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## Research Paper

# Finite Adverbial Clauses in L2 Academic Research Writing: A Cross-Examination of Disciplinary Research Articles Authored by Filipino Researchers

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## Abstract

Adverbial clauses are often-overlooked elaborated and explicit structures of L2 academic research writing. In this study, the researcher cross-examined finite adverbial clauses in Filipino-authored qualitative and quantitative research articles (RAs) in Applied Linguistics, Psychology, Sociology, Curriculum and Instruction, Measurement and Evaluation, and Communication through automated and manual coding techniques. The main findings revealed that cause/reason clauses were the most dominant adverbial clauses especially in qualitative disciplinary RAs. Final cause/reason and conditional clauses were more pervasive than their initial equivalents whereas initial concessive clauses were more ubiquitous than their final counterparts. In conclusion, cause/reason clauses are the most operational adverbial clauses across the six disciplines. Filipino researchers regardless of disciplines convey more causes/reasons for the arguments in the main clauses when writing qualitative research. Final cause/reason and conditional clauses are normative in qualitative and quantitative disciplinary RAs whereas initial concessive clauses provide background for the main clauses which carry new arguments.

**Keywords:** Academic Research Writing; Disciplinary Research Articles; Finite Adverbial Clauses; Filipino Researchers.

## 1. Introduction

English has been widely explored in modern academic research writing (e.g., Biber, Gray, Staples, & Egbert, 2020; Pan, Reppen, & Biber, 2016; Ren, 2021). Of formal written registers, research articles have earned copious investigations in terms of English clauses (e.g., Cho & Lee, 2016; Hyland & Tse, 2005; Kim & Crosthwaite, 2019). Finite adverbial clauses are elaborated and explicit syntactic structures, containing subjects and verbs marked for tense, aspect, and modality (Biber, Gray, & Staples, 2016; Gray, 2015). Like finite complement and relative clauses, finite adverbial clauses also play significant roles such as expressing causes/reasons, conditions, and concessions in the development of authors' arguments in writing research (Biber et al., 1999). For years, however, finite adverbial clauses in L1 English disciplinary research articles have earned significant attention (e.g., Carter-Thomas & Rowley-Jolivet, 2008; Kerz & Wiechmann, 2015; Rowley-Jolivet & Carter-Thomas, 2008; Rezaee, Nemati, & Golparvar, 2018; Warchal, 2010). Nevertheless, these clauses are rarely or never studied in L2 English disciplinary RAs written by L2 researchers, and thus have gained limited research in L2 academic writing research (Hernandez, 2021).

In the Philippines, finite adverbial clauses are an underexplored area of study in L2 academic research writing. This is the gap that this study seeks to fill in. So far, only Gustilo (2010) explored finite adverbial clauses in Filipino-authored disciplinary research articles. Her study has alerted that a scant of research on adverbial clauses exists. The need to undertake studies which compare different adverbial clauses in RAs from one discipline to another is a dire need as it would offer applied and pedagogical implications for academic research journals, research writing curricula, and L2 academic research writing instruction. Therefore, this study cross-examines finite adverbial clauses particularly *because* +, *if* +, and *although* + clauses in Filipino-authored disciplinary research articles.



## 2. Literature Review

### 2.1. English as the Language of Research

As the global language of research writing (Flowerdew, 2013; Lillis & Curry, 2016), English proffers advantages for research writers and disciplinary settings. One is that researchers whether L1 English or L2 English users utilize the language to advance knowledge, resulting in the development of disciplinary communities (Paltridge, 2013). English has hastily positioned itself as the language used in scholarly journals. Flowerdew (2013) and Lillis and Curry (2010) reported that 95% of research in natural sciences and 90% of research in social sciences, archived in the Institute of Scientific Information (now Web of Science), are written usually in English. Sixty-seven percent of research, indexed in Ulrich's Periodicals Directory, is published commonly in English. Nevertheless, there is no assurance that these studies were written by all L1 English users for a fact that English is also owned by L2 English users (Kachru, 1997; Jenkins, 2015).

In the Philippines, Filipinos use English as their L2. They first learned it from the *Thomasites* (the Philippines' first American teachers). After their short stay in the country, Filipino teachers took over. Henceforth, English has rooted itself as the Filipinos' L2 in various language domains (e.g., education) and communication situations. As L2 English users, Filipino researchers use English as the official language in writing research and academic publications (Dayag, 2014). Social science, education science, and humanities research journals in the Philippines oblige authors to write almost all in English, so their works can be globally understood and may reach broader circulation (Hernandez, 2022). In addition, higher academic institutions in the country require graduate and undergraduate scholars to write research in English, so they may earn academic units and advanced degrees (Hernandez, 2022). Thus, English is the language of academic research writing in the Philippines (Dayag, 2012, 2014).

### 2.2. Academic Research Writing and the Research Article

Academic writing is scholarly writing required in higher education institutions and research publications. It is the main means of knowledge distribution in disciplinary fields (Gray, 2015; Khedri & Konstantinos, 2018). It is represented by different academic written texts (e.g., essays, research articles, textbooks). Studies on academic writing have established the notion that the grammatical features of academic texts vary from one another. Also, there has been an impression that written academic language differs across disciplines and disciplinary communities use grammatical devices in various ways (Gray, 2015; Hyland, 2006). Gray (2015) points out that linguistic differences exist because disciplinary fields have assorted principles, knowledge structures, research cultures, and writing practices (Hyland, 2007). Flowerdew (2013, p. 307) calls this as "situated characteristic". However, the idea of syntactic differences across disciplines is rarely investigated in research articles written by L2 English Filipino researchers.

Of academic texts, the research article overall embodies academic research writing (Biber & Gray, 2010, 2011; Biber et al., 2016; Gray, 2015). Swales (2001, 2004) emphasizes that it is the leading research genre across disciplines. Research articles (RAs) convey new findings and knowledge which are systematically produced (Khedri & Konstantinos, 2018; Validi, Jalilifar, Shooshtari, & Hayati, 2016; van Enk & Power, 2017). They have motivated researchers to examine their grammatical features (Soodmand Afshar & Ranjbar, 2017). Gray (2015) sub-classifies RAs into qualitative and quantitative RA sub-registers (aside from theoretical RAs) based on research paradigms in hard sciences (physical and natural sciences), dealing with experimentations and scientific method (e.g., Biology, Engineering, etc.) and soft sciences (behavioral and social sciences), dealing with human behavior and perceptions (e.g., Education, Sociology, etc.). On the one hand, qualitative RAs are about qualitative data examined through qualitative research methods (e.g., case study, grounded theory, etc.). On the other hand, quantitative RAs are about quantitative data that are explored through quantitative research designs (e.g., correlational, experimental, etc.). The study adopts these two RA sub-classifications in examining the three finite adverbial clauses in Filipino-authored disciplinary RAs.

### 2.3. Studies of Finite Adverbial Clauses

To date, studies of finite cause/reason, conditional, and concessive clauses have focused on disciplinary RAs authored by L1 English researchers (e.g., Carter-Thomas & Rowley-Jolivet, 2008; Kerz & Wiechmann, 2015; Rowley-Jolivet & Carter-Thomas, 2008; Rezaee et al., 2018; Warchal, 2010). Kerz and Wiechmann (2015) examined causal and concessive clauses in physical and engineering sciences, life sciences, health sciences, social sciences, and humanities RAs. They discovered that both clauses occurred consistently in initial slots and were commonly introduced by *since* and

*while*. Rezaee et al. (2018) explored reason clauses in applied linguistics RAs and found that final reason clauses outnumbered the initial ones. This placement was triggered by three factors: bridging, subordinator choice, and clausal complexity. In contrast, Warchal (2010) explored *if*-conditional clauses, expressing consensus in linguistics RAs. These conditional clauses in linguistics RAs play different interpersonal discourse functions: to guide readers in interpreting results; to involve readers for more discussion; to convey ideas and terms, etc.

Finite adverbial clauses in RAs written by L2 English writers like Filipino researchers are seldom investigated. Carter-Thomas and Rowley-Jolivet (2008) compared *if*-conditionals in medical RAs with those in French-authored medical conference presentations and editorials. They found that *if*-clauses were either initially or finally placed in sentences in RAs and editorials, but they were commonly initially placed in conference presentations. Similarly, Rowley-Jolivet and Carter-Thomas (2008) compared *if*-conditionals in oncology RAs and in French-authored oncology conference presentations. They discovered that final *if*-conditional clauses were more frequent in RAs. However, initial *if*-conditional clauses were more recurrent in conference presentations. In the Philippines, Gustilo (2010) analyzed finite adverbial clauses in Filipino-authored disciplinary RAs. She reported that conditional and causative clauses in applied linguistics and language teaching RAs were frequently used in the introduction and results and discussion sections. In the introduction, these clauses convey research territory. In the results and discussion, they explain the findings.

Other studies had explored finite adverbial clauses, not in disciplinary RAs. Charles (2011) studied concessive clauses in L1 and L2 English assignments in the British Academic Written English Corpus (BAWE). Castelo and Monaco (2013) examined conditional clauses in L1 English scientific texts. Diessel and Hetterle (2011) analyzed causal clauses in English, German, Mandarin Chinese, and Japanese conversations. Lastly, Guillaume (2018) explored *as*- and *since*-clauses in BNC (Brown National Corpus) and COCA (Corpus of Contemporary American English) consisting of various texts.

As only Gustilo (2010) did an exploration of finite adverbial clauses in RAs of Filipino researchers, a scarcity of studies on the three finite adverbial clauses in L2 academic research writing in the Philippines exists. Exploring these clauses in Filipino-authored disciplinary RAs is significant because cause/reason, conditional, and concessive clauses aid academic writers like Filipino researchers in presenting and developing arguments (Biber et al., 1999). However, an investigation of these clauses has never been charted in academic writing research particularly in the Philippines. Given these reasons, the study problematizes the need to cross-analyze these clauses in disciplinary RAs written by Filipino researchers.

### 3. Research Questions

The present study cross-examines *because* +, *if* +, and *although* + clauses in qualitative and quantitative RAs in six disciplines: Applied Linguistics (AL), Psychology (PSY), Sociology (SOC), Curriculum and Instruction (CI), Measurement and Evaluation (ME), and Communication (COM). Specifically, it sought to answer the following questions:

1. Which is the most frequently used finite adverbial clause in qualitative and quantitative disciplinary RAs?
2. How are the finite adverbial clauses placed in sentences in qualitative and quantitative disciplinary RAs?

## 4. Dataset and Methodology

### 4.1. Discourse Approach and Data Sources

The study used register analysis as discourse approach to cross-analyze the disciplinary RAs. Data sources were 84 Filipino-authored RAs (374,722 tokens), randomly selected from each of the six disciplines in Open Access Philippine research journals. Applied linguistics was considered because it frequently exhibits high publication rates (e.g., Gray, 2015; Gustilo, 2010; Khedri & Konstantinos, 2018; Rahimpour, Sotoudehnama, & Sasani, 2018; Rezaee et al., 2018; Shahab, Rasidi, Seddighi, & Yamini, 2019; Soodmand Afshar, Doosti, & Movassagh, 2018; Soodmand Afshar & Ranjbar, 2017;) whereas the other disciplines were chosen because they were disregarded in the past studies. Analyzing research articles in these disciplines is needed as these are in-demand fields of academic research in the Philippines. RAs were selected because they are the most published research texts (Hyland, 2006) and the most representative sub-register of academic writing (Biber & Gray, 2016; Gray, 2015). They were collected from a 10-year period (2009-2019) as this paper

is a synchronic examination. Based on Gray's (2015) RA sub-classifications, 14 RAs with 7 RAs per qualitative sub-register and 7 RAs per quantitative sub-register in each discipline consisted the research texts: qualitative AL (7 RAs) and quantitative AL (7 RAs) (14 RAs); qualitative PSY (7 RAs) and quantitative PSY (7 RAs) (14 RAs); qualitative SOC (7 RAs) and quantitative SOC (7 RAs) (14 RAs); qualitative CI (7 RAs) and quantitative CI (7 RAs) (14 RAs); quantitative ME (14 RAs); and qualitative COM (7 RAs) and quantitative COM (7 RAs) (14 RAs) (see Table 1). No qualitative RAs were collected for ME because the discipline commonly employs quantitative research methods. The 11 disciplinary RA sub-registers were considered as various groups of texts, compared and/or contrasted with each other.

Table 1. *Randomly Selected Academic Research Articles across Disciplines*

Publication Period	Disciplinary Sub-registers Disciplines	Qualitative		Quantitative		Total	
		Number of Texts	Tokens	Number of Texts	Tokens	Number of Texts	Tokens
2010-2018	Applied Linguistics	7	27,189	7	30,088	14	57,277
2009-2019	Psychology	7	44,133	7	23,402	14	67,535
2009-2019	Sociology	7	35,445	7	31,062	14	66,507
2010-2019	Curriculum and Instruction	7	31,593	7	31,351	14	62,944
2011-2019	Measurement and Evaluation			14	55,889	14	55,889
2009-2018	Communication	7	31,470	7	33,100	14	64,570
Total	Total					84	374,722

## 4.2. Framework for Analysis

The study used Biber et al.'s (1999) finite adverbial clauses framework. Finite adverbial clauses are subordinate clauses that embed extra information in the main clauses and syntactically function as adverbs. They are elaborated and explicit structures consisting of subject and verb marked for tense, aspect, and modality (Biber et al., 2016; Gray, 2015). *Because* +, *if* +, and *although* + clauses perform different discourse functions (Biber et al., 1999) while they have corresponding syntactic patterns.

*Because* + clause expresses the cause/reason for the occurrence of the argument conveyed in the main clause (Biber et al., 1999). *If* + clause advances the circumstance for the reality or the likelihood of the fact expressed in the main clause (Biber et al., 1999). Likewise, it hedges claims (Huebler, 1983) or begs a pact with a proposition which the writer believes as risky (Myers, 1989; Swales & Feak, 2012). *Although* + clause demonstrates the limitations of claims, events, or facts (Biber et al., 1999). It opposes the idea articulated in the main clause while it also serves as a bridge (Hinkel, 2014; Jacobs, 1995).

*Because* +, *if* +, and *although* + clauses are framed as *because* + SNP + PVP, *if* + SNP + PVP, and *although* + SNP + PVP, respectively. *Because*, *if*, and *although* are adverbial subordinators which correspond to cause/reason, condition, and concession. SNP refers to the subject noun phrase (full subject) while PVP stands for the predicate verb phrase (the full predicate) in the clause. The SNP + PVP frame after the adverbial subordinator is obligatory for these finite adverbial clauses. Those patterns can be structurally complex and can be complicated through clausal complement or phrasal modifier constituents. Phrasal modifiers make these adverbial clauses structurally complex (Biber & Gray, 2010). Table 2 lists the three finite adverbial clauses (italicized and bolded) (Biber et al., 1999, pp. 825, 836).

Table 2. *Because* +, *If* +, and *Although* + Clauses

Finite Adverbial Clauses	Sample Finite Adverbial Clauses
1 <i>Because</i> + clause	<b><i>Because one did not know how accurately the clock had been ticking during the processes of weighing,</i></b> one could not know precisely the times at which movements of the shutter occurred between which the radiation was released.
2 <i>If</i> + clause	<b><i>If light is moving in the direction labelled z in the figure,</i></b> it has two distinct possibilities of polarisation.
3 <i>Although</i> + clause	A number of field experiments have demonstrated the importance of such "keystone predators", <b><i>although the great majority of studies have centered on marine and freshwater ecosystems.</i></b>

In sentences, *because* +, *if* +, and *although* + clauses can take the initial or final position. The initial slot takes place when the adverbial clause is positioned before the main clause whereas the final slot occurs when it is located after the main clause. Initially placed adverbial clause carries given information, referring to the prior discourse while its main

clause conveys a new idea (Biber et al., 1999). It plays as a cohesive clause, linking the prior discourse and the new idea in the main clause or as a background/setting (Leech & Svartvik, 2002) for the succeeding discourse that is communicated in the main clause. Finally placed adverbial clause contains a new idea while the main clause conveys given information relating to the previous discourse. This final position conforms to the end-of-weight principle where the writer prefers putting a syntactic unit at the end of the clause/sentence. It aims to give additional information about the action in the main clause, to make the full proposition in the main clause easier to understand, and to not interfere with the subject in the main clause (Biber et al., 1999).

### 4.3. Inter-coder Reliability and Normalization

Using *because*, *if*, and *although* as nodes, each finite adverbial clause from the research texts was extracted in Excel files through AntConc (Version 3.5.9) (Anthony, 2021). On Excel files, each finite adverbial clause was hand-coded. Hand coding was necessary as corpus tools are not always consistent in their analysis (Egbert, Larsson, & Biber, 2020). Three qualified inter-coders independently analyzed all the initially coded adverbial clauses. Two coding sessions yielded. In the first, each coder and the researcher met separately and discovered conflicting decisions. They conducted further discussions to arrive at common judgments. In the second, they met again separately (after a week) to compare their judgments until they finalized their decisions. Inter-coder reliability calculated through Fleiss Kappa yielded 0.96 (0.81 – 1.00), an almost perfect reliability agreement. Normalizing each raw frequency of each clause was computed by dividing it to the tokens of each disciplinary RA sub-register and then multiplied by 1,000 as norming number, following corpus-based studies (e.g., Biber, 1988; Biber & Gray, 2016; Biber et al., 2016; Gray, 2015).

## 5. Results and Discussion

This section presents the findings and their interpretations. As this study is new, its results are compared and/or contrasted with the related studies wherever applicable.

### 5.1. Most Frequently Used Finite Adverbial Clause

Of the three finite adverbial clauses, *because* + clauses most frequently occurred across disciplinary RA sub-registers except in quantitative ME RAs where *if*+ clauses were slightly more frequent than *because* + clauses (see Figure 1). This finding shows that *because* + clauses are the most commonly used finite adverbial clauses across disciplinary RA sub-registers. Thus, Filipino researchers convey more causal justifications on their arguments. In other words, they express more causes/reasons rather than conditions and concessions in writing research in the soft sciences.

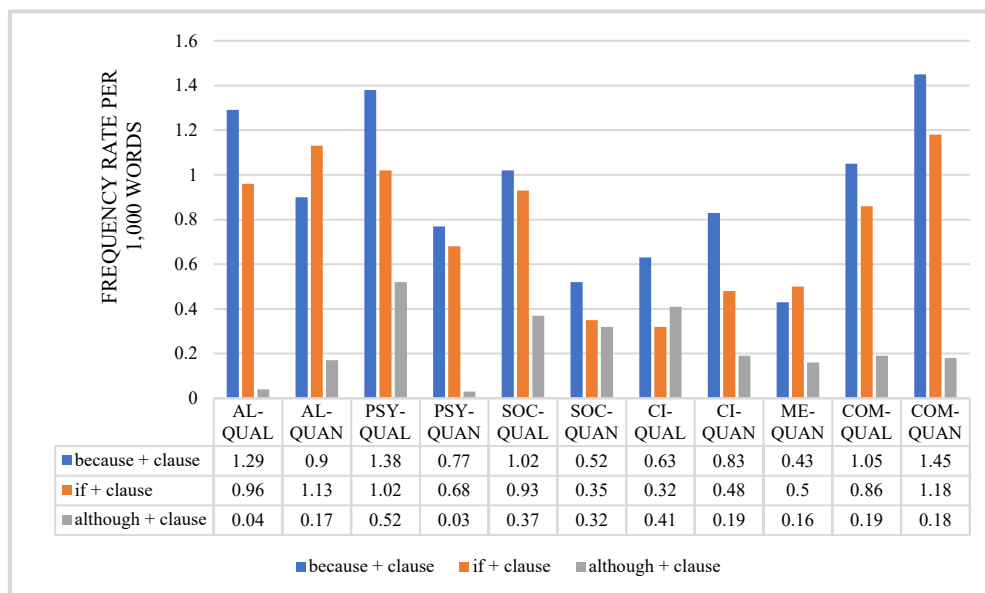


Figure 1. Cause/Reason, Conditional, and Concessive Clauses

Succeeding *because* + clauses, *if* + clauses occurred more frequently than *although* + clauses which had the least occurrences across disciplines. In the following sections, each finite adverbial clause is discussed.

### 5.1.1. *Because* + Clauses

Across disciplines, *because* + clauses in quantitative COM (1.45) occurred most frequently. This result denotes that Filipino researchers in COM convey more causes/reasons through *because* + clauses when writing quantitative research. In contrast, *because* + clauses in quantitative ME (0.43) occurred least frequently across disciplines. This finding suggests that Filipino researchers in ME do not often give causes/reasons through *because* + clauses when writing research.

By disciplinary RA sub-register, *because* + clauses occurred more dominantly in qualitative RAs, as shown in the following results: qualitative PSY RAs (1.38), AL RAs (1.29), and SOC RAs (1.02) versus quantitative AL RAs (0.9), PSY RAs (0.77) and SOC RAs (0.52). These results entail that Filipino researchers in PSY, AL, COM, and SOC add more causes/reasons to attest arguments when they write qualitative research. On the contrary, *because* + clauses were more frequent in quantitative COM (1.43) and CI RAs (0.83) than in qualitative COM (1.05) and CI RAs (0.63). These slants imply that qualitative RAs possess more *because* + clauses than quantitative RAs. In this respect, Filipino researchers in PSY, AL, and SOC employ more *because* + clauses in writing qualitative research than in writing quantitative research. However, those researchers in COM and CI utilize more *because* + clauses in writing quantitative than in writing qualitative studies. *Because* + clauses (bolded) in sentences 1 to 2 in quantitative COM, SOC, and ME RAs are exemplified below:

- (1) **Because + most of the respondents** (SNP) + **are females** (PVP), it is recommended to conduct a similar or comparative study that will focus on gender and ethnicity. [Quantitative COM]
- (2) **Because + many CSSP students** (SNP) + **come from sectarian private high schools** (PVP), the influence of religion is something to be reckoned with. [Quantitative SOC]
- (3) **Because + the experience of bullying** (SNP) + **may be sensitive to the context** (PVP), the 3-factor structure was tested separately in public and private schools. [Quantitative ME]

All these *because* + clauses communicate precise causes/reasons for the arguments expressed in the main clauses. In addition, they follow *because* + SNP + PVP pattern. For example, 1 conveys that most of the respondents are females as the reason for the argument that doing a comparable gender and ethnicity study is recommended. Similarly, 3 expresses that bullying experience may be context sensitive which is the cause for the main argument that the 3-factor structure (i.e., a measure for bullying experience) was tested in public and private schools. By syntactic pattern, only 1 has a simple *because* + SNP + PVP pattern whereas 2 and 3 have complex patterns. For instance, 2 includes one attributive adjective, **many**, and one noun premodifier, **CSSP** (an acronym), both modifying **students**. These three comprise the SNP. Also, it has an adverbial prepositional phrase, **from sectarian private high schools**, postmodifying the verb, **come**. These constitute the PVP. Such adverbial prepositional phrase consists of the prepositional head, **from**, and the prepositional object, **schools**. This object is pre-modified by a series of attributive adjectives, **sectarian**, **private**, and **high**. Since *because* + clauses exceeded the other two adverbial clauses, it could be construed that identifying exact causes/reasons through *because* + clauses is essential across the six disciplines.

### 5.1.2. *If* + Clauses

*If* + clauses were less frequent than *because* + clauses across disciplinary RA sub-registers. However, those in quantitative AL (1.13) and ME RAs (0.5) were somewhat more frequent than *because* + clauses in quantitative AL (0.9) and ME RAs (0.43). With very close frequencies, *if* + clauses in quantitative COM (1.18) and AL RAs (1.13) were most frequent across disciplinary RAs. It can be deduced that quantitative COM and AL RAs contain more *if* + clauses. Likewise, Filipino researchers usually employ these clauses in writing quantitative COM and AL studies.

Unlike *because* + clauses, *if* + clauses were either more recurrent in quantitative disciplinary RAs or qualitative disciplinary RAs. Those in quantitative COM (1.18), AL (1.13), and CI RAs (0.48) occurred more frequently than those in qualitative COM (0.86), AL (0.96), and CI RAs (0.32). In contrast, *if*-clauses in qualitative PSY (1.02) and SOC RAs (0.93) were more frequent than those in quantitative PSY (0.68) and SOC RAs (0.35). However, those in quantitative ME

RAs (0.5) occurred almost as frequent as those in quantitative CI RAs (0.48). With these varying frequencies of *if* + clauses across disciplinary RA sub-registers, it could be construed that Filipino researchers use them more in writing quantitative COM, AL, and CI studies and in writing qualitative PSY and SOC research. Take a look at the *if* + clauses (bolded) in sentences 4 to 6 in quantitative COM RA, qualitative AL RA, and qualitative CI RA:

- (4) **If + a pretest (SNP) + has been conducted (PVP)**, a posttest could also be self-administered (after exposure to the material) through a questionnaire or interview... [Quantitative COM]
- (5) **If + these practical concerns (SNP) + are addressed on a long-term basis (PVP)**, it may result in a successful implementation of the MTB-MLE. [Qualitative AL]
- (6) **If + replies in the poetry unit (SNP) + got 100 (PVP)** short response replies in fiction collected 376. [Qualitative CI]

These *if* + clauses denote conditions for the possibilities of circumstances expressed in the main clauses. For instance, 4 expresses that the conduct of a pre-test is a condition for the circumstance that a posttest using a questionnaire or interview could also be administered. Similarly, 6 conveys that 100-point replies in the poetry unit is a condition for 376 short response collected replies in fiction. By syntactic pattern, 4 has a relatively simple *if* + clause pattern whereas 5 and 6 have a complex *if* + clause pattern. For example, 5 involves the determiner, **these**, and the attributive adjective, **practical**, both pre-modifying the noun, **concerns**. These compose the SNP. Also, it includes the adverbial prepositional phrase, **on a long-term basis**, which postmodifies the verb phrase, **are addressed**. Both of which compose the PVP.

### 5.1.3. *Although* + Clauses

Unlike *because* + and *if* + clauses, *although* + clauses occurred with low frequencies. *Although* + clauses in qualitative PSY RAs (0.52) had the highest occurrence whereas those in quantitative PSY RAs (0.03) had the lowest. Those in qualitative RA sub-registers were slightly overriding those in quantitative RA sub-registers, as demonstrated by the following results: qualitative (0.37) and quantitative SOC RAs (0.32); qualitative (0.41) and quantitative CI RAs (0.19); qualitative (0.19) and quantitative COM RAs (0.18); and quantitative ME RAs (0.16). In contrast, those in quantitative AL RAs (0.17) were more frequent than those in qualitative AL RAs (0.04). Like *because* + and *if* + clauses in qualitative disciplinary RAs, *although* + clauses were frequently higher in qualitative disciplinary RAs except in AL RAs where *although* + clauses were much more frequent in quantitative AL RAs than in qualitative AL RAs. Consider the following examples of *although* + clauses (bolded) in sentences 7 to 13 in qualitative PSY, CI, and SOC RAs, quantitative SOC RA, qualitative and quantitative COM RAs, and quantitative PSY RA:

- (7) They refuse to be identified as Filipino-Japanese, **although + they (SNP) recognize within them that they are not pure Japanese (PVP)**. [Qualitative PSY]
- (8) The study has inherent limitation common to action research **although + the instructor-researcher (SNP) + exerted robust and systematic implementation of the action research cycles (PVP)**. [Qualitative CI]
- (9) ... they still preferred to continue driving their motorcycles **although + they (SNP) + all agree that four-wheeled vehicles are safer (PVP)**. [Qualitative SOC]
- (10) Results also show, **although + difference (SNP) + is not significant (PVP)**, that Catholics illustrate a better concept of marriage than respondents of a different religion. [Quantitative SOC]
- (11) This comes out in stories where the subject's sexual orientation or being gay is mentioned **although + it (SNP) + doesn't have a bearing on the article or topic (PVP)**. [Qualitative COM]
- (12) It is worthy to point out that **although + the documentary film (SNP) + is saturated with visual content which facilitates learning (PVP)**, it does have its limitations. [Quantitative COM]
- (13) However, in the study by Tierney and Lavelle (1997), **although + the levels of hardiness (SNP) + increased immediately after the training (PVP)**, the levels retorted back to the baseline level 6 months later. [Quantitative PSY]

These *although* + clauses show the restrictions or refusals of claims (as in 11 and 12), events (as in 7 and 9), or facts (as in 8 and 10) expressed in the main clauses. For instance, 7 expresses that Filipino-Japanese children (referred to

by the subject *they*) acknowledge within themselves that they are not pure Japanese as opposed to the claim (in the main clause) that they refuse to be identified as Filipino-Japanese. In the same way, 13 conveys that the immediate increase of hardness levels after the training is a limitation for the event (in the main clause) that such levels reverted to the baseline after 6 months. By syntactic pattern, only 10 follows a relatively simple *although* + SNP + PVP pattern whereas the other clauses adhere to complex syntactic patterns. For instance, 12 includes the determiner, **the**, and the noun premodifier, **documentary**, for the noun, **film**. These all make the SNP. It contains an adverbial prepositional phrase, **with visual content**, postmodifying the verb phrase, **is saturated**. The adverbial prepositional phrase carries the prepositional object, **content**, which is pre-modified by the attributive adjective, **visual**, and is postmodified by a relative *which*-clause, **which facilitates learning**. These syntactic constituents comprise the PVP.

## 5.2. Placements of Finite Adverbial Clauses

*Because* + clause was consistently located in the sentence-final position across disciplinary RA sub-registers (qualitative [1.03] and quantitative AL RAs [0.83]; qualitative [1.29] and quantitative PSY RAs [0.68]; qualitative [0.96] and quantitative SOC RAs [0.42]; qualitative [0.06] and quantitative CI RAs [0.08]; quantitative ME RAs [0.41]; qualitative [0.99] and quantitative COM RAs [1.39]) (see Figure 2). These findings strongly prove Biber et al.'s (1999) and Rezaee et al.'s (2018) claim that clauses of cause/reason are placed much more frequently at the end of main clauses in research texts. However, these findings contrast Kerz and Wiechmann's (2015) finding that causal clauses commonly occur initially in sentences. This contradiction probably stems from the RAs' disciplinary origins and their authors' geographical contexts. Kerz and Wiechmann (2015) analyzed hard and soft science RAs written by L1 English researchers while this study examined only soft science RAs authored by Filipino researchers.

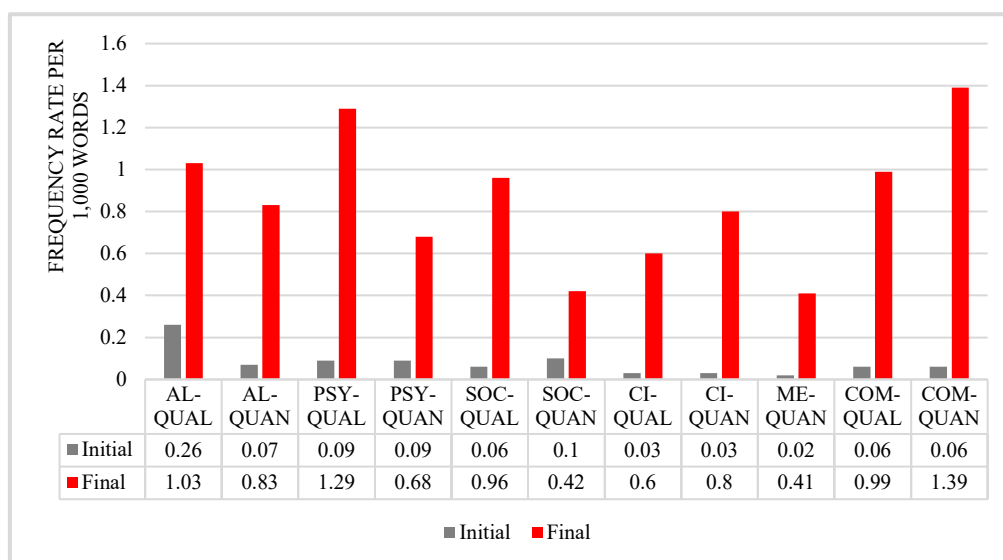


Figure 2. *Because* + Clauses by Placement

The steady use of final *because* + clauses in disciplinary RAs indicates that Filipino researchers across the six disciplines make their arguments easier to comprehend (Biber et al., 1999). The final placement style signifies the end-of-weight principle in that Filipino researchers commonly give a new idea at the end of the sentence after it was provided a background by the main clause. Thus, their readers (e.g., specialists and graduate researchers) may quickly decipher the new information in the clause. Final *because* + clauses (bolded and italicized) in sentences 14 to 15 in quantitative COM and ME RAs are illustrated below:

- (14) ..., the film *Mona Lisa Smile* (2003) was chosen ***because its story is situated in a classroom*** .... [Quantitative COM]
- (15) It is possible that nursing students develop beginning competencies ***because research findings in their coursework have implications for their practice***. [Quantitative ME]



Aside from expressing the causes/reasons for the arguments in the main clauses, *because* + clauses (14 and 15) above also provide new ideas as they are finally placed in sentences. These final *because* + clauses express information different from the arguments conveyed in the main clauses. For example, 14 conveys that the classroom is the context of the film *Mona Lisa Smile*, which varies from the argument that the film itself was the selected one. In like manner, 15 expresses that research findings have implications for nursing practice, which differs from the argument that there is the possibility for nursing students to develop beginning competencies. These *because* + clauses make the propositions in the main clauses understandable as they do not intervene the subjects.

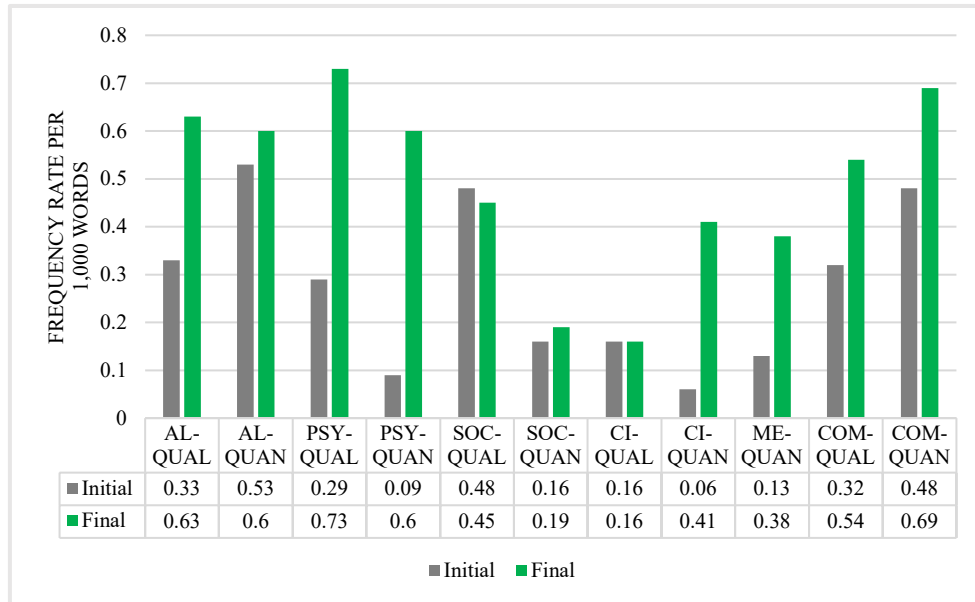


Figure 3. *If* + Clauses by Placement

Like *because* + clauses, *if* + clauses occurred more in the final placement (see Figure 3). This result supports Rowley-Jolivet and Carter-Thomas's (2008) assertion that final *if* + clauses occur more frequently than initial *if* + clauses. However, it contrasts Carter-Thomas and Rowley-Jolivet's (2008) argument that these clauses are usually placed both in initial and final slots. The recurrent final position of *because* + and *if* + clauses across disciplinary RA sub-registers again shows the principle of end-weight. Moreover, it strongly hints that Filipino researchers commonly communicate a new idea at the end of a sentence after the idea was given frame by the main clause. Hence, readers may effortlessly understand the new information in the *if* + clause.

Unlike the final placement of *because* + clauses across disciplinary RA sub-registers, final *if* + clauses were more common than initial *if* + clauses across disciplinary RAs (qualitative [0.73] and quantitative PSY RAs [0.6], quantitative [0.69] and qualitative COM RAs [0.54], qualitative [0.63] and quantitative AL RAs [0.6], quantitative ME RAs [0.38]). However, those initial *if* + clauses (0.48) in qualitative SOC RAs were slightly more frequent than final *if* + clauses (0.45). These tendencies signal that such clauses tend to be placed in the final sentence position especially in PSY, COM, AL, and ME RAs. Nevertheless, it is commonly placed both in the initial and final sentence positions in qualitative SOC RAs. Overall, Filipino researchers in PSY, COM, AL, and ME tend to use final *if* + clauses in writing either qualitative or quantitative research. However, those in SOC usually employ initial and final *if* + clauses in writing qualitative studies. Final *if* + clauses (bolded and italicized) in sentences 16 to 17 in qualitative PSY and CI RAs are exemplified as follows:

- (16) It would also be beneficial to the Filipino gay prisoners ***if their stories of struggle and narratives of hope will be equally present in the literature.*** [Qualitative PSY]
- (17) Considering the novelty of service-learning in the institution, the needs that have been mentioned may not be addressed ***if implementers do not have the capacity to deliver the process.*** [Qualitative CI]

These final *if* + clauses primarily give new ideas and do not interrupt the subjects while making the main clauses easy to comprehend. For example, 16 conveys that Filipino gay prisoners' stories of struggle and narratives of hope will

equally exist in the literature. This condition carries new information which is different from the argument in the main clause that it would also be beneficial to them (i.e., referring to Filipino gray prisoners). Comparatively, 17 expresses that implementers lack the capacity to deliver service-learning. This condition also gives new idea which is disparate from the assertion in the main clause that service-learning needs may not be addressed because of their newness in the institution. Figure 4 shows the frequency distribution of *although* + clauses by placement.

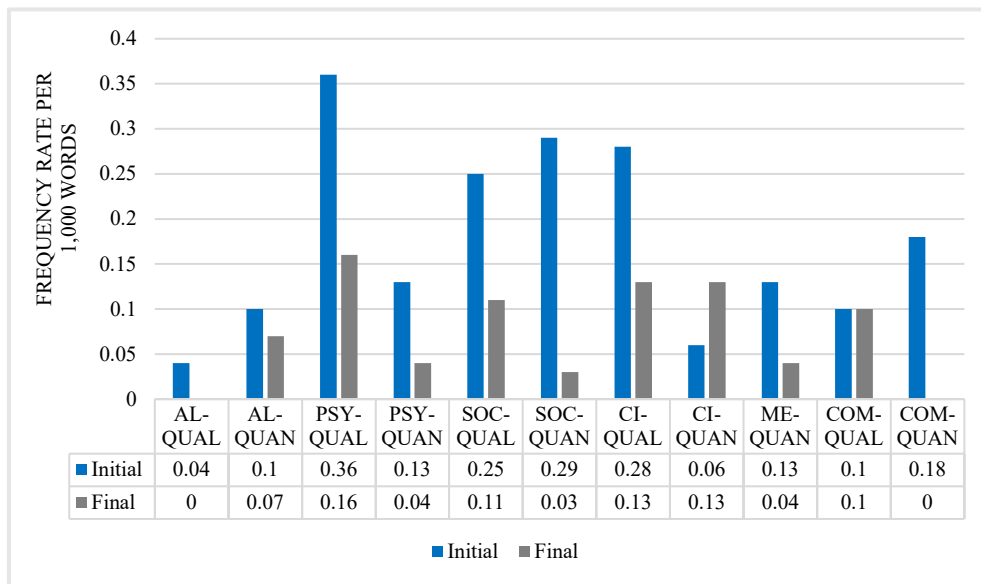


Figure 4. *Although* + Clauses by Placement

*Although* + clauses in the initial position in qualitative PSY RAs (0.36) occurred the most while those in qualitative AL RAs (0.04) occurred the least. This result denotes that Filipino researchers in PSY usually and those in AL occasionally put *although* + clauses initially in sentences when writing qualitative research. Unlike the other two adverbial clauses which were more frequently placed in the final position, *although* + clauses were positioned more frequently in the initial position (except in quantitative CI RAs (0.13), where final *although* + clauses were more recurrent, and in qualitative COM RAs, where initial (0.1) and final (0.1) *although* + clauses (0.1) were frequently equal). The more frequent use of initial *although* + clauses corroborates Kerz and Wiechmann’s (2015) finding that initial concessive clauses are more common in soft (and hard) sciences. In general, initial *although* + clauses were very much higher in qualitative PSY, CI, and SOC RAs and in quantitative SOC and COM RAs than final *although* + clauses. These slants prove that *although* + clauses tend to be placed more initially in sentences.

Initial *although* + clauses in qualitative PSY (0.36) and CI RAs (0.28) were more dominant than those in quantitative PSY (0.13) and CI RAs (0.06). However, initial *although* + clauses in quantitative SOC (0.29), COM (0.18), AL (0.1), and ME RAs (0.13) were more recurrent than those in qualitative SOC (0.25), COM (0.1), and AL RAs (0.04). These results further show that Filipino researchers from the six disciplines place *although* + clauses initially in sentences when writing qualitative and quantitative research. Initial *although* + clauses (bolded and italicized) in sentences 18 to 27 across disciplinary RA sub-registers are demonstrated below:

- (18) ***Although these experiences may not be specific to the participants,*** it implies that there are stressors faced by prisoners regardless of sexual orientation and gender identity. [Qualitative PSY]
- (19) ***Although their houses are made up of light materials,*** they are not considered squatters. [Qualitative SOC]
- (20) ***Although CHED already identified engineering and technology courses as priority courses for grants of scholarships,*** still aeronautical engineering was not clearly identified to the list of engineering courses recognized by CHED and DOST. [Qualitative CI]
- (21) ***Although both groups registered a marked increase in the level of performance of the students,*** the participants in the control group performed better than those in the experimental group. [Quantitative COM]

- (22) *Although some studies have considered the individual differences in student motivation and engagement*, little consensus has been achieved. [Quantitative ME]
- (23) *Although hardiness is generally considered a personality trait*, there have been successful attempts to teach hardiness to individuals. [Quantitative PSY]
- (24) *Although these topics were not directly determined as a result of the study*, they were identified by the medical professionals involved in the research,.... [Quantitative CI]
- (25) This means that *although linguistic features would certainly assist the intercoders in distinguishing a particular move*, explicit instructions as regards the functions of all the schematic units featured in the linguistic framework to be used in the study was done in advance. [Qualitative AL]
- (26) *Although the results of the present study revealed the moderate level of the respondents' language proficiency*, it can still be reflected as satisfactory level. [Quantitative AL]
- (27) *Although the influence of viral video has been researched extensively*, much less attention has been given to the elements within viral videos. [Qualitative COM]

These initial *although* + clauses act as cohesive structures between the argument in the preceding discourses and the new information in the main clauses (18, 24, and 25), or frames for the subsequent arguments (19, 20, 21, 22, 23, 26, and 27) expressed in the main clauses. For instance, 18 connects the previous ideas (i.e., the specific lived experiences of Filipino gay prisoners) in the preceding discourses as signaled by the cataphoric reference, *these*. At the same time, *these* refers to the hyponymic term, *experiences*, within the *although* + clause. This initial concession clause links with the proposition in the main clause that there are stressors that challenge prisoners despite their sex or gender. In contrast, 27 provides a background that viral video's influence has been broadly studied for the argument in the main clause that a dearth of consideration has been provided for viral video elements.

Since initial *although* + clauses were more frequent across disciplines, it could be construed that Filipino researchers underscore the limitations of claims, phenomena, or facts about certain arguments aside from using them as cohesive structures. For this reason, they maintain gradual intensification in information load (Biber et al., 1999) because they initially present to their readers a piece of familiar information through initial *although* + clauses before they provide new information through the main clauses.

More than the preceding interpretations, the findings presented above can be further elucidated. First, *because* + clauses as the most frequently used finite adverbial clauses in disciplinary RAs of Filipino researchers is a new finding in the sense that they are not similar or different from the results of the previous studies. Hence, it can be asserted that the current study has charted new knowledge for L2 academic research writing. Second, the particular placement of each finite adverbial clause in disciplinary RA sub-registers showed consistency and inconsistency with the findings of the related studies (as pointed out in section 5.2). *Because* +, *although* +, and *if* + clauses' positions in sentences which are similar with and different from the findings of Biber et al. (1999), Kerz and Wiechmann (2015), Rezaee et al. (2018), and Rowley-Jolivet and Carter-Thomas (2008) suggest that finite adverbial clauses have common and distinct placements in RAs written by Filipino researchers and other research writers. Overall, since finite adverbial clauses differed in frequencies of use whether in terms of the most occurring clauses or sentence placements, their varying frequencies prove Gray's (2015) and Hyland's (2007) argument that language use differs from one disciplinary written discourse to another.

## 6. Conclusions and Implications

With the impetus that a dearth of research about finite adverbial clauses in L2 academic research writing exists especially in the Philippines, this study cross-examined *because* +, *if* +, and *although* + clauses in RAs across the six disciplines. Specifically, it determined the most frequently used finite adverbial clause and the position of the three adverbial clauses in sentences in qualitative and quantitative disciplinary RAs. Of the three adverbial clauses, *because* + clause was the most frequently used. Final *because* + and *if* + clauses much consistently occurred unlike their initial equivalents. However, initial *although* + clauses occurred more than final *although* + clauses. In addition, the three adverbial clauses differed in frequencies, functions, and syntactic patterns across disciplinary RA sub-registers.

Corresponding to the main findings, two conclusions can be drawn. First, *because* + clause is the most functional finite adverbial clause especially in qualitative disciplinary RAs regardless of disciplinary origin. Hence, Filipino researchers in the six disciplines much frequently express more causes/reasons to justify their arguments in the main clauses than conditions and concessions in writing qualitative research. Second, the end-of-weight principle through final *because* + and *if* + clauses is highly valued in writing qualitative and quantitative disciplinary RAs (except in quantitative ME RAs). Filipino researchers sustain this principle to establish reader ease. However, initial placement is relatively preferred with *although* + clauses across disciplinary RAs (except in quantitative CI and qualitative COM RAs). Filipino researchers use this placement to give frame or background for the main clause which contains new information, thus promoting gradual increase in information load. The study offers applied and pedagogical implications for disciplinary research journals, research writing curricula, and L2 academic writing instruction.

On research journals, editors-in-chief across disciplines need to indicate in their author guidelines the need to use more *because* + clauses, final *because* + and *if* + clauses, and initial *although* + clauses. Hence, research writers may convey precise causes/reasons for certain arguments, develop text decipherability, and establish the development of ideas. On research writing curricula, curriculum developers may collaborate with academic research writing instructors/professors to assimilate *because* +, *if* +, and *although* + clauses as language foci for the course contents/topics in the curricula. In the Philippines, research writing curricula usually ignore the associated clausal features (and other syntactic features) of academic research writing. Sometimes, the exclusion of these syntactic features causes the lack of knowledge and skills of student and expert L2 English academic writers in writing research papers. By incorporating the finite adverbial clauses in the research curricula, academic writers can be guided with the adverbial clauses to employ in writing qualitative and quantitative research. On L2 academic writing instruction, academic research writing instructors/professors should engage students with consciousness-raising tasks on the functions and syntactic pattern/s of finite adverbial clauses. These tasks may elevate the students' cognizance of *because* + clauses as the most functional adverbial clauses in writing qualitative and quantitative studies. Moreover, exemplars of these clauses should be selected from L2 English Filipino-authored RAs or Philippine English academic texts (Hernandez, 2020). Hence, academic research writing classes would be more contextualized, and students from the six disciplines may advance their grammatical competence in writing research.

Despite the study's contribution to academic writing research, it offers paths for future studies. Researchers should explore RAs from the hard disciplines like chemistry, engineering, and endocrinology. Thus, the ways research writers employ finite adverbial clauses in these disciplines can be distinguished from the adverbial clauses in the soft disciplines. RAs written by Indian, Singaporean, Chinese, and Japanese researchers should also be cross-examined to differentiate the ways these L2 English users employ adverbial clauses in writing qualitative and quantitative RAs. Examining other adverbial clauses in occluded research texts (e.g., review articles, oral defenses) may divulge other clauses associated with these texts. Finite clauses as complements and noun postmodifiers also require attention to thrive studies in L2 academic research writing in L2 English contexts. Further research should also consider using quantitative statistical tests to reveal more empirical interpretations.

Future studies considering these proposed routes may provide more positive implications for other allied aspects of L2 academic research writing. Those studies could also inform professional development trainings in research writing for publication. As finite adverbial clauses are underexplored syntactic structures of L2 academic research writing, more studies of these clauses are crucial.

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The author declares no conflict of interest.

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