

**THE APPLICATION OF PROBLEM-BASED LEARNING THROUGH
GRAMMARLY APPLICATION TO IMPROVE STUDENTS' GRAMMAR
MASTERY AT SMK NEGERI SUMATERA SELATAN PALEMBANG**

A Thesis By

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ENGLISH EDUCATION STUDY PROGRAM

LANGUAGE AND ARTS EDUCATION DEPARTMENT



FACULTY OF TEACHER TRAINING AND EDUCATION

SRIWIJAYA UNIVERSITY

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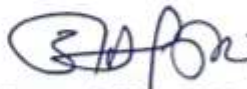
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DECLARATION

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I hereby declare that the thesis entitled:

"The Application of Problem-Based Learning Through Grammarly Application to Improve Students' Grammar Mastery at SMK Negeri Sumatera Selatan Palembang"

Was conducted independently and prepared without unjustifiable assistance. All quotes written and/or thoughts of others used in the thesis, either from published sources or not (including from journal, books, articles, lecture notes, assignments other students and others), have been cited properly in accordance to the rules of academic standard and regulations.

Indralaya, December 2023

The Undersigned



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DEDICATION AND MOTTOS

This thesis is dedicated to:

My lovely family, my father and mother who always pray and support me. My dearest sisters, Dira, Difa and Dinia, I'm very lucky to have a family like this, and to myself who has finished this thesis and stayed patient in any situation.

MOTTOS

لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا

“Allah does not charge a soul except [with that within] its capacity.”

(QS. Al Baqarah : 286)

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**The Application of Problem-Based Learning Through Grammarly
Application to Improve Students' Grammar Mastery at SMK Negeri
Sumatera Selatan Palembang**

ABSTRACT

The objectives of the research were to find out whether there is a significant improvement in grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between before and after they are taught by using Problem-Based Learning through Grammarly application and a significant difference in the grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between the experimental group that is taught by using Problem-Based Learning through Grammarly application and the control group that is not. This research used quasi-experimental method. The pre-test and post-test were used to collect the data. The samples were 64 students of class X PHN of SMK Negeri Sumatera Selatan Palembang. The result showed that there was a significant improvement in grammar mastery of the 10th-grade students in SMK Negeri Sumatera Selatan Palembang between before and after they were taught by using Problem-Based Learning through Grammarly application, with a significant level of 0.000. It indicates that the implementation of Problem-Based Learning through Grammarly application helps students of experimental group to improve their grammar mastery. Additionally, the result showed that there was a significant difference in grammar mastery between students who were taught by using Problem-Based Learning through Grammarly application and those who were not, with the significant level of < 0.05 . Based on the analysis, it is concluded that using Problem-Based Learning through Grammarly application could improve grammar mastery of the 10th-grade students of SMK Negeri Sumatera Selatan Palembang.

Keywords: *Problem-Based Learning, Grammarly application, grammar mastery.*

CHAPTER I

INTRODUCTION

This chapter describes (1) background, (2) problems of the research, (3) objectives of the research, (4) significance of the research and (5) scope of the research.

1.1 Background

In the twenty-first century, information and communication technology (ICT) has developed quickly in human life. It makes our work less time-consuming and much easier. ICT is defined as the use of digital technology to create, share, gather, and administrate information and communicate in real time (Sarkar, 2012; techterms, 2018; Reddy et.al., 2020). Hayati, et.al., (2021), stated that ICT is a useful tool for displaying or expressing information in a variety of ways. ICT includes a wide variety of technology such as computers, telephones, software applications, and the internet, which enable worldwide communication and information sharing. ICT has become an essential aspect of daily life. It empowers individuals, companies, and society by offering instruments for education, cooperation, creativity, and economic development. As technology advances, the effect of ICT is expected to grow even more, impacting numerous facets of human existence and altering the way people live, work, and interact with one another.

ICT contributed to the developments and growth in economics, transportation, and, most importantly, education. The advancement of ICT has been implemented in the educational setting, which has improved teacher training in educational technology (Cueva A, 2022). ICT is typically characterized as technical equipment or tools used to improve instruction in education. The use of ICT in education has not only increased access to educational resources, but has also resulted in individualized learning, which provides a variety of learning styles and needs. Students may now access a variety of knowledge, collaborate with peers all over the world, and gain digital literacy skills that are essential in today's technology-driven culture. Students who use ICT can be more focused and save

time since it allows them to get information more quickly from anywhere and at anytime (Inderawati, 2011; Hayati, et.al, 2021).

ICT is being used increasingly in schools for various subjects, including the study of foreign languages. The use of ICT in language teaching gives access to a wide variety of tools, such as language learning applications, interactive web platforms, and virtual classrooms, allowing learners to engage with the language in real-world circumstances. According to Dash B.B (2022), the application of modern technology in English language teaching is described as the creative application of systems, methods, materials, tools, equipment, and strategies that are related to the English language and contribute to the accomplishment of the intended outcomes. In short, information and communication technology (ICT) has become an effective tool for language acquisition, making learning more accessible, interesting, and effective.

Nowadays, the function of technology has become crucial in developing four language skills, one of which is grammar. Grammar is a set of rules that allow people to organize sentences. It covers various aspects of the English language, such as parts of speech, punctuation, language mechanics and clauses. According to Hirai (2010), grammar is the method of organizing sentences and developing an acceptable language. Crystal (2004) claimed that grammar is a way by which we express our feelings through the structural structure of language. According to this, Grammar may be defined as a set of principles that govern how words are joined or arranged together to form accurate, meaningful sentences that allow people to talk and write efficiently and accurately.

The application of grammar in English language is essential. Grammar mastery is required for mastering the four English skills, namely writing, reading, listening, and speaking. Learning grammar can help us enhance our writing, speaking, and translating skills, even though its use is not for daily life. The advantages of using grammar include improving translation skills, increasing vocabulary, learning the true meaning of sentences, and developing conceptual thinking about grammatical structures.

Based on the 2013 curriculum, teachers are recommended to use a scientific approach in the teaching and learning process. It allows teachers to improve the learning process by breaking it down into steps that offer specific instructions for conducting students' learning. According to Minister of Education and Culture Regulation Number 22 (2016), four learning models strengthen the scientific approach to the teaching and learning process during classroom activity, one of which is Problem-Based Learning (PBL). According to Bodagh et al., (2017) PBL is an approach that begins with a problem or a difficult circumstance. The setting allows students to form hypotheses and identify learning requirements to better understand the problem and achieve the learning objectives. This method of learning encourages students to be more independent in selecting what options are best, particularly when working in groups. According to Tan (2021), the aims of PBL include the acquisition of process skills, content learning and problem-solving skills, and lifelong learning.

One of the schools that uses the 2013 curriculum is SMK Negeri Sumatera Selatan. Based on the interview with three English teachers there, most of the students in that school have problems in mastering English skills. This problem happens because most teachers use media for learning grammar such as books, which are less attractive to learners in the learning process. For some learners who do not know much about grammar, media learning through books is usually difficult to grasp., as a result, learners also need teachers as companions to increase the learning outcomes achieved. In this situation, the function of digital technology in the area of learning is necessary as a tool to improve learners' interest in studying, particularly learning English grammar, to send a message to the learners, and to engage learners' thoughts, attention, and feelings, so that interest in learning grammar increases.

Digital technology that can be used to learn grammar is Grammarly application. Grammarly is a writing tool that assists authors in checking for many forms of language or grammatical problems in English. According to Ghufon (2019), The Grammarly application plays a role in assessing English writing errors. It can be used to check the spelling of the text and maintain the tool's aim

of avoiding typos out of context. So, Grammarly is a software application that controls and keeps writing looking excellent and proper. It also provides free plagiarism tests and may detect academic difficulties like data resemblance or plagiarism from other online-based data.

Based on the above description, the researcher is interested in doing research to determine whether Problem-Based Learning through Grammarly could improve students' grammar mastery in SMK Negeri Sumatera Selatan Palembang. Grammarly application is used in the research. The existence of this application is used as a supporting tool that can improve learners' interest in learning grammar.

1.2 Problems of the Research

Based on the explanation above, the problems of the research are in the following questions:

1. Is there a significant improvement in grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between before and after they are taught by using Problem-Based Learning through Grammarly?
2. Is there a significant difference in grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between the experimental group that is taught by using Problem-Based Learning through Grammarly and the control group that is not?

1.3 Objectives of the Research

Related to the research, the objectives of the research are to find out:

1. A significant improvement in grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between before and after they are taught by using Problem-Based Learning through Grammarly.
2. A significant difference in grammar mastery of 10th-grade students in SMK Negeri Sumatera Selatan Palembang between the experimental group that is taught by using Problem-Based Learning through Grammarly and the control group that is not.

1.4 Significance of the Research

1. Theoretically

The researcher expects that readers will gain a lot of information and recognize the significance of grammar.

2. Practically

a. Teacher

Teachers will get knowledge on applying Problem-Based Learning method through Grammarly application to improve students' grammar skills which can be implemented in the classroom and have a positive impact on the students.

b. Students

Students are motivated to learn English, especially when using the Grammarly application as a tool to improve their grammar knowledge.

c. Other researchers

Completing this study will stimulate and inspire other researchers who are needed to do research, as well as have a beneficial impact on research to improve grammar mastery through Problem-Based Learning using Grammarly application.

1.5 Scope of the Research

This research focuses on the usage of Grammarly as a learning resource to assist students in improving their grammatical skills. It focuses on using Grammarly free version.

REFERENCES

- Alzu'bi, M. A. (2015). Effectiveness of inductive and deductive methods in teaching grammar. *Advances in Language and Literary Studies*, 6(2), 187-193. and application Sixth Edition, New Jersey: Prentice Hall Inc., p. 36.
- Azmi Zakaria, M., & Aziz, A. A. (2019). The impact of digital storytelling on ESL narrative writing skills. *Arab World English Journal (AWEJ) Special Issue on CALL*, (5).
- Beringer, J. (2007). Application of problem-based learning through research investigation. *Journal of Geography in Higher Education*, 31(3), 445-457.
- Bodagh, N., Bloomfield, J., Birch, P., & Ricketts, W. (2017). Problem-based learning: a review. *British journal of hospital medicine*, 78(11), C167-C170.
- Celce-Murcia, M. (2015). An overview of teaching grammar in ELT. *Teaching and Learning English Grammar*, 3-18.
- Chiou, B. (2019). The application of problem-based learning approach in English grammar instruction: A pilot study. *Journal of Language Teaching and Research*, 10(3), 446-453.
- Creswell, J. W. (2008). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. New Jersey: Pearson Education Ltd., p. 313.
- Crystal, D. (2004). *Two thousand million? English Today*. Cambridge: University of Cambridge.
- Cueva, A., & Inga, E. (2022). Information and communication technologies for education considering the flipped learning model. *Education Sciences*, 12(3), 207.
- Dash, B. B. (2022). Digital Tools for Teaching and Learning English Language in the 21st Century. *International Journal Of English and Studies*, 4(2), 8-13.

- Dewi, U. (2022). Grammarly as automated writing evaluation: Its effectiveness from EFL students' perceptions. *Lingua Cultura*, 16(2), 155-161.
- Etherington, M. B. (2011). Investigative primary science: a problem-based learning approach. *Australian Journal of Teacher Education*, 36(9), 53-74. <http://dx.doi.org/10.14221/ajte.2011v36n9.2>
- Fadhilah, U., Julia, H., & Saribu, D. (2019). Effectiveness of grammarly application for writing English Abstract. *International Journal of Science and Research (IJSR)*. ISSN, 2319-7064.
- Fitria, T. N. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 65-78.
- Gay, L. R. & Peter, A. (2000) Educational Research Competencies for Analysis
- Ghufron, M. A. (2019). Exploring an Automated Feedback Program 'Grammarly' and Teacher Corrective Feedback in EFL Writing Assessment: Modern vs. Traditional Assessment. *ELLIC. ELLiC 2019*, 307.
- Ghufron, M. A., & Rosyida, F. 2018. The Role of Grammarly in Assessing English as a Foreign Language (EFL) Writing. *Lingua Cultura*, 12(4),395. <https://doi.org/10.21512/lc.v12i4.4582>
- Hans, A., & Hans, E. (2017). Role of grammar in communication–writing skills. *International Journal of English Language, Literature and Humanities*, 5(1), 39-50.
- Harmer, J. (2008). *How to teach English* (Vol. 62, No. 3, pp. 313-316). Oxford University Press.
- Harmer, Jeremy. (2001). *the Practice of English Language Teaching*. London: Longman Group UK Limited.

- Hasan, D (2022). The Use of the Grammarly Application to Improve Student's Grammar Mastery at SMAN 18 Makassar. From <https://repository.unibos.ac.id/xmlui/handle/123456789/1797>
- Hayati, R., Anggraini, H. W., & Jaya, H. P. (2021). ICT and Learning Attitude towards Students' Academic Paragraph Writing in College Level. *ENGLISH FRANCA: Academic Journal of English Language and Education*, 5(1), 149-168.
- Hestningsih, W. (2016). The Effects of Grammar Mastery and Vocabulary Mastery Towards Students Argumentative Writing. *Deiksis*, 8(02), 208-216.
- Hirai, D. (2010). *Academic Language/Literacy Strategies for Adolescent*. New York: Routledge.
- Karyuatry, L. (2018). Grammarly as a tool to improve students' writing quality: Free online-proofreader across the boundaries. *JSSH (Jurnal Sains Sosial dan Humaniora)*, 2(1), 83-89.
- Karyuatry, L., Rizqan, M. D. A., & Darayani, N. A. (2018). Grammarly as a Tool to Improve Students' Writing Quality: Free Online-Proofreader Across the Boundaries
- Keiziah, A. A. (2010). A comparative study of problem-based and lecture-based learning in secondary school students' motivation to learn science. *International Journal of Science and Technology Education Research*, 1(6), 126-131.
- Kemendikbud. (2016). *Permendikbud Nomor 22 Tahun 2016 Tentang Model Pembelajaran*. Jakarta: Kementerian Pendidikan dan Kebudayaan RI.
- Lukman, (2016). *Pemanfaatan teknologi informasi dalam penulisan artikel Ilmiah*. PDII-LIPI

- Mart, C. T. (2013). Teaching grammar in context: why and how? *Journal of Theory and Practice in Language Studies*, 3(1), 124-129. doi: 10.4304/tpls.3.1.124-129
- Nasution, A. B. M. D., Sidiq, E. I., Faujan, M. L. Y., & Tabroni, I. (2023). Increasing Understanding of Fiqh: Problem Based Learning (PBL) Drives it All. *International Journal of Integrative Sciences*, 2(2), 65-78.
- Nurkhin, A., & Pramusinto, H. (2020). Problem-Based Learning Strategy: Its Impact on Students' Critical and Creative Thinking Skills. *European Journal of Educational Research*, 9(3), 1141-1150.
- Obilor, E. I. (2023). Convenience and purposive sampling techniques: Are they the same. *International Journal of Innovative Social & Science Education Research*, 11(1), 1-7.
- Perdana, I., Manullang, S. O., & Masri, F. A. (2021). Effectiveness of online Grammarly application in improving academic writing: review of experts experience. *International Journal of Social Sciences*, 4(1), 122-130.
- Pohan, A. E. (2019). PROBLEM BASED LEARNING; AN EFFICIENT STRATEGY ON ENHANCING STUDENTS' GRAMMAR ABILITY. *vol, 10*, 56-66.
- Priya, S. P. (2015). The importance of teaching grammar more interestingly in the classrooms. *International Journal of English Language, Literature and Translation Studies (IJELR)*, 2(3), 447-449.
- Reddy, P., Sharma, B., & Chaudhary, K. (2020). Digital literacy: A review of literature. *International Journal of Technoethics (IJT)*, 11(2), 65-94.
- Sarkar, S. (2012). The Role of Information and Communication Technology (ICT) in Higher Education for the 21st Century. *The Science Probe*, 30-41.
- Shoimin, A. (2017). *68 Model Pembelajaran Inovatif dalam Kurikulum 2013*. Yogyakarta: Ar Ruzz Media.

- Silva, A. B. D., Bispo, A. C. K. D. A., Rodriguez, D. G., & Vasquez, F. I. F. (2018). Problem-based learning: A proposal for structuring PBL and its implications for learning among students in an undergraduate management degree program. *Revista de Gestão*, 25(2), 160-177.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta
- Tan, O. S. (2021). *Problem-based learning innovation: Using problems to power learning in the 21st century*. Gale Cengage Learning.
- Thornbury, S. (1999). How to teach grammar. *Readings in Methodology*, 129.
- Tomakin, E. (2014). Teaching English tenses (grammar) in the Turkish texts: a case of simple Present tense: Isilmaketiiter. *International Journal of Learning & Development*, 4(1), 115-131. doi:10.5296/jilid.v4i1.5154
- Tortorella, G., & Cauchick-Miguel, P. A. (2018). Teaching lean manufacturing at a postgraduate level: Integrating traditional teaching methods and problem-based learning approach. *International Journal of Lean Six Sigma*, 9(3), 301–323. <https://doi.org/10.1108/IJLSS-08-2017-0101>
- Toshpulatova, M., & Ilhomjonova, R. (2023). TEACHING AND LEARNING ENGLISH THROUGH DIGITAL TECHNOLOGY. *Engineering problems and innovations*.
- Tucker, C. R. (2015). *Creatively Teach the Common Core Literacy Standards With Technology: Grades 6-12*. Corwin Press.
- Zuhriyah, M. (2017). Problem-based learning to improve students' grammar competence. *Register Journal*, 10(1), 48-61.