International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Improve Students' Spelling Correction Skills Through Interactive Learning Using Google Drive

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Abstract
This study employed a pretest and posttest comparative quantitative approach with research subjects of Indonesian Language and Literature Education Study Programme students at Cenderawasih University, Papua Province, Indonesia. The findings indicated a significant enhancement in the students' spelling correction proficiency following their engagement in interactive learning activities facilitated by google drive. This enhancement can be attributed to the utilisation of google drive as a learning medium, which empowers students to learn autonomously and interactively, in addition to fostering a more dynamic learning environment. This research offers practical implications for lecturers seeking to develop innovative learning media that can enhance the quality of Indonesian language learning.

Keywords: Spelling Correction, Interactive Learning, Google Drive

1. Introduction

Language is the primary means of communication in human life. It is not merely a means of communication or a tool; rather, it is a social practice replete with ideologies and interests (Shirahata, M., & Lahti, M., 2022). Effective communication necessitates adherence to principles of linguistic ethics and politeness (Hartini, N., et.al., 2023). The capacity to articulate oneself with clarity and precision is a critical factor in achieving success. A salient aspect of language pertains to the capacity to rectify spelling errors in accordance with grammatical conventions. As Yousofi (2022) asserts, grammar plays a pivotal role in ensuring clarity, coherence, and effective communication by preventing ambiguity.

The capacity to comprehend the grammatical principles of writing is conducive to the effective composition of academic texts (Jaafar, R., et.al., 2018). Asaad (2024) further asserts that linguistic aspects, encompassing letters and words, exert a significant influence on students' academic writing. Spelling correction skills are defined as the ability to identify and rectify spelling errors in words (Smith, 2021).

The development of writing skills has been shown to facilitate effective communication in a variety of academic disciplines (Jones-Mensah & Hilton, 2024). However, it is evident that a significant number of students continue to grapple with the accurate spelling of words. This phenomenon can be attributed to various factors, including a lack of comprehension regarding spelling conventions, insufficient practice, or a waning interest in language acquisition.

In order to surmount this issue, it is imperative to employ innovative and engaging learning methodologies. Butarbutar (2024) posited that online scaffolding can function as a cognitive and interactive instrument in the cultivation of writing skills. Furthermore, the provision of opportunities for students to engage in writing practice has been demonstrated to facilitate the development of their writing skills (Hales, P., 2017). One of the methods employed in addressing spelling errors is interactive learning based on Google Drive.

Google Drive is a digital platform that offers a range of features, some of which can be utilised as a spelling correction medium for student writing outcomes. The present study aims to examine the effectiveness of interactive learning based on Google Drive in improving students' spelling correction skills. The findings of this study are anticipated to contribute to the development of innovative and effective language learning methodologies.

2. Literature Review

Interactive Learning

Interactive learning is defined as a teaching method that emphasises active participation and collaboration between students and teachers (Fan, X., & Li, J., 2023). Furthermore, as asserted by Miles, P., & Boltin, K. (2024), interactive learning is a student-centred learning approach that emphasises active participation and collaboration between students and educators. This opinion emphasises that interactive learning is a teaching method that emphasises active participation and collaboration between students and teachers. In this model, students are not merely passive recipients of information, but rather play an active role in the learning process through various activities such as discussion, question and answer, group work, and other interactive exercises. The teacher's role is that of a facilitator, guiding and encouraging students to explore the material, think critically, and solve problems independently.

Interactive learning environments have been demonstrated to influence both individual and collaborative student identities (Apeah-Kubi., 2025; Hod, Y., 2023). The fundamental objective of interactive learning is to establish a dynamic and stimulating learning environment. In such an environment, students are encouraged to participate actively, collaborate and engage directly in the learning process. This approach facilitates not only a more profound comprehension of the subject matter, but also the development of a range of pivotal skills. These skills include critical thinking, problem solving, communication and social interaction. Interactive learning is designed to increase students' motivation and confidence in learning. The motivation and confidence that interactive learning fosters in students has been shown to increase their eagerness to learn, explore the material, and achieve optimal learning outcomes (Smith, 2019).

Google Drive as a Learning Platform

Google Drive can be defined as one of the popular applications on an online platform that allows users to access their data anywhere and at any time through internet-connected devices (Daryabar, F., et.al., 2016). Google Drive is a cloud-based platform that provides various collaboration and communication features, such as Google Docs, Google Sheets, and Google Slides (Daryabar, F., et.al., 2016). These features enable users to create, share, and edit documents simultaneously in real time.

As K. C. (2017) also asserts, Google Drive is a highly effective and efficient online data processing tool. A further advantage of Google Drive is its accessibility across a range of online devices, facilitating convenient access for students at any time and from any location. A salient feature of Google Drive is the Spelling Edit feature, which is available in Google Documents.

The edit spelling feature assists users in correcting spelling errors in documents. This feature employs

automated processes to detect words that are either mistyped or do not correspond to the dictionary being utilised. It subsequently offers suggestions to assist in enhancing the document's linguistic accuracy. Users can elect to accept these suggestions, disregard them, or contribute new words to the dictionary. This feature has been shown to enhance writing efficiency and contribute to the production of more professional documents by minimising spelling mistakes (Smith, 2020).

Studies Related to Spelling Correction

The correction of spelling errors can be achieved through the identification of misspellings that result in the standardisation of words. For instance, research by Stolk (2024) posits that spelling errors in ancient Greek papyrus documents can offer insights into the evolution of the Greek language's sound and morphology. Typo correction is an important aspect in various applications, such as word processors, spell checkers, and machine translation systems.

Spelling correction can be achieved through a variety of methodologies. The efficacy of this process can be enhanced by employing a multimodal interface that integrates voice and mouse interaction (Taieb - Maimon & Romanovskii-Chernik, 2024). In this study, the Google Drive platform is utilised for the correction of spelling errors in research papers conducted by students.

The implementation of spelling correction through Google Drive has been demonstrated to engender numerous advantages. Primarily, the correction of spelling errors ensures that the document is devoid of any mistakes. Secondly, accurate spelling enhances the professionalism and credibility of the document. Thirdly, the automated nature of the process obviates the need for extensive manual checking, which is both time-consuming and labour-intensive. Finally, spelling correction facilitates access to text for users with disabilities, thereby promoting inclusivity and accessibility in digital documentation. Additionally, spelling correction can facilitate the learning process of correct spelling and enhance writing skills.

3. Methods

Research Approach and Design

The present study employed a pretest and posttest comparative quantitative approach. Comparative quantitative research is a research method that aims to compare two or more groups or variables (McGowan & Gaset., 2023). This process involves the collection of numerical data, followed by statistical analysis to ascertain significant differences between the groups under comparison.

The pretest-posttest design is a type of quantitative research that is useful for measuring changes in the condition or attitude of research subjects before and after an intervention (Reime, et.al., 2022). The design that was implemented was a pre-test and post-test design, which enabled the researcher to make a comparison between the students' spelling correction skills before and after the interactive learning intervention that was based on Google Drive.

Research Subject

The subjects of the present study were students of the Indonesian Language and Literature Education Study Programme at Cenderawasih University, Papua Province, Indonesia. The selection of these subjects was based on their relevance to the focus of the research, namely spelling correction ability in the context of language education. The total number of subjects was 50, all of whom were engaged in the preparation of research papers and proposals.

Research Procedures

The research procedure in this study commenced with the implementation of a pretest, wherein students were administered an initial test to evaluate their spelling correction skills. Subsequent to the pretest, the

students participated in a series of interactive learning intervention sessions that were facilitated using Google Drive. These sessions incorporated comprehensive explanations of the subject matter and utilised Google Drive as a medium for spelling correction. Following the intervention, a post-test was administered to the students, which was equivalent to the pre-test and was used to measure changes in spelling correction ability.

Research Instruments

The instrument utilised in this study is a thesis manuscript, which is comprised of 50,000 words and spans a total of 150 pages. Within this document, the researcher has identified 200 errors, which are expected to be rectified in the pretest phase. The thesis manuscript was provided in the form of a Microsoft Word document, enabling its processing through a computerised device. Following the implementation of a spelling correction intervention through the use of the 'edit spelling' feature on Google Drive, the instrument was administered once more in the post-test phase.

Data Analysis Technique

The objective of the comparative descriptive analysis is to provide a detailed account of the number of spelling errors identified and rectified by students on both the pretest and posttest. The analysis steps include calculating the number of spelling errors found and corrected by each student on the pretest and posttest. Subsequently, the data was presented in tabular form, with each student's data presented individually and the group's data presented collectively. Following this, a comparison was made of the number of spelling errors found and corrected in the pretest and posttest to ascertain whether there had been an improvement. The results of the analysis were described narratively. The analysis revealed that students identified and rectified a greater number of spelling errors in the posttest compared to the pretest.

4. Results

This study was conducted by means of an evaluation of students' understanding of spelling. The final sample comprised 50 subjects who demonstrated successful completion of the study. The findings, based on the results of the spelling comprehension and correction tests, revealed an increase in scores from the pretest to the posttest.

Table 1: Earnings of pretest and posttest scores

Student Code	Pretest Score	Posttest Score	Improved		Student Code	Pretest Score	Posttest Score	Improved
student-01	60	85	25		student-26	55	81	26
student-02	55	80	25		student-27	70	95	25
student-03	70	90	20		student-28	65	89	24
student-04	65	88	23		student-29	50	76	26
student-05	50	75	25		student-30	75	91	16
student-06	75	95	20		student-31	60	86	26

student-07	60	82	22		student-32	55	82	27
student-08	55	78	23		student-33	70	92	22
student-09	70	92	22		student34	65	90	25
student-10	65	86	21		student-35	50	77	27
student-11	50	72	22		student-36	75	93	18
student-12	75	90	15		student-37	60	87	27
student-13	60	83	23		student-38	55	83	28
student-14	55	79	24		student-39	70	90	20
student-15	70	91	21		student-40	65	91	26
student-16	65	87	22		student-41	50	78	28
student-17	50	73	23		student-42	75	98	23
student-18	75	92	17		student-43	60	88	28
student-19	60	84	24		student-44	55	84	29
student-20	55	80	25		student-45	70	99	29
student-21	70	94	24		student-46	65	92	27
student-22	65	88	23		student-47	50	79	29
student-23	50	74	24		student-48	75	93	18
student-24	75	98	23		student-49	60	89	29
student-25	60	85	25		student-50	55	85	30

5. Discussion

As demonstrated in Table 1, the data indicates a significant improvement, suggesting the efficacy of the intervention. The extent of this improvement varied, with the maximum recorded as 30 points (Mhs-50) and the minimum as 15 points (Mhs-12), reflecting individual differences in the learning process. The

pre-test scores ranged from 50 to 75, while the post-test scores were between 60 and 99. These results indicate variations in initial ability. The case study of Mhs-50, which demonstrated the most significant improvement, is recommended for further investigation to ascertain the factors contributing to its success. Conversely, Mhs-12, which demonstrated the least significant improvement, necessitates further evaluation to ascertain any potential barriers. The majority of students demonstrated an improvement of 20-30 points, signifying the general effectiveness of the intervention. The mean score improvement for the 50 students was 23.88. These results can be used for programme evaluation, individual follow-up, and identification of additional contextual factors that influence outcomes.

The findings of this study demonstrate that Google Drive is an effective interactive learning media for enhancing Indonesian spelling correction skills. The collaborative features and automatic spelling correction on Google Drive have been demonstrated to increase students' engagement and motivation in the learning process. Furthermore, the integration of Google Drive in educational settings fosters a blend of independent and collaborative learning, thereby nurturing the development of 21st-century skills.

This enhancement in spelling correction proficiency serves as a testament to the efficacy of the interactive learning intervention facilitated by Google Drive. This phenomenon is hypothesised to be attributable to several factors. Primarily, the utilisation of Google Drive as a learning medium empowers students to learn autonomously and interactively. Features such as the spell checker, grammar checker, and suggestion tools in Google Docs assist students in identifying and correcting spelling errors independently.

Secondly, interactive learning encourages students to adopt a more active role in the learning process. In addition to the passive reception of information, students partake in a variety of interactive activities, including discussions, exercises, and peer review using Google Drive. It is hypothesised that these activities will enhance students' comprehension of spelling and its application in their writing.

Thirdly, this intervention facilitates more rapid and precise feedback. Through the utilisation of Google Drive features, students can instantaneously identify and address their spelling errors, receiving tailored suggestions for improvement. Lecturers can also provide feedback through the comments feature and on google docs. This precise and efficient feedback enables students to immediately correct errors and deepen their understanding.

This research makes a significant contribution to the development of more effective Indonesian language learning methods. The utilisation of Google Drive as an interactive learning medium holds considerable potential in enhancing students' language skills, particularly with regard to spelling. Further research is required to ascertain the effectiveness of this intervention on a broader population and to explore other linguistic aspects.

The findings of this study carry significant implications for educational practitioners, particularly those involved in the instruction of Indonesian as a foreign or second language. Google Drive-based interactive learning interventions can be adopted and adapted according to learning needs and contexts. Teachers or lecturers can utilise google drive features to create more interactive learning materials, facilitate discussion and collaboration between students, and provide more efficient feedback.

This research also provides insights for curriculum and learning technology developers. The integration of technology in Indonesian language learning should be approached in a methodical and systematic manner to ensure a favourable impact on students' language skills. The development of an interactive and adaptive technology-based learning platform is identified as a key area for future research.

6. Conclusion

The utilisation of Google Drive as an interactive learning media has been demonstrated to be an effective method for enhancing Indonesian spelling correction skills. This study offers practical implications for lecturers in the development of innovative learning media that can enhance the quality of Indonesian language learning. Future research could explore the use of Google Drive in the context of learning other language skills.

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