

Investigating the Use of Corpus-Informed Grammar Materials in Indonesian EFL Classrooms

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ARTICLE INFO	ABSTRACT
Keywords: Corpus-informed materials, EFL, grammar, university students DOI: http://dx.doi.org/10.21093/ijeltal.v7i2.1415 How to cite: Oktavianti, I.N., Eriani, E., Rolyna, I., Prayogi, I. (2023). Investigating the Use of Corpus-Informed Grammar Materials in Indonesian EFL Classrooms. <i>Indonesian Journal of English Language Teaching and Applied Linguistics</i>, 7(2), 417-438	Despite the growing recognition of corpus in language teaching and learning, the importance of teaching materials informed by corpus investigation has not been widely acknowledged, especially in the EFL context. In teaching grammar, it is essential to provide authentic materials for the learners indicating both grammaticality and appropriateness. This study investigates students' perceptions of the use of corpus-informed grammar materials and the strengths and drawbacks of these materials. The participants were 40 Basic Structure students at their first-year university level. The data were collected using questionnaires and interviews after the participants attended seven meetings with Real Grammar as the book used in the classroom. The data were then coded, categorized, and analyzed to describe how the students perceived the materials. The present study showed that most students have a positive attitude toward the corpus-informed grammar book since it enables them to know the appropriate context of use related to the register (spoken or written). Corpus-informed materials have several strengths, such as describing the register-specific and frequency information, improving language learning awareness, learning motivation, critical thinking, and many more. However, corpus-informed materials should not be the only thing to rely on, so lecturers or instructors should provide adequate explanations for the materials and corpus research. These results show that it is necessary to promote the use of corpus-informed materials in EFL classrooms, including grammar classes. However, the teachers should also be trained on how corpus works, and corpus-related terms and the use of corpus-informed materials should be reconsidered for the lower level of learners.

1. Introduction

In foreign language learning, grammar is perceived as a complex part of the language since it comprises a list of rules one should master to be fluent in the target language. Some studies have shown students' difficulties or problems in learning English grammar (Listia & Febriyanti, 2020; Wahyuningtyas & Bram, 2018). Those studies emphasize the complexity of this language aspect; however, grammar is beneficial and mandatory since it is strongly related to other language skills, e.g., writing (Lestari, 2018; Musa, 2021) and speaking (Kusumawardani & Mardiyani, 2018; Sahdi & Mahmood, 2021). In the EFL context, the task is more demanding due to the limited exposure to the target language. Consequently, English learners and teachers must rely heavily on teaching materials. Teaching materials, including textbooks, are prominent in language teaching (McGrath, 2013). Textbooks are the most common pedagogical materials for language teaching because of their accessibility, portability, and ease of use. Their two main functions are: (1) supporting L2 proficiency development and (2) providing comprehensive support in all aspects of foreign language courses (Vitta, 2021). Thus, the textbook should be carefully designed to match students' communicative competence (Burton, 2022; Römer, 2010).

English textbooks, including grammar mastery, have been published to assist teaching and learning. Interestingly, studies have shown mismatches between the language presented in the textbooks and real-life English (Gilmore, 2004; Oktavianti & Fajria, 2021; Oktavianti & Prayogi, 2020; Siegel, 2014; Simbuka, 2021; among others). These mismatches might affect the mastery of grammar since they are related to linguistic units or constructions. Ur (2022) exemplified that the conventional tendency to put present progressive first in many grammar books is not aligned with the corpus result showing that simple verb is more common in all contexts. Furthermore, earlier studies have demonstrated that many grammar materials are taken out of context, making learning grammar harder and irrelevant for real-life communication (Conrad, 2000; Hughes, 2010; Ur, 2022). Thus, authentic materials should be considered to overcome this issue, especially when designing teaching materials in the EFL context. Authenticity is crucial since it can provide many comprehensible inputs for the learners (Jones, 2022; Tomlinson & Masuhara, 2017). Moreover, it is also necessary to consider context, register, or genre because they are critical factors in acquiring communicative competence (Gilmore, 2007; Meunier & Reppen, 2015; Römer, 2010).

In response to this need, the advancement of technology enables the large size authentic language data to be stored digitally in the past decades called corpus. Corpus is a collection of texts stored digitally in a machine-readable format (McEnery & Hardie, 2012). In terms of language teaching, a corpus can be of any help as it comprises a massive collection of natural language use which means it can provide authentic examples for teaching and learning purposes. Burkette & Kretzschmar Jr. (2018) argued that describing language-related phenomena from personal experience is nearly plausible. This is because personal intuition does not indicate what everybody else is saying or writing; thus, a considerable collection called corpus can help us understand language as a complex system. Corpus is also suitable for providing authentic data from various register-specific sources, meaning that they distinguish between spoken and written contexts. Hence, the language data are relevant to the context of use. Moreover, Conrad (2000) explained that grammar is not monolithic; it should be presented in register-specific descriptions to provide learners with the correct context of use (e.g., spoken or written, academic or non-academic). Thus, materials designed

by corpus consultation are register-based and context-appropriate, and they are called corpus-informed materials.

Corpus-informed materials differ from conventional materials as they are carefully designed and aligned with the findings of corpus research (McCarthy, 2004; McCarthy & McCarten, 2022). Corpus-informed materials are essential considering several rationales. First, the materials are based on actual use, meaning they are not produced from a real-life context. Second, the syllabus is informed by the frequency information indicating the priority of linguistic features/units produced by language users. Third, the context is authentic based on registers, e.g., the distinction between the spoken and written register (McCarthy, 2004). More importantly, Timmis (2022) suggested that one of the principles that should be considered in designing syllabi and materials for grammar is that it should be informed by corpus research. This statement does correspond to Ur (2022), who points out that material development for grammar should consider corpus linguistics. In addition, Hughes (2010) emphasized that corpus-based insights in grammar courses have a range of benefits, including the plausibility of having task-based, tailored, and inductive materials.

Previous studies have demonstrated the beneficial use of corpus in ELT, e.g., providing rich, authentic language data, promoting discovery learning, equipping learners with the appropriate context of use, and many more (Chambers, 2019; McCarthy & McCarten, 2022; Timmis, 2015). More specifically, studies in grammar courses have shown the utilization of corpus and how it can benefit learners (Conrad, 2010; Jones & Waller, 2015; Meunier & Reppen, 2015). Several studies have reported that using corpus is helpful and insightful for learners in learning grammar because learners can develop their potential with the help of corpus (Fauzan et al., 2022; Lin, 2016; Yanto & Nugraha, 2017). Regarding the use of corpus-informed grammar materials, some studies showed that these kinds of materials are insightful for both teachers and learners, but at the same time, they are challenging to use (McCarthy & McCarten, 2022; Meunier & Reppen, 2015).

There have been a few studies on corpus use in ELT, but those studies mainly focused on using Data-Driven Learning (DDL). DDL is a pedagogical approach that focuses on learners as "language detectives" since they directly engage with language data (printed materials or hands-on corpus activities) (Crosthwaite, 2020). In learning prepositions, for example, teachers can ask the students to access corpora (e.g., *British National Corpus* or BNC) to find the examples of prepositions *in*, *at*, and *on*, and they inductively generate the patterns of use. DDL in language classrooms has been intensively studied by many scholars, including Boontam & Phoocharoensil (2018), Garner (2013), Giampieri (2020), Lin (2021), Liu (2016), Nugraha et al. (2017), and Talai & Fotovatnia (2012). Earlier studies on corpus use in language teaching have also investigated corpus-based textbook evaluation (Hsu, 2015; Lee, 2020; Molavi et al., 2014; Simbuka, 2021).

Despite the rapid recognition of corpus in the past few years in Indonesia, it is surprisingly not widely known among ELT practitioners and English language teachers in the country. The use of corpus-informed materials and the perceptions towards the use have received far less attention. A limited number of studies has been done to investigate corpus-informed or corpus-based grammar materials in several EFL contexts, such as in Girgin (2011, 2019), Lakew et al. (2021), Rodríguez-Fuentes & Swatek (2022). However, little is known about Indonesian university students' perceptions of implementing corpus-informed grammar

materials. Therefore, the present study aims to investigate the students' responses toward implementing corpus-informed rules in Indonesian EFL grammar classes and the strengths and drawbacks of using corpus-informed materials in grammar learning.

The study's results can contribute to informing EFL teachers and instructors on how students respond to corpus-informed materials and how they can benefit from them. Moreover, this study can inform the decisions of teachers or EFL instructors on how to use corpus-informed materials or to develop their corpus-informed grammar materials. With the above aims, this paper seeks to answer the following research questions: (1) how do the students perceive the use of corpus-informed grammar materials? and (2) how do the students respond to the strengths and drawbacks of corpus-informed grammar materials?

2. Literature Review

2.1 Grammar teaching

As an essential language aspect to learn and master, grammar teaching has been long considered challenging. Some teachers have questioned the necessity of teaching grammar, as Krashen (1982) argued that if the input is sufficient and understandable, the grammar will be acquired unconsciously. Nevertheless, this is more demanding in the EFL context because exposure to the target language is usually limited to classrooms. Concerning grammar teaching in the classrooms, selecting the right grammar instruction is important to accelerate natural acquisition (Larsen-Freeman, 2014). Some approaches to grammar instruction include *present, practice, produce*, focus on form, *grammaring*, and explicit grammar instruction (Larsen-Freeman, 2014). In practice, grammar teaching should consider three dimensions to help our students use the language accurately, meaningfully, and appropriately: (1) structure or form, (2) meaning, and (3) use; this is known as a three-dimensional grammar framework (figure 1) Larsen-Freeman (2014).

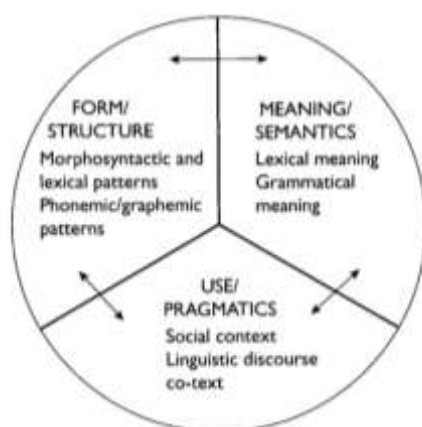


Figure 1. A three-dimensional grammar framework (Larsen-Freeman, 2014)

This framework indicates that grammar is about the correct form and meaning and the correct use. The learners must be informed on when or why particular grammatical aspects or features are used (Larsen-Freeman, 2014; Larsen-Freeman & Celce-Murcia, 2016).

2.2 Materials for teaching grammar

Materials should be designed systematically and carefully to meet students' needs and teaching objectives in companion to teaching activity. In the EFL context, teaching materials

are vital as they provide exposure to the target language (McGrath, 2013). A typical textbook presents some language skills and components, e.g., speaking, writing, vocabulary, and grammar. Grammar has long been a prominent aspect of many language coursebooks. Furthermore, there are also a lot of grammar coursebooks published all over the globe to support language learning. In a more traditional description of grammar, grammar is seen dichotomously, i.e., correct or incorrect, accurate or inaccurate, acceptable or unacceptable (Conrad, 2010). However, there is a shift toward grammar focus. In the early 20th Century, grammar teaching focused on formal grammatical rules due to the influence of grammar-translation and audiolingual methods (Ur, 2022). In the 20th century, those two former methods were abandoned by most grammar writers since the emergence of the communicative approach in language teaching (Larsen-Freeman, 2014; Ur, 2022). As a consequence, there is a reduction of grammar explanations and exercises to a minimum (Ur, 2022).

Timmis (2022) suggested some principles to consider when designing grammar syllabi, including the use of corpus. Grammar material writers should take account of the results of corpus investigation when designing grammar syllabi. It aligns with Conrad (2000), who pointed out that principled decisions on what to include in grammar materials should be informed based on corpus research. Since grammar structure should be aligned with what the learners need in day-to-day communication, grammar should be regarded as an enabling device rather than a set of rules (Sinclair, 1990). Another concern in grammar materials is related to the typical patterns or structures English speakers use that the learners should master. We should focus on priority areas for given learners rather than utilizing a one-size-fits-all syllabus. The syllabus should be informed by what we know about language or linguistic knowledge, e.g., some word combinations typically co-occur (i.e., collocation). The grammar materials should highlight these examples (Conrad, 2010; Timmis, 2015, 2022; Ur, 2022).

2.3 Corpus-informed materials

Corpus linguistics has offered a new view of grammar, contributing to revolutionizing grammar materials. Conrad (2000) argued that grammar teaching should be changed in the 21st century, including registering-specific descriptions, integrating grammar with vocabulary, and shifting from structural accuracy to appropriate use. This means that there must be some resources that meet these three aspects.

Corpus-based research has demonstrated that there are varieties of grammar use in different registers (Biber et al., 2021; Conrad, 2000; Jones & Waller, 2015; Larsen-Freeman & Celce-Murcia, 2016), emphasizing phraseology and lexicogrammar (Conrad, 2010; Jones & Waller, 2015; Szudarski, 2017), and demonstrating the appropriate use of words or grammatical patterns (Jones & Waller, 2015). In general, grammar materials can benefit from corpus because of those three rationales (i.e., register-specific description, lexicogrammar focus, and examples of appropriate use). Corpus research has demonstrated some important findings regarding the frequency of grammatical patterns (Biber & Reppen, 2002). Biber et al. (1999, 2021) showed that the verb's simple aspect is more frequent than the progressive verb; however, this finding contrasts with the tendency in many conventional grammar books, which discuss progressive tense first at the beginner level. In a more direct sense, Larsen-Freeman (2014) stated that through direct corpus use or DDL, students could create their

knowledge of the grammatical constructions, e.g., patterned sequences, ready-made chunks, and collocations.

The term corpus-informed is selected as it deals with the inclusion of research findings and discoveries from corpus studies, the rationale of the inclusion, and the presentation of the corpus information (e.g., graphs, charts, concordance lines, etc.) (Meunier & Reppen, 2015). Some English coursebooks have been published based on corpus research information, such as *COBUILD English Course*, the first corpus-informed coursebook, and the *Touchstone* series with their specialty in providing authentic dialogues (O'Keeffe et al., 2007). As for grammar materials, *Longman Grammar of Spoken and Written English* (LGSWE) (Biber et al., 1999) can be included as an example of a corpus-informed grammar book comprising 6000 authentic examples from the Longman Corpus Network. The student version of this book, entitled *Longman Student Grammar of Spoken, and Written English* (LSG), provides more than 3000 real-life English examples (simplified versions of those in LGSWE). Another corpus-informed grammar book is *Real Grammar* (Conrad & Biber, 2009) which was developed based on research undertaken on the *Longman Spoken and Written English* (LSWE) corpus that is suitable for students as a self-study of class supplement. A couple of years later, a corpus-informed grammar book, *English Grammar Today* (Carter et al., 2016), was published based on the Cambridge International Corpus (CIC), containing written and spoken text from various English national varieties.

To a large extent, McCarthy & McCarten (2022) argued that corpus-informed materials offer several benefits, e.g., they offer more accurate language descriptions, are actual as opposed to invented usage, and are close to the claim to authenticity. These aspects will likely improve motivation and result in more natural and useful learning outcomes for teachers and learners. What has been discussed here does correspond to the nature of corpus in which corpus can shift our understanding of grammar from correct/incorrect to likely/unlikely (Conrad, 2010; Jones & Waller, 2015). It is also important to stop overlooking the relationship between grammar and vocabulary as offered in the corpus (Conrad, 2010; Jones & Waller, 2015; Szudarski, 2017). In addition, corpus distinguishes registers in terms of language use because spoken language differs from written one; this information is needed in grammar materials since we also need to use grammar in spoken context. Corpus can provide us with register-specific descriptions, which is useful for learners to use the language appropriately (Conrad, 2000). Moreover, Hughes (2010) pointed out some advantages of corpus-informed grammar materials, i.e., adaptable and adjustable, in line with the needs of various approaches and learning styles. Corpus can also benefit from exposure to massive examples used in teacher-developed materials. The materials also support communicative language teaching and autonomous learning because language learners are encouraged to develop their questions about grammatical points.

2.4 Previous Studies

Some studies focusing on corpus use and grammar materials have previously been done in some respects, e.g., implementation of a corpus in grammar classes (e.g., Lin, 2016; Muis Muhyidin, 2020; Nugraha et al., 2017; Yanto & Nugraha, 2017), the effects of corpus use to grammar mastery (Boontam & Phoocharoensil, 2018; Fauzan et al., 2022; Girgin, 2019; Huang, 2014; Lin, 2021), and perceptions of corpus use in grammar classes (Lin & Lee, 2015; Muhyidin, 2021). In particular, several studies have also investigated corpus-informed

grammar materials in the ESL and EFL context. Meunier & Reppen (2015) explored the differences between corpus-informed vs. non-corpus-informed grammar materials. In terms of the use, several studies examined the use and perceptions of corpus-informed grammar materials (e.g., Lakew et al., 2021; Yanto & Nugraha, 2017).

As mentioned in some references (e.g., Römer, 2010; Timmis, 2015), a corpus can be used directly in the classrooms or known as DDL. This application is also relevant in grammar classes since the corpus presents pattern recognition. For instance, in learning passive voice, learners can be exposed to many examples of passive sentences from a corpus, and they should be able to generate patterns based on those language data. In relation to DDL in the classroom, some studies have been conducted to explore this issue (Lin, 2016, 2019; Muis Muhyidin, 2020; Nugraha et al., 2017). Lin (2016) found that the use of DDL has improved learning attitudes, but there were no significant differences between the effects of the treatments. However, the results showed that teachers favor using DDL and found it innovative. The study also confirmed that DDL is effective for grammar learning and can transform the way Taiwanese students learn grammar into active engagement. Another implementation of DDL in grammar courses was studied by Nugraha et al. (2017), demonstrating the use of DDL using BNC to teach subject-verb agreement. The results showed positive responses from the students. Similarly, Muhyidin (2020) reported that DDL implemented in grammar classes was done through four stages of the teaching process, namely exploration and pattern generation, explicit explanation, exercises, and classroom production and teacher's feedback.

Several other studies have focused on identifying the effects of corpus use on grammar mastery (Boontam & Phoocharoensil, 2018; Fauzan et al., 2022; Girgin, 2011, 2019; Huang, 2014). Girgin (2011) argued that corpus activities using concordance lines (i.e., a list of all of the occurrences of a particular keyword in a corpus, presented within the context in which they occur, usually a few words to the left and right of the keyword (Baker et al., 2006)) learned the target grammatical patterns effectively. Using corpus-based activities in learning grammar produced similar results as using a conventional grammar course book. Similarly, Huang (2014) demonstrated in his experimental research that the learners' knowledge of periphrastic causative improved and notably outperformed the control group. The result confirms the effectiveness of corpus in improving learners' grammatical knowledge. Another similar research on this issue was done by Boontam & Phoocharoensil (2018), examining the effectiveness of paper-based DDL in developing grammatical consciousness. The results showed that there was a significant difference increasing from the pre-test to the post-test after DDL activities were treated to the students. Following the previous research, Girgin (2019) investigated the effectiveness of corpus-based activities in teaching phrasal verbs and reported that students were able to understand and construct the correct forms of phrasal verbs after six hours of teaching utilizing corpus-based activities. Likewise, Fauzan et al. (2022) claimed that the use of an online corpus (SkELL) as a resource for DDL in grammar classrooms could help students learn grammar more effectively, in line with the use of an online dictionary (*YourDictionary*) since both can provide authentic examples and context of use.

Some studies on corpus for grammar have predominantly focused on the perceptions of students and teachers. Lin & Lee (2015) explored teachers' perceptions regarding the use of DDL, and they pointed out that teachers found DDL an innovative and interesting approach

to teaching grammar. In the study, Lin & Lee (2015) reported that the teachers approved DDL as a potential way to improve students' engagement in the discussion. However, this benefit has consequences, such as more teacher workloads and technical difficulties. In the end, teachers agreed with the more efficient choice of conventional grammar teaching. In a similar fashion, Dündar et al. (2017) reported that most participants involved in their study were interested in learning English with corpus. However, they believed that corpus-based grammar teaching needs to be designed carefully, and they also need to build fundamental solid English knowledge before using the corpus. A similar study was done by Muhyidin (2021), surveying the students' perceptions of using corpus in learning grammar. The findings showed that the corpus toolkit increased students' participation and enthusiasm in grammar learning, motivated the students to speak English, and assisted students in learning during the pandemic.

Regardless of the direct use, a corpus can be used indirectly to consult teaching materials. Teaching materials can use the corpus research results to inform the syllabus, the organization, and the content. Meunier & Reppen (2015) explained the differences between corpus-informed grammar materials and non-corpus-grammar materials, e.g., the passive constructions. Corpus results show that agentless passive is dominant in actual use and get-passive is less frequent, but these two points are not mentioned and discussed in non-corpus-informed grammar coursebooks. More interestingly, unlike corpus-informed materials, register preferences are not indicated in non-corpus-informed materials. Another thing to notice is that the examples in corpus-informed materials are contextualized, but those in non-corpus-informed materials are decontextualized.

In response to this specialty of corpus-informed materials, some studies have explored the perceptions toward using the materials. Yanto & Nugraha (2017), for instance, studied the implementation of corpus-informed grammar learning and how students perceived the materials. This study argued that incorporating corpus-informed data into grammar classrooms was beneficial as the students were introduced to real-life English examples and informed about the context, which led to a positive reception of corpus. This study highlighted the use of corpus-informed materials as a tool to promote autonomous learning and inductive thinking. Similar responses to corpus-informed materials were presented in the study of Lakew et al. (2021), investigating students' and teachers' perceptions of using corpus-informed materials for spoken grammar instructions. The results demonstrated that both teachers and students perceived corpus-informed spoken grammar instructions as a positive contribution to English language teaching, considering the improved achievement made by the students. Nevertheless, the study emphasized the need for sufficient background knowledge and training on corpus-informed materials usage.

3. Research Methodology

3.1 Research Design

This study uses a survey approach involving 40 first-semester students of the English Education Department enrolled in the *Basic Structure* (basic grammar) course. The participants were selected using a purposive sampling technique with the following criteria i.e., they were enrolled in a *Basic Structure* (basic grammar) course and have attended seven meetings with the companion of a corpus-informed grammar coursebook.

3.2 Corpus-informed Grammar Book

The corpus-informed grammar coursebook used in the present study is *Real Grammar*, written by Susan Conrad and Douglas Biber and published by Pearson Longman in 2009. This grammar coursebook has been written based on corpus investigation utilizing the Longman Corpus Network to see how people speak and write. This is a new kind of grammar book since it focuses on typical grammar—looks at the most common grammatical patterns in different registers or communication modes. The awareness of typical grammatical patterns is crucial due to the need to use English accurately and appropriately, meaning that English speakers should speak correctly in particular contexts. This book also connects grammar to words or vocabulary (lexicogrammar), which is important since words are not used in isolation.

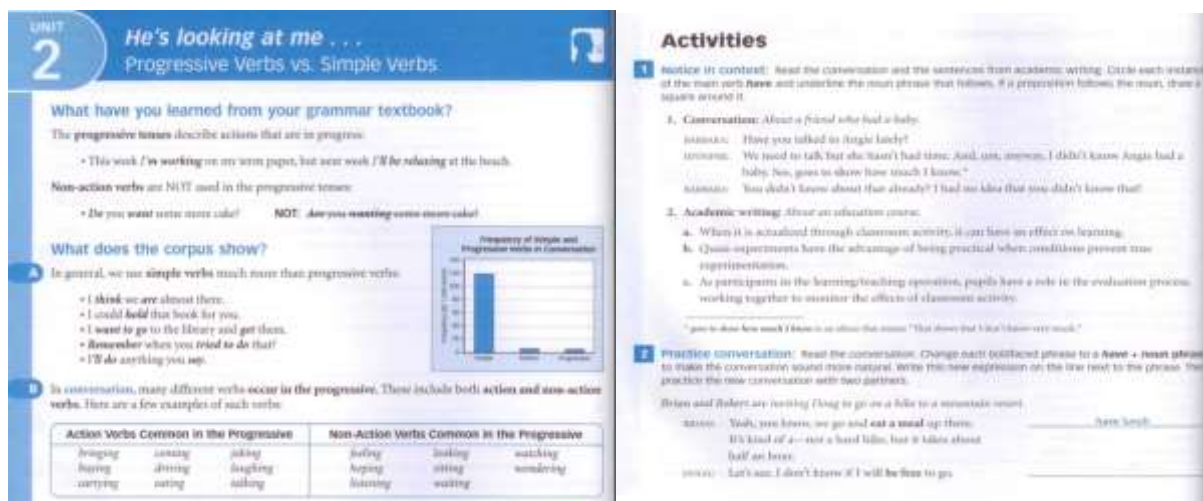


Figure 2. Examples of corpus-informed grammar materials in *Real Grammar*

3.3 Research Instruments

This research utilized questionnaires to collect the data, i.e., students' attitudes toward corpus-informed grammar materials. Questionnaires were employed in this study to gather descriptive statistical information, which may be used as marginal data (Mirhosseini, 2020). The questionnaire instruments were designed to explore the students' attitudes toward corpus-informed materials consisting of 20 items in the following details (Table 1).

Table 1. Topic of questionnaire

Topics of Questionnaire		Items
1.	Students' perceptions of using corpus-informed grammar materials	1—6
2.	The strengths and drawbacks of corpus-informed grammar materials	7—20

This research followed the study of Paker & Özcan (2017) to measure the perception by using five options of answers, i.e., strongly disagree (1), disagree (2), somewhat agree (3), agree (4), and strongly agree (5). The researchers translated the questionnaire into Indonesian to make the participants feel easier and more comfortable and to collect more reliable data. The questionnaire and the translated version were consulted by two experts for validation and to determine whether the English and Indonesian versions were similar. However, the *Indonesian Journal of English Language Teaching and Applied Linguistics*, 7(2), 2023

perceptions can be expressed within the confinements of fixed responses provided by the questionnaires (Mirhosseini, 2020). Thus, this present study also gathered data from interviews in the semi-structured format to confirm and complete the results of the questionnaire data because semi-structured interview allows flexibility in how the questions were phrased and asked (Harreveld et al., 2016). Furthermore, the qualitative method must have multiple data sources (Creswell, 2013). The interview guide consists of 7 questions, as shown in Table 2.

Table 2. Topic of interview

	Topics of Interview	Questions
1.	Students' perceptions of using corpus-informed grammar materials.	1, 2, 3 and 4
2.	The strengths and drawbacks of corpus-informed grammar materials	5 and 6

3.4 Research Procedure

The present study was conducted after the grammar coursebook was used for seven weeks. Table 3 presents the details of the materials covered in each meeting and the activities done in the *Real Grammar* coursebook.

Table 3. Grammar materials used in *Real Grammar*

Meeting	Topic	Activity	Unit
1.	Simple past tense	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	1
2.	Progressive tense	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	2
3.	Perfect tense	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	3
4.	Nouns	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	55, 58
5	Adjectives and Adverbs	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	70, 71
6.	Modal verbs	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	11
7	Modal verbs	read the unit accompanied by the lecturer's explanation, do some practice provided in the book	12

3.5 Data Collection Technique

The data were collected by using questionnaires and interviews. The questionnaires were distributed on a *Google Form* link to the research participants after seven weeks enrolled in *Basic Structure* and had been using the *Real Grammar* book for seven meetings. This study also employed semi-structured interviews to get more comprehensive data and to validate what was chosen in the questionnaires. As many as ten (10) students were selected to be

interviewed based on their responses to the questionnaire. They were selected based on the representation of the response variants. Seven questions in the interview stage cover perceptions, strengths, and drawbacks of using a corpus-informed grammar coursebook.

3.6 Data Analysis Technique

Following the categorization of the questionnaire, namely the views of corpus-informed grammar materials and the benefits and limitations of the materials, the questionnaire analysis was carried out. For each questionnaire topic, the researchers used a percentage that was computed. The outcomes were then thoroughly explained. The conversation was recorded, and the researchers transcribed it. The transcription of the questionnaire's sections was used to determine which elements of the interview data to categorize into. According to each interviewee, the interview's findings were explained. The results of questionnaires and interviews were categorized under identical, emphasizing the students' attitudes. At last, both analyses were further connected to the results of the previous studies to yield a robust analysis for this study.

4. Findings

4.1. Students' perceptions of using corpus-informed grammar materials

This section presents the questionnaire and interview results dealing with the students' perceptions of using corpus-informed grammar material, as shown in Table 4.

Table 4. Students' perceptions of using corpus-informed grammar materials

No	Questions	Scale				
		1 strongly disagree	2 disagree	3 somewhat agree	4 agree	5 strongly agree
1	In my opinion, learning English Grammar using corpus-informed materials is fun.	0	0	15%	65%	20%
2	In my opinion, learning English grammar using corpus-informed materials is helpful	0	12.5%	35%	47.5%	5
3	In my opinion, the use of corpus-based material in studying grammar can help me distinguish the correct choice of words because it provides information under the context of use, namely the context of speaking or writing	0	0	25%	55%	20%
4	In my opinion, the use of corpus-based material can help me to get a broad view of language because there is information on usage context (speaking/writing)	0	7.5%	22.5%	47.5%	22.5%
5	In my opinion, the information of contextual use (speaking / writing) is important in learning grammar	0	0	10%	57.5%	32.5%
6	In my opinion, the frequency information (more often used / most frequently used / rarely used) is important in learning grammar.	0	0	15%	70%	15%

Table 4 demonstrates students' perceptions of using corpus-informed grammar material among the participants, who mostly show positive attitudes. Most of the students (65% of the participants) reported that they had fun learning grammar using a corpus-informed grammar book. Besides, 47,5% of participants agreed that learning grammar using corpus-informed materials was helpful. Many students (55% of the participants) reported that using corpus-based material in studying grammar could help them distinguish the correct choice of words because the materials provide information under the context of use, namely the context of speaking or writing. They also reported that using corpus-based material could help them get a broad view of language because there is information on usage context (47.5% of the students agreed, and 22.5% strongly agreed). Most of the students agreed that the information of contextual use (spoken/written) is important in learning grammar (57.5% of the participants agreed, and 32.5% of them strongly agreed). Most participants agreed—70% of the students agreed and 15 % strongly agreed—that the frequency information is vital in learning grammar. The students agreed that frequency information helped them learn grammar because they are informed of typical and atypical English words, as stated by students P1, P2, P4, P5, P7, and P8 below.

"I think it is helpful to me. Because we know the differences between using the word for writing and speaking (P1)."

"It helps because if we want to speak, we know common and uncommon words. So, we know the real grammar (P2)."

"This book is very good. From the information in the book, we know whether the word is commonly used, especially in speaking. As first-semester students, we are not confident in speaking English, but at least we must know words that are typically and rarely used (P3)."

"Yes, it is important because complete explanations like this can make studying easier. It also makes writing easier (P4)."

"It helped me because we can have a broader knowledge. And from this book, we were asked to think more and remember the word because we should have vocabulary reserve (P5)."

"In my opinion, it is beneficial. For example, we know the use of "can" and the context of use (P6)."

"The book is clear; the practice is not too much, but the explanation is detailed (P7)."

"I think it's great if there's information on words often used like that. The students will understand the material faster (P8)."

Furthermore, the students reported that the information of the context of the use in corpus material helped them learn grammar. Some students confirmed this in the interview excerpts below.

"To be honest, it is beneficial because the information is worth observing. There are many kinds of words, so we must have an insight into the word, its use and context (P2)."

"It is helpful because of the context of use. I could understand fast and, of course, it did not trouble me (P8)."

As for the instructions in corpus-informed grammar materials, the students agreed that the instructions of corpus-informed grammar materials were easy to understand. However, some students also felt that they still needed explanations from the lecturer, as confirmed in the interview excerpts below.

"In my opinion, I understand the instructions in the book. However, for my friend, if the lecturer does not explain it, sometimes they are still confused (P1.9)."

"Sometimes they need explanations from the lecturer. But overall, it's clear enough (P1)."

"This book further explores our abilities because we are always asked to write and think, like, our critical thinking is being developed (P3)."

"The instructions are clear. But sometimes we needed to understand more deeply because it forced me to think harder (P5)."

"The instructions can be understood because the language of this book is easy to understand (P9)."

4.2 Strengths and drawbacks of corpus-informed grammar materials

The present study also discusses the strengths and weaknesses of using corpus-informed grammar materials perceived by the students, which later can be used to improve and modify the teaching activity using corpus-informed materials. Table 5 displays the questionnaire related to the strengths and drawbacks of corpus-informed materials.

Table 5. The strengths of corpus-informed grammar materials

No	Questions	Scale				
		1 strongly disagree	2 disagree	3 somewhat agree	4 agree	5 strongly agree
7	In my opinion, the information on contextual usage (speaking/ writing) makes it easy to learn grammar.	0	0	12.5%	57.5%	30%
8	In my opinion, the information from contextual usage (speaking/writing) helps me to understand grammar material.	0	0	10%	65.5%	27.5%
9	In my opinion, the information on contextual usage (speaking/writing) makes my English practice better.	0	0	10%	60%	30%
10	In my opinion, the use of corpus-based material can contribute to my understanding of English because of its accuracy in providing information about the frequency of lingual units (for example, more often used / most often used / rarely used).	0	0	17.5%	70%	12.5%

11	In my opinion, the information of frequency (more often used / most often used / rarely used) makes me easy to learn grammar.	0	0	15%	67.5%	17.5%
12	In my opinion, information on frequency (more often used / most frequently used / rarely used) help me to understand grammar material.	0	0	17.5%	65%	17.5%
13	In my opinion, the frequency information (more often used / most often used/rarely used) makes English practice better.	0	2.5%	12.5%	60%	25%
14	In my opinion, using corpus-based material in learning grammar can increase language learning awareness.	0	0	27.5%	55%	17%
15	In my opinion, using corpus-based material requires me to study independently.	0	7.5%	32.5%	47.5%	12.5%
16	In my opinion, corpus-based material can motivate me to learn grammar.	0	2.5%	30%	52.5%	15%
17	In my opinion, corpus-based material makes my knowledge of grammar broader.	0	2.5%	15%	62.5%	20%
18	In my opinion, exercises in corpus-based material (frequency and context of use) require me to think critically.	0	7.5%	37.5%	45%	10%

Table 5 demonstrates that most of the participants agreed that the information on contextual usage (speaking/writing) made them learn grammar more easily (57.5% of participants agreed, and 30% of them strongly agreed). They agreed that the information from the contextual usage helped them understand the grammar materials (65.5% of the total participants agreed). That context of use improved their English practice (60% of the total participants agreed).

Most students (70% of the total students) confirmed that corpus-based materials could positively contribute to their understanding of English because of the accuracy in providing information about the frequency of lingual units. The frequency information made them learn grammar more easily (67.5% of the students agreed) and helped them understand grammar material (65% of the participants agreed). However, 2.5% of participants disagreed that the frequency information helped them learn English better. Meanwhile, for the use of corpus-based material in learning grammar, the students responded that the use of corpus-based material increased their language learning awareness (55% of the participants agreed, and 27.5% of them somewhat agreed). Most students—47.5% of the participants—agreed that using corpus-based material required them to study independently (agreed), but 3 out of 40 students (7.5%) disagreed. The students also reported that corpus-based material could motivate them to learn grammar (52.5% of the participants agreed), and only 1 out of 40 students (2.5 %) disagreed. Furthermore, the

result showed that corpus-based materials broaden the student's knowledge of grammar, as confirmed by 62.5% of the participants.

Still related to the strengths of corpus-informed grammar materials, there were 18 students out of 40 students (45% of the total participants) agreed that exercises in corpus-based materials required them to think critically. Several students agreed that using corpus-informed grammar materials was helpful. Using corpus-informed grammar materials was challenging, but they are also good things to learn. Below are some student statements mentioning the strengths of corpus-informed grammar materials.

"This book is very good. From the information in the book, we know whether the word is commonly used, especially in speaking. As first-semester students, we are not confident in speaking English, but at least we must know words that are typically and rarely used (P3)."

"This book further explores our abilities because we are always asked to write and think, like, our critical thinking is being developed (P3)."

"Because there is frequency information, we know this word according to what native speakers use and whether this word is suitable for writing or speaking. So, we don't just carelessly talk and write (P10)."

However, apart from the strengths, corpus-informed grammar materials also have some drawbacks, as reported by the students in Table 6.

Table 6. The drawbacks of corpus-informed grammar materials

No	Questions	Scale				
		1 strongly disagree	2 disagree	3 somewhat agree	4 agree	5 strongly agree
19	In my opinion, corpus-based material (frequency and context of use) was confusing to understand without a lecturer's explanation	5%	22.5%	35%	32.5%	5%
20	In my opinion, exercises in corpus-based material (frequency and context of use) take longer to complete.	2.5%	30%	40%	22.5%	5%

Table 6 shows that students find the materials confusing without a lecturer explanation meaning that the explanation is still mandatory in the classroom. There are 35% of the participants claimed that corpus-informed materials are challenging to understand without the lecturer's explanation. In addition, 40% of participants reported that corpus-informed exercises took longer to accomplish, which is understandable since the format differs from those exercises in conventional grammar coursebooks. The corpus-based exercises focus more on actual language use, distinguishing spoken context from written context. However, students can use this practice to enhance their linguistic knowledge and language competence; thus, taking longer to complete corpus-based tasks should be considered worthy, and they have to get used to it. Teachers can adjust the time or provide clearer instructions before the students complete the exercise.

The students generally held a positive attitude toward corpus-informed grammar materials; some elements were functional. The information on the context of use and frequency assists the students in understanding that grammar is not only about rules but also about using the rules. The students also found that corpus-informed materials improve their language learning awareness, motivate them to study independently, broaden their language, and make learning grammar easier. However, corpus-informed materials are sometimes confusing, and they still need explanations from the lecturer. It indicates the importance of the materials being accompanied by lecturers with sufficient knowledge of corpus literacy.

5. Discussion

The study's findings demonstrate that students view corpus-informed grammar materials positively since they can contribute to their learning process. This result is in line with Yanto & Nugraha (2017) and Lakew et al. (2021)'s research proving that students (and teachers) perceived corpus-informed materials as advantageous for learning grammar. The positive attitudes are associated with some prominent characteristics of these materials, namely context of use and frequency information. Students agreed that the description of usage context and frequency is helpful for them to use the grammar correctly and appropriately. This finding corresponds to a study by Fauzan et al. (2022), claiming that corpus resources can help students learn grammar more effectively. In addition, frequency information emphasizes the priority scale of the grammar materials, which is necessary since many grammar topics should be covered and taught; thus, the principled decision in grammar material design is mandatory. Conrad (2000) pointed out that designing a grammar syllabus consisting of materials frequently used or found by English speakers is crucial. Conrad (2010) also mentioned that grammar is not merely associated with the dichotomy of correct/incorrect or grammatical/ungrammatical; it is also about probability—what is typical in a particular context. Being 'typical' implies that grammatical choices are more often than other choices.

This study also demonstrated that using corpus-informed grammar materials is also helpful for the students in making grammar learning easier. This finding corresponds to Girgin (2019)'s and Muhyidin (2021)'s findings. These two studies did not specifically discuss corpus-informed grammar materials. However, Girgin (2019), for example, showed that using corpus-based activities for grammar topics was advantageous for the students since they deal with authentic language data. Using an inductive approach helped the students raise their awareness and critical thinking. Muhyidin (2021) also reported that corpus did assist the students in learning the target language. Students find the use of corpus helps them learn English better. More recently, Rodríguez-Fuentes & Swatek (2022) figured that using corpus-informed materials is effective compared to non-corpus-informed materials in grammar teaching.

Regarding the nature of corpus-informed grammar materials, this study presented some strengths from students' points of view. The first thing relates to the noticeable characteristics of corpus-informed materials: the register-specific description of grammatical patterns (whether used in spoken or written context) and the usage frequency in particular contexts. This finding is in line with Meunier & Reppen (2015)'s claim on the benefits of

corpus-informed materials stating that these two details can only be found in language materials designed based on or informed by the results of corpus research. Regarding frequency information, Biber & Reppen (2002) and Timmis (2015) argue that frequency can give accurate information on grammatical patterns, which means students can use the grammar appropriately.

Another strength captured by students' perception is the capability of corpus-informed grammar materials to increase language learning awareness. Boulton (2017)'s paper confirmed this as one of the characteristics of corpus use in language teaching and learning. Using corpora in language learning means exposure to authentic data directly or indirectly, which provides massive contextualized linguistic data exposure needed for language learning. This condition is more controlled compared to regular reading or listening daily, which can increase the language awareness of the learners (Boulton, 2017). Corpus-informed materials are also reported as an attempt to promote autonomous learning, which corresponds to the finding of Yanto & Nugraha (2017)'s study. They reported that using corpus-informed grammar materials can help students study independently, leading to more access to autonomous learning. Regarding learner motivation, corpus-informed materials can motivate students to learn grammar, as proven by the result of this study supporting Muhyidin (2021)'s study about the benefit of corpus use in the classroom, i.e., motivating learners.

Some participants of the present study also reported that corpus-informed materials could broaden their knowledge which is in line with the statement from Conrad (2010) and Jones & Waller (2015). They pointed out that corpus can tell many things about grammar related to structural and probabilistic terms. It connects grammar with typical social and discourse contexts, which can benefit the learners and make them better language users. Corpus-informed materials are designed to facilitate learners with the skills to use the language appropriately. These are primarily presented in DDL format, which is relevant to the inductive approach. This study showed that students perceive corpus-informed materials positively as they can train critical thinking. This result corresponds with Nugraha et al. (2017)'s study demonstrating that corpus use (DDL) involved hypothesis formation through inductive DDL tasks. This inductive thinking is favorable since learners are trained to generate patterns based on empirical data.

Although students can experience the strengths of using these materials, some drawbacks should be considered. First, the practice or exercise sections in the corpus-based or corpus-informed grammar materials are perplexing to some students requiring clear explanations from the lecturers prior to the completion of the practice. These findings are aligned with Yanto & Nugraha (2017) findings, reporting that learning using corpus is challenging because it is a new experience for the students. Consequently, the students also need longer time to complete the practice or exercise, which they are not used to the formats. The present study proved that corpus-informed exercises took longer than conventional grammar exercises. This result aligns with Leńko-Szymańska (2017)'s research claiming that the tasks in the corpus were too challenging and time-consuming. These indicate that, regardless of the powerful side of corpus-based or corpus-informed materials, sufficient backgrounds in corpus knowledge and lecturers' explanations are crucial in using the materials.

Given the earlier details on the strengths and weaknesses of corpus-informed materials, it is essential to consider these points about the design of grammar materials. First, considering the significant importance of corpus-based or corpus-informed materials, these kinds of materials are unavoidable and should be recommended in EFL classrooms. However, teachers should have sufficient corpus literacy to design, develop, and use these materials in the classrooms. Ma et al. (2021) argued that corpus-based language pedagogy is essential, but this requires training on corpus use and integrating corpus in language teaching. Without adequate knowledge of corpus, teachers and materials writers might face challenges in creating and using materials based on corpus research. Despite the growing popularity of corpus linguistics in the last decades, the corpus-based linguistic approach is not widely known by the majority of the professional teaching community due to the absence of corpus learning in teacher training and teacher difficulty in handling corpus technology (Boulton, 2017; Callies, 2019; Chambers, 2019; Zareva, 2017). Therefore, English education departments or teacher training programs should consider adding corpus literacy to their curriculum.

6. Conclusion

The present study showed that using corpus-informed grammar materials can help learners study grammar appropriately since they contextualize the grammatical patterns and provide the usage tendency. This information is insightful for learners, which can help learners to be communicatively competent language users. Most students view the use of corpus-informed grammar materials positively and can use the strengths of corpus-informed materials (register-specific context, frequency information). Some strengths of corpus-informed materials cannot be found in conventional or non-corpus-informed grammar materials. They can help increase language learning awareness and motivate them to study inside or outside classrooms. However, the students believe that using corpus-informed materials should be accompanied by clear instructions and explanations from the lecturers/teachers/instructors, and the design of the materials should be carefully considered. The materials writers should have adequate knowledge of corpus literacy as the pedagogical content knowledge. This study, however, covered a relatively small-scale level, involved first-semester students only, and was conducted in a pretty short time which might result in some inaccuracies. Therefore, enrolling more participants from various academic levels with a more extended study period can benefit the research since they can provide more comprehensive results.

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