

Need Analysis in Designing Digital System English Book for English Instructional Class

1st Difiani Apriyanti
English Department
Politeknik Negeri Padang
Padang, Indonesia
difi_apriyanti@yahoo.com

2nd Syahrul Ramadhan
Indonesian Department
Universitas Negeri Padang
Padang, Indonesia
syahrulramadhan.632@gmail.com

3rd Hermawati Syarif
English Department
Universitas Negeri Padang
Padang, Indonesia
hermawati_sy@yahoo.com

4th Witri Handayani
English Department
Politeknik Negeri Padang
Padang, Indonesia
wietripnp@gmail.com

5th Syofiani
Indonesian Department
Universitas Bung Hatta
Padang, Indonesia
syofiani.jufri@gmail.com

Abstract—English Instructional Class which is known as *Kelas Berbahasa Inggris (KBI)* has been established in several higher institutions all around Indonesia. The aim is to prepare students to be able to compete in international level. Industrial Engineering of Universitas Andalas located in Padang of West Sumatra has operated KBI until now. The licenses to be KBI teachers in this department are getting their degree from English speaking country, passing micro teaching in English for Specific Purpose (ESP) training, and developing teaching subject module. Meanwhile, students who enroll in KBI class are filtered only based on their willingness. During learning process, the students are in English zone. Listen the lectures in English, having presentation in English, writing tasks in English, especially writing internship report and final project—must be faced and done by the students. There isn't any facilitation for supporting students' acquiring their English. Therefore, being in this class can be frustrating for the students who have lack capability in English. The English book for KBI is created digitally in order to help students in their writing tasks and in the same time facilitate the teachers to teach using the book and CLIL method.

Keywords—English Instructional Class, System English Book, Digital, Industrial Engineering

I. INTRODUCTION

Nowadays, it is necessary to support Indonesian young generation to be a qualified and competitive person in international level especially in acquiring English as the international language. For this purpose, education sector has done several actions such as establishing school using international standard, which is known as SBI (Sekolah Bertaraf Internasional) and allowing universities to have English instructional class which is known as KBI (Kelas Berbahasa Inggris).

Many universities in Indonesia have offered this KBI program, such as Universitas Indonesia, Universitas Islam Negeri Syarif Hidayatullah and Univeristas Trisakti in 2016 [10]. Then, in 2018, the official website of some universities in Indonesia has spread the information that they open the admission for international program, such as Institute Teknologi Bandung [12], Universitas Mulawarman[9], Universitas Negeri Yogyakarta [1], Institute Pertanian Bogor[5], Universitas Gajah Mada[8], Universitas Negeri Padang [2], Universitas Andalas[4] and many more.

Universitas Andalas which is located in West Sumatra Indonesia has facilitated the existency of KBI. Departments which established it in the first term are Biology, Pharmacy, Nursing, Chemistry, and Industrial Engineering. The aims of KBI in this university are increasing graduates' competency and competitiveness globally, starting international class charge by DIKTI, preparing professional graduates with international certificate, giving opportunity for international students, and expanding cooperation opportunity with international institution as the support for student exchange program and credit earning. Several kinds of activities have been carried out to support KBI and bringing up English atmosphere such as English club, student exchange and credit earning on other universities' KBI, even overseas' [4].

Universitas Andalas Industrial Engineering Department of Universitas Andalas offers KBI [3] since 2014. Nearly all the main subjects are delivered in English, except for religion, Bahasa Indonesia, and Civics Studies, in which Indonesian language is used. KBI class is taught by master and doctorate teachers graduated from English speaking countries.

Furthermore, the 'license' for teachers who want to teach KBI class are passing micro-teaching in English for Specific Purpose (ESP) training and have developed a module for their teaching subjects. Actually, as a teacher who is teaching a content subject of industrial engineering field by using English, the teachers also have to be trained to use CLIL method.

CLIL which is stand for Content Language Integrated Learning means that during teaching the subject content, the language is also being taught. It means that for KBI industrial Engineering teachers, they must teach the students the content of the industrial engineering by using English, in during delivering they also teach the language. As Pérez and Basse say that CLIL students have less errors in English speaking and writing comparing to non CLIL students [15]. By applying CLIL, the students will get two knowledge and skills which are the industrial engineering subject content and english related to the subject content.

Coming to KBI class only based on willigness- without teachers teaches the language and without supporting facilitation for acquiring the language- is really not enough. Students can be ended with frustration and stress especially

for students who are not from SBI schools. They must do their tasks in English.

Beside having presentation in English as their tasks, KBI students are also facing a challenge in writing. They must write in English, especially in writing their reports of internship and final projects. If there is no efforts from the teachers or the students, their writing is going to be messy. The use of portfolio [11], technology [6] and classroom feedback interaction [13] for developing writing in ESP and EAP class have been conducted.

Meanwhile, the writer's view toward KBI students is from acquiring the system English. By understanding, using, and drilling the grammar, vocabulary pronunciation, and register, the English skills - listening, speaking, reading, and writing- will be improved skills.

This English system is packed into a book named Digital System English Book for English Instructional Class in order to help the students understand the system English in writing. It will help the students in writing their lesson report and final project report. As Industrial Engineering students, their reports present procedures, process, analysis of an activity or program, and propose a model of program.

Therefore, their writing is a kind of sequence order, which mostly uses passive sentences, and simple present is the most common tense using preposition and adverbial words. After reviewing the reports, analysis is conducted. Analysis is done to find errors or weaknesses occurred in the reports, which later on will be brought up as the topics of the book. Thus, the scope of English system which is presented in the book is limited based on the errors analysis.

This English Book is made as digital book in order to be able to be kept and found easily by the students and teachers, just as experienced by Carmen and Malagón in their study to create ICT for CLIL materials for effectivity and efficiency [16]

Although this book is designed based on the case taken from KBI students' reports, this book can be used for other KBI class. This digital system book is also recommended for KBI teachers who have applied CLIL in the teaching learning process, and for Industrial Engineering KBI teachers who are willing to apply CLIL.

II. METHOD

English student book for KBI class in Industrial Engineering Department of Universitas Andalas is created based on ADDIE model. It stands for Analyze, Design, Development, Implementation, and Evaluation [7]. In analyzing step, 2 progress reports and 3 final projects from KBI class of Industrial Engineering were chosen. Data which is writing errors were taken from chapter 3 of the progress reports entitled 'Result' and chapter 5 of final projects entitled 'Discussion'. Types of error and Error Categories proposed by Wu and Garza [14] were applied, as followed:

TABLE I. TYPES OF ERRORS

Types of error	Error Categories
Grammatical errors	1. Verb tense 2. Sentence structure 3. Coordination 4. Relative clause 5. Singular/plural 6. Verb omission 7. Subject omission 8. S-V agreement 9. Fragment 10. Noun
Lexical errors	1. Noun 2. Pronoun 3. Verb 4. Adjective 5. Adverb 6. Article 7. Preposition 8. Word form 9. Interjections
Semantic errors	Word choice (Meaning)
Mechanics errors	1. Punctuation 2. Capitalization 3. Spelling
Intelligible errors	1. If any

Next, the outline of the book was designed. In designing, a good order and sequence was made. Then, the outline will be developed after getting comment from the KBI teachers and KBI students in order to find out whether the outline concept was the same as what the teachers deal during supervising students' internship report and final project, and also the same as what the students face during writing in English. This book will be implemented in KBI class of Industrial Engineering of Andalas University, and at the end will be evaluated.

III. FINDING AND DISCUSSION

A. Finding

Students Industrial Engineering of Universitas Classroom who were in KBI has produced internship report and final report which were written in English.

From all chapters in the reports, there is chapter of "Discussion". This chapter contains more students' perception and thought. From review toward those chapters, internship report and final project mostly talked about describing a product, designing a product, analyzing a product, and giving steps.

After analyzing these chapters from the reports, there are errors occurred on the writing. They are as followed:

TABLE II. ERRORS ON THE WRITING

No	Analysis Result/Description	Error Categories
1	The students write one sentence with a lot of information, which caused difficult understanding.	Fragment
2.	The students wrote only part of a sentence, such as the sentence contains a verb but not a subject.	Subject omission
3	The students did not consistent in sequencing, such as using first, second, third, then, next, finally. (They start with first, but then cannot be found the next sequence.)	Coordination
4.	The students mixed up between past verb and past participle verb. (Students mostly wrote a process in passive sentences).	Sentence Structure
5.	The students did not use pronoun. (The same words can appear several times in one sentence or sentences which are around them)	Noun-Pronoun
6.	The students forget the basic rules between subject and verb (If the subject is singular, so the verb must plus -s, in a present condition)	S-V Agreement
7	Parts of speech is still confusing (for example housing developer and developer housing)	Word Form
8.	The students mixed up between noun and adjectives (such as uncontrol machine was written machine uncontrol)	Noun-Adjective
9	The students were not using conjunction and caused one sentence with the next sentence seems unrelated).	Conjunction
10.	One sentence does not follow one structure	Sentence Structure
11.	There are wrong words, but not in industrial engineering terms.	Word Choice
12.	Making sentence at the beginning of the sentence, which actually must be written in gerund, such as after getting it, they send it directly.	Verb Tense
13.	The only punctuation which commonly absent is the comma	Punctuation

From the table above, it can be seen that all students' errors are included in all types of errors proposed by Wu and Garza. There are 5 errors in grammatical error type, 3 errors in semantic error type, 1 error in semantic error type, and 1 error in mechanic error type.

Grammatical error is the biggest. It includes fragment, subject omission, coordination, sentence structure, and s-v agreement. The lexical error includes noun-pronoun, word form, noun-adjective. Semantic error includes word choice, and mechanic error includes punctuation.

From grammatical errors, it can be seen that the students did not know how to write a good sentence which contains a lot of information and it was written down in a good structure and grammar. Students were also not aware whether the sentence is structurally and grammatically uncomplete, such as missing of subject, especially when the sentence is complex. Therefore, the missing of subject, or the wrong form of verb occurred. The example taken from the report is *"That make the user have to identify all criteria and recalculate the score manually and one by one in order to visualize the result in BAN-PT's perspective"*. Another example is *"Step-by-step implementation of each use case then identified and created as a class diagram."*

Next, students were not aware with the differences of simple past using past verb and passive sentence using past participle verb. This happened since the concept of simple past in active form and in passive form is still weak. The example is *"Audit result for each study program is serve in the form of average score for each standard along with its system"*. The students must be able to differentiate forms of verb. *The error example is Based on the research conducted be suited to the problems founded."*

The students also did not consistent in describing a sequence such as a process or procedures. Therefore, readers will lost in the middle of their reading.

For lexical errors, the students did not know that their writing is full of the same words which are closer to each others and caused the sentence monotonous and unscientific. Pronouns or referred words were not used. The example is *"Users use paper ony when users want to print members' card, print numbers of books."*

Next, the students did not know the difference of part of speech such as noun, verb, adjective, adverb which caused a mixed up phrases. Students also did not know the English system, wheather adjectives comes after a noun, adverb comes after a verb. This can be the effect of not knowing part of the speech.

Semantic error includes word choice. Students were using any words that they know which is suitable with the meaning in Bahasa Indonesia without any variation. They did not try to find word which has the closes meaning but different. The example is *"The system is a system designed in the hospital library"*, and another example is *"System is described by describing the major activities in the system."*

While for mechanic error, students were not carefull in writing wheather they have left any comma since it will give a big difference in the comprehension.

Beside analyzing the data gotten from students' internship report and final report, an interview was also conducted to the teachers. Teaching in KBI classes, they did aware on the words choice, the pronunciation, the spelling, the grammar plus structure during preparation stage such as making power point, making questions tests, and also on teaching stage by uttering in a good grammatical and structural sentences, and avoiding mispronunciation.

The teachers did not join any special courses to increase their skill for teaching in English. They were just relied on their past experiences during being a student in English speaking country where they must listen to lectures delivered in English and do tasks in English. In teaching, they made sure that the students understand the content of that day subject.

With their background which is not English, the teachers did not focus on students' understanding toward the system of the language such as the grammar, they focused more on students' understanding toward the materials or lessons. They also said that errors usually found in students writing tasks such as in their internship report and final report. They did some corrections, but recommend the students to do proof reading by someone who is skillful in that field.

The teachers said that English book which is going to be created for Industrial Engineering KBI class must be related to topics which are most written by the students. The topics are related to designing, analyzing, and managing. Therefore, the system of the language must refer to the topics, such as the used of sequence such as first, firstly, simple present, etc. Beside that, the teacher will know parts of English that they have to stress on during teaching those topics, and Content Language Integrated Learning (CLIL) can be applied.

While from questionnaire distributed to the students, most of them chose KBI class because they love English and also knowing many benefits for their future being in KBI class. Being in English instructional medium class, during lectures, they focused more on understanding the lesson explained by the teachers. They tried to understand as the whole.

While in conducting the tasks, such as writing internship report and final report, they depend more on their knowledge and skills that they have got during high schools and also on their friends in the class. They used google translate and google translation when they got difficulty in understanding or in constructing sentences. From their expectation, they hope that KBI provides facilities that can support their English's understanding, comprehending, and acquiring.

The students support of having English book specialize in Industrial Engineering problem area. Therefore they will know the system of English language that they must acquire and aware during writing without needed to know all English system which sometimes is confused them.

B. Discussion

From the interview, teachers focused more on students' understanding toward the subject content, not because they do not understand the system of the language, but they are confused how to include teaching the language (English) while in the same time teaching the subject content (Industrial Engineering subjects). KBI teachers must get more training on CLIL, and this book will give a big help for the teachers.

As an English book specialize for Industrial Engineering KBI class, the book must present parts of speech by differentiating the noun, verb, adjective, and adverb. By being able determining part of speech, students error in modifier can be reduced.

The book must present clause in order to let the students know how to write long sentences or complex sentences that give several information. Connection words also need to be presented in the book such as in addition, furthermore, thus, and others, so the students are able to express their information in several sentences which are still in a good correlation.

The book must present the tenses of simple present and simple past. Since using simple past, it means that the book also must present the three verbs which are present verb, past verb, and past participle verb.

Moreover, the book must present simple present verb and simple past in active and passive form. Since the texts are mostly about process and procedures where objects are the main focus.

Beside presenting passive sentences for supporting the process and procedures, order or sequence is also presented such as first, second, third, and also firstly, secondly, thirdly, next, then, finally, the last, and others.

The book also must present way of referring, such as using the pronoun such as in order to create a good and scientific writing, for example the factory workers and used 'they' for reference. Therefore, the outline draft for the book is shown in table 2.

TABLE III. OUTLINE DRAFT

Chapter 1	Parts of Speech
Chapter 2	Present, past, past participle verbs
Chapter 3	Pronoun
Chapter 4	Simple present
Chapter 5	Passive simple present
Chapter 6	Simple past
Chapter 7	Passive simple past
Chapter 8	Clause of complex sentences
Chapter 9	Sequence
Chapter 10	Referring
Chapter 11	Punctuation

By including system of the language which has been filtered inside the book, students will be more aware in writing. After being aware in every of their writing, it is going to be their habit, and finally resulting a good writing.

IV. CONCLUSION

Based on the finding of the research, it can be concluded that most of the students made mistakes in organizing the sentences. Moreover, the Industrial Engineering students of Universitas Andalas need more practice on how to write a sentence which consists of many ideas without confusing the readers. They also need to know how to arrange a process or a procedure in a good sequence. Therefore, facilitating the students with the Digital System English Book for Writing, especially for Industrial Engineering students, will give positive influence through the students' development in writing skill as the book is provided with the specific term related to Industrial Engineering field.

REFERENCES

- [1] Alwi, T. (2018). UNY Siapkan Prodi Kelas Internasional. *TribunJogja.com*. <http://jogja.tribunnews.com/2018/08/22/uny-siapkan-prodi-kelas-internasional>
- [2] Editor. (2018). UNP Buka Kelas Internasional di Tahun 2018, Tertarik Gabung? Retrieved from <https://ayokuliah.id/artikel/berita-kampus/unp-buka-kelas-internasional/>
- [3] Hafil, Muhammad. 2014. Lima Prodi Universitas Andalas Buka Kelas Bahasa Inggris. *Republika.co.id*. 23 August 2014
- [4] Kelas Berbahasa Inggris (KBI). (2018). Retrieved from <http://pmb.unand.ac.id/index.php/informasi-terbaru/informasi-umum/70-kelas-berbahasa-inggris-kbi>
- [5] Kelas Internasional. (2018). Retrieved from <http://admission.ipb.ac.id/kelas-internasional/>
- [6] Kutlu, Ö. (2013). Using Technology for Developing Writing in an ESP Class. *Procedia - Social and Behavioral Sciences*, 70, 267–271. doi:10.1016/j.sbspro.2013.01.064
- [7] Lior, L. N. (2013). Design and Development Models and Processes. *Writing for Interaction*, 21–42. doi:10.1016/b978-0-12-394813-7.00002-

- [8] Pengumuman Penerimaan Mahasiswa Baru Program S-2 Kelas Internasional Fakultas Hukum UGM. (2017, 16 June). Kementerian Riset Teknologi Dan Pendidikan Tinggi Republik Indonesia. Retrieved from <https://www.ristekdikti.go.id/pengumuman-penerimaan-mahasiswa-baru-program-s-2-kelas-internasional-fakultas-hukum-ugm/#UVLxSj5gFZOgui57.99>
- [9] *Sadar Persaingan MEA, FEB Buka Kelas Bahasa Inggris.* (2018, 07 Feb). Retrieved from <https://www.sketsaunmul.co/>
- [10] Sukmawijaya, A. (2016). Berikut 3 Kampus Yang Terapkan Kuliah Khusus Internasional. Official website of Tempo. <https://nasional.tempo.co/read/740142/berikut-3-kampus-yang-terapkan-kuliah-khusus-internasional/full&view=ok>
- [11] Uçar, S., & Yazıcı, Y. (2016). The Impact of Portfolios on Enhancing Writing Skills in ESP Classes. *Procedia - Social and Behavioral Sciences*, 232, 226–233. doi:10.1016/j.sbspro.2016.10.001
- [12] Undergraduate Admission for International Program. (2018). Retrieved from http://usm.itb.ac.id/wp/?page_id=934
- [13] Unlu, Z., & Wharton, S. M. (2015). Exploring classroom feedback interactions around EAP writing: A data based model. *Journal of English for Academic Purposes*, 17, 24–36. doi:10.1016/j.jeap.2014.11.005
- [14] Wu, Hsiao-ping and Garza, Esther V. (2014) Types and Attributes of English Writing Errors in the EFL Context-A Study of Error Analysis. SSN 1798-4769 *Journal of Language Teaching and Research*, Vol. 5, No. 6, pp. 1256-1262, November 2014 © 2014 ACADEMY PUBLISHER Manufactured in Finland. doi:10.4304/jltr.5.6.1256-1262
- [15] Pérez, Marta Celestén & Basse, Rachel. 2015. Analysing errors of CLIL and non-CLIL primary school students in their written and oral productions: a comparative study. *Procedia - Social and Behavioral Sciences* 173 (2015) 11 – 17
- [16] Pérez, Magdalena López & Malagón, Carmen Galván. 2017. Creating Materials with ICT for CLIL Lessons: A Didactic Proposal. *Procedia - Social and Behavioral Sciences* Volume 237, 21 February 2017, Pages 633-637