

ENGLISH NEEDS ANALYSIS TO IMPROVE THE TECHNICAL COMPETENCE OF VOCATIONAL AUTOMOTIVE STUDENTS

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ABSTRACT

This study aims to analyze English language skills in one of the schools in Garut Regency with a focus on automotive majors, in order to improve their technical competence. This study examines the English language skills needed in the automotive industry and evaluates the effectiveness of the current curriculum. Through qualitative methods, including interviews, this study found that although the curriculum partially meets the needs of the industry, there are gaps in students' English skills. The results showed that students face challenges in mastering technical vocabulary, manual reading comprehension, and effective communication in the automotive sector. In addition, the lack of industry-specific materials in the curriculum further complicates their learning process. Recommendations are provided to improve the alignment of the curriculum with industry needs through the integration of practical applications and improved teacher training.

Keywords: English for Specific Purposes (ESP), Technical Competence, Vocational Education, Automotive Industry, Needs Analysis

A. Introduction

English has become an indispensable language in vocational education, particularly in technical disciplines that require access to international knowledge, technical documentation, and workplace communication. In the automotive industry, English is frequently used in service manuals, diagnostic software, equipment instructions, maintenance procedures, and communication with

multinational manufacturers.

Consequently, vocational students specializing in automotive engineering are expected not only to master technical competencies but also to develop English language proficiency that supports their future professional responsibilities.

English proficiency therefore functions as an essential employability skill that complements vocational

expertise. The integration of English into vocational education is commonly addressed through English for Specific Purposes (ESP), which emphasizes language instruction based on learners' academic and occupational needs rather than general language competence.

According to Hutchinson and Waters (1987), ESP is designed by identifying learners' target needs and adapting instructional materials to the communicative situations they are likely to encounter in their professional environments. Dudley-Evans and St John (1998) further argue that needs analysis is the cornerstone of ESP curriculum development because it enables educators to identify the linguistic competencies required by specific occupational sectors.

In the automotive sector, English plays a significant role in understanding technical manuals, interpreting diagnostic information, operating modern equipment, and communicating technical problems effectively.

Basturkmen (2010) explains that technical English differs substantially from general English because it incorporates specialized terminology,

communicative functions, and workplace-specific discourse. Therefore, English instruction for automotive vocational students should emphasize authentic technical contexts that closely resemble industrial practices. Such contextualized instruction is expected to improve students' technical competence while simultaneously enhancing their communication skills in professional settings.

Indonesia has adopted the Merdeka Curriculum, which encourages vocational schools to develop learning experiences that are responsive to industry demands and students' competencies. This curriculum provides teachers with greater flexibility to contextualize instructional materials according to students' vocational fields. Nevertheless, many vocational schools continue to implement English instruction that primarily focuses on General English rather than ESP-oriented learning.

As a result, students often experience difficulties in understanding technical vocabulary, interpreting automotive documentation, and applying English

in workplace communication, despite possessing adequate practical skills. These challenges indicate that the alignment between English instruction and industrial requirements remains insufficient.

Several previous studies have highlighted the importance of ESP implementation in vocational education. Natsir et al. (2022) reported that English instruction in vocational high schools should be adapted to the characteristics of each vocational program to support students' professional competencies. Rahmat and Adi (2021) also found that English language proficiency contributes significantly to vocational students' readiness to understand technical documentation and participate in industrial communication.

Likewise, Rahman (2020) emphasized that integrating digital learning media and authentic instructional materials can improve ESP learning outcomes in vocational settings. However, most previous studies have primarily discussed curriculum development or instructional strategies, while relatively limited attention has been given to examining whether current English instruction adequately addresses the

actual language needs of automotive students through comprehensive needs analysis.

This research addresses that gap by conducting a needs analysis of English learning for automotive vocational students at SMK Alfarisi Leles, Garut Regency. Specifically, the study investigates the English competencies required to support students' technical abilities and examines whether the current English instruction aligns with those competencies.

The findings are expected to provide practical recommendations for developing an ESP-oriented English curriculum that better supports technical competence, enhances workplace communication skills, and strengthens the alignment between vocational education and industry expectations.

B. Research Methods

This study employed a qualitative case study design to investigate the English language needs of automotive vocational

students in supporting their technical competence. A qualitative approach was selected because it enables an in-depth exploration of participants' experiences, perceptions, and instructional practices related to English learning within a specific educational context.

The case study design was considered appropriate since the research focused on a single vocational institution to obtain a comprehensive understanding of English language instruction in relation to automotive education.

The research was conducted at SMK Alfarisi Leles, Garut Regency, Indonesia, a vocational high school implementing the Merdeka Curriculum in its automotive engineering program. This setting was selected because the curriculum emphasizes competency-based learning and encourages the integration of instructional materials with industry needs.

The participants consisted of English teachers responsible for teaching automotive students and several students enrolled in the automotive engineering program. English teachers served as the primary participants because they possess direct experience in

designing, implementing, and adapting English instruction to vocational contexts, while students provided complementary information regarding their learning needs and classroom experiences.

Data were collected through semi-structured interviews, classroom observations, and document analysis. Semi-structured interviews were conducted with English teachers to explore their perceptions of students' English language needs, instructional strategies, curriculum implementation, and challenges encountered during classroom instruction. Classroom observations were carried out to examine teaching practices, students' participation, learning interactions, and the integration of automotive-related materials into English lessons. In addition, document analysis was conducted on curriculum documents, syllabi, and instructional materials to evaluate the extent to which English learning resources reflected the language demands of the automotive industry.

The collected data were analyzed using thematic analysis. Data obtained from interviews, observations, and documents were first organized and transcribed before

being coded according to recurring patterns. Similar codes were subsequently grouped into broader themes representing students' English language needs, instructional practices, curriculum implementation, and challenges in developing English competence within automotive vocational education.

The findings from the three data sources were compared through data triangulation to enhance the credibility and trustworthiness of the analysis. This analytical procedure enabled the researchers to develop a comprehensive understanding of the alignment between English instruction and the technical competency requirements of automotive vocational students.

C. Results and Discussion

The findings revealed that English instruction in the automotive vocational program has begun to incorporate the principles of English for Specific Purposes (ESP), although its implementation remains partial.

According to the interviewed teacher, the Merdeka Curriculum provides flexibility for adapting English instruction to students' vocational needs. Nevertheless, classroom

instruction continues to emphasize General English during the initial stages because many students possess limited basic English proficiency.

Topics such as daily activities, self-introduction, and descriptive texts are still frequently taught before students are introduced to automotive-related materials. As a result, only approximately half of the instructional content has been contextualized to the automotive field, indicating that English learning has not yet fully addressed industry-specific language demands, particularly technical terminology, workshop communication, and comprehension of automotive manuals.

These findings support Hutchinson and Waters (1987), who argue that ESP instruction should be developed based on learners' target needs rather than relying solely on general language instruction. Needs analysis enables educators to identify the language competencies required in professional settings and to design learning activities that are relevant to students' future occupations. The present study suggests that although curriculum flexibility exists, stronger integration of technical English into

classroom practice is still required to ensure that vocational graduates acquire language skills that are directly applicable to the automotive workplace.

Classroom observations further demonstrated that teachers employed various instructional strategies, including discovery learning, group discussions, lectures, and contextual learning activities. Automotive-related topics, such as vehicle engines, workshop equipment, and maintenance procedures, were introduced into English lessons to encourage students to connect language learning with their technical specialization. Digital media, including videos and presentation slides, were also utilized to increase students' engagement during classroom activities. However, the use of authentic industrial materials, such as service manuals, diagnostic instructions, and workplace communication scenarios, remained limited because of the availability of learning resources.

These instructional practices are consistent with the principles of contextual learning in ESP. Basturkmen (2010) emphasizes that ESP materials should reflect authentic

workplace situations so that language learning remains relevant to students' professional environments. Likewise, Rahman (2020) argues that integrating digital learning resources into ESP instruction can enhance students' motivation and facilitate the acquisition of technical vocabulary through authentic learning experiences. The limited use of authentic automotive materials in the present study therefore indicates an area that requires further improvement.

Another important finding concerns students' learning difficulties. Although several students actively participated in classroom discussions, many continued to experience challenges in understanding technical vocabulary, interpreting English instructional materials, reading automotive manuals, and communicating effectively in English. The teacher reported that students generally perceived English as a difficult subject, which resulted in low learning motivation and inconsistent classroom participation. Some students tended to remain passive during English activities and relied heavily on teacher explanations. To address these

difficulties, the teacher provided additional guidance, simplified explanations, translation support, and contextual examples related to automotive practice.

This finding reinforces previous studies indicating that insufficient English proficiency remains one of the primary barriers to vocational students' professional development. Rahmat and Adi (2021) explain that English competence is closely associated with students' ability to understand technical manuals, communicate in industrial environments, and adapt to globalization within the automotive sector. The findings of the present study indicate that improving students' motivation and confidence in using English should become an essential component of ESP implementation, alongside curriculum development and the provision of industry-relevant learning materials.

Overall, the study demonstrates that English instruction at the investigated vocational school has moved toward an ESP-oriented approach but has not yet fully achieved alignment with the linguistic

demands of the automotive industry. The findings indicate that successful ESP implementation requires not only curriculum flexibility but also systematic needs analysis, authentic instructional materials, collaboration between English teachers and automotive subject teachers, continuous teacher professional development, and greater utilization of digital learning media. Strengthening these components is expected to improve students' English proficiency while simultaneously supporting the development of their technical competence and workplace readiness.

E. Conclusion

This study concludes that English instruction for automotive vocational students has begun to incorporate the principles of English for Specific Purposes (ESP), particularly through the use of contextual learning activities and automotive-related topics.

Nevertheless, the implementation has not yet fully aligned with the actual language requirements of the automotive industry. Students continue to experience difficulties in mastering

technical vocabulary, understanding English-language technical materials, reading automotive manuals, and communicating effectively in professional contexts. These findings indicate that further adaptation of the English curriculum is necessary to better support students' technical competence and workplace readiness.

The study also demonstrates that contextual teaching strategies, discovery learning, group discussion, and the integration of digital learning media contribute positively to students' engagement and help connect English learning with automotive knowledge. However, limited basic English proficiency and low learning motivation remain significant barriers to effective ESP implementation. Therefore, successful ESP instruction requires systematic needs analysis, authentic industry-related instructional materials, collaboration between English teachers and automotive subject teachers, and continuous curriculum development that reflects current industrial demands.

Based on these findings, vocational schools are recommended to strengthen collaboration with the

automotive industry in developing English learning materials that represent authentic workplace communication, technical procedures, and service documentation. Teachers are also encouraged to expand the use of digital learning resources and contextual instructional strategies to improve students' motivation and technical English competence.

This study is limited to one vocational school with a relatively small number of participants; therefore, the findings cannot be generalized to all vocational education contexts. Future research is recommended to involve a larger number of vocational schools and participants from different regions and vocational disciplines in order to obtain a more comprehensive understanding of ESP implementation and to evaluate the effectiveness of ESP-based instructional models in vocational education.

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