

## English for Academic Purposes Writers' Use of Reporting Verbs in Argumentative and Cause-and-Effect Essay Exams

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### Abstract

The effective use of reporting verbs is an important part of establishing credibility in source-based writing. Although comparative studies of academic writing have shown that the reporting verbs used by novice and expert writers differ by discipline, fewer studies have examined whether such differences exist in English for academic purposes (EAP) writing, which often focuses on generic essay types as opposed to discipline-specific academic genres. Using a corpus of 1027 texts written by EAP students at an English-medium Canadian University, this study explored whether additional language (L2) writers' reporting verb choices differed in cause-and-effect and argumentative essays. Adopting semantic classifications from previous research, the occurrence of 34 reporting verbs across four semantic categories (*argue, think, find, show*) in the two essay types were compared. Results indicated that EAP students relied on a limited number of reporting verbs regardless of essay type. In contrast to disciplinary writing, *find* verbs occurred infrequently while *argue* verbs were most frequent. Pedagogical implications are discussed in terms of the relationship between essay type and L2 writers' use of reporting verbs.

### Introduction

Incorporating information from sources into academic writing has been identified as a key literacy skill and learning outcome in university writing studies (Haswell, 2000; McAlpine & Amundsen, 2011). When composing academic texts, writers typically provide support for their arguments through the use of source materials rather than depending solely on their prior knowledge or experiences (Gebril & Plakans, 2009; List, Du, & Lee, 2020). Similarly, in English for academic purposes (EAP) contexts, where post-secondary students are learning English with the goal of studying and carrying out research in that language (Flowerdew & Peacock, 2001), additional language (L2) writers might be expected to validate their opinions by incorporating evidence from sources. Providing such evidence requires that writers introduce, restructure, and respond to source information in their texts, which presents distinct challenges as compared to writing from prior knowledge. To incorporate citations successfully, writers need not only to understand source content but also to establish relevance and authority of source ideas (Petrić & Harwood, 2013; Wette, 2010). Researchers have acknowledged that it is difficult for some novice L2 writers to articulate coherent understanding of sources (Britt & Aglinskas, 2002; Segev-Miller, 2004), which impacts how they evaluate source content. In addition, expressing attitudes when attributing information to sources might also be challenging for these writers

because integrated writing tasks elicit more sophisticated linguistic features compared to independent writing tasks (Cumming et al., 2006; Guo, Crossley, & McNamara, 2013). These challenges suggest that instruction should focus on how to use grammatical devices, such as reporting verbs, to achieve certain functions within source-based writing (Hyland, 1999). However, while teaching L2 writers how to avoid plagiarism using citation conventions receives considerable attention in the EAP curriculum, building authorial stance through the use of different reporting structures is less emphasized (Borg, 2000; Liardét & Black, 2019).

In academic writing, reporting verbs (e.g., *claim*, *imply*, *argue*) play an important role in establishing a writer's arguments by attributing information to external sources and communicating authorial stance (Hunston & Thompson, 2001; Swales, 1990, 2014). While citing from sources, writers select verbs that show their stance toward source information to attain credibility. Therefore, it is common for experienced writers to use a variety of reporting verbs with different functions to establish arguments and convey their perspectives (Hyland, 2002, 2005; Thompson & Yiyun, 1991). In the case of L2 writers, understanding semantic and functional differences among reporting verbs may present a challenge when integrating information from sources. Comparative studies of academic writing have shown that the reporting verbs used by novice and expert writers differ by discipline (e.g., Harwood & Petrić, 2011; Lee, Hitchcock & Casal, 2018; Thompson & Tribble, 2001). However, less research has examined whether such differences in the use of reporting verbs occur in EAP writing, which often focuses on generic essays (i.e., classroom, school, or curricular genres) as opposed to discipline-specific academic genres (Swales, 2019).

Because EAP programs accommodate students from a variety of academic disciplines, they often focus on academic reading and writing skills through an essayist tradition (Hyland & Hamp-Lyons, 2002; Leki & Carson, 1994, 1997). In EAP classes, L2 writers may be asked to compose essays with distinct linguistic, structural, and discourse features. For example, argumentative essays elicit a goal-directed persuasion process with the use of substantive claims in support of a point of view. Writers build on their existing knowledge of argumentative discourse, develop arguments, and respond to counterarguments using directives or clear exposition (Hayes, 1996; Graham & Harris, 1997) with the help of the instruction that they receive in EAP classrooms. Cause-and-effect essays, on the other hand, do not necessarily require taking a point of view. Writers draw on a causal discourse and they use linguistic expressions of causal relations to reconstruct meaning in their texts (Xuelan & Kennedy, 1992). When composing these different essay types, EAP students need to use reporting verbs to achieve their discourse-specific goals (e.g., contrasting, emphasizing) and express their stance (Freddi, 2005; Hyland, 2002). For example, by using *argue* as a reporting verb, writers acknowledge the plausibility of propositions, whereas *claim* as a reporting verb signals distancing from propositions. Both reporting verbs are considered to be evaluative since they indicate epistemic/evidential comment of writers (Hunston & Thompson, 2001). To understand such differences, it has been suggested that university-level EAP courses provide students with sufficient practice on using a range of reporting verbs to present, criticize, and question source information and to express their stance towards the subject matter (Crosthwaite, 2016; Hyland, 1999; Shin, Velázquez, Swatek, Staples, & Partridge, 2018).

A large number of studies have analyzed the occurrence of reporting verbs in disciplinary texts through reference to Francis, Huston, and Manning's semantic classification (1996, pp. 97-101), which consists of four categories: *argue* (verbs that are concerned with taking up a position), *think* (verbs that are concerned with a mental activity or feeling), *show* (verbs that are concerned with a fact or situation), and *find* (verbs that are concerned with coming to know something). Examples of verbs in each category are provided in Table 3. Using this framework, Charles (2006) found that L1 English writers in politics/international relations and materials science used *argue* verbs most frequently, although they occurred less often in materials science than politics (i.e., a social science discipline). Although writers primarily referred to the cited authors using *argue* verbs in both disciplines, the materials science writers also relied on *find* and *show* verbs (e.g., *show*, *find*, *observe*) when presenting the results and situations. In an L1 writing development study, Friginal (2013) examined whether using a concordance program along with instructional practice impacted forestry students' development of report writing skills. Using the same four categories of reporting verbs, he looked into the frequency distribution of reporting verbs used in the corpora and found that in comparison to professional writers, the upper-level undergraduate students overused specific reporting verbs with a limited range (e.g., *show* and *find*) in their research reports. After a two-week instructional practice period, students increased their use of reporting verbs in the *argue* category and relied less on verbs in the *show* category, thereby diversifying their choice of reporting verb structures.

As for research with L2 writers, studies exploring college-level academic texts have reported that they tend to use a limited range of reporting verbs when writing from sources, which negatively affects their ability to support their arguments in texts (Biber & Reppen, 1998; Hinkel, 2003; Pecorari, 2008). In addition, they depend on verbs that are more commonly used in speech (e.g., *say*, *know*, *think*) rather than those found in academic writing (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Kwon, Staples, & Partridge, 2018). For example, examining semantic differences in first year undergraduate L2 writers' reporting verb choices, Kwon et al. (2018) found that students used a limited range of reporting verbs (e.g., *find*, *think*), many of which are more commonly used in spoken discourse than academic writing (e.g., *say*, *think*, *know*). Using the same corpus as in Kwon et al. (2018), Shin et al. (2018) investigated whether undergraduate L2 students' reporting verb use changed after attending a corpus-based workshop about the semantic aspects of reporting verbs. They compared post-intervention texts with randomly selected texts from a corpus. The students who participated in the intervention used fewer verbs associated with speech rather than academic writing (i.e., *say* and *talk about*). Overall, these studies have shown that in academic writing, *argue* verbs are in the majority despite variation in task and discipline, reflecting their focus on written communication; however, *show* and *find* verbs tend to occur less frequently in lower proficiency writers' texts.

Although previous comparative studies have provided evidence of syntactic and lexical complexity variation based on essay type (e.g., Lu, 2011; Yoon & Polio, 2017), studies to date have not examined reporting verbs specifically. Despite the growing recognition as to the importance of reporting structures in various academic disciplines, there is little research examining how L2 writers use reporting verbs in different essay types. For L2 writers to adopt appropriate positions that reflect their authorial stance, they need to develop rhetorical awareness to attribute information to sources through the use of reporting verbs. In light of the need to provide clear descriptions of L2 reporting verb use to identify potential areas for pedagogical

attention, the current study investigated the semantic distribution of reporting verbs in EAP argumentative and cause-and-effect essay exams. These essays were written by EAP students at an English-medium university in Quebec who were simultaneously taking disciplinary courses. For readers in British Columbia, it is interesting to note that students in British Columbia's post-secondary institutions also complete similar writing tasks that require extended length essays with source documentation. For example, one of the learning outcomes of university transfer courses offered at Okanagan College and Camosun College is to “incorporate quotations and paraphrases effectively into writing and use appropriate citation practices for each” (“Articulation guide”, 2019, p. 49). Thus, it is important to shed light on how reporting verbs are used in generic essays in EAP courses. The research question was as follows: How frequently do EAP writers use reporting verbs from the *argue*, *think*, *show*, and *find* semantic categories in their argumentative and cause-and-effect essays?

## Method

### The Research Context and Corpus

The argumentative and cause-and-effect essays were sampled from the Concordia Written English Academic Texts (CWEAT) corpus (McDonough, Neumann, & Leu (2018), which consists of timed writing exams from English L2 students enrolled in an EAP course with an instructional focus on source-based writing at Concordia University. The CWEAT corpus consists of 1027 argumentative and cause-and-effect essays (over 500,000 words) collected over a five-year period. As shown in Table 1, despite a slight variation in the total number of essays in each subcorpus, the mean number of words is comparable for both argumentative and cause-and-effect essays.

**Table 1**

*Words by Essay Type*

	Argumentative ( <i>n</i> = 551)	Cause-and-effect ( <i>n</i> = 476)
Total words	314,730	244,947
<i>M</i>	571.16	552.92
<i>SD</i>	109.38	112.88

The essays were written by undergraduate English L2 students enrolled in the second of two, six-credit courses in the EAP program. The students were admitted into undergraduate programs, but they were required to take the EAP course based upon their performance on an in-house university placement test that included a writing component. The EAP course objectives involved improving reading and writing skills to prepare students for university level academic tasks. The writing component of the course focused on paraphrasing and summarizing skills with a specific focus on argumentative and cause-and-effect essays. Following the assessment procedures of the EAP program, students wrote two three-hour exams (midterm and final) which

required them to integrate information from pre-specified sources included in the course-pack and acknowledge the use of these sources through in-text and end-of-text citations. The exams targeted different essay types with the midterm exam focusing on a cause-and-effect essay and the final exam eliciting an argumentative essay. Two weeks prior to each exam, the students were presented with a reading list with six to seven different sources. The EAP instructors were encouraged to discuss these sources in class and help students take notes using a note-taking template with text fields for notes about source citation, key terms, and lexical items. The exam topics were related to the general themes covered in the EAP course. For exam security reasons, the prompts cannot be shared, but the distribution of essays by topic has been provided in Appendix A. Students could bring one note sheet for each of the six sources and use an English-only dictionary. Table 2 displays students' demographic information.

**Table 2**

*Demographic Characteristics of L2 Writers in Each Corpus*

Text type	Male*	Female*	Most frequent L1s	M Age
Argumentative ( <i>n</i> = 551)	267 (48.5%)	262 (47.5%)	Chinese ( <i>n</i> = 253) French ( <i>n</i> = 94) Arabic ( <i>n</i> = 64) Persian ( <i>n</i> = 16) Spanish ( <i>n</i> = 16) Vietnamese ( <i>n</i> = 10) Russian ( <i>n</i> = 9) Other ( <i>n</i> = 89)	22.4 ( <i>SD</i> = 4.4)
Cause-and-effect ( <i>n</i> = 476)	220 (46.2%)	231 (48.5%)	Chinese ( <i>n</i> = 223) French ( <i>n</i> = 79) Arabic ( <i>n</i> = 53) Spanish ( <i>n</i> = 14) Persian ( <i>n</i> = 16) Russian ( <i>n</i> = 12) Other ( <i>n</i> = 79)	22.8 ( <i>SD</i> = 4.9)

\* Gender was not reported by some of the students

## Analysis

The students' handwritten essays were typed, verified, de-identified, and included in the corpora as text files. The frequency and distribution of reporting verbs across four semantic categories (i.e., the *argue*, *think*, *find*, and *show* categories) were identified. The reporting verbs included in the analyses were selected from a larger list comprised of 53 verbs (See Appendix B) analyzed in Kwon et al., (2018). Using AntConc (Anthony, 2014) for exporting concordance lines, the frequencies of the 53 reporting verbs for the entire dataset were calculated. Any instances in which a reporting verb was not used in a reporting structure (e.g., Using *means* of public transformation, ... vs. The researcher *means* that...) or used in quotation marks (According to the researcher, "the research team *found*...") were omitted.



Next, the occurrence of all 53 reporting verb lemmas (e.g., *write*, *writing*, *writes*, *wrote*, *written*) was examined to identify those verbs that had occurred in at least 25 different argumentative or cause-and-effect texts (i.e., at least 10% of the texts in each sub corpus). The analysis was limited to those 34 reporting verbs to ensure that they were used by a wide range of writers in our corpus as opposed to only a few uses by a few writers. As in Kwon et al., (2018) and Friginal (2013), the reporting verbs in the final list were classified into different semantic categories proposed by Charles (2006). Similar to Kwon et. al. (2018), both raw and normed counts per 100,000 words were calculated and reported in the findings. Examples from each of these categories as well as the final list of each reporting verb are found in Table 3.

**Table 3**

*Reporting Verbs by Semantic Categories*

Categories	Verbs	Examples from the corpus
Argue ( $n = 19$ )	argue, suggest, predict, write, explain, conclude, mention, admit, observe, accept, add, report, claim, point out, maintain, say, state, talk about, acknowledge	<i>“Sachs (2005) predicts that if rich countries donate 0.7% of their GDP donate to the poor, by the year 2025, the poverty rate will decrease by half.”</i>
Show ( $n = 6$ )	show, illustrate, indicate, demonstrate, reveal, mean	<i>“Solomon (2002) revealed that a consumer's level of self-esteem can be affected by marketing communications.”</i>
Find ( $n = 5$ )	realize, establish, recognize, discover, find out	<i>“Fuentes-Nieva (2014) has found that the 85 richest people in the world are richer than the bottom half population of the world.”</i>
Think ( $n = 4$ )	know, think, hold, feel	<i>“Karnani (2007) thinks that poor nations could spend more money to create more jobs to decrease poverty rather than only using microcredit.”</i>

The first researcher coded the entire data to identify the most frequent reporting verbs across four semantic categories in each essay type. An independent rater checked the dataset to ensure that no instances of the target verbs had been omitted. Any verbs missed by the first researcher were then included in the dataset.

### Findings

The research question explored EAP writers' reporting verb use in argumentative and cause-and-effects essays in terms of the frequency distribution across four semantic categories. As illustrated in Table 4, students used reporting verbs at a rate of 908.43 per 100,000 words in argumentative essays and 822.41 per 100,000 words in cause-and-effect essays. Taking into consideration variation in mean length, students used more than five reporting verbs per argumentative text and 4.6 reporting verbs per cause-and-effect text. The overall frequency in

both essay types is much lower than both the research reports in Friginal (2013), which contained around 1500 reporting verbs per 100,000 words, and Kwon et al., (2018), which contained 1633.91 per 100,000 words. The lower use of reporting verbs may be related to variation in both the writing assignments as well as the writers themselves. Whereas Kwon et. al., (2018) investigated literature review assignments, Friginal (2013) focused on undergraduate students' research reports. In these disciplinary writing assignments, students generate new knowledge about a topic by providing a comprehensive summary of prior research and using an array of sources such as scholarly articles, books, and reports (Torraco, 2005). In contrast, these argumentative and cause-and-effect essays limited the writers to a relatively small pool of sources (i.e., only six source texts). Although students could cite information from the same source multiple times, the relatively low number of sources may account for their lower use of reporting verbs. Furthermore, these essays were written under exam conditions, so time pressure may have reduced the frequency of reporting verb use.

**Table 4**

*Reporting Verb Frequency across Semantic Categories*

Categories	Argumentative		Cause-and-effect	
	Raw Count	Normed	Raw Count	Normed
Total verbs	2907	908.43	1850	822.41
Argue	1423	451.82	898	399.21
Think	756	240.21	447	198.71
Show	594	173.82	377	167.59
Find	134	42.58	128	56.90

As for the distribution of the 34 reporting verbs across the four semantic categories, *argue* verbs occurred most frequently in both argumentative and cause-and-effect corpora, followed by *think*, *show*, and *find* verbs. Drawing on the normed frequency counts, argumentative essays elicited more reporting verbs across the semantic categories of *argue*, *think*, and *show* (Table 4).

Turning to the most frequent reporting verbs in the corpora, the ten most frequent reporting verbs displayed in Table 5 accounted for more than 68% of all the reporting verbs in each corpus. Four reporting verbs *think*, *argue*, *say*, and *feel* made the top ten list in both corpora, which indicates a strong reliance on a limited range of reporting verbs regardless of the essay type. In addition, certain reporting verbs are more common in conversation than in academic writing (e.g., Biber & Reppen, 1998; Kwon et. al., 2018, Staples & Reppen, 2016). This use of conversational reporting verbs is the case in both essay types (*think*, *say*, *mean* in argumentative writing and *say*, *think* in cause-and-effect) with the most frequent verb in both argumentative writing (*think*) and cause-and-effect (*say*) being more common in conversation than in academic writing. However, we note here that students wrote cause-and-effect essays as part of their midterm and then wrote argumentative essays for their final exams. The increase of the use of reporting verbs between cause-and-effect and argumentative essays may be related to task requirements or may also be related to increased writing experience throughout the class.

Regarding the semantic categories, *argue* verbs were most frequent and had an equal distribution in argumentative and cause-and-effect essays. Notably, none of the five *find* verbs (*realize, establish, recognize, discover, find out*) were among the most frequent ten verbs used in the entire corpus. Two *think* verbs (i.e., *think* and *feel*) made the ten most frequent reporting verbs in each text type.

**Table 5***The 10 Most Frequent Reporting Verbs*

Semantic category	Reporting verb lemma	Argumentative		Cause-and-effect	
		Raw	Percentage	Raw	Percentage
Argue verbs	Argue	255	8.8%	153	8.3 %
	Say	234	8.0 %	183	9.9 %
	Claim	127	4.4 %	---	
	State	125	4.3 %	---	
	Mention	114	3.9 %	---	
	Admit	---		130	7.0 %
	Accept	---		125	6.8 %
	Add	---		83	4.5 %
Show	Show	316	10.8 %	---	
	Mean	153	5.3 %	---	
	Demonstrate	---		118	6.4 %
	Reveal	---		93	5.0 %
Think	Think	348	11.9 %	102	5.5 %
	Feel	101	3.5 %	138	7.5 %
	Know	217	7.4 %	---	---
	Hold	---	---	133	7.2 %
Total		1990	68.3 %	1258	68.1%

\*--- not on the top 10 list

As seen in Figure 1, the distribution of these semantic types of reporting verbs illustrates some interesting differences from Kwon et al. (2018), who found fewer *argue* verbs and more *find* verbs in undergraduate L2 writers' literature review assignments. For our writers, both argumentative and cause-and-effect essays required them to present their own subjective viewpoints in ways that differ from literature review assignment where the writer's subjective opinions are not as highly valued as synthesizing source materials. In addition, when composing literature review assignments, students typically depend on empirical studies as their source materials, and they provide a summary of what the researchers found. Our students, on the other hand, used commentaries and news reports that synthesized information from research studies as their sources, which perhaps accounts for the lower rates of *find* verbs in the corpora.



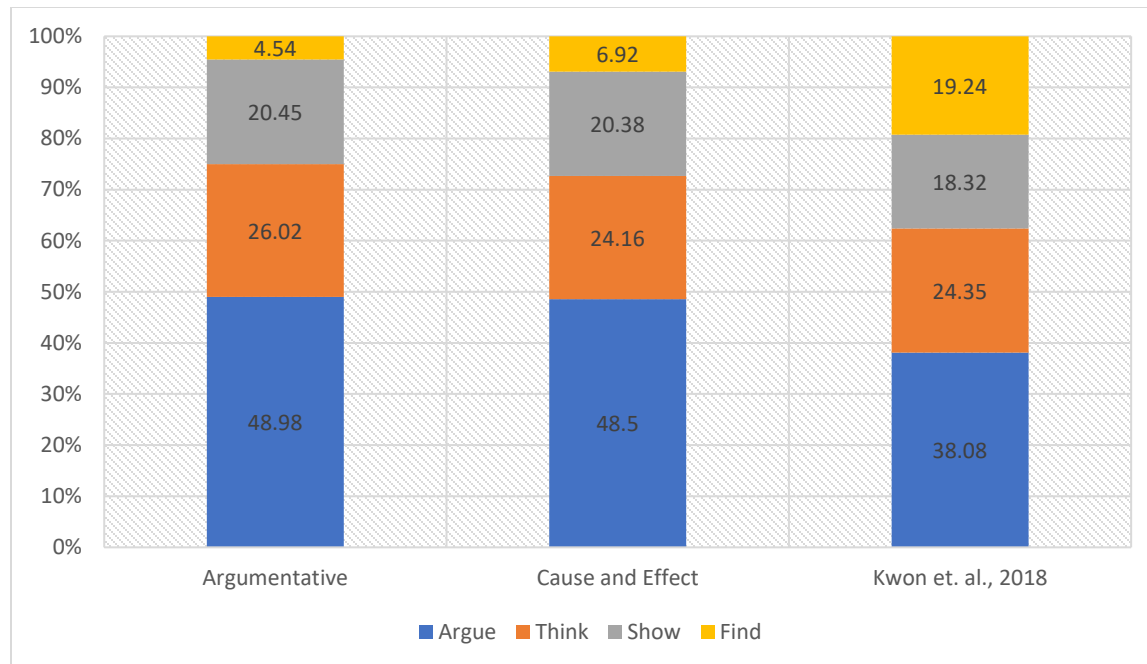


Figure 1. Semantic types of reporting verbs compared with literature review writing from Kwon, et. al., (2018) (by percentage).

Similar to previous research with undergraduate disciplinary writing (Charles, 2006; Friginal, 2013) *argue* verbs had the highest frequency rate in both essay types representing over 48% of all reporting verbs. More frequent use of *argue* verbs by our students indicate that EAP writing tasks, regardless of essay type, elicit similar reporting structures to academic writing. However, there were some differences in the specific verbs used in the argue category. Whereas *claim*, *state*, and *mention* made the top-ten of argumentative essays, they were replaced by *admit*, *accept*, and *add* in cause-and-effect essays. This variation could be associated with the differences in topics, prompts or source materials assigned to them for their midterm and final examinations.

Turning to the next most frequent semantic category, *think* verbs occurred more often in these essays (around 25% of all reporting verbs in each text type) than in prior disciplinary writing studies (Charles, 2006; Friginal, 2013). Since *think* verbs are associated with more informal or spoken settings (Biber et al., 1999; Hinkel, 2003; Staples & Reppen, 2016), expert writers might avoid using them when composing academic texts. For example, undergraduate students in Friginal's (2013) study used *think* verbs infrequently (3%) in their research reports. EAP students in the current study, on the other hand, often reflected their viewpoints about the topic assigned to them using *think* verbs and without citing a specific source. This use of *think* verbs might have helped them develop their arguments through general attributions (i.e., general information or position without corroboration) to be supported with evidence later in the essay. According to Charles (2006), writers present a claim to be supported or refuted and hide their actual stance when they use general attributions. Excerpts (1–2) below illustrate this pattern where the students choose the verb *think* to report opinions of others about the topic using uncited generalizations.

1. Argumentative essay: Although some proponents **think** that microcredit that provides some money to create jobs can reduce the poverty, no one can deny that microcredit might also cause the loan sharking.
2. Cause-and-effect essay: Many people **think** modern technology is helpful for food supply, but the truth is it hurting food supply much more.

As for *show* verbs, the overall frequency was similar in each corpus, representing 20% of all reporting verbs. Two reporting verbs *show* and *mean* accounted for almost 16% of all reporting verbs in the argumentative essay type. Interestingly, neither of these reporting verbs was among the most frequent ten reporting verbs in cause-and-effect essays. Previously, Kwon et al. (2018) reported that *show* accounted for 8% of all reporting verbs in undergraduate students' literature review assignments., In Swales's (2014) research, *show* was one of the two most frequently used reporting verbs in the Michigan Corpus of Upper-Level Student Papers (MICUSP). L2 writers in the current study were able to reflect the same pattern in terms of using *show* most frequently while writing argumentative essays. In cause-and-effect essays, they used the reporting verb *demonstrate* more frequently than *show* as illustrated in the excerpts (3–4) below.

3. Argumentative essay: As Seery's research **shows**, 20% of the poor families, which send their children to private schools, that costs 127% income of these families.
4. Cause-and-effect essay: Petrini (2005) **demonstrated**, in the past 20 years, more than twice as many chemical fertilizers have been used in food process.

*Find* verbs represented the least frequent semantic category in both the argumentative (4.6%) and cause-and-effect corpus (6.9%) of our students and none of these verbs made the ten most frequent verbs used in the entire corpus. Conversely, *find* verbs represented a higher frequency in previous studies. For example, in Friginal's (2013) research, *find* verbs accounted for 27% of all reporting verbs in research reports. This discrepancy is likely because the source materials assigned to our students were not scholarly articles but commentaries and news reports that synthesized information from research studies, presenting opposing views and/or emphasizing a certain opinion. Indeed, the students were successful in evaluating the source content as shown in the excerpt (5) below where, the student was able to evaluate that Jowit (2008) was not the primary source and cited the information using an *argue* verb rather than a *found* verb.

5. The original text: "The Living Planet report calculates that humans are using 30% more resources than the Earth can replenish each year, which is leading to deforestation, degraded soils, polluted air and water, and dramatic declines in numbers of fish and other species" (Jowit, 2008).

The student's citation: Jowit (2008) **reported** from the Living Planet that humans are using more natural resources than those available in the living planet (Argumentative text type).

### Pedagogical Implications

The results of this study show that EAP students depended on a limited number of reporting verbs in both types of source-based essays. Similar to disciplinary writing, *argue* verbs represented the most frequent semantic category whereas *find* verbs occurred infrequently. These results could be interpreted in the light of pedagogical issues surrounding the use of reporting structures in EAP essay types. As reported in previous research, using a wider range of reporting verbs would be indicative of students' ability to critically examine arguments in sources (Biber & Reppen, 1998; Hinkel, 2003). Overall use of reporting verbs for these EAP learners (around five reporting verbs per essay) seems to be much lower than disciplinary writing (e.g., Kwon et al., 2018). Thus, an important question to ask is whether the essays commonly targeted in EAP courses help students get ready for their academic subject courses. To prepare students for disciplinary courses, the pedagogical materials used in EAP courses should teach them how to read and evaluate academic texts and produce text-responsible writing that reflects their stance (Hyland & Shaw, 2016). Since these EAP students depended on a restricted set of reporting verbs to incorporate source information in their texts, writing instruction should include a focus on reporting verbs with different functions. Using corpus-informed materials has been shown to help students use a wider range of reporting verbs (Bloch, 2009; Friginal, 2013) and develop awareness of reporting verbs in academic writing (Shin et al., 2018). In addition, although textbooks and course-based materials encourage students to fully develop their arguments using sources, EAP students would further benefit from strategy training emphasizing the role of reporting verbs in source integration. This instruction could be done focusing on individual aspects of academic writing (e.g., purpose of source use, development of authorial voice) and introducing discourse tools (e.g., cohesive devices) that are elicited by different essay types (Freddi, 2005; Hyland, 2002).

The most commonly used reporting verbs in our corpora were associated with conversation rather than academic writing, which suggests that students were using developmental strategies when attributing information to sources in their texts. As part of an EAP curriculum, moving beyond the essayist tradition and introducing L2 students to authentic academic genres with rhetorical conventions would help them move progressively from spoken discourse to written language. Encouraging students to produce writing similar to literature reviews, an authentic academic genre across academic disciplines, might be considered as an additional curricular objective. In addition, having exposure to primary research as opposed to secondary sources will contribute to students' academic writing skills in terms of creating opportunities for research synthesis using more *find* verbs.

### Limitations

Although our findings have implications for EAP courses, the results should be interpreted cautiously. Because the midterm and final examinations were administered in an existing EAP course, all students wrote cause-and-effect essays four weeks before the argumentative essays. There was no control group to counterbalance the order of tests. Thus, replication studies are needed to confirm that it is the essay type, not development, that accounts for the differences. Furthermore, our study compared EAP essay types in terms of the distribution of reporting verbs across semantic categories. Although the results provide insights into the frequency of reporting

verb use across essay types, we did not explore the rhetorical functions of those verbs. Previous studies have shown that students in disciplinary courses use reporting verbs to achieve a variety of functions such as self-reference and uncited generalizations (Kwon et al., 2018; Shin et al., 2018). Future studies that focus on EAP writing should extend research into rhetorical functions of reporting structures in different essay types.

### Conclusion

This study explored L2 writers' reporting verb choices across two different essay types to examine whether EAP writing elicits similar reporting structures to academic writing. Drawing on corpus-based analysis, we found that EAP students relied on a limited number of reporting verbs regardless of essay type. We also found that, in contrast to more advanced academic writers' texts, *find* verbs occurred infrequently while *argue* verbs were most frequent in L2 writing. Because generic essay types, such as argumentative and cause-and-effect, are commonly targeted in EAP curriculum and assessment, our findings are useful for understanding how L2 students refer to source information when composing timed essays. Our future research aims to investigate EAP writers' engagement with primary sources while composing untimed classroom genres to examine how they introduce, evaluate, and position themselves in relation to the information presented in source materials.

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## Appendix A

### Topics by Essay Type

Argumentative (N = 551)	Cause-and-effect (N = 476)
Government (n = 100)	Food and drink (n = 101)
Advertising (n = 84)	Ecosystem (n = 54)
Microcredit (n = 75)	Wildlife (n = 44)
Poverty (n = 68)	Consumerism (n = 43)
Inequality (n = 60)	Population (n = 43)
Wealth (n = 58)	Modern diet (n = 37)
Organizations (n = 39)	Marketing (n = 36)
Resources (n = 35)	Environment (n = 36)
Charity (n = 26)	Agriculture (n = 31)
Marketing (n = 3)	Industrial farming (n = 21)
Food (n = 3)	Water supply (n = 19)
	Technology (n = 11)

## Appendix B

## The List of 53 Reporting Verbs and Frequency Counts in Each Essay Type

Semantic Category	Lemma	Argumentative		Cause-and-effect	
		Raw	Normed	Raw	Normed
Argue Category (n = 32)	Argue	255	81.0	23	9.4
	Suggest	37	11.8	15	6.1
	Assert	5	1.6	5	2.0
	Predict	11	3.5	36	14.7
	Write	38	12.1	49	20.0
	Explain	53	16.8	42	17.1
	Conclude	85	27.0	54	22.0
	Mention	114	36.2	93	38.0
	Admit	48	15.3	3	1.2
	Observe	16	5.1	17	6.9
	Accept	47	14.9	19	7.8
	Imply	8	2.5	0	0.0
	Add	42	13.3	118	48.2
	Complain	7	2.2	5	2.0
	Hypothesize	1	0.3	0	0.0
	Insist	6	1.9	3	1.2
	Propose	9	2.9	2	0.8
	Remark	1	0.3	6	2.4
	Reply	2	0.6	0	0.0
	Speculate	0	0.0	0	0.0
	Stress	0	0.0	0	0.0
	Contend	4	1.3	0	0.0
	Report	13	4.1	15	6.1
	Postulate	0	0.0	0	0.0
	Posit	0	0.0	0	0.0
	Claim	127	40.4	39	15.9
	Point out	68	21.6	83	33.9
	Maintain	72	22.9	23	9.4
	Say	234	74.3	125	51.0
	State	125	39.7	130	53.1
	Talk about	13	4.1	14	5.7
	Acknowledge	25	7.9	0	0.0
Show Category (n = 7)	Demonstrate	30	9.5	12	4.9
	Illustrate	25	7.9	37	15.1
	Indicate	50	15.9	37	15.1
	Confirm	6	1.9	2	0.8
	Reveal	20	6.4	20	8.2
	Mean	153	48.6	133	54.3
	Show	316	100.4	138	56.3

Find Category (n = 8)	Realize	50	15.9	53	21.6
	Find out	13	4.1	11	4.5
	Discover	5	1.6	24	9.8
	Establish	43	13.7	26	10.6
	Infer	0	0.0	1	0.4
	Recognize	23	7.3	13	5.3
	note	10	3.2	10	4.1
	Identify	13	4.1	6	2.4
Think Category (n = 6)	Know	217	68.9	183	74.7
	Assume	10	3.2	7	2.9
	Think	348	110.6	153	62.5
	Hold	90	28.6	9	3.7
	Feel	101	32.1	102	41.6
	Hope	11	3.5	12	4.9



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