

ENGLISH MATERIAL NEEDS OF AUTOMOTIVE TECHNOLOGY STUDENTS: AN ESP APPROACH

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ABSTRACT English for automotive technology is a specific discipline in which the students require particular language learning materials to meet their academic and future career needs. Hence, contextual material is a prerequisite to achieving the success of language learning. Drawing on this issue, the present study identified the English material needs of automotive technology students for working in vehicle inspection. The required data were collected using a web-based questionnaire and semi-structured interview from 186 students, 7 English lecturers, and 44 graduates of Poltrada Bali and PKTJ Tegal Indonesia who were purposively selected as the participants. This study classified English materials into content areas of automotive technology, language skills, and linguistic features. The results revealed that content areas needed by the students included vehicle components and their performances, ranging from engine system to support components. This study further suggested that speaking and reading were the most frequently needed skills than the other two skills because of the rapid growth of Information, Communication and Technology (ICT) and the needs of international information exchange in the automotive field. It was also depicted that the students preferred applied terminologies and translation to grammar since many automotive technology references and vehicle inspection were normally written in English. The results of this study could serve as an overview for lecturers and institution in automotive technology program to create standard syllabus and contextual material textbooks for the students.

Keywords: English for automotive technology, English for specific purposes, need analysis

A. INTRODUCTION

English for Specific Purposes (henceforth ESP) rapidly grows in particular disciplines due to the need for a comprehensive language program. Various non-English programs in higher education such as engineering, medical technology, nursing, information technology, pharmacy, and accounting offer English as a proficiency subject matter in their curriculums. General English, however, no longer addresses the students' needs in their scholarly, professional or working environment. ESP becomes an applicable approach that aims to meet the students' particular needs and learning outcomes. According to Rahman (2015), ESP is engaged English learning and teaching circumstance in which training techniques and taking in condition are unique in relation to General English.

Fauziati (2010) expounds a few perspectives that should be considered in structuring ESP, that are investigating the students' needs and wants, planning objectives and goals of the course, conceptualizing the substance, choosing and creating ESP materials, and

triggering students' feedback and instructor self-assessment. Regarding to the learning materials, Ahmed (2017) argues that all good and authentic materials have the characteristics of language input and skill development, positive impression in learners' mind, useful language information, easy familiarity, insight, remedy, and improvement in learning outcome deficiencies. By thinking about qualities of good materials, the lecturer can fit materials to the learning necessities. Planning important and fitting materials for the students is impossible heedlessly. In explicit order, for instance automotive technology, English materials is intended for the accomplishment in learning the subject of vehicle.

Automotive technology programs of Poltrada Bali and PKTJ Tegal Indonesia, which are managed under the Ministry of transportation, have a speciality in the field of vehicle inspection. Owojecho (2020) defines vehicle inspection as constitutional mandate of motor vehicle administration which responsible for ensuring that all vehicles plying the road are certified road worthy. This definition is in line with the regulation of the Minister of Transportation number 133 year 2015 that defines vehicle inspection as a series of activities that inspect parts or components of motorized vehicles, trailer trains, and patch trains in the framework of fulfilling technical requirements and roadworthiness. In spite of safety and roadworthiness, vehicle inspection in Indonesia is carried out to support the realization of environmental sustainability from the possibility of pollution caused by vehicles.

Considering to the responsibilities of vehicle roadworthiness and environmental sustainability, the graduates of automotive technology program should master all about vehicle inspection. The problem is most of vehicle parts and inspection procedures are usually written in English. Ramos (2019) states that automotive-related terminologies are normally written in English, especially those pertaining technology are in English and do not have direct translation. Therefore, English materials are expected to equip the students with knowledge and skills of English in automotive technology field, especially vehicle inspection area.

Based on preliminary interview with the English lecturers, the real condition of existing English materials for automotive technology in Poltrada Bali and PKTJ Tegal Indonesia still needs representative materials to assist the students in learning and developing language skills. As stated by the English lecturers, they often encountered similar problem of looking for and compiling appropriate teaching materials in every beginning of the semester. As a result, there was no exact materials they used, even among the English teachers often used different materials. This condition was supported by the point of views of the students in which they said that most of the English materials taught in their classroom were general

English such as daily routines, describing pictures, stating opinion, etc. Therefore, in order to develop representative English materials, this study is to investigate English material needs of automotive technology students to work in vehicle inspection field. Some previous researchers have investigated students' needs in learning English for automotive technology. Taula'bi' (2016) examined English language skills for automotive in a vocational high school in Sesean, north Toraja Indonesia. She found that the most priority of English language skills of automotive students was speaking. Lestari et al (2017) found that reading skill was the most needed by graduates of automotive of SMKN 2 Kota Bengkulu. The kinds of related vocabularies in automotive were related to car, i.e. kick lever, oil pump, and water cooling system, related to heavy machine, i.e. rear body offset, over hung, etc., and related to the motorcycle, i.e. swing arm, drum brake, and kick starter. The study of Lestari et.al (2017) further found that mastery of technical terms greatly affected the practice of industrial work.

Notwithstanding these above-mentioned previous literature, several research gaps are observable. First, the studies of Taula'bi' (2016) and Lestari et al. (2017) only concerned on vocational high school students' needs of English materials for automotive technology. Hence, a study of English material needs for automotive technology of university students still remains unexplored. Second, these two-mentioned studies only examined English skills and vocabulary needed by the vocational high school students in automotive technology. These studies slightly depict language contents and linguistic features required by the students. Therefore, the current study aims to close the existing gaps by examining English material needs of automotive students including topics of content areas, language skills, and linguistic features in vehicle inspection specialization, which remains more paucity of evidence.

B. REVIEW OF LITERATURE

The most well-known theory about English for specific purposes (ESP) is proposed by Hutchinson & Waters (1987) who state that ESP is a branch of English Language Teaching (ELT) which in turn is divided into two main branches of English for Academic Purposes (EAP) such as Medicine, Engineering, Law, Economics, and Agriculture and English for Occupational Purposes (EOP) such as English for secretaries, technicians, etc. Considering the developments in science and technology and the appearance of many different majors inside each course makes EAP a special language in each course and their materials should be compiled in accordance with the course. Appropriate and contextual materials based on

the students' field of studies are the primary requirement to achieve the success of teaching English for specific purposes. Therefore, conducting an inquiry about the students' needs of language materials in the context of teaching ESP is highly necessary.

In assessing English learners' specific needs, we come to the term "need analysis" which has been enormously discussed along the decades. Need analysis in English language teaching consists in assessing the learning needs of English learners and the techniques of achieving specific teaching and learning objectives (Otilia & Brancusi, 2015). Because English for specific purposes (ESP) courses are based on need analysis, the learning objectives are more obvious than in the case of general English courses (Jigang, 2012). It can be assumed that ESP learners will be more highly motivated in learning about topics and knowledge which are related to their fields of study or work interest (Nugroho, 2019; Poedjiastutie & Rif'ah, 2019). Hence, in the context of ESP teaching and learning in Automotive technology programs of Poltrada Bali and PKTJ Tegal Indonesia, need analysis is highly necessary to scrutinize the actual English material needs for students in English classroom.

Studies on the need analysis of English learning materials in the context of ESP have been conducted for years. Using a survey questionnaire, Guo Hui (2017) investigated English material needs of English for specific purposes for non-English majors in China. The survey depicted the gaps between theory of need analysis and the teaching practice, in which the demand of English for professional learning is highly growing but the existing English materials did not reach the students' actual needs. This study suggested that strengthening students' English practical skills was required as an effort to equip them with adequate knowledge of English as a means of communication. Similarly, the study of Nimasari (2018) also portrayed that English played an essential role in the globalization era for the students to obtain more promising careers, especially in informatics engineering field.

Moreover, Poedjiastutie & Rif'ah (2019) examined the English communication needs of civil engineering students. Drawing on the data obtained from FGD and web-based survey, the results indicated that English oral communication was urgently required by the students. The needs of English as requirement for jobs, professional functions, and casual conversation became the top three English needs demanded by the students. The study suggested that appropriate materials should be designed to meet the students' needs. In a similar direction, Nugroho (2020) analysed the English material needs of Accounting students as seen from ESP perspective. The results provided enrichment for Poedjiastutie

& Rif'ah's (2019) findings that the students of accounting needed contextualized English materials to assist them in developing their language skills. The study further recommended that designing representative materials and teaching activities for accounting students is highly necessary.

These previous studies mainly concern on examining the material needs of ESP students having various background of studies. However, to the best of the authors' knowledge, examining English material needs of automotive technology students still remains unexplored, especially in Indonesian ESP context. In the aim of providing enrichment to the previous literature, this study is conducted to shed some light on the students of automotive technology needs of English and identify what materials they urgently require to help developing their language knowledge and skills. This study contributes as input enhancement of English material needs of ESP students in Indonesian context, so as a basis of reference to develop contextual materials of English for automotive technology students.

C. METHOD

Research Context and Participants

This research used both qualitative and quantitative methods to investigate English materials based on need analysis for automotive technology students. Specifically, this study employed Creswell's (2009) sequential explanatory model which enables researchers to collect qualitative data to support quantitative results in order to depict more in-depth understanding of the current inquiry. In this study, the views and insights of participants were analyzed and revealed qualitatively and quantitatively by following this approach. The sample of this study was taken purposively. The idea behind purposive sampling is to concentrate on people with particular characteristics who will better be able to assist with the research. This study involved selecting the participants relating the English material needs of automotive technology that are English lecturers (N=7), automotive technology students (N=186), and graduates (N=44). The selection of English lecturers was grounded on the fact that they can provide useful information about the existing materials, and their students' needs for English materials. Graduates who have worked in the area of vehicle inspection were hoped to give information about relevancy and necessities of the English materials to their workplace setting.

Instruments and Data Collection

Type of instruments for collecting data in this study were web-based questionnaires and

semi structured interview. Over the past few decades, many of the questionnaires have increasingly been administered using electronic formats (Terluin, et al, 2018). In line with Terluin's opinion, this study concerned with the advantages of data collection over the internet including reduced administrative burden, prevention of item nonresponse, avoidance of data entry and coding errors, automatic application of skip patterns, and in many cases cost savings. The questionnaires were arranged in the Google form and the link then spread via WhatsApp to the all participants. In addition to the web-based questionnaires, semi structured interviews were conducted with two English lecturers, three graduates consisting of the head of automotive technology program, vehicle engineering lecturer, and vehicle inspector. The interview questions covered the following points: (1) the participants' perception regarding to the important topics given to the students, (2) the important skills that the students need to carry out their studies and future carriers (3) regulation and reference of English for automotive technology that can be used as guidance in designing materials (4) English class activities that support in acquiring the language for automotive technology.

Data Analysis

The technique of analyzing the questionnaire data was descriptive statistics. Mishra, et al (2019) define descriptive statistics as the kind of information presented in just of a few words to describe the basic features of the data in a study which consist of three major types that are measures of frequency, measures of central tendency, and measures of dispersion or variation. In this study, measures of frequency were used to calculate the number of English materials needs occurrences using percentage. The scores reflected the levels of need using Likert scales. Harpe (2015) states that Likert scales are based on the idea that some underlying phenomenon can be measured by aggregating an individual's rating of his/her feelings, attitudes, or perceptions related to a series of statements or items. The scores in this study were leveled into 1) not needed, 2) less needed, 3) fairly need, 4) Needed, and 5) strongly needed. Finally, data analysis from the results of semi structured were transcribed to support and explain the results obtained from the questionnaires.

D. FINDINGS AND DISCUSSION

Existing Materials of English for Automotive Technology

The results from the questionnaire based on the English lecturer's information about the existing teaching techniques and materials presented in percentages that can be seen in the table 1.

Table 1. The condition of existing materials and teaching techniques

Statement	Frequency	Percent (%)
Teaching using ESP approach	6	86%
The availability of standard on English for automotive technology syllabus	3	43%
The availability of English for automotive technology books	4	57%
The availability of related learning resources	6	86%
The availability of institute's regulation and policies in English materials	2	29%

As described in the table (1), the majority of English lecturers (86%) applied ESP as an approach to teach English. However, General English is still used by a lecturer to teach English for automotive technology. Regarding learning materials, lecturers use more other related learning resources than standard books on English for automotive technology. There are still lack of standard syllabus and regulation or policies in English materials as guidance in teaching English.

From the questionnaire given to the lecturers, speaking (89%) is singled out as the most essential skill area of English for automotive technology. Regarding to the linguistic features, lecturers perceived that applied terminologies (91%) and translation (83%) are strongly needed by the students in learning English.

To have clear information about experiences in teaching English for automotive technology, two English lecturers were interviewed related to the topics or content areas they taught. The topics they taught were fuel, tire, steering, suspension, brakes, wiper, bumper, horn, rear view mirror, speedometer and jack. Regarding to the language skills, the lecturers seek for listening and speaking materials from internet and give practice in the form of simulation, game, and role play. English learning materials for reading and writing activities are obtained from available books and internet. For grammar, lecturers give example of the use of tenses, present continuous tense, such as simulation of tire repair. Moreover, they taught preposition, sequence, noun, and adjective.

English Materials Relevancy

The data resulted from questionnaires given to the students and the graduates about relevancy of learning materials are about 80% English materials viewed to be relevant and appropriate. Based on the data, the materials learned in the classroom reflect their interest of English for automotive technology field. The given materials already represent to their needs in the academic, professional, and workplace setting. About 20% English materials that are perceived irrelevant because they do not fulfill students and graduates' necessities in English.

English Contents of the Automotive Technology to Work in Vehicle Inspection Area

Based on the data collected, there are a number of various topics of automotive technology in vehicle inspection specialization that are rated by the students and graduates. The level of content areas' needs can be seen in the table (2) below:

Table 2. The level of needs automotive technology contents of English materials

No	Topics of automotive technology for vehicle inspection	Frequency	Level of need
1	Grounding frame	83%	Needed
2	Converter kit	83%	Needed
3	Fuel	88%	Strongly Needed
4	Emission	89%	Strongly Needed
5	Tire	89%	Strongly Needed
6	Ground clearance	84%	Needed
7	Steering	90%	Strongly Needed
8	Suspension	90%	Strongly Needed
9	Brakes	91%	Strongly Needed
10	Drive train and axles	88%	Strongly Needed
11	Transmissions	89%	Strongly Needed
12	Dashboard	84%	Needed
13	Wiper	84%	Needed
14	Bumper	85%	Strongly Needed
15	Horn	84%	Needed
16	Safety belt	90%	Strongly Needed
17	Rear view mirror	86%	Strongly Needed
18	Lighting and reflector	87%	Strongly Needed
19	Windshield	82%	Needed
20	Speedometer	88%	Strongly Needed
21	Jack	84%	Needed
22	Safety triangle	84%	Needed
23	First aid kit	88%	Strongly Needed

The result showed that topics are rated proportionally. Topics are ranging from needed to strongly needed. The level of needs that are strongly needed distributes 61% of the total rates of questionnaire. 39% of students rate the topics which are needed in learning English for automotive. The students' questionnaire results are similar with graduates' opinions that all the contents areas are needed and strongly needed in the practice of vehicle inspection.

Based on the result of interview with two graduates who are vehicle engineering lecturer and vehicle inspector, vehicle components are most frequently used in technical inspection. The content areas of vehicle inspection can be structurally categorized into many components or systems that have already been governed in the Government Regulation No 55 of 2012 about vehicle. Components vehicle include engine system, power train system, suspension system, brake system, tire system, electrical system, fuel system, exhaust system, support system, dimension and safety system. Concerning vehicle inspection, Regulation of the Minister of Transportation Number 133 of 2015 can be referred as guidance by lecturers in designing English content areas for automotive technology in vehicle inspection specialization. Vehicle inspection according to the regulation consists of three main activities that are visual, roadworthiness, and administration inspection. Visual inspection is pre inspection that diagnose the condition, position, and function each system of vehicle without inspection tools. Roadworthiness inspection is conducted to get result of performance standard.

Level of Needs in Language Skills

In terms of language skills, students and graduates perceive differently. According to the students, speaking is the most strongly needed, but graduates' view reading is the most essential. The complete data of level of need of language skills needed by the students is shown by Figure 1 below.

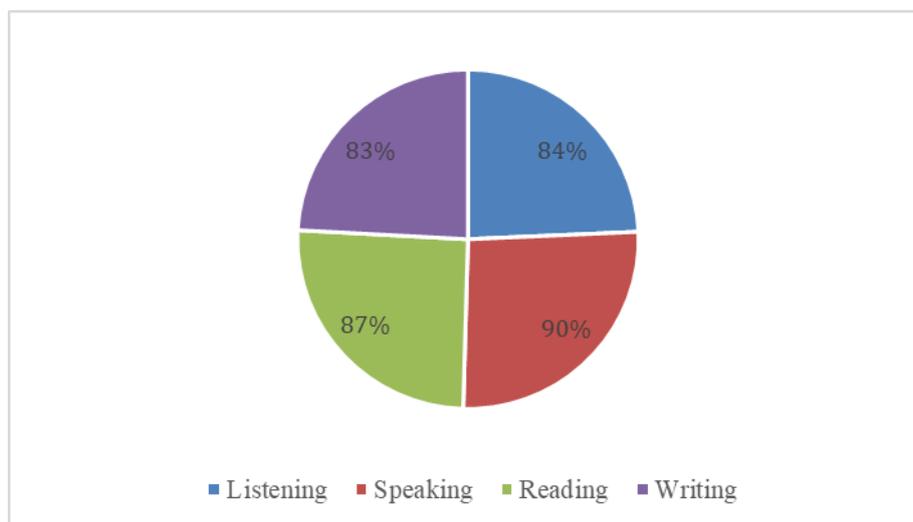


Figure 1. The level of needs of language skills

Figure 1 describes that the four language skills are relatively needed by the students. The majority of students (>80%) perceive topics of language skills are important in their

academic purpose. Speaking skill (90%) is more needed by the students than three other language skills. This result is quite different with the graduates' rate of the language skills' needs that can be seen in the following table (3).

Table. 3 level of needs of language skills

No	Language Skills	Score	Level of need
1	Listening	86%	Needed
2	Speaking	90%	Strongly Needed
3	Reading	92%	Strongly Needed
4	Writing	88%	Needed

Speaking and reading skills are considered more strongly needed by the graduates. The result of interview with the head of automotive technology program, one of the graduates from Bali, showed that actually four language skills are strongly needed by the students since there is a plan of conducting TOEFL as proficiency test in English. Reading practice is strongly needed because the students are directed to be able to read journal citation about automotive technology, and even the students are hoped to be able to write journal article in English. Speaking is also strongly needed by the students because sometimes there is a visit from other countries to get information exchanges. In the end, the outcomes of learning English for automotive technology are intended that the students can compete internationally.

In addition, based on the interview with a graduate who is vehicle inspector, reading is strongly needed because the needs of developing knowledge and insight in the workplace setting. Information Technology (IT) Innovation and advances in automotive field force vehicle inspectors to be capable in using and modifying better technology. If they do not read up to date information, they will be left behind in automotive technology from the other countries. By reading, they can improve their knowledge and capability in analyzing vehicle problems. Some keys in analyzing defect vehicle components in detail information can be found in the automotive books which are still written in English. Additionally, speaking is also strongly needed in their professional setting, because sometimes they need to go for overseas visit.

Level of Needs in Linguistic Features

Table 4 shows the detail of the level of needs of linguistic features by percentage.

Table 4. The level of needs of linguistic features

No	Linguistic Features	Score	Level of need
1	Grammar	83%	Needed
2	Applied Terminologies	87%	Strongly Needed
3	Translation	89%	Strongly Needed

The results of the research show that translation is the most strongly needed by the students (89%). This is in line with the opinion of the majority students (92%) which rate that translation is very essential in their workplace setting. The data obtained from the interviews revealed that translation activities are often done by the graduates when they work in the area of vehicle inspection. Translation is strongly needed because many of automotive technology books, especially vehicle inspection books, are written in English. Few of them have already translated into Indonesian language, but there are new automotive technology and operating procedures of vehicle inspection's equipment which are in English.

Applied terminologies is strongly needed by students (87%) and graduates (88%). The data obtained from the interviews revealed that there are many terminologies that are difficult and do not have equivalent word in Indonesian language, for example word 'dashboard', 'converter kit', 'power train', etc. Finally, grammar are less needed than translation and applied terminologies. However, the result of interview with the head of automotive program revealed that the materials of grammar are relatively large. It is as a result of future plan of institutional program, grammar is needed concerning with TOEFL preparation as a graduate competency standard to face international market.

Discussion

The findings showed that the majority of English lecturers in Poltrada Bali and PKTJ Tegal have already applied English for Specific Purposes as an approach to teach English for automotive technology. It indicated that the lecturers have already taken into account the particular characteristics of ESP that automotive technology is a particular discipline and students are adult learners who already have some knowledge of English. Automotive technology students are learning the language to convey a range of technical skills and carry out unique job-related tasks in the automotive sector. However, there is a lecturer who still used General English to teach automotive technology students. It indicated that he/she more centered on grammar teaching and put equal emphasis on four language skills. This is in line with opinion of Rahman (2015) which argued that all four language skills are emphasized equally in General English. In ESP, however, it is a need to conduct analysis to in order to decide the language skills the learners need the most and to design syllabus appropriately.

Based on the data, the materials learned in the classroom have already reflected their interest of English for automotive technology field. The given materials already represent to their needs in the academic, professional, and occupational environment. This is

inconsistent with the opinion of Mehisto (2012) which states that quality learning materials allow students understand how learning is and can be implemented in and out of school. According to Mehisto quality learning materials are part of a larger narrative that aims to improve progressively the content awareness and language skills of students. However, irrelevant English materials were still reported by some students and graduates. It is perhaps explained by the fact that the materials do not fulfill their necessities in English. They are some of them who still taught general English. General English does not support their careers in automotive technology. General English taught by the lecturer does not encourage the students to acquire their language proficiency for their field.

Regarding learning material resources, lecturers use more other related learning resources than standard books on English for automotive technology such as web based materials e.g online text, graphic, article and video. Chapman & Chapman (2004, cited in Klement & Marešová, 2014) define that electronic materials is a new category of educational materials containing many components that allow the maximum utilization of the potential of digital technologies such as hypertext, graphic files, sound, the video, and animation. Related to web based materials, it notes that lecturers have to find online references. The use of learning materials from internet are perhaps due to the availability. This is in compliance with the opinion of Yusof & Saadon (2012, p. 402) which state that “web-based language learning materials are among the favorite resources for English teachers as they are plentiful, easily accessed, user-friendly and most importantly, free of charge”.

The findings also revealed that there are still lack of standard syllabus and regulation or policies in English materials as guidance in teaching English. . Consequently, different lecturers have various materials for the same degree or class resulting in various competencies gained by the students. The result supports the claim of Setiawati (2016) which stated that no collaboration between ESP lecturers to develop the syllabus for a certain course resulted in different ESP materials for the students and no standard ESP competency. As a result, the materials' assessment did not measure the students' real competency.

The majority of topics in the content areas given in the questionnaires are strongly needed by the students. The topics include vehicle systems (e.g fuel system, emission system, steering system, suspension system, brake system, transmission system, etc) and support vehicle components (e.g tire, dashboard, bumper, horn, rearview mirror, windshield, safetybelt, etc). In the practice, a vehicle inspector needs to ensure that vehicle is roadworthy, and all of parts and system can properly function. This supports the idea of

Ramos (2019, p. 2) which stated that “stated that an automotive review provides explanations and inspections of the interior, exterior, driving performance of a vehicle”. Therefore, teaching materials which are appropriate for the context of automotive technology are perhaps topics related to the names of vehicle components and how the vehicle systems work.

They designed and focused on the materials which improve the students’ ability to use English orally. Differently, graduates perceive that reading is the most important skill needed in their professional and workplace setting. It indicates that two language skills either speaking or reading skills are essential for learning necessities. It can be inferred that more practice and activities should be focused more frequently in those skills. Firstly, communication with other countries is very essential to get insight exchange about new innovation in the automotive technology. Speaking ability is very important to make communication runs smoothly. Consequently, English learning materials should support students in acquiring speaking skill, so that they will be ready in the future career. Secondly, the task in reading activities should encourage the comprehension ability. Knowledge and information in analyzing a text should be enhanced since there are references of automotive field.

Regarding to the linguistic features, lecturers paid more attention to the English materials that facilitated the students to enhance the acquisition of vocabulary, especially terms and words in automotive field, and the strategy of translation automotive technology references than grammar or structure. This is in line with the result of questionnaires of students and graduates that automotive terminologies are strongly needed in practice of vehicle inspection. It is perhaps explained by the fact that many terminologies of automotive field do not have equivalent word in Indonesian language, so that the knowledge about how to use and define the terminologies are needed by the students. This is in accordance with the opinion of Saliu, & Hajrullai (2016) which state that English for Specific Purposes courses are designed for learners who study in various languages in specific field and who need or want to know specific vocabulary, terminology, and other related English subjects from their field.

The result of topics related to translation is a need of tips and techniques to translate easily. Necessities in translating is perhaps explained that graduate who will be the first one getting information about new technology should be able to translate and to understand all the text into appropriate translation in Indonesian language. They should translate new reference, manual books, guidance, international regularities and information that may range

from the simple text to complex one. It is also hoped that the lecturers introduce the students about effective translation tools which appropriate used in learning English. Therefore, techniques in translating text is considered as essential to the students' necessities either in their academic or in future career. Finally, grammar that are needed by automotive students is TOEFL preparation. The materials given perhaps include part of speech, clauses, agreement, parallel structure, active and passive voice, gerund, infinitive, redundancy, and tenses.

E. CONCLUSION

The present study aims to examine English material needs of automotive students in terms of content areas, language skills, and linguistic features in the field of vehicle inspection. Drawing on the sequential explanatory design, the results of need analysis in this study reveal that content areas highly needed by the students are vehicle components and their performances, ranging from engine system to support components. In terms of language skills, speaking and reading are two skills acknowledged by the participants that are the most frequently needed to support students' performances both academic and professional. Moreover, this study also found that the students preferred applied terminologies and translation related to automotive vehicle to grammatical rules of the language since they have to deal with a range of references about vehicle inspection written in English. These results could contribute to providing an overview for teachers and school administrators to design appropriate English materials for automotive technology students. Despite these compelling results, this study is lack of various instruments of data collection. Therefore, future studies are strongly suggested to conduct an immense project scrutinizing the English material needs of automotive technology students by employing various tools of data collection to obtain more comprehensive findings, such as observation, field notes, documentation, etc.

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