

## **Materials Development for Teaching English using Quizizz to the 10<sup>th</sup> Graders of Modeling Design and Building Information Department in Vocational High School 3 Mataram**

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**Abstract:** General English is not considered adequate for vocational students. They need a curriculum built around "English for Specific Purposes" (ESP) to develop the targeted language skills required for their chosen field especially in Modeling Design and Building Information Department. This study examines the development of ESP-Based English material using Quizizz for vocational schools, along with student opinions on the material with Quizizz. Using R&D (Research and Development) methodology with ADDIE model, the study progressed through data collection, analyzing data, designing new materials, expert validation, developing the materials, implementing the ESP-based English material using Quizizz, and giving the final questionnaire students to find out student's opinions. The research involved 30 participants who were X DPIB A at SMKN 3 Mataram. The data were analyzed qualitatively and quantitatively. The result of this research are; 1) The design of ESP-Based English material is developed into 4 distinct thematic topics (*The introduction of the material, Professional Profiles, Object Identification, and Describing Places*) by inserting vocabulary appropriate to the major and the materials were delivered to students via the interactive learning platform Quizizz. Interactive features such as; multiple choice, fill-in-the-blanks, polls, picture-matching, open-ended questions, and drag-and-drop activities enriched the exercise design. 2) The total score of 79.083% in the student's opinions questionnaire suggests that students are highly interested and engaged with the English ESP materials developed using Quizizz.

**Keywords:** ESP-Based English material, Quizizz, Modeling Design, and Building Information program, student's opinions

## **INTRODUCTION**

In today's era, English should be centered on the needs of the students, particularly those interested in specialized science disciplines and jobs. For instance, students in vocational schools can learn English according to their chosen majors, such as economics, tourism, nursing, design and development, cuisine, fashion design, office administration, etc. Vocational high school, derived from Government Regulations No 74/2008, is a formal education unit that organizes vocational education at the secondary education level to continue some junior secondary education. Vocational high school has a fundamental difference from Senior High school. Rizal (2017) stated that the difference between Vocational High School and Senior High School lies in the learning objectives where students from vocational high

school graduates must be ready to enter the workforce after graduating.

Teaching English in vocational high schools must be based on English for Specific Purpose rather than general English to equip students with English language skills in line with their fields and expertise to compete in carrying out their professions in the future. In line with Bryam and Hu's (2013) statement, English for Specific Purpose is directed to the teaching and learning English for work or academic purposes. English for Specific Purpose (ESP) can be defined as teaching and learning the specific skill and language needed by particular learners for a particular purpose.

Material development is essential in teaching activities because developing material does not only use one source to teach but also many

methods that can be implemented for students. Tomlinson (2012) described that material development is all the processes of producing and using the language learning material, including material evaluation, adaptation, design, production, and research. It means that material development is one of the keys teachers must design before teaching in the classroom. Learning is used as a topic of discussion during the teaching and learning process. Teachers use teaching materials to check students' understanding in the form of assignments, assessments, and reflections on learning during the teaching and learning process in the classroom. Harsono (2015) stated that learning materials mean anything the teacher uses to teach language learners. Teachers can access learning materials anywhere or design them according to students' needs. Teachers can modify learning materials from various sources to achieve language learning objectives. As this study focuses on Vocational High School, the school must have materials that are appropriate and needed for students in accordance with the majors pursued. Related to the act of the Republic of Indonesia No. 20 of 2003 on National Education System article 15, as cited in Mahbub (2018), vocational education is a secondary education program for preparing learners for a specific job. To respond to this statement, Vocational High Schools should provide English skills related to the specific skill achieved by the graduates. According to Rahayu et al. (2020), ESP teachers must teach the students according to each major. However, the reality does not match the facts on the field. There are still many teachers from vocational high schools who have not implemented ESP, and there are still problems related to the availability of appropriate English learning materials for students.

Citra & Rosy (2020) stated that many media can be applied by teachers, one of the game-based learning media that can also be used as an evaluation to measure student understanding as long as students get the material that has been taught is Quizizz educational game-based learning media. Zhao (2019) enlightened that Quizizz is a game-based edification app that lugs many player actions to the studies and establishes in-class interactive practice and exhilaration. Therefore, the Quizizz application is one type of application designed to help teachers design learning material

in the classroom. The use of this Quizizz application has a good impact on students when the teacher implements the material in class; for instance, students only focus on the results of their answers, not just the speed in answering questions, and students also become enthusiastic when they find their teacher changing the process of delivering monotonous material to using more varied media. Instead of just essays and multiple choice, this app lets teachers create interactive questions like polls, drag-and-drop activities, and matching exercises. This helps students develop the skills to tackle different question formats. This statement is also emphasized by Mac Namara & Murphy (2017), who state that interesting features, music, avatars, leaderboards, and themes are present in the quizizz application so that students learn like playing a game. Effective English learning materials require a well-defined development process and student feedback. Gathering student opinions on existing materials allows us to assess their usefulness and ensure they align with the Building Information Department. This will ultimately lead to the implementation of high-quality materials that provide students with a comprehensive learning experience. Instead of simply learning general English, students can now focus on practical skills relevant to their future careers through the use of English for Specific Purposes (ESP) materials. This targeted approach is expected to improve their learning outcomes and prepare them for real-world work situations.

Based on the explanation of the problem above, it is necessary to develop ESP-based English language materials for grade 10 students at SMK Negeri 3 Mataram by using Quizizz to attract students' interest so that students are enthusiastic and active in learning English in class and to find out the student's opinion toward the materials using Quizizz. This research aims to assist teachers in developing materials for ESP-based English teaching by using the Quizizz application and also to find out students' opinions regarding ESP-based English materials that have been developed and implemented by teachers in the classroom.

## METHODS

The design in this study uses research and development (R&D) method. The researcher believes that the R&D research method is very suitable for this research because this research aims to produce ESP-based English language materials that are useful for students in the Modeling Design and Building Information Department in the vocational high school 3 Mataram. The method used in this research is a development model with the ADDIE model, which consists of five phase (Branch, 2009). **Phase 1 : Analyze.** This phase was started by collaborating with an English teacher to analyze the syllabus document (ATP) in order to determine three learning objectives (TP). Additionally, an interview was conducted with an English teacher to gather data on the needs for developing ESP-based English materials. **Phase 2 : Design.** This phase began with distributing a questionnaire to students using Quizizz to gather their needs before material design. Subsequently, English learning materials were designed to align with the established learning objectives (TP). The design process comprised four key stages: (1) *Input:* This stage involved identifying the language skills targeted based on the chosen learning objectives. (2) *Content Focus:* Content materials were created that directly corresponded to the identified language skills. (3) *Language Focus:* Careful attention was paid to the specific vocabulary and grammar used in the materials, ensuring clarity and avoiding implicit symbolic meanings. (4) *Task:* This stage involved developing material questions for application by students using Quizizz. **Phase 3 : Development.** The next phase involved developing the initial ESP-based English materials, followed by conducting expert validation and analyzing the data gathered from the validation process. This analysis informed the feasibility of the ESP-based materials, which were then revised based on the experts' feedback. **Phase 4: Implementation.** This phase involved implementing the developed ESP-based English material with the Quizizz application to evaluate the effectiveness of the designed materials. Additionally, a questionnaire was distributed to students to gather their opinions after using the materials through Quizizz. **Phase 5 : Evaluation.** The final steps in the ADDIE approach

involved the expert evaluating the implemented material.

This research involved one class of 36 students at the tenth-graders in DPIB A from the Modeling Design and Building Information program at SMKN 3 Mataram. The researcher collaborated with an English teacher from the program. The data collection for this study employed four methods: observation, documentary analysis, interviews, and questionnaires. The research instruments used were an interview sheet for the English teacher and an expert validation and product trial instrument. This study employed a combined approach to data analysis, utilizing both quantitative analysis techniques and qualitative descriptive analysis. Quantitative analysis was used to examine data gathered from the validation results and learner opinion questionnaires. This analysis aimed to assess the validity and student perception of the developed ESP-based English language materials. Specifically, the quantitative analysis focused on Material validation questionnaire: This questionnaire employed a Likert scale, consisting of five categories ranging from "Highly feasible, needs revision" to "Very unfeasible, needs revision." These categories were further defined according to percentage ranges: (Not good ; 21 % - 40 %, Quite good ; 41 % - 60 %, Good ; 61 % - 80 %, Excellent ; 81 % - 100 %). As suggested by Riduwan (2010), materials and learning media were considered feasible if the validator assessment yielded a percentage of  $\geq 61\%$ .

The analysis of learner opinions used a technique involving a four-category Likert scale questionnaire. Student responses were converted into percentage scores and then categorized as follows: Very bad: 0% - 20%, Not good: 21% - 40%, Not good enough: 41% - 60%, Good: 61% - 80%, and Excellent: 81% - 100%. These categories served to determine the feasibility of the ESP-based materials and gauge student opinions. After material testing, 10th-grade DPIB A students completed the questionnaire. Following Miles and Huberman (1992), a qualitative descriptive analysis technique was then employed. This method comprised four concurrent phases: data collection, data reduction, data display, and conclusion drawing/verification.

## FINDINGS AND DISCUSSION

### Findings

In this study, the researcher collected data from various sources, including observations, interviews, needs questionnaires, material validation, and final questionnaires, to address the research question. To organize and interpret these findings, the researcher employed the *ADDIE* model, meticulously analyzing the results of each project phase.

**Analyze :** Before designing ESP materials, the researcher worked with English teachers to identify basic competencies (TP) students needed to learn according to the curriculum (ATP). These skills focused on analyzing descriptions of people, objects, and tourist attractions. The research started by observing and interviewing English teachers in a class of Building Modeling and Information Design (DPIB A) students at SMKN 3 Mataram. The observations revealed several issues: Repetitive and unengaging lessons, Materials lacking relevance to students' field of study (Building Modeling and Information Design) Absence of learning media in lessons and lack of activities to motivate students. Teacher interviews confirmed these observations and identified student needs. Students needed materials that included vocabulary specific to their major. Additionally, the current curriculum seemed to hinder the use of specialized English materials (ESP) within the vocational school setting. However, the interviews also highlighted the potential of using an integrated approach for developing these materials, and teachers were particularly interested in using Quizizz to create engaging learning environments.

**Design :** Additionally, a needs questionnaire was administered to 30 respondents, consisting of 10 multiple-choice questions divided into five categories: student goals, needs, wants, lacks, and learning media. The result of needs Questionnaire can be seen in below :

- a. **Student's goals:** Nearly 80% of students see English as crucial for their future careers.
- b. **Student's needs (necessities) :** Half the students have moderate motivation but a basic proficiency level. Speaking emerged as the most challenging skill for most students (almost 60%). A majority (over 60%)

expressed a desire for app-based games to boost their motivation.

- c. **Student's wants :** The most desired topic was "English for Building Modeling and Information Design," aligning with their major.
- d. **Student's lacks :** Many students (over 55%) felt insecure due to a general lack of English familiarity. Additionally, over a third (37%) lacked specific vocabulary related to their field.
- e. **The learning media :** While some students were unfamiliar with the Quizizz app (37%), there was a strong interest (also 37%) in using it for learning.

Overall, the survey highlights a need for engaging and relevant learning materials that address students' career goals and specific vocabulary needs. Interactive tools like Quizizz can potentially address these needs and increase student motivation. To maximize student engagement, the researcher designed the materials featuring four distinct thematic units, each aligned with a specific aspect of the students' chosen field:

- a. **Unit 1: "The Introduction of Material"** focused on students' comprehension of tool functions relevant to their major.
- b. **Unit 2: "Professional Profiles"** aimed to develop students' ability to describe people by reading career descriptions from their chosen fields, followed by fill-in exercises to assess comprehension.
- c. **Unit 3 : "Object identification"** presented various types of objects found in their major-specific equipment.
- d. **Unit 4: "Describing Places"** emphasized the description of "home" using vocabulary relevant to the students' major and incorporating modifications to noun phrases.

**Development :** After completing the design the researcher had uploaded the materials to Quizizz, which had already been revised based on the feedback received from both validators. Encouraged by strong preliminary results (95.83% score and "very good" rating), the

materials were offered to English teachers and a lecturer for final validation, confirming their feasibility for implementation. Subsequently, the materials were implemented in the classroom using Quizizz.

**Implementation :** The researcher had revised the material based on suggestions from the validator, and then the material had been ready to be implemented in front of the class using Quizizz. After this last trial, students were administered a questionnaire. The questionnaire consisted of 10 questions regarding their opinions on the ESP-based English language materials that had been designed and the use of the Quizizz application as a means of implementing the material. Students' opinions toward the ESP-Based English material were divided into 4 scales: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). These were collected from a survey of 30 students, and the results of the analysis were presented in the following tables with a detailed explanation.

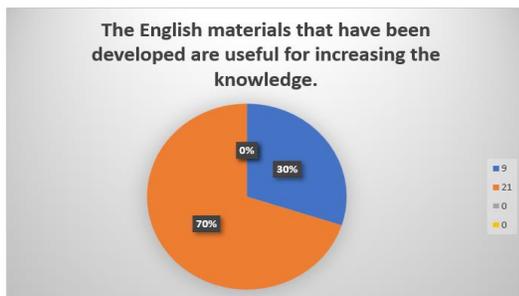


Figure 1. The finding for question number 1 from the student's opinions questionnaire

The data (question 1 table) shows the ESP materials developed are highly effective in enhancing student knowledge. Given their strong positive feedback (9 strongly agree, 21 agree), these materials deserve a place in Vocational School English programs alongside the general English materials. Analysis of student responses to the ESP-based English materials revealed positive outcomes. The average score of 79.083%, categorized as "Good," indicated that the materials effectively aligned with the Quizizz platform.

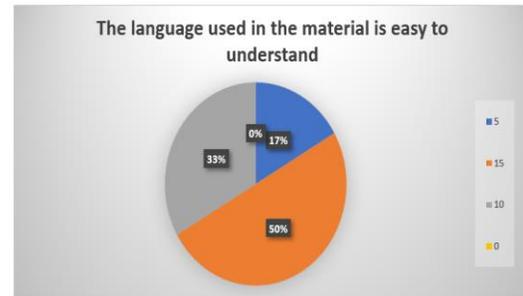


Figure 2. The finding for question number 2 from the student's opinions questionnaire

Students' opinions on the clarity of the new English material were evenly split, with 15 students finding it easy to understand and 15 students finding it difficult. This suggests a potential challenge with the material, perhaps because of the specialized vocabulary beyond the general English that students are used to. Answering questions based on the material could be a challenge for students.

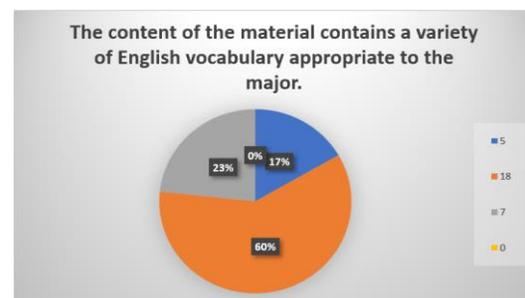


Figure 3. The finding for question number 3 from the student's opinions questionnaire

The next question had been related to the vocabulary of the majors covered in the material. A total of 4 students had said they strongly agreed and 18 students had said they agreed with the content of the material containing vocabulary relevant to their majors. The text had also listed negative responses, with 7 students not agreeing. While the presented vocabulary aligned with what students already encountered in their major subjects, the researcher had enhanced it by incorporating additional descriptive phrases for each term.

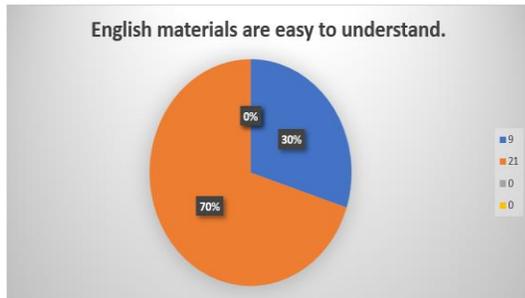


Figure 4. The finding for question number 4 from the student's opinions questionnaire

Recognizing the students' basic English skills, the researchers adapted the language in the materials to ensure easy comprehension. This resulted in positive feedback from most of the students (20 out of 30), although some of them still struggled in understanding the meaning of the sentences.

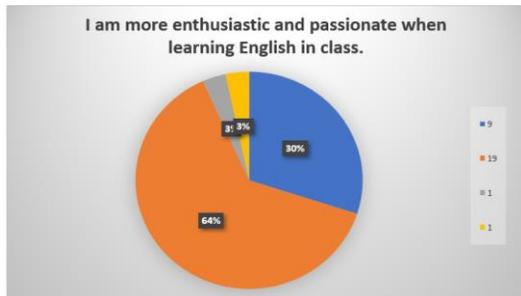


Figure 5. The finding for question number 5 from the student's opinions questionnaire

Compared to their previous experience with general and uninteresting materials, 28 students expressed strong excitement and engagement when introduced to the ESP-based materials. This marked contrast emphasizes the effectiveness of the customized content in stimulating curiosity and motivation to learn English in a vocational context.

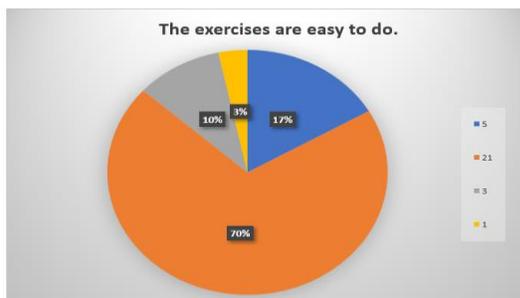


Figure 6. The finding for question number 6 from the student's opinions questionnaire

Most students found the exercises easy, with 4 students strongly agreeing and 21 students agreeing. The remaining 5 students strongly disagreed: 3 students disagreed and 1 student strongly disagreed. The practice in Quizizz designed with multiple answer choices aims to help students assess their vocabulary knowledge related to the major. Most students found the questions easy, while some students found them challenging.

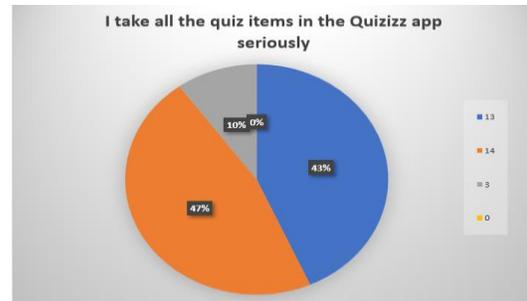


Figure 7. The finding for question number 7 from the student's opinions questionnaire

The researcher saw students' active involvement in working on the tasks that had been provided through the application during the first trial, thus supporting the data in the table above. Most students (13 + 14) agreed or strongly agreed that they took the quiz questions seriously.

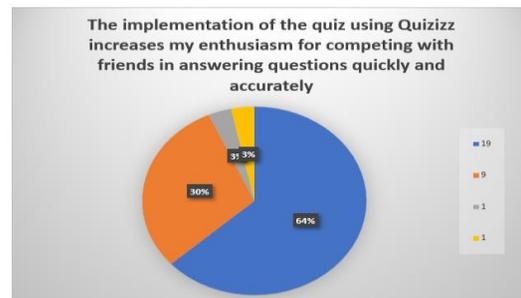
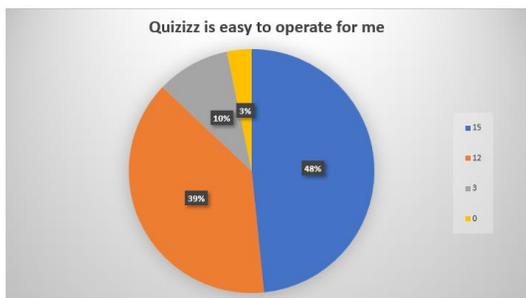


Figure 8. The finding for question number 8 from the student's opinions questionnaire

The table above demonstrated how the application of practice questions through Quizizz stimulated enthusiasm and a sense of competence among the students. A total of 28 students, 19 of whom strongly agreed and 9 of whom agreed, stated that using this semi-gamified learning media made them feel more excited and challenged when working on the questions.

Figure 9. The finding for question number 9 from the student's opinions questionnaire



A survey showed that most students found Quizizz easy to use, while some students had difficulty accessing it. This could be seen from the way to connect to the app, which was very easy. Students only needed internet access, to open [joinmyquiz.com](http://joinmyquiz.com) in Chrome, to enter the name and class code given by the teacher, and to start answering questions.



Figure 10. The finding for question number 10 from the student's opinions questionnaire

Quizizz, an app-based learning platform, had the potential to be a revolutionary step in education, judging by past student feedback. The overwhelmingly positive response (29 out of 30) indicated that Quizizz generated excitement for learning, especially with students' increased proficiency in using smartphones.

**Evaluation :** The ESP-based English language materials were evaluated by experts after development. The focus of the evaluation was on the effectiveness of the Quizizz activities and the quality of the practice questions. The experts were satisfied with both the materials and their engaging nature.

## Discussion

This study investigated two things: (1) designing ESP materials using Quizizz for 10th graders in Mataram's Vocational High School's Building Design department, and (2) their opinions on those materials and also the Quizizz app. The researcher designed ESP-based English materials for a tenth-grade Modeling Design and Building Information course. In designing the material, a course grid for tenth-grade Modeling Design and Building Information was design to develop ESP-based English material. The grid outlined selected basic competencies (TP) in the syllabus (ATP) which were divided into 4 different topics The activities focused on grammar, vocabulary and text structure.

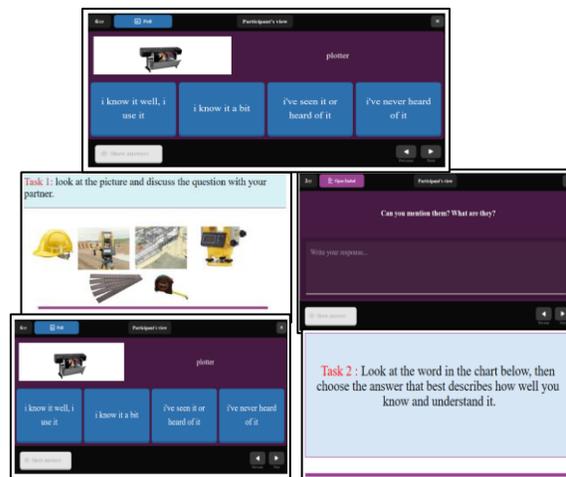


Figure 11. The design of ESP-Based English material using Quizizz for topic 1

Topic 1, titled "*The introduction of the material*", focuses on warm-up exercises before going into the core exercises of this material. It includes 2 tasks. The first task features 3 *fill-in-the-blank* questions with accompanying pictures of departmental equipment. Second task contains instructions for completing the question. the type of question used is *polling*. This type of question has no correct answer options. Students can choose one of the options that they think is the right answer. This method is to measure how far students understand the objects and tools that exist and are commonly used in the Modeling Design and Building Information department. There are 10 poll questions with 4 answer options, which are "I know it well, I use it" ; "I know it a bit" ; "I've seen it or heard of it" ; "I've never heard of it".

Topic 2 with a heading "*Professional Profiles*", students are instructed to read a text about the duties of an architect then answer 5 *multiple choice* questions about the job description of the architect's co-worker. The answer choices are in the form of pictures that describe the person's job. Students are given 3 minutes to answer the questions. To help with understanding, the previous quiz ended with a *glossary* defining key terms relevant to both the reading and quiz questions. Here are some English learning materials for topic 2, designed for a specific field and made with Quizizz

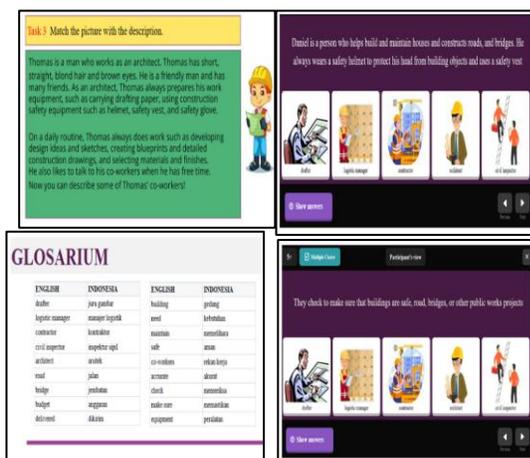


Figure 12. The design of ESP-Based English material using Quizizz for topic 2

After completing the second unit, it will be followed by unit 3 with the topic '*Object Identification*', jumps in with sample tasks on slide 1. Slides 2 and 3 test object vocabulary with *picture-matching* Quizzes (2 questions, 3 minutes). Slide 4 offers a department *glossary*. Slides 5-14 present 10 definition-based *multiple choice* questions with pictures (2 minutes), while the final *open-ended* question asks students to identify a job and needed equipment (2 minutes). A final slide offers both English and Bahasa *glossaries*. This section details the design of Quizizz-based ESP learning materials aimed at the students starting with topic 3

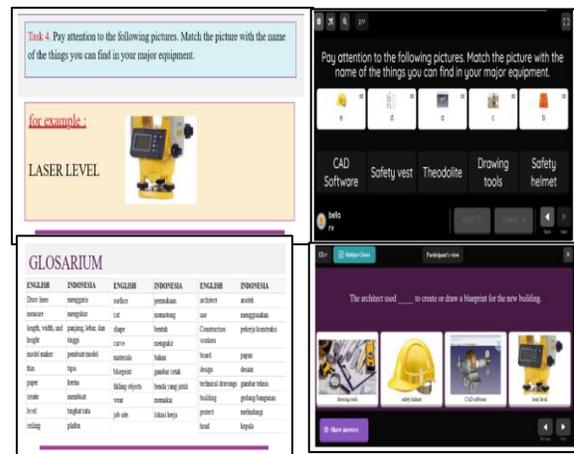


Figure 13. The design of ESP-Based English material using Quizizz for topic 3

Topic 4 talks about "*Describing Places*" through a text called "*House: A place to call home.*" Students first analyze the text to identify *nouns and noun phrases*. Explanations and examples follow, preparing them for translation practice. 5 *open-ended* and *multiple-choice* questions test their ability to translate both noun phrases and individual nouns into Indonesian. A final *drag-and-drop* exercise challenges them to match definitions with the studied vocabulary. A helpful *glossary* supports learning throughout, and the whole session takes just 3 minutes. These are some ESP-based English materials designed for topic 4 on Quizizz.

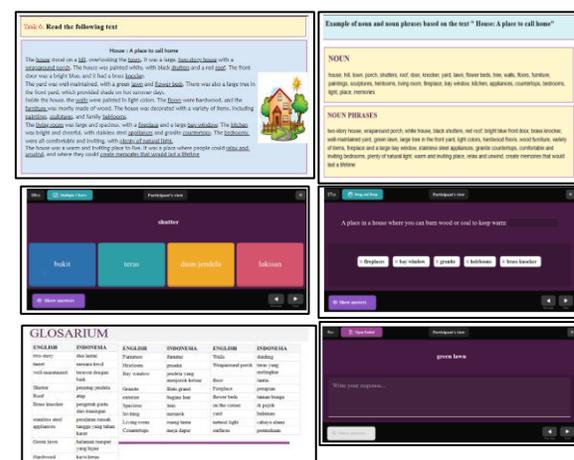


Figure 14. The design of ESP-Based English material using Quizizz for topic 4

These choices aligned with Mac Namara & Murphy's (2017), highlighting the positive impact of visual elements, music, competition, and personalization in gamified learning platforms like Quizizz. Ultimately, this multifaceted approach aimed to increase student engagement, motivation, and knowledge retention. Incorporating Quizizz into the teaching materials proved successful, making the classroom environment more "lively" and engaging. Students actively participated in answering practice questions on their smartphones, highlighting the increased interactivity compared to traditional methods. This aligns with Zhao's (2019) research, confirming that Quizizz's game-based approach fosters dynamic and enjoyable learning experiences. The analogy of learning being like a game further emphasizes the positive impact on student engagement and motivation, suggesting they perceive knowledge acquisition as akin to unlocking new achievements in a favorite video game. This shift in student perception can potentially lead to improved knowledge retention and overall academic performance.

A study explored the impact of using Quizizz, a gamified learning platform, to deliver English for Specific Purposes (ESP) materials to students in a Modeling Design and Building Information program. The results were overwhelmingly positive.

- **High Student Approval:** Students strongly approved of the learning materials delivered through Quizizz (average score: 79.08%).
- **Increased Enthusiasm:** A majority (28 out of 30) reported increased enthusiasm for learning English after understanding ESP and its connection to their studies. This aligns with goals of "English for Vocational Purposes" programs.
- **Engaging and Clear Exercises:** Students found the Quizizz exercises straightforward and easy to understand (27 out of 30).
- **Improved Vocabulary Knowledge:** While students initially showed some familiarity with the vocabulary, the materials aimed to expand their knowledge beyond current levels (aligning with needs-based material adaptation principles).

- **Fun and Interactive Learning:** Students experienced a significant increase in both enthusiasm and participation due to Quizizz's gamified approach. Surveys revealed positive feedback (29 out of 30) highlighting the fun and engaging environment created by Quizizz. This aligns with research on Quizizz fostering enjoyable learning.
- **Accessibility:** The app's accessibility allows students to use it easily anytime and anywhere, even outside of class.
- **Effective Assessment:** Integrating Quizizz into the assessment process increased its interest and effectiveness (28 students agreed). The element of friendly competition further boosted motivation and engagement.
- **Ease of Use:** Quizizz features a user-friendly interface requiring only a smartphone with internet access.

Overall, the study demonstrates that using Quizizz can significantly improve student motivation, engagement, and learning outcomes in ESP courses.

## CONCLUSION

The ESP-Based English learning materials were designed based on basic competences (TP) in syllabus at Merdeka curriculum and the student's needs, determined through a survey of 30 students in class X DPIB A at SMKN 3 Mataram on October 26, 2023. This materials were develop using a research and development (R&D) methodology referring to *ADDIE* model. The results of the first research question indicate that, the design of materials were well-structured, focused on vocabulary, grammar, and text structure related to the Modeling Design and Building Information Department and divided into four topics: *Introduction:* This topic uses pictures and polling questions to assess students' existing knowledge of the tools and equipment. *Professional Profiles:* Students read about an architect's job and answer multiple-choice questions about a coworker's role, using pictures as answer choices. *Object Identification:* This section uses quizzes and multiple-choice questions with pictures to test students' understanding of object vocabulary. *Describing*

*Places*: Students analyze text to identify nouns and noun phrases, then translate them into Indonesian using various question formats. To enhance student engagement, the researcher implemented Quizizz, an interactive learning platform. This app functionalities aligned perfectly with the materials' question formats (polls, multiple choice, essay, picture matching, open ended, and drag-and-drop). It further facilitated learning through timed questions, a competitive leaderboard, and a gamified experience. Students responded favorably to the material presented using Quizizz, achieving a 79.083% ("Good") rating on the associated questionnaire. This positive perception was further confirmed by the questionnaire results.

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