kruse, 2010). Arguing or refuting is one way for writers to criticize the findings or results of the referenced research. Steinhoff (2007) in Kruse (2010) demonstrated in his assessment of student seminar papers that students critique relatively little from the outset, much less than academics in a corpus of similar work. This study will explore how Indonesian writers express their stances and evaluate the thoughts of previous authors.

Method

This study uses a mixed-method design to determine the evaluative function of reporting verbs in German research articles written by Indonesian researchers. The corpus-based method saves time and ensures the accuracy of the results (Wen & Pramoolsook, 2021). The sheer volume of the text would make it impossible for any researcher to complete it if done by hand (Dalfino et al., 2023). The corpus analysis is based on 'real data', given that the theses that compose the data were actually written and not contrived by the researchers. The corpus-based approach is synonymous with large amounts of empirical data. This technique, by using wordlist and concordance, as the quantitative method provides information on statistics such as frequencies and percentages in the use of reporting verbs. Concordance, said Kilgarriff (2014, p. 10), the basic tool for anyone working with corpus, is underlying any analysis. Meanwhile, the qualitative approach is used to determine the meaning aspects of reporting verbs.

The corpus for this study originates from 85 research articles, henceforth in this research shows data and is abbreviated as ra, written by German language lecturers and researchers in various universities in Indonesia that have German language study program. They belong to the Indonesische Germanistenverband (IGV) or Indonesian Germanistics Association (AGI). They first share the findings of their research at the twice-yearly international seminar before writing the publications. These articles are compiled and published in journals that cover linguistics, literature, culture, and teaching German as a foreign language for adult speakers. The AGI-Journal, from its inaugural edition (2013) to its most recent edition – published in 2021, serves as the study's corpus and has 202.165 tokens. As the seminar was international, there were several speakers apart from Indonesia, e.g. Germany, Switzerland, Thailand, Vietnam, Malaysia, India, and Australia. However, articles by non-Indonesians did not meet the criteria to be used as the corpus for this research. The texts were converted from .pdf to .txt, which is a plain text format that can be read by the Sketch Engine. Titles, subsection headings, tables, graphs, figures, diagrams, and bibliographies were extracted. The extracted data were tagged as ra0 to ra84. This was intended for easy identification and to provide the writers with anonymity.

The data collection process was done by filtering all the verbs in the corpus using the wordlist feature. This search technique produces data of reporting verbs that will only be in sentences with the structure name of researcher (NR) or reported author as subject followed by a reporting verb (RV), e.g. Stern (1984) includes evaluation as one of the 'curriculum processes' (Pickard, 1995), and the structure the NR as agent in passive voice like "Studies involving Chinese writers have been conducted by Lay (1982), Arndt (1987) and Friedlander (1990) (Pickard, 1995)". This technique closes the possibilities of, and also rules out NR as part of a possessive noun phrase, e.g. "Oglin's (1989) inquiry …" (Pickard, 1995).

The filtered verbs amounted to 2.035 items with 30.239 frequencies. Then these targeted verbs were analyzed by Sketch Engine software's concordance function. Not all verbs are reporting verbs, it depends on the structure of the sentence, the meaning of the verb, and the writer's aim in using it, e.g the verb zeigen (show) in the following two sentences: "Diese Zeremonie kann zeigen, dass die Rolle einer Familie und Religion in der Gesellschaft sehr wichtig ist" (This ceremony can show that the role of family and religion in society is very important). In this sentence, no subject or information is used as a reference source in reporting previous research.

Referring to Hyland's (2002) theory of reporting verbs, there are 94 reporting verbs out of the total number of verbs found in the corpus. The next step is to enter the keyword, which is the reporting verbs as a lemma, so that the results that appear are all forms of the searched word, for example, the word zeigen (to show). The concordance will find all forms of the word zeigen, for example, zeigen which has undergone conjugation for third person singular, namely zeigt. From the aspect of time, zeigen will appear in the present and past tenses (hat gezeigt in Perfekt and zeigte in Präteritum). What is not detected are trennbare Verben, which are verbs that can be split. For example, the word stellen (to put). It must be checked again whether there is a prefix at the end of the sentence, for example, prefix ein in einstellen (adjust), fest in feststellen (determine), and an in anstellen (employ). This reporting verbs usage can be found in active sentences, passive

sentences, and as participles (i.g das von Wilhelm Busch benutzte Wort/the word used by Wilhelm Busch).

Once the concordance lists were generated, the next step is to manually check whether the red-colored verbs in the concordance row qualify as reporting verbs, which are verbs that express the writer's acknowledgment that what he writes is not his own idea, but someone else's idea that he quotes. We then saved these findings as statistical data that would later illustrate the occurrence rate of these verbs (see Table 4). This statistical data was then analyzed based on the type of activity and the evaluative function, classified according to Hyland's (2002) theory, which we will present in the Findings section. This combined method is in line with corpus linguistics research, which takes a qualitative approach to the data produced by corpus devices. The results of the analysis are presented in the following subsection.

Findings

Table 3 demonstrates the number of variants of reporting verbs used in the corpus. Discourse Acts dominate 61 out of 97 total verbs, which means about 62% of the total reporting verbs used. On the other hand, there are 18 verb variants each that fall into the Research Acts and Cognition Acts categories. This result does not show the occurrence of the usage of reporting verbs in the corpus. This result illustrates that Indonesian writers use Discourse-Acts verbs more variably than verbs with the categories of Research Acts and Cognition Acts. The comparison demonstrates that Indonesian writers focus less on cognitive action and less on describing the steps and results of previous research. They prefer to present the information and describe it as an act of communication in discourse.

Table 3

Comparison of the use of verb categories in the corpus (%)

Category	Totals	%
Research Acts	18	19
Cognition Acts	18	19
Discourse Acts	61	62
Total	97	100

Table 4 below shows the top five reporting verbs that appear most frequently in each category. According to Hyland's (2002) framework, the reporting verbs categorized in the Discourse Acts were the most found in the corpus with a total occurrence of 144 times or equivalent to 60%. The most dominant verb is schreiben (write) with 36 occurrences, followed by erklären (explain, 26 times), then sagen (say), definieren (define), and vorschlagen (suggest), with 25, then 16 and 10 occurrences. In term of distribution, almost a third of occurrences of the verb "say" are in one article, namely article 33, followed by 5 occurrences in article 76. Likewise, the verb "explain" appears 5x in article 76. This is the most striking result of this study. It indicates that the most frequently used verbs are concentrated in one text, which may cause boredom or monotony for the readers of this text. On the other hand, other reporting verbs are fairly evenly distributed in the corpus. This means that Indonesian writers are able to use reporting verbs effectively when referring to previous research.

The result of this study is in line with Hyland's (2002), Fayyaz & Abdulaziz (2022), and Agbaglo & Bonsu (2022) research which compares the use of reporting verbs in various disciplines of science and social sciences. In the field of applied linguistics, the most widely used reporting verbs are the Discourse Acts category with 59%, followed by Research Acts with 30,5%, and finally the Cognition Acts category with 10,5% occurrence. Hyland (2002) determines the greater use of Discourse Acts forms in the social sciences and humanities is better suited to an argumentative framework that more easily acknowledges complexity, explicit interpretation, and speculation as legitimate components of knowledge. That is why, compared to the hard sciences, these fields are usually more discursive. However, the results of this study do not agree with Un-udom & Un-udom (2020) and Tan (2023), who stated that reporting verbs are the majority in research acts. Specifically, in Un-udom & Un-Udom's (2020) study, 58,4% of the reporting verbs were categorized in research acts. They came to the conclusion that the frequency of actual verb usage cannot be guaranteed by the number of existences.

The second rank of frequently used reporting verbs is Cognition Acts. The verb meinen (mean) dominates almost 50% of the other verbs with 23 occurrences in Cognition

Acts category. The verb argumentieren (argue) appears 9 times, followed by bieten (provide), vertreten (represent), and finden (think). The verb 'mean' is a favorite of Indonesian writers in expressing the mental processes of quoted researchers. The verb 'vertreten' (represent) in the corpus shows an interesting phenomenon. In the following sentence, the phrase 'die Meinung vertreten' has the same meaning as meinen (mean).

The Verb 'vertreten' (represent) in the corpus shows an interesting phenomenon. In the following sentence, the phrase 'die Meinung vertreten' has the same meaning as meinen (mean). I therefore categorize the verb 'represent' as Cognition Acts.

(1) Hoed (2006, p. 52) **vertritt die Meinung**, dass die Priorität der Übersetzung nicht die gleiche Form von Sätzen zu Satz ist, sondern die Äquivalenz von Sinn zwischen dem Ausgangstext und dem Zieltext, denn wichtiger ist die Übertragung von Sinn. (ra60)

Hoed (2006, p. 52) **means** that the priority of translation is not the same form of sentence to sentence, but the equivalence of meaning between the source text and the target text, because the transfer of meaning is more important. (ra60)

Another case with 'finden' found as data in the corpus. The verb 'finden' belongs to the reporting verb class, which has two meanings, namely to find and to think. The following sentences show the different meanings of 'finden':

(2) Dirven (1992, p. 253) in Wiemann (2009: 26) **findet**, authentische Hörtexte sind die Texte, die für Lernsituationen konzipiert wurden, dem Kenntnisstand der Lernenden. (ra55)

Dirven (1992, p. 253) in Wiemann (2009, p. 26) **thinks** that authentic listening texts are texts that have been designed for learning situations, the level of knowledge of the learners. (ra55)

(3) Wie Rost-Roth (2002) in ihrer Forschung **gefunden** hat, taucht das Phänomen der beschränkten Ausdruckmöglichkeiten der Anliegensformulierung von den nicht-

muttersprachlichen Studierenden in den analysierten Gesprächen auf. (ra54)

As Rost-Roth (2002) **found** in her research, the phenomenon of limited expression of concern by non-native students appears in the analyzed conversations. (ra54)

In sentence (2), finden denotes a mental action and means 'to think', whereas in sentence (3), finden has the meaning of discover which shows the writer's choice in conveying the research results of other authors. Thus, finden in this context is categorized into Research Acts that express finding. Therefore, this verb grouping is not watertight, as Hyland (2002) says. An action can fall into two different categories depending on the context of the sentence. Another reporting verbs of this category are evenly distributed in the corpus, which can be interpreted as the selection of verbs by Indonesian researchers is varied and they do not use them repeatedly in a single text.

As demonstrated in Table 4, reporting verbs in the Research Acts category, which indicate activities related to research, are in this study least utilized. The verb feststellen (determine) dominates with 11 occurrences, followed by bestätigen (confirm) with 8 occurrences out of 45 occurrences of other verbs in this category. In the third position, the verb untersuchen (examine) appears with a frequency of 6 times, and then verwenden (utilize), and analysieren (analyze), each with 4 occurrences. Other verbs appeared 19 times. Determine and confirm express research result from another author, while examine, utilize, and analyze convey procedures. The word "feststellen" requires more steps in the search method. Feststellen is a "trennbares Verb" (separable verb, so the concordance only recognizes feststellen written out in full. In the corpus, it was found 2x in the sentence and in the past tense. To search for this verb further, the lemma "stellen" must be entered into the search engine, as there are several prefixes that can be added to the basic verb "stellen", including the prefix vor- in vorstellen (to introduce, to present), prefix dar- in darstellen (to present, represent, to show), and the prefix ein- in einstellen (to set, to cease). Thus, searching for the verb stellen is done twice, by entering the lemma "stellen" and "feststellen".

A study by Agbaglo & Bonsu (2022) investigated reporting verbs used in the literature review sections in fifteen master's theses published in the Economics discipline. Using AntConc software, they analyzed the way reporting verbs are used based on Hyland's taxonomy. The study's findings demonstrated that the theses used all three categories of reporting verbs varyingly. Additionally, compared to the Research Acts and Cognition Acts, verbs in the Discourse Acts group were employed more frequently. Comparably, the findings of the study conducted by Fayyaz & Abdulaziz (2022) highlighted that reporting verbs related to Discourse Acts are used more frequently, but surprisingly, no one is using the Discourse Acts sub-category 'critical' to cite other people's work. Fayyaz & Abdulaziz (2022) analyzed the use of reporting verbs in introduction and literature reviews of social sciences research articles by Pakistani writers. Apart from investigating the frequency of usage, the study by Agbaglo & Bonsu (2022) also analyzed the function of reporting verbs. Findings and assurance verbs were commonly used on the evaluative function. This study directs the practice of using reporting verbs appropriately in academic writing.

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Different results were shown by research conducted by Lee & Tan (2023), which also investigated reporting verbs, this time used by non-native novice postgraduate students from different countries such as China, Iran, Iraq, Libya, Malaysia, Nigeria, Jordan, Taiwan, and Yemen in their 32 literature review writings. The results illustrated that while the students employed reporting verbs from all three categories by Hyland (2002), they

tended to utilize more Research Acts than Discourse Acts reporting verbs. The verbs for Cognition Acts were the least used. Regarding the forms, the most common forms under the Research Acts were 'found' and 'conducted', while 'stated', 'concluded', and 'suggested' were the most dominant forms under Discourse Acts. Concerning Cognition Acts were 'believed' and 'agreed' the fundamental forms. In summary, the study showed that it is necessary to educate inexperienced writers about the three types of reporting verbs that could be incorporated into essential citations to improve academic writing.

Another study, Manan & Mohd Noor (2014), investigated the frequency and the function of reporting verbs used in six master theses written by Malaysian students in the English Language Studies (ELS) program. In contrast to the investigation conducted by Agbaglo & Bonsu (2022), Fayyaz & Abdulaziz (2022), and Lee & Tan (2023), the findings of this investigation revealed that the Malaysian students were more familiar with the reporting verbs from the Research Acts group according to Hyland's (2000) framework, as compared to Cognition Acts and Discourse Acts. From the result of the study, Manan & Noor (2014) suggested, that rather than teaching the form and content of the research itself, it would be a good idea to teach masters students how to use reporting verbs in a Research Methodology course.

Table 4

Frequently employed reporting verbs and the distribution in corpus

Category	Reporting Verb	Frequency	Distribution	Totals	%
Research Acts	feststellen (determine)	11	ra0, ra2, ra38, a58, ra59 (2x), ra60, ra73, ra75 (2x), ra81	45	18
	bestätigen (confirm)	8	ra1, ra3, ra29, ra39, ra40, ra59, ra74, ra82		
	untersuchen (examine)	6	ra30, ra35 (2x), rq52, ra77 (2x)		
	verwenden (utilize)	4	ra54, ra69 (3x)		
	analysieren (analyze)	4	ra28, ra35 (2x), ra52		
	andere Verben (another verbs)	19			
Cognition Acts	meinen (mean)	23	ra3 (4x), ra6 (2x), ra24, ra27, (2x), ra28, ra29, ra32, ra35 (2x),	53	22

Category	Reporting Verb	Frequency	Distribution	Totals	%
			ra53, ra54, ra60, ra62, ra71, ra82 (3x)		
	argumentieren (argue)	9	ra29 (2x), ra35, ra49 (2x), ra70, ra71, ra74 (2x)		
	bieten (provide)	2	ra52, ra70		
	vertreten (represent)	2	ra30, ra60		
	finden (think)	2	ra54, ra55		
	andere Verben (another verbs)	15			
	schreiben (write)	36	ra0 (4x), ra8, ra17 (3x), ra33 (10x), ra34, ra36, ra39 (2x), ra46, ra54, ra56 (4x), ra62, ra74, ra76 (5x), ra82		
	erklären (explain)	26	ra1, ra24, ra26 (2x), ra32, ra34, ra36, ra46 (4x), ra53 (2x), ra54, ra59 (3x), ra64, ra65, ra68, ra70, ra76 (3x), ra77, ra80		
Discourse Acts	sagen (say)	25	ra3, ra5, ra7, ra12, ra21, ra28, ra29, ra32 (2x), ra41, ra56, ra59 (2x), ra63, ra67, ra70, ra74, ra76 (5x), ra81 (2x), ra82	144	60
	definieren (define)	16	ra2, ra5 (2x), ra6, ra20, ra24, ra27, ra28 (3x), ra30, ra39, ra46, ra57, ra70, ra71		
	vorschlagen (suggest)	10	ra3 (2x), ra28, ra32, ra40, ra55, ra59, ra66, ra73 (2x)		
	andere Verben (another verbs)	31			
Total of frequency				242	100

Based on their evaluative function, the use of reporting verbs by Indonesian writers is very diverse, as illustrated in Table 4. The Research Acts category is dominated by verbs that describe research procedures. The verb 'bestätigen' indicates that the writer accepts the cited research results, while 'feststellen' is a non-factive verb to comment on research findings with no clear attitudinal signal as to their reliability. Verbs with

the counter-factive category are not present in the corpus. In other words, Indonesian writers do not refute the result of previous research or do not take a stance to disagree with or refute the information referenced by previous authors.

The results of data analysis in the Cognitive Acts category showed that three of four evaluative functions were found. A neutral attitude towards the proposition is represented by the verbs 'meinen' and 'vertreten'. Then the Indonesian writers represent the author as having a positive attitude toward the materials through the verb 'bieten' and 'finden', meaning accepting it as true or correct.

In terms of Discourse Acts, Indonesian researchers in the fields of linguistics, literature, and German language teaching convey reporting verbs with the evaluative function of non-factive assurance dominantly, namely through the use of the verbs 'schreiben', 'erklären', 'sagen', and 'definieren'. These verbs inform the writer's acceptance of the cited material neutrally, objectively, and without interpretation. Meanwhile, the verb 'vorschlagen' means the doubtful attitude of the writer. The writer shows that the information or conclusion presented is not certain.

Table 5

Evaluative function of frequently employed reporting verbs

Category	Reporting Verb	Evaluative Function
Research Acts	bestätigen / confirm	findings, factive
	geben (Tipps, Beispiel, Wort, Erklärung) / give (tips, example, word, explanation)	procedures
	untersuchen / examine	procedures
	verwenden / utilize	procedures
	feststellen / determine	findings, non-factive
Cognition Acts	meinen / mean	neutral
	argumentieren / argue	tentative
	bieten / provide	positive
	finden / think	positive
	vertreten / represent	neutral
Discourse Acts	schrieben / write	assurance, non-factive
	erklären / explain	assurance, non-factive

Category	Reporting Verb	Evaluative Function
	sagen / say	assurance, non-factive
	definieren / define	assurance, non-factive
	vorschlagen / suggest	doubt, tentative

As demonstrated in Table 5, Indonesian writers employed all categories of reporting verbs based on Hyland's (2002) classification. The verbs belonging to the Discourse Act group dominate in terms of verb diversity and frequency of occurrence. A significant result of the analysis in this study is that the evaluative functions of Research Act and Cognitiv Act category verbs are more varied than Discourse Act's verbs which are dominated by non-factive assurance function. Interestingly, none of the evaluative functions of the verbs were criticizing, negative, or rejecting the cited material.

Discussion

Reporting verbs are a crucial feature in academic writing. It helps the writer to express their assertions and develop credibility and veracity of the research. The findings from this study provide important insights into Indonesian writers' citation practices, particularly their use of reporting verbs in German research articles. Overall, the predominance of Discourse Acts among reporting verbs (62%) indicates a tendency to present cited information primarily as a communicative acts. This is consistent with previous research in applied linguistics, as noted by Hyland (2002), where discourse-related verbs are often used in the social sciences and humanities because of their suitability for argumentative frameworks. Thus, Indonesian authors seem to adopt a similar approach, emphasizing the presentation of information rather than an analysis of the research actions or cognitive processes of the quoted authors.

Interestingly, the frequent use of specific verbs such as 'write' and 'explain' within Discourse Acts suggests that Indonesian writers prefer verbs that convey cited ideas directly. The repetition of some verbs, especially 'say' in one text may lead to a sense of monotony. Thus, it proves that varying the reporting verbs is challenging for non-native speakers. In addition to the dominant use of Discourse Acts, the distribution of Cognition and Research Acts reporting verbs reveals nuanced patterns. The results

suggest that Indonesian writers rely on these verbs to attribute personal viewpoints, but may be constrained by the limitations of expressing evaluative meaning or critical engagement with source material.

Conclusion

In the corpus of this study, Discourse Acts were used more frequently when compared to Research Acts and Cognition Acts, indicating that the main focus of the author is the communication of claims and arguments rather than conveying research activities or cognitive reflection of other authors. This means that scientific articles written by Indonesian researchers tend to be more argumentative, where claims are discussed, supported, or rejected. Writers more often interact with other researchers' opinions or arguments and relate them to their own ideas. However, the evaluative value is not very visible because the verbs that appear dominantly are 'schreiben' (write), 'erklären' (explain), 'sagen' (say), and 'definieren' (define) which are neutrally charged. Although some previous research offers a clear taxonomy system, categorizing reporting verbs is not an easy thing to do. It is often highly context-dependent in practice. However, Indonesian writers need to be familiar and critical with and knowledgeable in the proper use and selection of reporting verbs so that they can effectively introduce their research to their community. In conclusion, these findings provide valuable implications for the academic writing training of Indonesian writers. More emphasis on the use of evaluation and diverse reporting verbs could help Indonesian writers to take a clearer stance and engage more critically with cited material. Some limitations were noted, even though the methodology may provide answers to the study questions. It's possible that the corpus size is too small to accurately capture all German research articles in Indonesia. More coverage and balanced corpora could be used in future research.

Author Details

Genita Cansrina (Doctoral)
¹ Padjadjaran University, Faculty of Cultural Sciences, Bandung, Indonesia
🆔 0000-0002-0623-4305   ✉ g.cansrina@unpad.ac.id

Eva Tuckyta Sari Sujatna (Prof. Dr.)
¹ Padjadjaran University, Faculty of Cultural Sciences, Bandung, Indonesia
🆔 0000-0002-6254-5714

Susi Yuliawati (Dr.)
¹ Padjadjaran University, Faculty of Cultural Sciences, Bandung, Indonesia
🆔 0000-0002-7483-3860

Noor Hasnoor Mohamad Nor (Dr.)
² Universiti Malaya, Academy of Malay Studies, Kuala Lumpur, Malaysia
🆔 0000-0002-7340-8862

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