Form, Tense, and Voice of Reporting Verb in Article Text Written by Indonesian Speakers

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Highlights
Referring to previous work is fundamental in writing article text to support the information conveyed clearly and accurately. As one of the instruments used to link concepts across studies, reporting verbs can provide a preference for the features of the research being studied.

ABSTRACT: This study examines the characteristics of reporting verb usage in article texts written by Indonesian speakers. This study is qualitative research that focuses on the comparison of the form, tense, and voice of reporting verbs. The data sourced from fifty social science articles and fifty natural science articles published in national journals from 2020 to 2024. Data were collected from three article body components which consists of introduction, literature review, and discussion. Then, the three body components were converted into *text* (TXT) format files and combined into a corpus database based on social science and natural science clusters in the *AntConc* application. The data analysis is based on Hyland's theory (2002), supported theory of tense and voice by Azar (2002) and O'Dwyer (2006). The findings show that the forms of reporting verbs in social science articles are more varied, with around 33 verbs, compared to natural science articles, which amounted to 28. There are similarities among the five verbs frequently employed in the two disciplines including *show, find, reveal, demonstrate,* and *observe*. The category classification of reporting verbs in social science leans towards discourse (69.09%), and natural science leans towards research (49.26%). In terms of tense, present simple is the tense that tends to be used in social science. Meanwhile, natural science uses two types of tense: present simple and past simple. Lastly, the voice of the reporting verb in the two disciplines applies active voice. These findings indicate that the characteristics of social research are argumentative, emphasizing the interpretation of current phenomena. On the contrary, the characteristics of natural science illustrate that it is experimental, reflecting a verified research process.

Keywords: reporting verb, article text, Indonesian speaker

Introduction

English as an international language has become an important skill for non-native English speakers. English effectively connects various sectors, including technology, education, economy, and other social interactions (Dwigiyanthi & Winarta, 2024). One implementation of

the importance of English skills in the education sector is as the language of instruction for article writing. Articles that have a high reputation index generally have English as the language of writing, such as articles in Indonesia that are included in SINTA 1 and 2 accreditations. In article writing, there is an important element in the form of including references to support the arguments presented by the author (Febriyanti & Yuliawati, 2024; Jarkovská & Kučírková, 2021). Reporting verb is one of the tools to connect views or research results from other authors. A good understanding of the use of reporting verbs in scientific journal writing is often considered a challenge for non-native English speakers (Jarkovská & Kučírková, 2020; Malá et al., 2022). Considering the importance of citation in writing, the investigation of reporting verbs in the background of non-native English speakers, especially Indonesian, is still quite limited. Therefore, this study explores the use of reporting verbs produced by Indonesian speakers to develop the study from the side of non-native English speakers.

The assumption of the importance of reporting verbs in article writing is that quoting can show the connection of ideas. Hyland and Jiang (2019) stated that reporting verbs can illustrate the gaps in one's position to create novelty in existing knowledge concepts. Bloch (2010) asserts that non-native English speakers find it difficult to convey their opinions about other researcher's claims when choosing the incorrect reporting verb variety. This is due to the wide variety of reporting verbs with different meanings. Therefore, Thompson and Ye (1991) grouped reporting verbs into three categories based on the verb process: textual, mental, and research. First, textual verbs refer to the process in which verbal expression is necessary (*state, write, term, challenge, underline, point out, name, deny*). Second, mental verbs refer to mental processes (*believe, think, focus on, consider, prefer*). The last category is research verbs that show the process part of research (*measure, calculate, quantify, obtain, find*).

Besides Thompson and Ye, other linguists study the grouping of reporting verbs based on sentence structural patterns. Francis et al. (1996, as cited in Charles, 2006) divide reporting verbs into four categories: argue, think, show, and find. First, argue verbs are related to communication (*suggest, assert, point out*). The second category is think verbs, which are related to how the writer thinks, believes, knows, and hopes (*think, assume, feel*). Third, show verbs indicate facts or situations (*show, demonstrate, reveal*). Finally, find verbs are related to knowing or finding something (*find, observe, discover, establish*). According to Charles (2006), the reporting verb category developed by Francis et al. (1996) has similarities with the categories initiated by Thompson and Ye (1991), namely argue verbs are equivalent to textual verbs, think verbs are equivalent to mental verbs, show and find verbs are equivalent to research verbs.

In line with other linguists, Hyland (2002) also divided the reporting verb category into three classifications as Thompson and Ye (1991). First, the research category is a verb that describes experimental activities in the real world (*observe, discover, notice, show, analyze, calculate, assay, explore, plot, recover*). The second category is cognition, which refers to the mental activity of the writer (*believe, conceptualize, suspect, assume, view*). The last category is discourse, which refers to the verbal expression of the author's cognitive activity (*ascribe, discuss, hypothesize, report, state*). Based on the categorization by the three experts above, this

study applies the reporting verb theory proposed by Hyland (2002) which provides guidance on a wider variety of reporting verb types, allowing writers to choose the most appropriate words for their communication purposes.

Previous research has studied reporting verbs. Jarkovská and Kučírková (2020) examined the use of reporting verbs in thesis of Economics and Management by Czech speakers. Malá et al. (2022) also examined reporting verbs in academic texts written by Czech speakers and compared them with native English speakers. Matte and Stumpf (2022) studied reporting verbs in social science and natural science articles produced by Portuguese speakers. Furthermore, Alahmed and Jabbar (2022) identified reporting verbs in essays written by Iraqi master's students. Mar (2020) analyzed reporting verbs in articles produced by Myanmar speakers. In addition, the study of reporting verbs was also examined in the thesis of Vietnamese master students by Loan and Pramoolsook (2015). Meanwhile, the use of reporting verbs in Indonesian speakers has been studied by Febriyanti and Yuliawati (2024) in student essays and Ruminda (2016) in news texts.

Referring to the previous literature, reporting verbs have been studied in Czech, Portuguese, Iraqi, Myanmar, and Vietnamese speakers. There are two reporting verb studies on Indonesian speakers, one conducted by Febriyanti and Yuliawati (2024) and Ruminda (2016). However, those two researchers focus on reporting verbs in essays and news texts. Meanwhile, this study analyzes reporting in article texts and compares them based on social science and natural science disciplines. This research aims to see the characteristics of reporting verb usage in article texts written by Indonesian speakers. Referring to this objective, the characteristics of reporting verbs will be investigated based on the following question formulation:

1. What is the form of reporting verb used in social science and natural science articles by Indonesian speakers?
2. How are the tenses and voice of reporting verb used in social science and natural science articles by Indonesian speakers?

Method

This study is categorized into qualitative research that describes the phenomenon of language use. This research focuses on using English reporting verbs produced by Indonesian speakers. The data is in the form of clauses and sentences sourced from fifty journal articles in the social science cluster and fifty journal articles in the natural science cluster. The data sources of the social science cluster consist of *Ahkam, Ijtihad, International Journal of Language Education, Journal of Indonesian Legal Studies*, and *Bestuur*. On the other hand, the natural science cluster data sources include *Indonesian Journal of Science and Technology, Asean Journal of Science and Engineering, Forest and Society, Journal on Mathematics Education*, and *Journal of Robotics and Control*. Journal selection was established on four criteria:

1. The journal is written in English, and most authors are from Indonesia.
2. The journal is indexed on the national Sinta scale, with a reputation impact factor of at least 3.5.

3. Journal indexed on an international Scopus scale with a *SCImago Journal Rank* (SJR) reputation of at least 0.35.
4. Selected journal articles within five years, around 2020 to 2024.

The stages of data collection started with visiting the journal's website and downloading articles included in publications from 2020 to 2024. Data were collected from three article body components: introduction, literature review, and discussion. Then, the three body components were converted into *text* (TXT) format files. Next, the TXT files are combined into a corpus database based on social science and natural science clusters in the *AntConc* application. The social science corpus database is SLCORPUS, while the natural science corpus database is SNCORPUS. The number of SLCORPUS tokens was 193,930, and SNCORPUS was 119,764.

The following stages in data collection were then continued in the *AntConc* application. 72 verb samples adapted from the reporting verb theory by Hyland (2002) were used as target words for searching through the *KeyWord In Context* (KWIC) feature. From the search results of each sample word in the KWIC feature, citation sentences containing verb keywords were manually selected and grouped in *Microsoft Excel*. Furthermore, the Figure 1 below demonstrates the step of analysis.
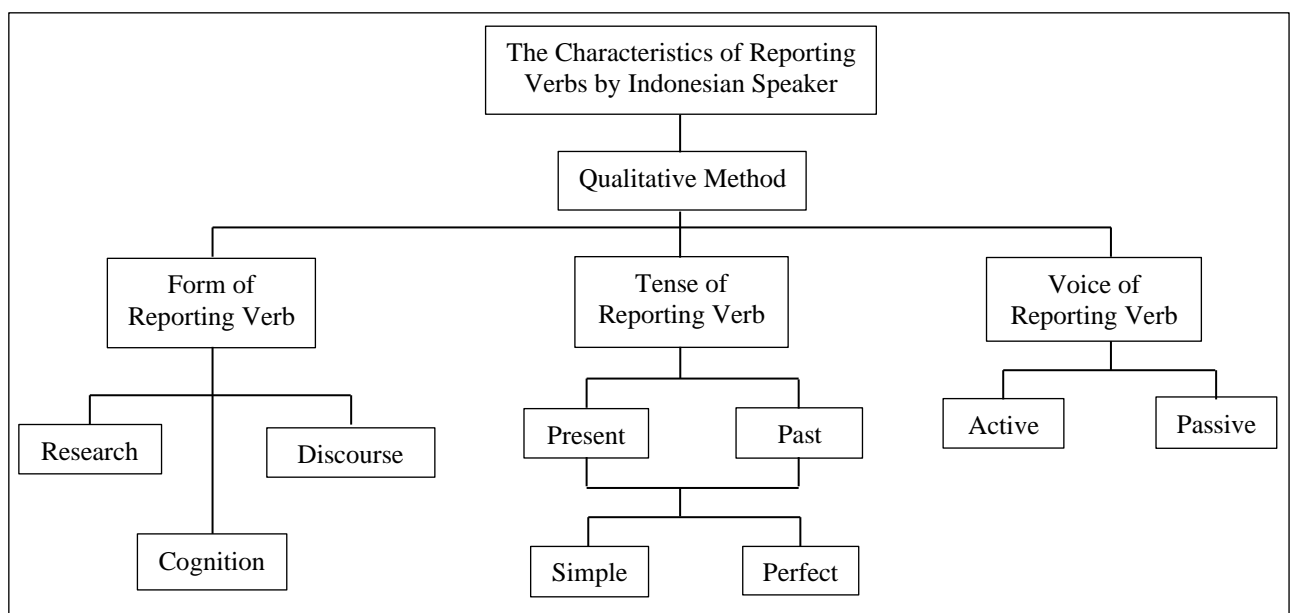

Fig 1 Step of Analysis

The data analysis stage begins by classifying the types of verbs in each sentence by putting a checkmark in the appropriate verb column. Then, the classified data were analyzed using the 'analyze data' feature in *Microsoft Excel* to obtain the verb frequency. In addition, the verb forms are also categorized based on Hyland's (2002) three reporting verb categories to identify the tendency of the categories that appear in the two article science clusters. After that, the percentage of each verb frequency is calculated manually using the formula (% verb = frequency of verb/total frequency x 100%). The results of the calculation are sorted from the largest to the smallest. Besides the verb forms, the data were also analyzed in terms of tense

and voice. The tense analysis considers the affixation attached to the verb. In contrast, the voice analysis is determined from the relationship between the verb and the accompanying noun as the subject and object of the predicate. The tense and voice are examined using the theories of Azar (2002) and O'Dwyer (2006). The analysis results are presented in the form of numbers and tables. Furthermore, the data are described as a form of interpretation of the results.

Findings and Discussion
Findings
This section presents the results of the reporting verb data analysis. The findings are divided into two sections: the form of the reporting verb and the tense and voice of the reporting verb.

1. The Form of Reporting Verb

Based on the test results of 72 verb samples, there is a difference in the number of reporting verb findings between the two science clusters. The number of reporting verbs in social science articles is 33 verb forms. Meanwhile, the number of reporting verbs in natural science articles is around 28 verb forms. Table 1 below shows the difference in the number of reporting verbs in social and natural science articles.

Table 1
The Difference of Verb Form in Social Science and Natural Science Articles

No.	Social Science		Natural Science	
	Verb Form	**Frequency**	**Verb Form**	**Frequency**
1	State	53	Show	44
2	Argue	34	State	32
3	Explain	17	Report	18
4	Show	12	Find	17
5	Find	11	Reveal	11
6	Discuss	9	Demonstrate	9
7	Reveal, Assert	8	Argue, Discuss	8
8	Believe	7	Agree	7
9	Indicate, Note	6	Suggest, Indicate	6
10	Consider, Suggest	5	Observe, Explore	4
11	Point out	4	Discover, Point out, Describe	3
12	Demonstrate, Observe, Focus on, Agree, Report	3	Measure, Analyze, Identify, Believe, Focus on, Explain, Note, Claim	2
13	Discover, Explore, Confirm, View, Define, Affirm	2	Obtain, Confirm, Write, Assert	1
14	Establish, Think, Assume, Feel, Concur, Write, Claim, Warn	1		

Table 1 illustrates the distribution of the form of reporting verbs in social science and natural science articles. The verb forms used in the two science clusters have similar forms. The verb *state* is more prominent in social science articles with a frequency of 53, followed by other verbs, including *argue, explain, show*, and *find*. On the other hand, the verb *show* is dominantly used in natural science articles with a frequency of 44, followed by *state, report, find,* and *reveal*. However, the top five verbs show the tendency of the reporting verb category used in the two science clusters. The verbs *state, argue*, and *explain*, which are in the discourse category, occupy the most significant portion of social science articles. Meanwhile, *show, find*, and *reveal* verbs in the research category dominate natural science article writing. The difference in reporting verb categories can be seen in Table 2 and Table 3 below.

Table 2
Distribution of Reporting Verb Category

Category	Social Science		Natural Science	
	Frequency	Percentage	Frequency	Percentage
Research	44	20,00%	100	49,26%
Cognition	24	10,91%	11	5,42%
Discourse	152	69,09%	92	45,32%
Total	220	100%	203	100%

Table 3
Distribution of Verb Forms in Different Reporting Verb Category

Social Science			Natural Science		
Category	Frequency	Percentage	Category	Frequency	Percentage
Research	**44**	**19,73%**	**Research**	**100**	**49,26%**
Show	12	5,45%	Show	44	21,67%
Find	11	5,00%	Find	17	8,37%
Reveal	8	3,64%	Reveal	11	5,42%
Demonstrate	3	1,36%	Demonstrate	9	4,43%
Observe	3	1,36%	Observe	4	1,97%
Discover	2	0,91%	Explore	4	1,97%
Explore	2	0,91%	Discover	3	1,48%
Confirm	2	0,91%	Measure	2	0,99%
Establish	1	0,45%	Analyze	2	0,99%
			Identify	2	0,99%
			Obtain	1	0,49%
			Confirm	1	0,49%
Cognition	**24**	**10,76%**	**Cognition**	**11**	**5,42%**
Believe	7	3,18%	Agree	7	3,45%
Consider	5	2,27%	Believe	2	0,99%
Focus on	3	1,36%	Focus on	2	0,99%
Agree	3	1,36%			
View	2	0,91%			
Think	1	0,45%			
Assume	1	0,45%			

Feel	1	0,45%			
Concur	1	0,45%			
Discourse	**152**	**69,09%**	**Discourse**	**92**	**45,32%**
State	53	24,09%	State	32	15,76%
Argue	34	15,45%	Report	18	8,87%
Explain	17	7,73%	Argue	8	3,94%
Discuss	9	4,09%	Discuss	8	3,94%
Assert	8	3,64%	Suggest	6	2,96%
Indicate	6	2,73%	Indicate	6	2,96%
Note	6	2,73%	Point out	3	1,48%
Suggest	5	2,27%	Describe	3	1,48%
Point out	4	1,82%	Explain	2	0,99%
Report	3	1,36%	Note	2	0,99%
Define	2	0,91%	Claim	2	0,99%
Affirm	2	0,91%	Write	1	0,49%
Write	1	0,45%	Assert	1	0,49%
Claim	1	0,45%			
Warn	1	0,45%			
Total	220	100%	**Total**	203	100%

Based on Table 2, the findings show significant differences in the employment of reporting verbs between the two disciplines. In social science articles, the most highly represented are Discourse verbs, with 152 verb frequencies (69.09%). The other two categories with lower occurrence are Research verbs, with a frequency of 44 (20%), and Cognition verbs, with a very low frequency of 24 (10.91%). On the other hand, the highest category in natural science articles is demonstrated by Research Verb, which has a frequency of 100 (49.26%) of the total data. This frequency ranking is followed by Discourse verbs at 92 (45.32%.) The frequency of Cognition verbs also occupies a very low position in natural science articles, with 11 occurrences (5.42%).

Meanwhile, Table 3 displays the frequency distribution of verb forms among the three categories. First, the Research verb category found 9 forms in social science and 12 forms in natural science. There are similarities among the five verbs frequently employed in articles related to the social and natural sciences. It includes *show, find, reveal, demonstrate,* and *observe*. In social science articles, the frequency distribution of the five verbs consists of *show* in 12 occurrences (5.45%), *find* in 11 (5%), *reveal* in 8 (3.64%), as well as *demonstrate* and *observe* in 3 (1.36%). Meanwhile, the distribution of verbs in natural science articles includes *show* in 44 occurrences (21.67%), *find* in 17 (8.37%), *reveal* in 11 (5.42%), *demonstrate* in 9 (4.43%), and *observe* in 4 (1.97%).

Furthermore, the distribution of Cognition category verbs in social science articles is more significant than in natural science articles. In social science, there are nine forms of verbs: *believe, consider, focus on, agree, view, think, assume, feel*, and *concur*. Among the nine forms, the three verbs that have the highest occurrence are *believe* in 7 (3.18%), *consider* in 5 (2.27%), and *focus on* with 3 occurrences (1.36%). In contrast, Cognition verbs in natural science articles

only consist of 3 forms: *agree, believe*, and *focus on*. The frequency distribution of each verb includes *agree* in 7 (3.45%), then *believe* and *focus on* with 2 occurrences (0.99%).

Lastly, the findings on the Discourse verb category also varied between the two disciplines. There are 15 verb forms in social science articles, including *state, argue, explain, discuss, state, indicate, note, suggest, show, report, define, assert, write, claim,* and *warn*. Meanwhile, in natural science, 13 verb forms were obtained: *state, report, argue, discuss, suggest, indicate, point out, describe, explain, note, claim, write,* and *assert*. The five most frequently occurring verbs between the two disciplines varied. In social sciences, the frequency distribution of the five highest verbs including *state* in 53 (24.09%), *argue* in 34 (15.45%), *explain* in 17 (7.73%), *discuss* in 9 (4.09%), and *assert* in 8 (3.64%). On the other hand, the distribution of the highest five verbs in natural science consisted of *state* in 32 (15.76%), *report* in 18 (8.87%), *argue* and *discuss* in 8 (3.94%), and *suggest* in 6 (2.96%).

2. The Tense and Voice of Reporting Verb

After classifying the forms of reporting verbs, the research examined the data on the use of tense and voice in the articles of the two disciplines. As shown in Table 4, the highest verb tense in social science articles is present simple, with a frequency of 114 occurrences or 51.82% of the total data. This result is followed by past simple with a frequency of 101 occurrences or 45.91%, and the least used is present perfect with about 5 occurrences or 2.27%. On the other hand, the tendency of verb tense usage in natural science articles is equal, where the frequencies between present simple and past simple are 95 occurrences or 46.80% of the total data. In addition, present perfect also occupies the lowest position with a frequency of about 13 or 6.40%. Reporting verbs with present simple tense tend to be used to construct statements and have a general attribute, which means that the ideas conveyed are still acceptable in the present. Meanwhile, reporting verbs with past simple tense are applied to show the research steps and display the findings that have been completed. On the other hand, the present perfect is utilized to explain the summary of the findings of the previous research, and the findings are related so that it can still be continued. Data (1), (2), and (3) below are examples of the use of present simple, present perfect, and past simple reporting verbs.

(1) *Fang (2020)* **explains** *that the woman's family should strengthen her child's partner to prevent the negative effects of this honest marriage, which could have an impact on intimidation and violence against women. [SL-IJTIHAD10]*

(2) *Zhang et al. (2024)* **investigated** *multipolar magnesium electrolysis cell, cell voltage, and current density used for NSGA II. [SN-AJSE1]*

(3) *Many studies* **have shown** *that environmental damage is primarily caused by human activities, such as the use of fossil fuels that are not environmentally friendly (Huo & Peng, 2023), deforestation (Itawan, 2023), industrial activities (Ilham, 2021), air pollution (Manisalidis et al., 2020), and other activities that contribute to environmental degradation. [SN-IJOST1]*

Table 4
Tense of Reporting Verb in Social and Natural Science Articles

Verb Tense	Social Science		Natural Science	
	Frequency	Percentage	Frequency	Percentage
Present Simple	114	51,82%	95	46,80%
Present Perfect	5	2,27%	13	6,40%
Past Simple	101	45,91%	95	46,80%
Total	220	100%	203	100%

In addition to verb tense, verb voice is also examined in this study. Based on Table 5, the voice findings between social science and natural science articles have the same tendency that Indonesian speakers mostly use active voice. The results are proven by the frequency of active voice, as much as 206 (93.64%), compared to passive voice, which is only found in around 14 occurrences (6.36%) in social science articles. Meanwhile, in natural science articles, passive voice is used in around 11 occurrences (5.42%), which is lower than the frequency of active voice in 192 (94.58%).

Table 5
Voice of Reporting Verb in Social and Natural Science Articles

Verb Voice	Social Science		Natural Science	
	Frequency	Percentage	Frequency	Percentage
Active	206	93,64%	192	94,58%
Passive	14	6,36%	11	5,42%
Total	220	100%	203	100%

After finding the common types of tense and voice used in the two disciplines, the distribution of verb tense and voice usage in each reporting verb category was also investigated. As shown in Table 6, verb tense and voice of reporting verbs show similar results in each category. In the research category, the verb tense and voice often used is past simple active. This is proven from the calculation of past simple active in social science of 24 (10.91%) and in natural science more around 45 (22.17%). In addition, the cognition category utilizes more verb tense and voice in the form of present simple active. These results are confirmed by the data of the occurrence of present simple active of 19 occurrences (8.64%) in social science and 9 occurrences (4.43%) in natural science. Similar to the cognition category, present simple active also has the highest position in the discourse category. In social science, present simple active is found at around 75 (34.09%) more than in natural science which is found at 42 (20.69%).

Table 6

Distribution of Verb Tense and Voice in Different Reporting Verb Category

Tense-Voice	Research		Cognition		Discourse		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Social Science								
Present Simple Active	17	7,73%	19	8,64%	75	34,09%	111	50,45%
Present Simple Passive	0	0%	0	0%	3	1,36%	3	1,36%
Present Perfect Active	3	1,36%	0	0%	2	0,91%	5	2,27%
Present Perfect Passive	0	0%	0	0%	0	0%	0	0%
Past Simple Active	24	10,91%	5	2,27%	61	27,73%	90	40,91%
Past Simple Passive	0	0%	0	0%	11	5%	11	5%
Total							**220**	**100%**
Natural Science								
Present Simple Active	42	20,69%	9	4,43%	42	20,69%	93	45,81%
Present Simple Passive	1	0,49%	0	0%	1	0,49%	2	0,99%
Present Perfect Active	9	4,43%	0	0%	3	1,48%	12	5,91%
Present Perfect Passive	0	0%	0	0%	1	0,49%	1	0,49%
Past Simple Active	45	22,17%	2	0,99%	40	19,70%	87	42,86%
Past Simple Passive	3	1,48%	0	0%	5	2,46%	8	3,94%
Total							**203**	**100%**

Table 6 also illustrates the distribution of other tenses and voices in the reporting verb category. Past simple active occupies the second highest position in each reporting verb category in the two disciplines. Social science writers use past simple active for research verbs in 24 (10.91%), cognition verbs in 5 (2.27%), and discourse verbs in 61 (27.73%). At the same time, natural science writers apply past simple active for research verbs in 45 (22.17%), cognition verbs in 2 (0.99%), and discourse verbs in 40 (19.70%).

Next, the distribution of the present perfect active in the two disciplines is only found in the research and discourse categories. In social science, the present perfect active obtains the higher frequency in research, around 3 occurrences (1.36%), followed by discourse in 2 occurrences (0.91%). In natural science, the present perfect active for research category was recorded in 9 occurrences (4.43%) and the discourse category in 3 (1.48%).

On the other hand, the lowest occurrence of verb tense and voice is found in the passive form. Present simple passive in social science articles is only found in the discourse category with a frequency of 3 (1.36%) and not in the other two categories. Meanwhile, in natural science articles, the present simple passive is found in research and discourse categories with an equal frequency of 1 occurrence (0.49%). Meanwhile, the present perfect passive is not found in the three reporting verb categories in social science. Present perfect passive is only found in the category of discourse in natural science articles with a frequency of 1 (0.49%). The last type of verb tense and voice found is past simple passive. Although there are differences in distribution in the two disciplines, the past simple passive has quite a lot of frequency compared to the other two passive forms. In social science, the past simple passive is only found in the discourse

category with a frequency of 11 (5%). In comparison, the use of past simple passive in natural science is distributed in the research category in 3 (1.48%) and the discourse category in 5 (2.56%).

Discussion

Based on the findings, reporting verbs produced by Indonesian speakers in social science articles are more varied. As a result of testing 72 verb samples adapted from Hyland (2002), 33 reporting verb forms are found in social science articles. The findings are more numerous when compared to the forms of reporting verbs found in natural science articles, which amounted to around 28 verbs. This result can be influenced by the focus of social science studies that deal with diverse social phenomena, thus requiring various reporting verbs to describe the context of the statements from other studies. This reason agrees with Alahmed and Jabbar (2022), who stated that academic writers use reporting verbs to relate to ideas or previous research results to support their arguments.

Each verb form found can be grouped into the reporting verb category. Hyland (2002) divides reporting verb groups based on the type of activity referred to by the verb. The category is composed of research, cognition, and discourse categories. Based on the verb distribution analysis results, social science writers dominantly use reporting verbs in the discourse category. This is evidenced by three of the five verbs used more frequently, such as the verbs *state, argue*, and *explain*. Social science research emphasizes the interpretation of data, so writers need to express their views and position themselves towards the findings or arguments being discussed. In comparison, natural science writers tend to use reporting verbs categorized as research. This is proven by the findings that *show, find*, and *reveal* verbs are in the top five frequency verb forms. Science research depends on a systematic methodology, so writers need to present their findings in a structured manner to help readers understand the validity and significance of the research. As an illustration, the *argue* verb in data (4) shows a more definite attitude towards the quoted information, while the *find* verb in data (5) reports the factual results of the previous research test analysis.

(4) Yazaki (2018) **argues** that legislation plays a significant role in the mushrooming of administration. [SL-BESTUUR10]

(5) Abida et al. (2020), Li et al. (2020), as well as Xie and Wan (2018) **found** that the recovery rate of magnetic solid catalysts was 1.7-fold higher than non-magnetic solid catalysts. [SN-IJOST5]

The results of the category tendency is supported by Hyland's (2002) idea that social science fields (philosophy, sociology, marketing, and applied linguistics) more frequently use reporting verbs in discourse, while science fields (engineering and science) tend to use reporting verbs in research. Research by Yasmin et al. (2020) is also related to the findings of this study, which states that argue category adapted from Francis et al. (1996, as cited in Charles, 2006) is mostly found in humanities articles written by Pakistani speakers and native English speakers. The argue category is equivalent to the discourse category in Hyland's (2002) reporting verb classification.

However, the findings of this study also refute several other studies, such as Alasmari (2023), as well as Un-udom and Un-udom (2020). Alasmari (2023) found that the research category comparing social science articles in Arabic and English has a large percentage of about 48%. Meanwhile, Un-udom and Un-udom (2020), from the results of their research on applied linguistics articles, are also dominated by reporting verbs with research categories around 58.4%. The difference in research results is also found in the writing of Febriyanti and Yuliawati (2024), which suggests that the category of think based on Francis et al. (1996, as cited in Charles, 2006), which is parallel to the category of cognition in Hyland (2002), is widely used in English essays written by Indonesian students at Padjadjaran University. By referring to these findings, the inconsistency of the results can be influenced by differences in data sources in terms of quantity. Therefore, Un-udom and Un-udom (2020) stated that the result of frequency occurrence is not absolute.

As mentioned earlier, Hyland (2002) divides reporting verbs into research, cognition, and discourse verbs into three specific groups. Based on the results of verb distribution in each category, the most used verbs in the research and discourse categories are between two similar fields of science. In the research category, the verb *show* is used frequently in social science and natural science articles, such as the following data examples.

(6) *Harianto and Dalle (2018)* **show** *that the average value of the skills grade XI students at SMA Negeri 7 Bulukumba is 58.11 (less). [SL-IJOLE7]*

(7) *Suprapto et al. (2020)* **show** *that the results of 3D assessments made by students still tend to be low, which is caused by a lack of mastery of concepts and a lack of training time in the use of software. [SN-IJOST9]*

Verb *show* in data (6) and (7) represent the results found by other researchers. Hyland (2002) argues that reporting verbs in the research category are composed of two parts, namely finding and procedure. Finding verbs are generally used to describe the results or findings of researchers, while procedure verbs are related to describing procedural aspects or steps in research. As shown in data (6) and (7), it can be concluded that the application of the verb *show* by Indonesian speakers is included in the verb finding. Indonesian speakers mostly emphasize previous researcher's results as information on what contributions have been found by previous research in a particular field. Despite the research category, high-reporting verbs used in the discourse category produce the same form, namely verb *state*. The following data (8) and (9) illustrate examples of the use of verb *state*.

(8) *Asifa Quraishi-Landes (2016)* **states** *that Sharia is not a code of law or court decisions enforced by the government, and it is not a set of rules that are decided in court. [SL-IJTIHAD3]*

(9) *Efriani et al. (2019)* **state** *that students made mistakes in turning problems into counting processes because they do not read the problem correctly. [SN-JME5]*

Verb *state* in data (8) and (9) illustrate how the writer informs the reader neutrally about the information quoted from other studies. Hyland (2002) mentions that the author can provide an attitude or evaluation of information from different studies. The attitude statement can be in doubt, agreement, or a neutral attitude towards the referenced statement. As shown in data (8)

and (9), Indonesian writers use verb *state* to present the information in simple terms related to their research. In other words, the position of Indonesian speakers is neutral without giving excessive judgment when conveying ideas from different studies. Differing from the research and discourse categories, the most frequent verb in the cognition category differs between the two disciplines. The following data (10) and (11) show examples of cognition category in social science and natural science articles.

> (10) *Maḥmūd Shalṭūt (1995) and ʿAlī Jumʿah (2005)* **believe** *that FGM, or female circumcision, is not a religious obligation because it lacks strong textual evidence. [SL-AHKAM8]*

> (11) *This finding* **agrees** *with Siswono (2010), who opines that students' capability to math subject can solve problems clearly but are unable to use more than one alternative solution and do not provide an element of novelty. [SN-JME4]*

Verb *believe* in data (10) is the dominant verb used by social science writers, while the verb *agree* in data (10) is a verb frequently used by natural science writers. Hyland (2002) explains that the cognition category relates to how writers interpret or understand information from other studies. The interpretation can be in the form of agreeing, criticizing, or neutral. As shown in data (10), it is found that social science writers tend to use the verb *believe*, which indicates the delivery of information with neutral nuances. The writer interprets the referenced material openly and does not reflect absolute truth. This differs from natural science writers who use the verb *agree*, as illustrated in data (11). The verb *agree* here demonstrates the author's belief in the relevance of the information they find with other studies. Uba (2019) concluded that this difference in how writers use reporting verbs can be influenced by the nature of research between the two disciplines. Social research can contain subjectivity, which allows for a more open understanding of the topic. In contrast, science research tends to use testing so that the material produced is more certain.

Regarding the tense of reporting verbs, present simple and past simple are widely used by Indonesian writers. In social sciences, present simple is superior by about 51.82% compared to past simple, obtained at 45.91%. In contrast, the findings of present simple and past simple in natural sciences are 46.80%. The results of the findings of these two tenses are similar to the research of Loan and Pramoolsook (2015), which reveals the characteristics of the reporting verb tense in Vietnamese writers are present simple (51.26%) and past simple (46.80%). However, this finding disagrees with Mar (2020) who find past simple (41%) as a dominant tense in English research articles written by Myanmar. According to Hyland and Jiang (2019), the difference in tense choice between present and past is related to the nature of the discipline. Social science writers tend to use the present simple due to the dynamic nature of the analysis related to social phenomena, so the use of the present tense shows an understanding of what is happening. On the other hand, natural science writers use past simple tense due to the nature of the research that should be accomplished first, so the utilize of past tense is intended to report the findings.

In terms of voice verb, social science and natural science writers generally apply the active voice. This is evident from the findings of the use of active voice in social science articles of around 93.64% and natural science articles of 94.58%. This voice finding is related to the previously mentioned tense tendencies where present simple tends to be used. The use of active voice emphasizes the subject who performs the action so that the use of active voice in reporting verbs can show who made the statement or conducted the research. By focusing on the subject, the information quoted by the author contains clarity that allows the source to be accounted for. Jarkovská and Kučírková (2021) also argue that the use of active voice integrated with the clause structure engages a prominent role for the cited author. Hence, the use of active voice aims to emphasize who is responsible for the ideas conveyed. The result of this voice tendency agrees with Loan and Pramoolsook (2015), who found that the percentage of active voice usage is 97.95% in Vietnamese writers. Un-udom and Un-udom (2020) also found significant results in the use of active voice in applied linguistic articles, as much as 85.16%. The tendency to use reporting verbs in active voice has also been proven in the Portuguese corpus by Matte and Stumpf (2022), with a percentage of around 87%.

Conclusion

This study examines the use of reporting verbs in social science and natural science articles written by Indonesian speakers in terms of form, tense, and voice. The results show that Indonesian speakers who apply reporting verbs have characteristics that are adjusted to the nature of the discipline. Social science articles emphasize argumentation so that the forms of reporting verbs found are also more categorized as discourse. On the other hand, natural science articles emphasize the stages and results of research so that the reporting verbs chosen are generally in the research category.

Regarding verb tense, both social science and natural science articles show almost similar characteristics in present simple and past simple, which are quite dominantly used. However, the present simple in social science articles is higher because it is generally aimed at discussing theories that are relevant to current conditions. In comparison, past simple in natural science articles tend to document the results of experiments that have been conducted. Present simple tense is used to create arguments, while past simple tense is used to display research stages and results. Furthermore, there is also perfect present tense which is used to present a summary of previous research results that have a connection with the current study. Finally, the results of the voice findings in this study show a tendency towards the active voice that highlights the subject who performs the action so as to support the clarity of the source of the information conveyed.

In brief, this research can support the understanding of citation writing using English reporting verbs in academic activities. This research can be applied as a reference in verb selection for the citation process. This research is limited to English reporting verbs produced in Indonesian writer's articles. As a suggestion for the future, other researchers can expand the research focus by comparing the use of reporting verbs in English and Indonesian by Indonesian speakers.

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