

Effectiveness of Meaning-based Approach to Pedagogical Grammar Material in Accounting Students' Learning

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ABSTRACT

This study highlights the importance of English proficiency for accounting students in the ASEAN Economic Community (AEC), where professional communication is essential. However, existing ESP Materials often fail to integrate grammar with meaningful communication relevant to professional contexts. Few studies have empirically examined the effectiveness of meaning-oriented grammar materials in ESP contexts, particularly for accounting students in Indonesian higher education. This study aims to evaluate the effectiveness of Meaning-based Approach to Pedagogical Grammar (MAP Grammar) materials on students' learning achievement compared with conventional ESP materials. A quasi-experimental design was employed involving two groups (N=25) at the University of Riau. Pre-test results showed no significant difference between groups (M=61.28 vs. 59.48; $p=0.168$). Post-test results indicated higher mean score in the experimental group (M=79.60) than the control group (M=73.08), but the difference was not statistically significant ($p=0.937$). In other words, the findings revealed no significant difference in pre-test scores between groups, while the experimental group achieved a higher post-test mean score than the control group, although the difference was not statistically significant. These findings indicate that MAP Grammar may support the integration of grammatical understanding and communicative use in ESP learning. However, further longitudinal studies with broader assessment measures are required to determine its long-term effectiveness.

Keywords: *Effectiveness, MAP Grammar, ESP, Learning Achievement, Accounting Students*

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INTRODUCTION

Accounting is one such field significantly impacted by the free-market policies of the ASEAN Mutual Recognition Arrangement (MRA) (Mayangsari et al., 2019). Non-English major students, particularly those in the field, require strong English language skills to succeed in their careers and adapt to the ASEAN Economic Community (AEC) (Adhariani, 2020), because the globalized business environment necessitates strong English language skills for accounting professionals (Dunakhir & Osman, 2023). At university level, the programs often include English courses tailored to this kind of specific field, known as English for Specific Purposes (ESP). Therefore, to prepare students for such challenges, English language materials are one of the learning media that should be designed to develop their communication skills specifically for the accounting workplace.

In response to these global demands, English instruction at the university level in Indonesia tends to emphasize specific academic skills, particularly reading and writing. Given the academic nature of the study, strong literacy skills are essential for accounting. In Indonesian context, ESP learners prioritize reading comprehension to underpin their writing abilities. This emphasis on reading stems from the belief that it fosters grammar awareness and language structure understanding, which are crucial for effective writing (Marjokorpi, 2023). While other language skills are taught as well, reading and writing are considered as the core components of university education in Indonesia (Solikhah, 2015).

Despite this emphasis on literacy skills, existing teaching approaches often fail to adequately support students in developing the specific language competencies required in

their professional fields. However, traditional English language teaching approaches often fail to equip students with the domain-specific knowledge they need. Accounting students require instruction that not only targets relevant vocabulary and grammar but also develops their ability to comprehend and produce written and spoken English in professional contexts (Dudley-Evans & St. John, 1998; Hyland, 2006). English for Specific Purposes (ESP) programs bridge this gap by tailoring language instruction to the specific needs of a particular profession (Hutchinson & Waters, 1987). Consequently, Indonesian universities emphasize English proficiency for accounting students due to the international demand for qualified professionals (Alhawsawi, 2020; Beaverstock, 1990). In other words, the importance of high-quality English teaching for ESP students, including in accounting field, cannot be overstated.

While English proficiency is undeniably crucial for accounting students to excel in their field (AbdulRaheem Al-Malki et al., 2022; Septiari & Sari, 2020), the reality is that English language skills, particularly in Indonesia, remain relatively low among students (Saputra & Kristiawan, 2022). This gap can be attributed to several factors. One primary obstacle is the dearth of authentic English teaching materials tailored to the accounting field (Hyland, 2022). This shortage stems from insufficient focus on developing English skills for accounting students and limited resources (Fitria, 2020). Hence, many institutions resort to using General English (GE) materials instead of English for Specific Purposes (ESP) materials (Syakur et al., 2022). GE and ESP differ significantly in terms of focus and context (Baumgardner, 1988). ESP for accounting more concentrates on language use for specific accounting communication needs, emphasizing language skills relevant to accounting terminology and situations, while GE is a subject designed to equip learners with broad English language skills applicable across various fields (Gestanti et al., 2019; Nugroho, 2020a). In other words, mismatched ESP materials hinder language proficiency development since using materials irrelevant to the field leaves students inadequately equipped ineffective linguistically. Therefore, ESP teaching requires materials aligned with the specific professional and academic contexts.

In addition to the mismatch between GE and ESP materials, another critical issue lies in how these materials are delivered in the classroom. Another challenge is the existing ESP materials which often prioritize grammar drills and exercises over communicative activities, limiting students' exposure to authentic language used in their professional contexts. This lack of real-world language practice hinders the development of practical language skills necessary for effective communication in the field (Nguyen & Le, 2020). As a result, students may struggle to apply their language knowledge in professional settings. In addition, inadequate opportunities for speaking, listening, and collaborative activities, combined with insufficient exposure to specialized vocabulary, impede language proficiency development. Students may become reluctant to use the language in their field due to a lack of confidence and fluency (Sjaifullah & Laksmi, 2022). As a result, fostering ESP learners' English skills, instructional materials must effectively integrate field-specific language and real-world contexts.

Furthermore, existing ESP materials often lack engaging methods, relevant content, realistic scenarios, and proper assessment tools (Hasriadi et al., 2019) which address the scarcity of ESP materials specifically designed for Indonesian accounting students (Nartiningrum & Nugroho, 2020; Purwanti, 2019) so that there is a disparity and a strong correlation between students' English language needs and the ESP learning material (Ratmanida, 2012). This gap highlights the necessity for specialized instructional materials that target students' linguistic deficiencies and prepare them for authentic communication scenarios, in accordance with the principles of ESP pedagogy (Hasriadi et al., 2019; Nugroho, 2020b).

Although previous studies have discussed the development of ESP materials for accounting students and emphasized the importance of communicative language learning, most studies primarily focus on needs analysis, material development, or general ESP instruction rather than empirically examining how grammar instruction can be integrated with meaning-focuses communication in ESP context. In particular, limited research has investigated the effectiveness of Meaning-based approach to Pedagogical Grammar materials in improving accounting students' English learning achievement in Indonesian higher

education. As a result, the pedagogical impact of integrating meaning-oriented grammar instruction into ESP materials for accounting learners remains insufficiently explored.

One important aspect that is often overlooked in the development of ESP materials is the role of grammar in conveying meaning effectively. While communication extends beyond merely understanding the literal meaning of words, encompassing the context and ensuring that the message is interpreted as intended, the order of words undeniably influences meaning (Haque, 2021), due to the fact that languages have specific syntactic rules that govern sentence structure to express grammatical relationships (such as subject, verb, and object) and maintain logical coherence (Kenzhebekova & Sabitova, 2023). For instance, the sentences "The dog chased the cat" and "The cat chased the dog" convey different meanings due to word order. The importance of grammar also asserted by Z. Chen (2016) that the skill of effectively using language, including reading, speaking, listening, and writing, along with a strong understanding of grammar, is essential for teaching English for Specific Purposes (ESP). In other words, the significance of grammar in effective communication cannot be overstated, as it ensures that messages are not only understood but also interpreted correctly.

To address these challenges, an alternative approach to grammar instructions is required. Accordingly, the Meaning-based Approach to Pedagogical Grammar (MAP Grammar) offers a novel method for enhancing learners' understanding of grammar in a second language (L2) by emphasizing the processes involved in constructing meaning. By presenting grammar rules as interconnected ideas rather than isolated facts, this approach reinforces the relationship between grammatical structures and the meanings they convey, thereby improving learners' fluency and communicative (Gray & Smithers, 2019a; Tajino, 2019). Consequently, MAP Grammar serves as a communicative approach particularly suited for English for Specific Purposes (ESP), both in course design and instructional materials (Syvak, 2018; Tajino, 2017). Therefore, this study contributes to ESP pedagogy by empirically examining whether MAP Grammar-based materials can enhance accounting students' English learning achievement compared with conventional instructional material.

The rationale for selecting this approach lies in its dual benefits: it not only addresses the deficiencies in current ESP instructional materials especially for the accounting field (Tajino, 2017) but also aligns with pedagogical strategies in education (Khoruzha, 2013). Moreover, the integration of a motivational and values-driven component within this approach has the potential to influence the extent to which ethical principles permeate the professional values of accounting students which will ultimately also be reflected in their behaviour (Khoruzha, 2013; Trakšelys, 2015). Therefore, this study seeks to examine the impact of Meaning-based Approach to Pedagogical Grammar English learning material on accounting students' learning achievement in English subject in university level. The research problem centres on identifying the differences between students' pre-test and post-test scores on the English subject when taught through conventional learning material versus Meaning-based Approach to Pedagogical Grammar material. Therefore, the research questions of this study are postulated as the following:

RQ1: Is there a significant difference in pre-test scores between accounting students taught using conventional materials and those taught using the Meaning-based Approach to Pedagogical Grammar in English?

RQ2: Is there a significant difference in post-test scores between accounting students taught using conventional materials and those taught using the Meaning-based Approach to Pedagogical Grammar in English?

English for Specific Purposes (ESP) and Professional Needs

English for Specific Purposes (ESP) is predicated on the idea that language instruction should be specifically designed to address the distinct needs of learners in specialized fields, such as accounting (Suyadi, 2016). Unlike general language education, which often provides a broad foundation in English, ESP emphasizes the creation of tailored instructional materials that align closely with the professional contexts in which learners will operate (Basturkmen,

2010; Hutchinson & Waters, 1987; Paltridge & Starfield, 2012; Robinett et al., 1988; Salmani-nodoushan, 2020). This targeted approach is particularly critical in situations where English proficiency transcends academic achievement and becomes a professional imperative (Karapetian, 2020). For instance, in the field of accounting, students must not only master general language skills but also develop the ability to comprehend and convey complex financial information in English. This necessity arises from the increasingly globalized nature of business, where international transactions and cross-border collaborations are commonplace.

Furthermore, the ESP framework highlights the importance of developing language materials that not only cover general English language skills but also delve into specialized vocabulary and professional discourse relevant to accounting (Dudley-Evans & St. John, 1998; Suyadi, 2016). This specialized focus is essential because the language used in accounting is often technical and context-specific, requiring students to engage with terminology and communication practices that are unique to the field. Consequently, ESP instruction must be meticulously designed to meet these demands, ensuring that accounting students are equipped with the language tools necessary for professional success in an increasingly interconnected world. Given these demands, grammar instruction becomes a crucial component in ESP learning.

The Role of Grammar in ESP

In line with these requirements, the role of grammar in ESP deserves further attention. In the realm of English for Specific Purposes (ESP), the instruction of grammar must transcend the traditional methods of rote memorization and mechanical drills that often characterize general language teaching (Tajino, 2017, 2019). While these methods may foster a basic understanding of grammatical rules, they do not adequately prepare students for the complex communicative demands of their professional fields. Instead, grammar instruction in ESP should be deeply integrated with the development of professional communication skills (Y. W. Chen et al., 2019). This integration allows students to apply their grammatical knowledge in authentic contexts, thereby bridging the gap between theoretical understanding and practical usage. Such an approach is supported by the theory of communicative competence, first articulated by Canale & Swain (1980) which assert that effective language learning encompasses more than just grammatical accuracy; it also includes the ability to use language appropriately in a variety of context. Therefore, this competence is crucial for ESP learners, who must navigate the specialized language demands of their professions.

However, traditional ESP materials frequently fall short in this regard. They tend to focus heavily on the rules of grammar without providing sufficient opportunities for students to practice these rules in realistic, professional scenarios. This lack of contextualization can significantly impede students' ability to communicate effectively in their field, as they may struggle to transfer their grammatical knowledge to the specific discourses of their profession. Rus (2019) highlight this issue, noting that the emphasis on decontextualized grammar instruction in ESP can limit students' communicative competence, particularly in professional settings where the ability to use language accurately and appropriately is essential. Therefore, a shift towards integrating grammar instruction with professional communication practice is necessary to enhance the relevance and effectiveness of ESP programs, enabling students to not only understand grammatical structures but also apply them confidently in their professional lives.

Meaning-based Approach to Pedagogical Grammar (MAP Grammar)

The Meaning-based Approach to Pedagogical Grammar (MAP Grammar) offers an innovative method for teaching grammar within the ESP context which emphasizes the functional relationship between grammatical structures and their meanings, which is particularly relevant in professional communication where precision and clarity are paramount (Tajino, 2017). MAP Grammar aligns with constructivist theories of language learning, which argue that learners construct meaning through active engagement with

language in context (Priyamvada, 2018). By focusing on how grammatical structures convey meaning, MAP Grammar helps learners develop both linguistic accuracy and communicative competence, making it an ideal approach for ESP materials designed for ESP learners, including in the field of accounting (Tajino, 2017, 2019).

In addition, in the design of ESP materials, Tajino alienates the MAP Grammar approach as an effective framework centered on three foundational principles: simultaneous stimuli and response, consistent practice, and rewarding interaction between teacher and learner. These pillars are intricately interwoven across nine specific learning events, each contributing to the enhancement of learners' comprehension and the successful attainment of educational objectives, as illustrated in the accompanying figure.

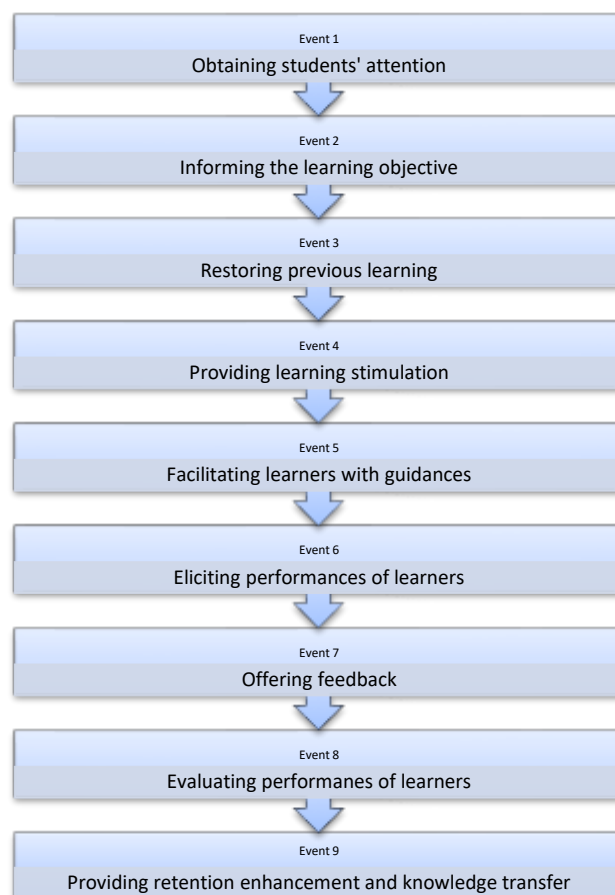


Figure 1. Structure of the Meaning-based Approach to Pedagogical Grammar

The MAP's 9-step cycle, distinctly outlined, actively engages learners, facilitates knowledge building, and incorporates assessment. It begins by connecting objectives with prior knowledge, introduces new concepts that encourage application, provides feedback to enhance mastery, and ultimately ensures fluency through knowledge transfer (Gray & Smithers, 2019a; Tajino, 2017, 2019) as illustrated in the figure below.



Figure 2. The Process of the Meaning-based Approach to Pedagogical Grammar

MAP Grammar enhances fluency by concentrating on essential components: the agent (α & Who), their actions (Does), the object affected (What), and the context of time and place (Where/When). This structured sequence supports a scaffolded approach to understanding,

rendering second language acquisition both systematic and efficient (Gray & Smithers, 2019b). Moreover, it creates a learning environment where language skills are developed through these sequential activities. In essence, MAP Grammar aligns with learners' goals and priorities, thereby strengthening their capacity to use English proficiently.

Cognitive and Affective Dimensions in Language Learning

The integration of cognitive and affective dimensions is crucial for creating effective ESP materials, as it ensures that language learning is both intellectually and emotionally engaging for students. Cognitive theories of language acquisition emphasize the importance of mental processes in learning, including the internalization of grammatical rules and their application in communication. According to these theories, learners construct understanding through interaction with language structures and contexts, which aids in the effective application of grammatical knowledge in real-world situations (Moore, 2018).

In addition to cognitive factors, the affective dimension significantly impacts language learning. Motivation and attitudes towards learning are pivotal in shaping learners' engagement and success. Sukying et al., (2023) highlights that when language instruction is connected to meaningful, real-world contexts, it enhances students' motivation by making the learning experience more relevant and applicable to their personal and professional goals. The MAP Grammar approach exemplifies this by integrating grammatical instruction with professional contexts, thus reinforcing the relevance of language learning for students (Tajino, 2017).

Furthermore, incorporating ethical and values-driven components into ESP materials can further support students' professional development. As noted by Widodo (2017), aligning, such as accounting, not only improves linguistic proficiency but also prepares students to navigate their professional environments with integrity. This alignment ensures that students' language skills are congruent with the ethical expectations of their field, thereby fostering both linguistic and professional competence. In summary, the integration of cognitive and affective dimensions in ESP materials, particularly through approaches like MAP Grammar, supports a comprehensive learning experience. By addressing both the intellectual and emotional aspects of language acquisition, these materials enhance learners' ability to apply language skills effectively in their professional contexts while aligning their learning with ethical standards.

Drawing on the theoretical insights derived from prior theories and studies, the following research hypotheses have been formulated. Accordingly, the study proposes the following hypotheses:

H₀₁: There is no significant difference in pre-test scores between students taught using conventional material and those taught using Meaning-based Approach to Pedagogical Grammar material in English subject for accounting students.

H₀₂: There is no significant difference in post-test scores between students taught using conventional material and those taught using Meaning-based Approach to Pedagogical Grammar material in English subject for accounting students.

METHOD

Respondents

The respondents of this study were undergraduate accounting students enrolled at a state university of Riau, Indonesia, namely University of Riau. Two intact classes were selected as the sample and randomly assigned into two groups: a control group and an experimental group. Two intact classes with relatively similar academic backgrounds and English proficiency levels were chosen from the population of accounting students enrolled in the English for Accounting course. One class was assigned as the experimental group and the other as the control group through random assignment. Each class consisted of 25 students, resulting in a total sample of 50 participants. The sample size was determined based on the

availability of intact classes participating in the course during the semester in which the study was conducted.

Instruments

The instrument used to measure students' learning achievement was a 15-item of multiple choice constructed in alignment with the English for Accounting syllabus provided by the university. The same test was administered as both the pre-test and post-test to ensure consistency in measuring students' performance before and after the treatment. The test items were designed to assess students' understanding of the grammar and language use within accounting contexts.

Procedures

By employing a quasi-experimental design, this study involved two groups: a control group and an experimental group. Both groups received identical instructional content delivered by the same teacher to maintain consistency in teaching quality. The treatment was conducted over seven instructional meetings across approximately seven weeks prior to the mid-term examination, which each session lasting approximately 100 minutes in accordance with the university schedule. Following lesson plans aligned with the semester learning plan. The control group was taught using conventional text-book-based materials, whereas the experimental group received instruction through learning materials developed based on Meaning-based Approach to Pedagogical Grammar (MAP Grammar).

The treatment aimed to integrate grammatical structures with meaningful communication relevant to accounting context. The MAP Grammar-based materials were specifically designed to emphasize the relationship between grammatical forms and meaning construction in accounting communication. The materials incorporated contextualized accounting topics, structured sentence patterns focusing on "Who-Does-What-Where/When" sequences, communicative exercises, guided interactions, and meaning focused activities adapted from the principles of Meaning-based Approach to Pedagogical Grammar proposed by (Tajino, 2017). In contrast to conventional materials, the MAP Grammar materials encouraged students to apply grammatical structures within authentic accounting-related communicative situations rather than through isolated grammar drills.

To ensure the quality of research instrument, both validity and reliability were established prior to data collection. Content validity was ensured through expert judgement, in which the test items were reviewed by English language teaching experts and subject specialist in English for Specific Purpose (ESP), particularly in the accounting domain. The evaluation focused on the relevance, clarity and alignment of the items with the learning objectives and syllabus. Revisions were made based on the feedback to improve the appropriateness of the instrument.

To determine the reliability of the instruments, a pilot test was conducted with a group of students with similar characteristics to the research participants. The reliability coefficient was calculated by using Cronbach's Alpha to assess the internal consistency of the test. The result indicated that the instruments had an acceptable level of reliability with 0.613, suggesting that it was consistent in measuring students' learning achievement.

Data Analysis

Data analysis was conducted using statistical procedures to determine the effectiveness of the instructional treatment. Initially, a normality test was performed to examine whether the data distribution met the assumption for parametric analysis. This was followed by homogeneity of variance test to ensure that the variances between groups were equal. Subsequently, an independent sample t-test was conducted at a significant level of 0.05 to compare the mean scores of the control and experimental group. The independent variable in this study was the instructional method (conventional versus MAP Grammar-based material), while the dependent variable was students' learning achievement as measured by the post-

test scores. The following section presents the results of the data analysis based on the procedures described above.

FINDINGS AND DISCUSSION

The Normality Test

To determine the increase in learning English result for accounting study program students in implementing English for Accounting learning material based on Meaning-based to Pedagogical Grammar at University of Riau; a statistical t-test was conducted. In addition, descriptive statistical analysis was also carried out on the pre-test and post-test value data. Thenceforward, a comparative test was conducted to see whether there was a significant difference between the pre-test and post-test scores between the two groups (experimental and control classes). Before carrying out the comparative test, first the normality test was carried out on the pre-test and post-test results.

Table 1. Normality Result of Data Pre Test (One-Sample Kolmogorov-Smirnov Test)

Tests of Normality				
	Class	Statistic	Kolmogorov-Smirnov ^a df	Sig.
Test Result English Learning	Experimental	,157	25	,114
	Control	,088	25	,200*

The presented table summarizes the outcomes of normality tests conducted to assess the adherence of the data to a normal distribution. The p-value serves as an indicator of the likelihood that a deviation from normality exists, under the assumption of underlying normality. A high p-value, typically exceeding 0.05, fails to provide sufficient evidence to reject the null hypothesis of normality, implying that the data cannot be considered significantly non-normal. Conversely, a low p-value which is equal to or less than 0.05 warrants rejection of the null hypothesis, suggesting a departure from normality in the data.

Examination of the "Sig." column within the table reveals that all p-values (experimental class for 0.114 and control class for 0.200) surpass 0.05, thereby failing to reject the hypothesis of normality for all variables under investigation. Consequently, based on these results, there is insufficient evidence to conclude that the data for any variable is non-normally distributed. In other words, it can be inferred that the data pertaining to the students of Riau University conforms to a normal distribution. After confirming the normality assumption, the next step was to examine the homogeneity of variance.

The Homogeneity Test

Having confirmed the normality of the data, homogeneity of variance test was subsequently performed as a prerequisite for employing parametric statistical analysis as the following:

Table 2. The Homogeneity Test

		Levene Statistic	df1	df2	Sig.
Test Result English Learning	Based on Mean	,006	1	48	,937
	Based on Median	,026	1	48	,872
	Based on Median and with adjusted df	,026	1	43,784	,872
	Based on trimmed mean	,017	1	48	,898

The presented SPSS 24 output pertains to a Levene's test of homogeneity of variances, a statistical procedure employed to determine whether two or more groups exhibit equal variances. The null hypothesis posits that the variances of the English learning groups are

homogeneous. The table provides Levene statistic values calculated using four different methods: mean, median, median with adjusted degrees of freedom, and trimmed mean. In all instances, the associated p-values significantly exceed the conventional alpha level of 0.05. Consequently, there is insufficient evidence to reject the null hypothesis, indicating that the assumption of homogeneity of variances is tenable for the English learning test results. The results of the normality and homogeneity tests indicate that the data conforms to a normal distribution and exhibits homogeneity.

The difference in pre-test scores between accounting students

To examine the first hypothesis, the pre-test scores of students taught using conventional material and experimental material were compared. An independent t-test was utilized to determine if there were significant differences in pre-test performance between the two groups. The pre-test results for both the control and experimental groups are detailed in Table 3.

Table 3. Summary of the t-test results for the pre-test in the control and experimental groups.

Class	N	Mean	Std. Deviation	t	Df	Sig.
Experimental Class	25	61,28	12,071	,585	48	0,168
Control Class	25	59,48	9,553			

The provided table above presents the results of a t-test comparing the pre-test scores of two groups of accounting students: an experimental group exposed to a Meaning-based Approach to Pedagogical Grammar learning material and a control group taught using conventional learning material. The initial descriptive statistics indicate that the experimental group (N=25) had a slightly higher mean pre-test score (M=61.28) than the control group (N=25, M=59.48). However, the standard deviations suggest a similar level of variability in scores between the two groups.

To determine if the observed difference in means is statistically significant, the t-test was conducted. The experimental group exhibited a slightly higher mean score compared to the control group and the standard deviation was also larger, indicating greater score variability within the experimental class. However, the calculated t-value of 0.585, with 48 degrees of freedom, yielded a non-significant p-value of 0.168. The results show that the t-value was not significant ($t=.585, p>.05$), implying that there was no statistically significant difference in pre-test scores between the experimental and control groups. In other words, the two groups exhibited similar levels of knowledge prior to the treatment intervention. Therefore, the subsequent treatment effect can be analyzed without concerns about initial group differences in knowledge. In other words, the first null hypothesis could not be rejected as the calculated p-value of 0.168 was greater than the significance level of 0.05.

The Difference in Post-Test Scores between Accounting Students

Furthermore, the researcher decided to test the second hypothesis to determine the increase in learning English result for accounting study program students in implementing *English for Accounting based on Meaning-based to pedagogical Grammar* learning material that is by conducting a statistical comparative t-test with independent t-test. The result of the statistical analysis as the following:

Table 4. Summary of the t-test results for the post-test in the control and experimental groups.

Class	N	Mean	Std. Deviation	t	Df	Sig.
Experimental Class	25	79,60	6,934	3,479	48	0,937
Control Class	25	73,08	6,304			

Investigating the second hypothesis, table 4 above presents the comparative statistics. The table presents a comparative analysis of two groups of students, an experimental class and a control class, with respect to their mean scores on a specific measure. Both groups

comprised 25 participants. The experimental class demonstrated a higher mean score of 79.60 with a standard deviation of 6.934, whereas the control group exhibited a mean score of 73.08 and a standard deviation of 6.304. A t-test was conducted to assess the difference between the two groups, yielding a t-value of 3.479 with 48 degrees of freedom. However, the resulting p-value of 0.937 indicates that the observed difference between the groups is not statistically significant which means the second null hypothesis could not be rejected as well as the calculated p-value of 0.937 was greater than the significance level of 0.05.

Based on these statistical findings, further interpretation is necessary to understand the implications of the results in relation to the research objectives and the theoretical framework underpinning this study. The findings of this study provide important insights into the impact of a Meaning-based Approach to Pedagogical Grammar (MAP Grammar) on accounting students' English language learning achievements. The results indicate that, while the experimental group, which utilized the MAP Grammar-based materials, demonstrated a higher mean post-test score than the control group, this difference was not statistically significant ($p = 0.937$). This suggests that although the MAP Grammar approach might offer certain advantages in enhancing students' understanding of English grammar in the context of accounting, its effectiveness may not be markedly superior to traditional methods, at least within the scope of this study. Additionally, this tendency also indicates that integrating grammatical instruction with meaning-focused communication may facilitate students' comprehension of language use within accounting contexts. The findings also imply that students may benefit from instructional practices that contextualize grammar as a functional resource for communication rather than isolated structural knowledge.

The non-significant difference between the two groups could be attributed to several factors. First, the duration of the intervention might not have been sufficient to produce significant changes in students' learning outcomes. As highlighted by [Tajino \(2017\)](#), the benefits of meaning-based approaches in language teaching often manifest over extended periods, longer-term studies are often necessary to observe significant improvements in language proficiency as well, particularly when introducing innovative teaching methods. Furthermore, the sample size, limited to two classes at a single institution, restricts the generalizability of the findings. This small, localized sample may not adequately represent the diverse linguistic and educational backgrounds of accounting students across different universities in Indonesia. This limitation is particularly when students are consistently exposed to the integration of form and meaning in various communicative contexts. Moreover, the complexity of accounting-specific language, which involves technical terminology and context-specific grammar, might require more prolonged and focused exposure to fully realize the potential of MAP Grammar materials ([Hyland, 2022](#)).

From a theoretical perspective, the findings partially support the principles of communicative and meaning-based language learning which emphasize that grammatical competence develops more effectively when learners engage with meaningful language use in contextualized situations ([Canale & Swain, 1980](#)). Although the statistical effect was limited, the improvement observed in the experimental group reflects the possibility that MAP Grammar contributes to learners' cognitive processing of grammatical meaning, particularly in ESP settings where language functions are closely connected to professional communication demands.

In addition to these factors, the instructional context and the students' prior language proficiency could play critical roles in determining the effectiveness of such pedagogical interventions. According to [Ikramovna \(2024\)](#), the success of ESP programs, particularly those incorporating innovative approaches like MAP Grammar, depends heavily on the learners' existing language skills and their ability to transfer learned grammatical structures to real-world professional scenarios. The participants in this study, while randomly assigned, may have had varying levels of prior exposure to English and differing degrees of familiarity with the specialized language of accounting, which could have influenced the outcomes.

Another possible explanation is the misalignment between the assessment tools and the instructional goals. The 15-item multiple-choice test used in this study, while aligned with

the university's English for Accounting syllabus, may not have fully captured the nuanced improvements in students' communicative competence that MAP Grammar aims to develop. In other words, the issue highlights a broader methodological concern in ESP research, namely the tendency to evaluate communicative and meaning-oriented learning through traditional objective tests. Since MAP Grammar emphasizes functional language use and meaning construction, performance-based assessments such as writing tasks, oral presentations, or contextual language production activities may provide a more accurate representation of students' communicative development. Charles (2015) suggests that traditional testing methods may not adequately reflect the gains in language proficiency that result from meaning-focused instruction, particularly in ESP contexts where practical application of language skills is crucial.

Beyond these factors, the lack of statistically significant improvement in the experimental group's post-test scores compared to the control group raises questions about the extent to which MAP Grammar addresses the specific needs of accounting students. While the approach emphasizes the interplay between form and meaning, it may not sufficiently account for the specialized vocabulary and discourse practices that are critical in accounting (Smith, 2020). This suggests a potential need for further refinement of MAP Grammar materials to better cater to the linguistic and communicative demands of accounting professionals.

Despite these limitations, the study has important implications for both ESP curriculum design and pedagogical practices. The findings suggest that while MAP Grammar shows promise in improving students' grasp of grammatical structures, it should be integrated with a more comprehensive approach that also addresses the specialized vocabulary and discourse patterns specific to the accounting profession. Educators and curriculum developers may need to consider incorporating more authentic, context-rich materials that align closely with the real-world demands of the accounting field. Additionally, the study underscores the necessity for ongoing professional development for instructors, ensuring they are equipped to effectively implement meaning-based approaches in their teaching. This aligns with studies research by (Ghafournia & Sabet, 2014; Sukying et al., 2023) which emphasize the role of teacher expertise in successfully delivering ESP content. Finally, future studies should aim to employ more diverse and robust assessment tools, potentially including performance-based tasks or longitudinal tracking, to better gauge the efficacy of innovative instructional methods like MAP Grammar in ESP settings.

In conclusion, although this study found no statistically significant advantage of MAP Grammar over traditional material, it emphasizes the importance of the intervention duration, students proficiency, and assessment alignment. Future research should examine longer implementations and more comprehensive assessments to better capture communicative competence in ESP contexts. Overall, these findings highlighted several important considerations that inform the conclusions of this study.

CONCLUSIONS

This study examines the effectiveness of the Meaning-based Approach to Pedagogical Grammar (MAP Grammar) in improving accounting students' English learning outcomes. Students exposed to MAP Grammar-based materials consistently achieved higher post-test scores than those taught with conventional materials, indicating its pedagogical potential in ESP contexts. However, the difference was not statistically significant, suggesting that the limited intervention duration and sample size may have constrained measurable effects. Nevertheless, MAP Grammar supports the integration of grammatical knowledge with meaningful communication and professional language use. The findings also extend the application of MAP Grammar to accounting-related ESP instruction, reinforcing grammar as a meaning-making resource rather than merely a set of rules. The study highlights the need to align grammatical instruction with assessment practices that capture communicative competence and higher-order language skills. Future research should involve larger and more

diverse samples, longer intervention periods, and performance-based assessments to further investigate the effectiveness of MAP Grammar in professional contexts.

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