Development of "Eng-Lab" Application Based on Needs Analysis to Improve Professional English in Metro City

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Abstract

The research focuses on the development of "Eng-Lab", an application designed to improve professional English skills in Metro Cities. This research aims to enrich educational technology literature and contribute practical solutions to English language learning challenges. Funded by LITABDIMAS, Director General of Education at the Ministry of Religion, this research identifies English as an important communication tool in the global work environment. The methodology used is a needs-based approach, combining expert insights and participant feedback through interviews and surveys. The result is an innovative, adaptive and interactive learning tool tailored to the user's needs. The app, assessed for its effectiveness, promises to overcome language barriers in the job market and increase economic growth. The study concludes that Eng-Lab, developed through extensive analysis and user feedback, offers a valuable and responsive educational tool for improving professional English proficiency in a diverse and developing economy.

Keywords: Eng-Lab Application, Professional English, Needs Based

1. INTRODUCTION

In globalization era, English skills are very necessary in the world of work and communication skills are also very important, communication skills are not only for domestic business partners but also for foreign countries and of course in relation to the economy (Polakova, 2022). Freelance work is also an option for fresh graduates to earn extra money, even though there are quite a few freelance websites from abroad that require English language skills. Professionals who are fluent in English will have an advantage in the world of work(van Raaij, 2008). They can easily communicate with colleagues from abroad and conduct more complex business negotiations(Hollinderbäumer, Hartz, & Ückert, 2013). In addition, English language skills can help professionals expand their networks and increase job opportunities. By mastering English, professionals have a competitive advantage in the world of work. Therefore, it is important for Professionals, in improving their English skills from an early age, so that they can achieve success in the future (Muthmainnah, 2022).

Metro City, as one of the cities that continues to develop in Lampung Province, Indonesia, has proven that many retailers have established branches in Metro City after Bandar Lampung City, from this illustration it is no exception to this global trend. Metro cities have the potential for rapid economic

growth and are increasingly attracting multinational companies, educational institutions and individuals who want to participate in the city's thriving business and education ecosystem(Czaja, 2006). To respond to the need for better professional English skills, innovative and technology-oriented approaches are needed. (Sudarmo, 2021). In this context, the development of a technology-based application, which we call "ENG-LAB," emerged as a potential solution to improve English language information capabilities in Metro Cities. This application is expected to provide wider and more flexible access for individuals and groups in obtaining professional English language knowledge. Therefore, this research aims to identify the real needs of the Metro City community regarding professional English learning, as well as design and develop the "ENG-LAB" application that can meet these needs effectively and efficiently (Nikimaleki, 2022).

The large number of retailers opening branches in Metro cities is a challenge in itself because retail outlets, most of which come from abroad, require job applicants to be able to speak English well. This creates several significant problems for the local job market and society as a whole. Requiring job applicants to speak English can create a language barrier for many prospective employees. In a metro city with a diverse population, not everyone is fluent in English. This policy may result in the delivery of qualified individuals who may have the necessary skills and experience but struggle with English language proficiency (Safar, 2017).

Limited Job Opportunities for those proficient in English limits employment opportunities for individuals who may not have access to quality English language education. This can perpetuate the socio-economic picture because those from privileged backgrounds have an advantage in the labor market. Policies like this can be considered culturally insensitive because they prioritize foreign languages over local languages and culture. Impact on the Local Economy By limiting job opportunities for English-speaking individuals, retailers may lose valuable talent. This could impact overall economic growth in the region as skilled workers may seek employment opportunities elsewhere. While English language skills may be important for some customer-facing roles, there are many backend and operational positions in retail that do not require extensive English skills. Forcing comprehensive English proficiency may not align with job requirements and may hinder efficiency and customer service(Fu, 2021).

From the description above, researchers need to develop an English language application based on needs analysis (AN) for the development of the "ENG-LAB" application which is a crucial step in designing an effective solution to improve professional English language skills in Metro City. This process involves a deep understanding of the needs, expectations, and challenges faced (Nur'Aini, Utami, & Naima, 2022) by the target users of the application. According to (Park, 2022) Many efforts to implement the need for analysis have

been made by language teachers and researchers. Needs analysis (NA) is considered to play an important role in the development of language learning curricula, including instructional planning, lesson plans, material development, and evaluation (Brown, 2001) NA is considered a prerequisite for designing and developing language curricula, syllabi, and instructional tasks as well as subsequent learning applications is an urgent need for all types of learning sequentially relevant and seen to be relevant to the needs of specific user groups" NA helps language teachers and course designers to identify needs individual learners before and during Language Learning (Zou & Li, 2015)

2. RESEARCH METHODOLOGY

In carrying out RnD, there are a series of steps that must be followed. It starts by identifying a need or problem, such as the need to increase professional capabilities in a wide area using training modules. The next step is to determine the specifications of the required solution, considering context, background, target user capabilities, and available resources. After that, an initial design of the product is created and tested in the field with a small group, then tested again with a larger group. During the testing process, observations and evaluations are carried out to make improvements. The evaluation and revision process takes place until an optimal product is created (Un, Cuervo-Cazurra, & Asakawa, 2010). Finally, product quality is tested through experiments to ensure its effectiveness. The following are the steps for R&D research according to Borg and Gall: (1) potential and problems, (2) information collection; (3) product design; (4) design validation; (5) design improvements; (6) product testing; (7) product revision; (8) trial use; (9) product revision; And (10) mass product manufacturing (Aka, 2019).

The problem analysis stage is carried out to determine the problems currently facing the research subject. The problems encountered are obtained from the results of observations in the place studied. Problem Analysis In the EngLab application development research aimed at supporting English language skills for fresh graduates and workers in Metro City, problem analysis is a crucial step. Identify User Needs (Needs Assessment). Start by collecting information from fresh graduates and workers in Metro City to understand their needs regarding English language skills. Data collection carries out surveys, interviews, or FGD (Focus Group Discussion) to obtain data about the obstacles they face in learning English.

The requirements analysis process is specific, especially to software. At this stage, an analysis is carried out of what hardware and software requirements are needed to develop Android application-based media using Mit App Inventor regarding subject problems in English learning activities using Eng-Lab. The main function of this learning media is the development of applications that can be studied wherever the user wants to learn. Analysis of functional media requirements for the EngLab application that integrates Mit

App Inventor in English language learning involves several important components, both in terms of hardware and software.

To find out the usefulness, effectiveness and benefits of this media for its users, it is necessary to carry out trials. And after that the researcher gets results that determine the level of success of the media product or material provided. Trials were carried out on the Eng-Lab application test by small classes. And the small class consists of professional workers in their fields and fresh graduates who want to hone their English skills. During media trials, researchers used questionnaires and field notes to determine the real conditions of subject users while using the Eng-Lab application in the process of using the application. Questions asked of users are related to the language, features and design of the Eng-Lab Application. Questionnaire data obtained from small class users was analyzed quantitatively using percentages. If at least 80% of Eng-Lab App users are suitable for improving Professional English skills, the product will not need to be revised(Cruz, 2019).

3. RESULT AND DISCUSSION

To find out problems related to developing English language skills, researchers conducted interviews, which were conducted on October 25 2023 with cashiers and retail store employees, fast food restaurant waiters, and BMT (Baitul Maal wa Tamwil) tellers as a step to determine the design and materials that will be used. developed in conjunction with the Eng-Lab application.

The research team focused on developing English language skills initiated a series of in-depth interviews. The main goal is to collect data that will be the foundation for designing and preparing the content of the application "Eng-Lab," a new platform aimed at improving English language skills in the work environment. The selected interview subjects included a cashier and several employees from NT Mart, a waiter from McDonald's, and a teller from BMT.

Based on these interviews, the research team concluded that there are several main needs for developing English language skills, especially in the context of customer service and financial services. To that end, they plan to:

1. Read training modules that cover specific understanding for each profession.
2. Provide conversation simulations by paying attention to conversation themes for Professionals/Workers.
3. Create training materials that are easily accessible and can be adapted to busy work schedules.
4. Include real scenarios from the subject's work experience to ensure the relevance of the material.

Apart from interviews, the research team also conducted an FGD (Focus Group Discussion) on October 24 2023. The aim of the FGD was to obtain more in-depth information and develop applications that were broader, deeper and more useful for users, especially prospective workers and professional workers. The FGD involved various stakeholders, from the Ma'arif Lampung University Quality Assurance Institute (UMALA), namely Mr. Hanif Amrullah ZA, M.Si (chairman of LPM), Mr. Dr. Dedi Setiawan, M.Pd. as well as other LPM members. At the discussion stage in developing the Eng-Lab application materials, LPM provides directions, namely:

1. Training modules that are adaptive and suit the specific needs of various professional fields.
2. Integration of language practice in the real context of daily work.
3. Attractive interactive features to increase user engagement and learning motivation.
4. Creating tests that can assess learning progress and provide constructive feedback.
5. Establish an online community to support peer-to-peer learning and share experiences.

Furthermore, the FGD was carried out with English lecturers who were attended by the Head of the Ma'arif University (UMALA) English Education Study Program, namely Mr. Umar Alfaruq A. Hasyim, M.Pd, secretary of the Head of Study Program, Mr. Suhono, M.Pd. as well as permanent lecturers at the Tadris English Study Program, namely: Mai Zuniati, M.Pd, Wiwied Paratiwi, M.Pd and Dr. Dian Anggraini, M.Pd. The FGD explains the design of the Eng-Lab application which is intended for professional users and also prospective workers, namely the following design:

1. Create structured material from beginner to advanced level, with clear progression and interrelated material.
2. Utilize technology to create dynamic interactions between users and learning materials, such as through interactive dialogue, games and simulations.
3. Integrate real situations and cultural contexts to develop the ability to communicate effectively in a global environment.
4. Implement an assessment system that provides real-time feedback and tracks progress to customize the learning experience.

To present the statistical data you provide in visual form, the datas provide:

1. Statistical Analysis of Application Display : Bar graphs will be effective for showing the distribution of respondents' assessments. Can display bars for each assessment category (Strongly Agree, Agree, etc.) with the length of the bar representing the number of respondents in each category.

2. Statistical Analysis of Media Instructions : Just like Figure 1, a bar graph can be used to depict the distribution of ratings, highlighting that the majority of respondents rated "Agree".
3. Statistical Analysis of Material Context: Pie or donut charts can be effective for showing the percentage of ratings in each category, making it easier to visualize the overall distribution.
4. Statistical Analysis of User Motivation : A line graph can be used to compare the spread of ratings for this question with other questions, highlighting consistency in ratings.
5. Statistical Analysis of Material (Figure 5) : Bar graphs with color variations for each assessment category can show the spread of respondents' opinions, including greater variations compared to other questions.
6. Statistical Analysis of User Needs Aspects : Bar or pie graph with emphasis on "Agree" and "Strongly Agree" ratings, showing the general consensus of respondents.
7. Statistical Analysis of User Agreeability : Bar graph, focusing on the height of the bars for "Agree" and "Strongly Agree", shows a general positive perception.
8. Expert Validation : For each subsection of expert validation, different bar graphs can be used, with each highlighting the specific aspect being assessed, such as application navigation, visual elements, vocabulary, and etc.

In socializing with users about the Eng-Lab application with a total of 26 correspondents, it was found that the results of the questionnaire assessment regarding the Eng-Lab application were as follows:

The document provides a detailed analysis of user feedback on various aspects of the Eng-Lab application. Key findings include:
1. Visual Appeal and Clarity: Users generally found the application's interface attractive and clear.
2. Instructions: The instructions within the app were deemed clear, precise, and easy to understand.
3. Content Relevance: The material presented was considered clear and contextually appropriate.
4. User Motivation: Most users agreed that the materials were relevant and enhanced their learning experience.
5. Ease of Use: While the materials were seen as easy to use for learning English, there was some diversity in opinions.
6. User Needs and Interests: The content was largely seen as meeting users' professional English learning needs.
7. Language Suitability: Users felt the language used in the app matched their proficiency level.

Overall, the feedback indicates a positive reception of the Eng-Lab app, with consistent user satisfaction across different aspects, suggesting its effectiveness as a holistic learning tool.

4. DISCUSSION

The interview with educational technology experts Dr. Choiruddin M.Pd and Dr. Agus Setiawan M.Pd provides insights into the Eng-Lab application. Eng-Lab is designed for interactive and comprehensive English learning, integrating advanced technology for personalized content. It uses machine learning algorithms to tailor materials to user proficiency and learning styles. Users positively responded to features like the chat function for authentic language practice and diverse job application templates. Continuous improvement in translation accuracy and relevance to current language learning trends is emphasized, along with the integration of augmented and virtual reality for an immersive learning experience. Suggestions include expanding Eng-Lab into a global language learning community and making language learning more efficient, enjoyable, and accessible worldwide.

This study begins a journey to improve the design and content of the Eng-Lab application, leveraging Borg and Gall's research pipeline to collect and analyze data. Initial conversations with professionals in the retail, fast food service, and financial sectors revealed a shared struggle in English language proficiency, especially in industry-specific terminology and customer interactions. These insights are critical in shaping application content, aligning it with real-world communicative demands in the workplace.

The subsequent Focus Group Discussion (FGD) with stakeholders from the Ma'arif Lampung University Quality Assurance Agency (UMALA) and English lecturers provided further insight. The discussion underscored the need for balance between theoretical knowledge and practical application, urging a tailored modular approach to serve a variety of professional backgrounds. Interactive features, self-assessment tools, and emphasis on real-world scenarios are highlighted as critical components for cultivating an engaging and conducive learning environment.

Responses collected from the app's usability survey reflected positive acceptance of the interface and clarity of instructions. Statistical data obtained from the survey showed a consensus among users, who found the app design to be intuitive and the content to be relevant and easy to understand. The dialogue and idiomatic expression features in the app are highly appreciated for their real-world applicability, and align with professionals' everyday linguistic challenges. A significant takeaway from this data is the perceived need for integrated chat features. This shows the high demand for real-time interaction capabilities in applications, which can potentially serve as a

platform for users to practice and improve their language skills through peer-to-peer communication.

Finally, an expert interview with Dr. Choiruddin, M.Pd, and Dr. Agus Setiawan, M.Pd, validated the technology pedagogy aspect of Eng-Lab. These discussions with educational technology validators underscore the importance of continuous updates and integration of new technologies such as augmented reality and virtual reality to enhance the learning experience. Their recommendations paved the way for Eng-Lab to develop into a comprehensive tool that not only teaches English but also fosters a global community of learners. The Eng-Lab app is emerging as a powerful tool designed to meet the English learning needs of various professionals. Collective feedback from users and experts underscores its efficacy and potential, and advocates a dynamic, user-centered learning approach. The results of this research suggest a continuous iterative process to refine and adapt the application to evolving trends in language learning and the varying needs of its users.

5. CONCLUSION

The Eng-Lab app provides comprehensive insight into the app's effectiveness as a language learning tool. This study used Borg and Gall's research model to collect and analyze data, engaging professionals in the retail, fast food service, and financial sectors to understand their struggles with English language proficiency, specifically industry-specific terminology and customer interactions. The implementation was received positively by users, with focus group discussions highlighting the need for balance between theoretical knowledge and practical application. The Eng-Lab app's interactive features, self-assessment tools, and emphasis on real-world scenarios were deemed essential to developing an engaging learning environment.

User surveys reflected satisfaction with the clarity of the app's interface and the relevance of the content, with dialogue and idiomatic expressions valued for their real-world applicability. The significant demand for integrated chat features indicates high interest in real-time interaction capabilities in applications, which can potentially serve as a platform for users to practice and improve their language skills through peer-to-peer communication. Interviews with educational technology experts validate the pedagogical technological aspects of Eng-Lab, emphasizing the importance of continuous updates and integration of new technologies, such as augmented reality and virtual reality, to enhance the learning experience. In conclusion, the Eng-Lab application emerges as an application designed to meet the diverse English learning needs of professionals. Collective feedback from users and experts underscores its effectiveness and potential, and recommends a dynamic, user-centered learning approach. The study advocates an ongoing, iterative process to refine and adapt

the application to evolving language learning trends and the varying needs of its users.

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