Abstract
This paper presents an analysis of the students’ writing skills. It is believed that writing is a powerful device to reflect language structure and to promote language learning. However, many students still experience difficulties in writing since it requires the appropriate grammatical and textual structures. Therefore, this study tries to analyse the students’ writing skills that will help them to improve their communicative competence. Data were obtained through documentation of students’ texts and interviews. The theories of Systemic Functional Linguistics, explanation text, and communicative competence were employed as the framework of the text analysis. The findings revealed the social function, the generic structure, the linguistic features, and also the grammatical and discourse competence in students’ explanation texts. It was concluded that the students perceived the importance of the use of correct grammar and textual structure in their writing. Regarding some grammatical mistakes in students’ explanation texts, it is recommended that teacher give explicit teaching and more exercises to them so that the students’ communicative competence can be developed.

Keywords: writing, grammatical competence, discourse competence, systemic functional linguistic, explanation text

Introduction
Many studies have revealed that writing is important for engineering students (Clement, Murugavel, & Murugavel, 2015; Donnell, Aller, Alley, & Kedrowicz, 2011; Hadiani & Permata, 2017; Mulia & Krisanti, 2014; Riemer, 2007; Surya, 2015). Most studies consider writing as an essential language skill for engineering students since it is used to perform various communicative tasks in formal and informal situations. It is also a powerful tool to reflect language structure and to promote language learning (D’Andrea, 2010). However, many students still encounter difficulties in writing as it requires the grammar mastery and organisation (Hadiani & Permata, 2017; Saravanan, Prakash, & Selvakumar, 2018). Thus, providing practical resources in teaching writing is needed. This can be problematic since improving students’ writing skills may include developing linguistic and communicative competence.

Developing students’ communicative competence in terms of writing skill requires several instruments, in that teachers, can support the students with...
exposures to reflect the language in all the competence areas. Concerning grammar, the students should be given practices on the grammatical features of the text. In terms of sociolinguistics, the students should be able to determine the readers of their texts. Regarding discourse, the students’ text should have the features to show coherence. With regards to strategy, the students should be able to prefer the genre appropriate to their needs (D’Andrea, 2010).

Explanation text is essential for engineering students as it is a factual text used to explain phenomena, and to answer the questions of how and why, which are not only used in science for natural process, but also common in industry for explaining technological processes (Gerot and Wignel, 1994; Derewianka, 2004; Martin and Rose, 2008). In addition, Cullen and Pudwill (2002) argue that engineers are often asked to give technical explanations on product design or manufacturing processes. It indicates that engineering students should be able to write a technological explanation text related to the engineering field.

However, writing an explanation text is not easy for EFL students. The students were reported to experience problems in writing an explanation text (Ting & Campbell, 2013). For Indonesian EFL students, the explanation text is considered a new type of text, so the availability of the text samples is still limited. This impacts on students' understanding of the text, leading to a different interpretation of how an explanation text should be written.

Studies regarding the students’ explanation texts based on Systemic Functional Linguistic have revealed the students’ ability in writing explanation text in terms of structure and language features. Common problems encountered by the students are the incorrect use of grammar and the limited use of textual structure (Martínez Lirola, 2015; Ting & Campbell, 2013; Hadiani & Fatonah, 2018). These lead to the failure of forming the purpose of an explanation text. Utilising the appropriate grammar and textual structure plays an important role in constructing an effective explanation text. It can be inferred that the students’ understanding and mastery in grammatical and discourse competence can be viewed from the students’ text analysis that can be used to improve the students’ communicative competence.

Based on the elaboration of the students’ difficulties in using the appropriate grammatical and textual structures in explanation text, this study is designed to investigate the students’ explanation text in SFL perspectives and its impact on the students’ grammatical and discourse competence. Therefore, this study aims to look into the students’ explanation text with regard to lexico-grammar analysis (Mood, Theme, and Transitivity). By carrying out the text analysis, it is expected that the students’ grammatical and discourse competence in writing can be generated.

Communicative Competence and Systematic Functional Linguistic

Communicative competence has long been considered important in second and foreign language learning (Hymes, 1972; Canale and Swain, 1980; Canale, 1983; Savignon, 1997). This term is related to the language user’s grammatical knowledge of syntax, morphology, phonology as well as social knowledge about the appropriate ways to use utterances (Hymes, 1972). It includes grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. The first area, grammatical competence, is concerned with sentence-level grammar in which it governs the understanding and knowledge of using the
grammar, syntax, and vocabulary of a language (Canale, 1983). It deals with the ability to use the correct words, the rules of sentence structure, the punctuations, and the spellings, etc. Discourse competence, on the other hand, deals with intersentential relationships. It is the understanding of how ideas are connected, and how to interpret language based on its context. In writing, discourse competence can be found in the use of connectors, so that the text is coherent and meaningful (Eggins, 2004). Meanwhile, sociolinguistic competence is the knowledge of having an awareness of the social rules of a language (Savignon, 1997). Whereas, strategic competence deals with the experience to observe the problem in communication and how it is fixed (Canale, 1983; Savignon, 1997).

The notions of Systemic Functional Linguistic (SFL) and Communicative Competence (CC) have been considered fundamentally different in terms of meaning-making and choice making. SFL is a system that focuses on making meanings and producing meaningful communication (Halliday, 1985). Whereas, communicative competence deals with the ability of language user’s on grammar, syntax, morphology, phonology as well as social knowledge about the appropriate ways to use utterances (Hymes, 1972). It can be stated that CC focuses on learning to talk that sees language as an expression rather than a source of meaning. However, many scholars believed that SFL could be used to support the development of someone’s communicative competence (Royce, 2007; Rodrigues and Williamson, 2010). It can be inferred that communicative competence is a subtype of SFL in which the use of its approach in teaching will support the students’ grammar learning in meaningful communication. SFL helps to improve communicative competence, which is essential for the students in learning languages.

**Explanation Text**

Explanation genre as a scientific text includes social function, generic structure, and linguistic features (Swales, 1990; Anderson and Anderson, 1997; Gerot and Wignel, 1994; Derewianka, 2004). The social function of the explanation genre as the first element of the genre is to communicate how something happens, elaborating steps or any other procedures on how something is done, or why it occurs. It focuses on the steps rather than things. Therefore, the purpose of an explanation text is to inform each step of the process and to provide reasons (Gerot and Wignel, 1994; Anderson and Anderson, 1997; Derewianka, 2004).

The second element of a genre is the generic structure which requires explanation texts to provide components such as a general statement to inform about the thing being explained and a sequenced explanation of why or how something occurs (Gerot & Wignel, 1994). There are two steps for constructing a written explanation according to Anderson and Anderson (1997), Derewianka (2004), and Martin and Rose (2008). It is initiated by a general statement about the event or thing as the first step. Then, it is continued by pointing out a series of sequenced activities that tell how or why.

To make a good explanation text, the writer has to consider some linguistic features in composing the text as the third element of the genre. These are generalised non-human participants, action verbs, passive voice, and timeless simple present tense.
Metafunctions in Explanation Texts

In analysing the students’ text concerning its coherence and meaningfulness, this study draws on the generic structure, social function, and linguistic feature of the explanation text. Furthermore, the elaboration of the students’ explanation text will be based on the SFL perspectives namely interpersonal, textual, and experiential metafunctions.

Interpersonal metafunction is concerned with how language is used for interacting in the form of talking or writing between interlocutors. The explanation text is mainly to inform how something is done. Hence, the purpose of the communicative exchange is giving information that is mostly written in the declarative form (Eggin, 2004; Thompson, 2014). The realisation of interpersonal metafunction is using Mood structure consisting of Mood, Finite and Residue (Eggin, 2004). The Mood element includes of two parts; the Subject, realised by a nominal group, and the Finite which is usually a part of the verbal group (Gerot & Wignel, 1994; Eggin, 2004). The Finite (lexical verb) is commonly written/spoken in present tense (verb I) such as produce, create, make, etc. Modality to show ability, possibility, and necessity might appear in several parts of the clause. In terms of Residue, it is formed from Predicator (non-finite verb), Complement (noun or nominal group), and Adjuncts in the form of adverbial group, and a prepositional phrase (Halliday, 1994; Gerot & Wignell, 1994; Eggin, 2004).

The experiential metafunction is realised by Transitivity system in which ideas and experience are represented through choices of participants, processes, and circumstances (Halliday, 1994; Martin and Rose, 2008). Therefore, the analysis focuses on the grammar of the clause as a representation (Eggin, 2004; Halliday, 1994). Explanation text is generally informing an event or a thing. Therefore, it is concerned with action and reaction. In the English transitivity structure, clauses can be analyzed for a process type (material, mental, behavioral, verbal, existential, and relational). Material processes such as the words, ‘hit,’ ‘put,’ ‘process,’ ‘maintain,’ etc. are commonly used in the explanation text since they show physical action. Thus, the role of the participant is as an actor in the process. Nevertheless, passive voice construction is usually used to focus on the activity done instead of someone who does the action. In addition, the verbs such as ‘are’ and ‘is’ which refer to the process of establishing an identity and assigning a quality are also found in the explanation text. These words mark the relational process. Hence, the participants act as carrier, token, or value.

The textual metafunction of language deals with how the text is created in the form of talking or writing to shape the text. This concept utilises the structure of Theme and Rheme (Gerot & Wignel, 1994; Eggin, 2004). The Theme is recognized as the elements which come first in the clause. This element is what the clause is about, and it serves as the point of departure of the message from the previous one. However, Theme is not always the subject of a clause, but it is the left-most important constituent of the clause (Gerot & Wignel, 1994). Meanwhile, Rheme refers to the rest part of the clause. The Theme can be classified into several types. The first type is topical Theme in which it appears in the form of Subject (noun or nominal group), and it is considered as unmarked topical Theme, whereas a topical Theme which is not the Subject is known as a marked topical Theme.
(Gerot & Wignel, 1994). Another type of Theme is a textual Theme in which it functions to relate the clause to its context. It can be set out in the form of Conjunctive Adjuncts (first, then, next, after that, etc.) and Conjunctions (but, and, or, etc.). Regarding the explanation text, the Conjunctive Adjuncts as the textual structure are used to keep the text cohesive and coherent.

Method
This study is aimed to explore how student’s explanation text is analysed based on SFL perspectives. By utilising a qualitative case study approach, the data were collected through the documentation of students’ texts and interview. The students’ explanation texts were used as the first method of data collection. The writings were deliberately chosen from six students’ explanation text during English class at the fifth semester of one state polytechnic in Bandung, Indonesia year 2017/2018. The six writings represented the high, mid, and low achievers. The students were asked to write an explanation text about a tool, an instrument, or a machine that they can find in their workshop after they had three meetings discussion on writing the explanation texts. The texts were then analysed in terms of the social function of the explanation text generated by Gerot and Wignel (1994), Anderson and Anderson (1997), and Derewianka (2004) that is to communicate how something happens, elaborating steps or any other procedures on how something is done. After that, the analysis was continued by identifying the generic structure in students’ texts as suggested by Gerot and Wignel (1994), Anderson and Anderson (1997), and Derewianka (2004) which covers a general statement, and a sequenced explanation of why or how something occurs. Then, the students’ explanation texts were analysed based on the linguistic features at the clause level; interpersonal, experiential, and textual metafunctions. The results of text analysis were then fitted to the theory of communicative competence, especially grammatical and discourse competence.

The interview with the participants of the study as the second source of data was carried out after the students’ explanation texts had been analysed. It was used to obtain more in-depth data on the students’ perspective about the process of writing explanation texts and to justify the data elicited from text analysis. For this reason, semi-structured interviews with open-ended questions (Frankel & Wallen, 2007) were chosen to get the information required (Field & Morse in Emilia, 2005). The content and procedures of the interviews were arranged based on the data obtained from the text analysis. Each student was given questions based on their experiences during the process of writing the explanation text. In addition, Bahasa Indonesia as the participants’ native language was used to make the participants easier to elaborate on their answers. The interviews were recorded by tape recorder. The interview data were inserted while discussing the main data resulted from the text analysis.

Findings and Discussion
This section presents the analysis of students’ explanation text in SFL perspectives, with regard to interpersonal, experiential, and textual metafunctions.
The results will be used to interpret the students’ grammatical and discourse competence in their writing.

The first step of genre analysis is done by analysing the generic structure of the students’ explanation texts. Theoretically, explanation text includes a general statement, and a sequenced explanation (Anderson & Anderson, 1997; Derewianka, 2004; Martin and Rose, 2008). The result of the analysis is illustrated in Table 1 below.

<table>
<thead>
<tr>
<th>Text</th>
<th>General Statement</th>
<th>Sequenced Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>2</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>3</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>4</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>5</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>6</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Based on Table 1, it can be seen that the students’ explanation text has fulfilled the structure of explanation text. Regarding the social function, explanation text is a text which informs about how something is done (Anderson and Anderson, 1997; Derewianka, 2004; Martin & Rose, 2008). It can be said that the students’ ability to write the explanation text with regards to its structure and organisation is considered sufficient. The students argued in the interview that they were able to write the generic structure of the explanation text since it was taught previously. It indicates that giving explicit teaching on the theory of explanation genre will improve the students’ awareness and also their ability in writing an explanation text.

The analysis of Mood structure in the students’ explanation texts is carried out to identify interpersonal metafunction. These can be found in the form of clauses and sentences. There is a total of 96 clauses in 60 sentences found in students’ explanation texts. Almost all of the sentences (58 sentences or 97%) are positive declarative. It points out that the students are aware that the readers are the recipient of information (Eggins, 2004). The dominant use of declarative sentences in students’ explanation texts reflects the characteristic of explanation text in which to give information. Moreover, the students mostly employ present tense with verb 1 in the clauses in spite of errors they make in the tense form. The most common errors are the inappropriate use of Verb 1 in the text. The students write: ‘The machine process the workpiece when it finishing’. The first Finite uses present tense, but it is incorrect. Since the subject is singular, the finite should take an additional ‘s’. On the second clause, there is no complete finite. Since the complement is in ‘ing-form’, the finite should take the verb ‘is.’ These show that the students still have problems differentiating the types of verbs in their writing. It was found from the interview that for the low achiever participant, they admitted that they did not know and they did not understand how to use the correct types of verbs in sentences. It means that the teacher should work harder to give them some extra exercises and explicit teaching on the use of type of verbs in sentences.
In addition, the students also use Modal Finite in the clauses. The Modal Finite can, may, will in an explanation text are applied to express the students’ opinion towards a specific utterance in the text whether it is to indicate ability, necessity, or possibility. However, there is an improper form of Modal Finite in the students’ explanation texts. In the text, the student writes ‘The coil will changed’ which is considered inaccurate. The predicator ‘change’ which appears to be written as ‘changed’ after the Modal Finite ‘will.’ The students admitted in the interview that they did not know that they should use an infinitive verb after Modal Finite. Meanwhile, some others admitted that they knew that they made mistakes, and the error was caused by their carelessness. It indicates that errors in students’ writing can be caused not only by the students’ inability but the students’ carelessness as well.

The experiential metafunction analysis is carried out to recognise how reality is presented in the language. Based on the review, it can be outlined that majority of clauses in the students’ explanation texts are written in material process (78%) followed by relational process (21%) and verbal process (16%). The dominant use of material processes in the students’ explanation text shows the students’ understanding of the social function of the explanation text which is to inform how something is done. They are written in words to present physical action. The students, in their texts, applied the material processes such as maintain, put, create, check, prepare, mark, place, rotate, repeat, and hit. The verbs are categorized as dynamic verbs which signal the doing which are in line with Gerot and Wignel (1994), and Anderson and Anderson (1997) who state that explanation texts occupy the use of material processes. In addition, the huge number of passive voice such as ‘is set’, ‘is checked’, etc. also demonstrates the students’ comprehension that the explanation text focuses on the actions on how something is done instead of pointing out who does the actions. It indicates that the students have tried to apply the linguistic features of explanation text showing technological processes by using passive voice (Martin and Rose, 2008) although there were still some errors in its construction. Moreover, the students also use relational process such as ‘is,’ and ‘are’ to show the entity or the state of being. The use of relational processes in their explanation texts indicates that the students have been able to adapt with the linguistic features of the explanation texts by using relational processes (Derewianka, 2004; Gerot & Wignell, 1994; Martin & Rose, 2008). Nevertheless, the errors in the form of the verb still occur. Taking, for example, the student writes ‘After that the molten glass is cutted slowly’. As the clause is in the passive voice, the construction of verb form should be the verb ‘to be’ followed by the verb in past participle form (Verb 3). This is in line with the study conducted by (Ting & Campbell, 2013) who state that students employed inaccurate construction of passive voice in their explanation texts. This is possibly due to the students’ misunderstanding of the use of the structure of sentences.

The textual metafunction is extracted to identify the topic of the clause through Theme and Rheme structure (Gerot & Wignell, 1994; Thompson, 2014). The result of the analysis shows that the clauses are mostly written in proper noun which can be categorized into unmarked topical Theme. The students probably want to show that the subject of their explanation text is an important object, so it
appears in a proper noun such as ‘Trafo,’ ‘The workpiece,’ etc. The Rheme of unmarked topical Theme will be consequently the informing agent of the Theme that could be in the form of a definition, an explanation, or an opinion. However, some students produced marked Theme in their explanation texts which are mostly in the form of sequence markers. This is relevant to the characteristics of an explanation text which is to inform how something is done. Most clauses are marked by the sequence markers such as first, after that, then. The students tend to show that they are explaining the process of how something is done. It can be said that the students have attempted to give precise information which forms a coherence in their explanation texts by employing the sequence markers (Ting & Campbell, 2013). The text analysis shows that the students have tried to write the explanation text by using the generic structure and organization of the text appropriately.

The interpretation of students’ grammatical and discourse competence is taken from the result of text analysis from SFL perspectives, with regards to interpersonal, experiential, and textual metafunction. Based on the result of text analysis, it was found that in general the students’ grammatical and discourse competence is considered satisfactory. It can be seen from the students’ ability to use the correct grammar and textual structure to mark discourses in their texts. The students still made several errors in their writing. From the students’ texts, it can be found that students made more errors in grammar (75% that represents 21 errors) than in textual structure (25% that represents 7 errors).

In terms of grammatical competence, students made mistakes in using the verb type (38%), passive voice construction (33%), modal auxiliary (19%), and spelling (10%). These show that some students still have difficulties in using the correct grammar, in this case, sentence structure in their writing. However, these errors are mostly made by the low achiever students. It was revealed from the interview that the students do not understand the rules of sentence structure in terms of tense and passive voice construction. It indicates that the teacher should provide the students with more exercises and explicit teaching related to this issue.

Meanwhile, concerning the discourse competence, the students employed conjunction such as ‘and’, ‘but’, and ‘or’ and the conjunctive adjuncts such as ‘first’, ‘to begin with’, ‘then’, and ‘next’ as the textual structure in their explanation text to make their text coherent and meaningful. However, some errors were still found in the students’ texts specifically in using the correct conjunction and reference in their sentences. From the analysis, it can be said that some students still encounter some difficulties in using the correct cohesive devices in their texts to make them coherent and meaningful. The preferred solution is that the students should be given more exercises and explicit teaching related to the problems faced during the process of writing.

**Conclusion**

This study has examined the students’ explanation texts in SFL perspectives intended to improve the students’ communicative competence. The results show that the students have fulfilled the criteria of the explanation text by employing the elements of generic structure in their texts. Whereas, with regards to the linguistic
features, the students have been able to identify the types of verb appropriate with
the characteristic of the explanation texts in spite of some errors in verb type,
passive voice construction, modal verb, and spelling. The dominant use of
declarative sentences as the Mood choices is considered relevant to the
characteristic of the explanation text. The Transitivity structure analysis shows that
the clauses are dominated by material processes. In the Theme-Rheme structure,
the clauses are mostly written in unmarked topical Theme. Based on the text
analysis, it can be inferred that in terms of grammatical competence the students
could be categorised satisfactory, even they still have difficulties in using the
correct grammar of type of verbs, passive voice construction, and spelling, for
example. Meanwhile, regarding discourse competence, the students have been able
to use conjunctions and conjunctive adjuncts in their explanation text to keep the
text cohesive and coherent. It should be stated that analysing students’ text analysis
can reveal the students’ grammatical and discourse competence.

In conclusion, students realised the importance of the use of correct
grammar and textual structure in their writing. In terms of teaching-learning
practice, learning writing is not a single shot activity. It should be carried out
regularly and intensively. Thus, to create a meaningful writing class, it might be
suggested that teacher and student continue active communication both inside and
outside the classroom. Concerning the grammatical mistakes in the students’
explanation texts, it is recommended that the teacher give explicit teaching and
more exercises to them so that the students’ communicative competence can be
improved.

References
Macmillan Education Australia.
to second language teaching and testing. *Applied Linguistics, 1*(1), 1-47.
Canale, M. (1983). From communicative competence to communicative language
pedagogy. Language and Communication. London: Longinal, 2-27
of the English language training need analysis for engineering students in India.
*English Language Teaching, 8*(2), 116–125. https://doi.org/10.5539/elt.v8n2p116
*Bulletin of Nagoya Institute of Technology, 53*, 57-64.
D’Andrea, L.P. (2010). Using writing to develop communicative competence in the
foreign language classroom. *BELT Journal. 1*(3), 139-146
Teacher Association
says that engineering graduates have poor communication skills: What the
literature says. *ASEE Annual Conference and Exposition, Conference


