

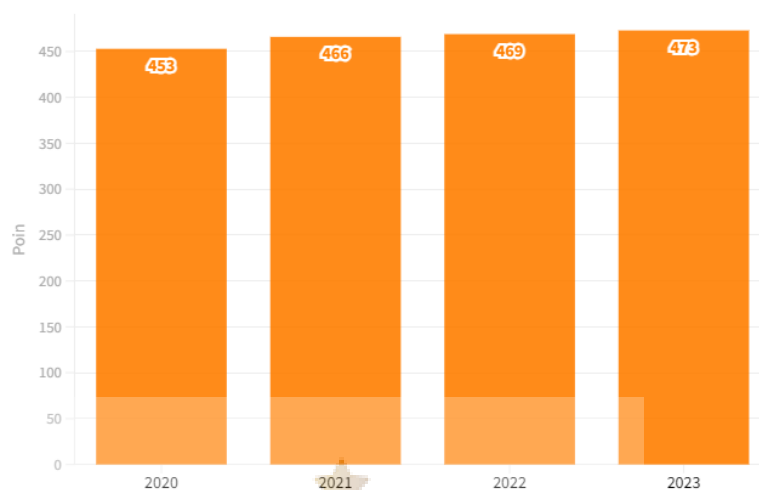
CHAPTER I

INTRODUCTION

A. Research Background

English has become an essential language for business, education, and communication in the age of globalization. English is the universal language of the modern world, making it essential for gaining access to opportunities and knowledge worldwide (Crystal, 2003). Furthermore, the emergence of the Fourth Industrial Revolution, marked by cutting-edge technologies like the Internet of Things and artificial intelligence, has increased the demand for proficient English language proficiency in order to function in the digital world (Schwab, 2017). As a result, in order to provide children with the skills necessary in a global economy that is changing quickly, educators and legislators must place a high priority on English language instruction (Graddol, 2006).

Despite the steady growth in Indonesia's English Proficiency Index (EPI) scores over the years, the country's overall proficiency remains relatively low. The 2023 EPI score of 473, albeit an improvement over the previous year's 469, nonetheless placed Indonesia in the low proficiency category (Data Indonesia, 2023). This slow growth underlines the continued attempts to enhance English language abilities among Indonesians, however underscores the need for more powerful educational programs to accomplish major advancements. The modest rises in EPI scores, especially the maximum annual increase of 13 points in 2021, imply that while progress is being made, the speed of growth is gradual (Data Indonesia, 2023). Indonesia's ranking of 79th out of 113 countries globally and 13th out of 23 countries in Asia implies that there is still much opportunity for improvement to compete more successfully on the international stage (Data Indonesia, 2023).



**Figure 1.1 Indonesian Population English Proficiency Score
(2020-2023)**

Source: English First (EF)

Strong English language ability is increasingly necessary as we manage the complexity of the Fourth Industrial Revolution, which is marked by rapid technological developments and digital transformations. Proficiency in English communication is a prerequisite for gaining access to state-of-the-art information, engaging in international partnerships, and taking advantage of emerging technologies like artificial intelligence and the Internet of Things (Schwab, 2017). In order to guarantee that its workforce can prosper in a world that is becoming more technologically advanced and networked, Indonesia must place a high priority on improving English education. In this new industrial era, increasing English proficiency will help Indonesians innovate, interact with international markets, and spur economic prosperity (Graddol, 2006).

The graph shows the trends in Indonesia's English Proficiency Index (EPI) ratings from 2015 to 2023 for various age groups. The patterns of English competence over this time span vary depending on the age group (18–20 years, 21–25 years, 26–30 years, 31–40 years, and 41+ years). The EPI results show a discernible fall for the youngest age group (18–20 years), indicating that younger adults—possibly including recent high school graduates and first-year university

students—may have encountered difficulties sustaining or enhancing their English proficiency. Other age groups exhibit similar swings, with the majority of their results staying in the low competency area (English First, 2023).

When this data is connected to Indonesian junior high school students' English proficiency, it becomes clear that fundamental English instruction need a lot of support. In a few years, junior high school kids will make up the majority of the 18–20 age group, and existing patterns indicate that early interventions are critical. The falling or stagnating proficiency results demonstrate the need for improved junior high school English education policies and instructional strategies. Indonesia can create a more solid foundation for future generations and raise the level of English proficiency in all age groups in the years to come by enhancing the Junior High School English curriculum and teaching methods (English First, 2023).

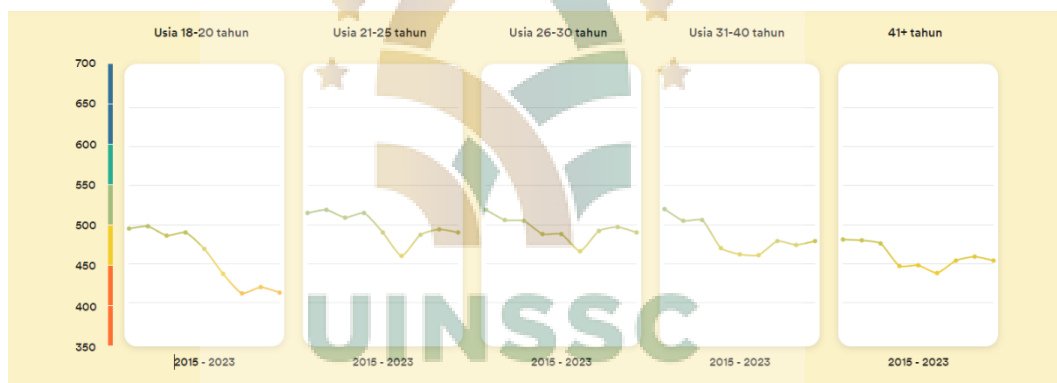


Figure 1.2 English Proficiency Index (EPI) scores in various age groups in Indonesia from 2015 to 2023

Source: English First (EF)

Grammar provides the rules and principles that dictate how sentences are created and interpreted, serving as the structural cornerstone of efficient communication. Grammar mastery is essential for junior high school students in Indonesia for a number of reasons. First and foremost, proficient grammar usage helps students communicate ideas precisely and coherently, which is critical for both everyday and academic communication (Harmer, 2007). Second, being proficient in grammar is essential to understanding and evaluating texts, which enables students to interact critically with a variety of reading resources (Ur, 2012). Thirdly, a strong

grasp of grammar gives pupils the tools they need to succeed in a world that is becoming more interconnected. English is a universal language (Crystal, 2003).

Connecting this to the previous analysis of the English Proficiency Index (EPI) results, the inconsistent and generally low proficiency levels in Indonesia across different age groups highlight the pressing need to improve English education, beginning with junior high school grammar instruction (Data Indonesia, 2023). Teachers can enhance students' performance on standardized tests such as the EPI and equip them for future academic and professional pursuits by emphasizing grammar and building a solid linguistic foundation (Harmer, 2007). According to the trends, early grammar education intervention can eventually result in more consistent and high proficiency results, which will help achieve the nation's overarching objective of improving English proficiency (Graddol, 2006).

Numerous facets of incorporating technology into language acquisition have been examined in earlier research, especially in light of the Fourth Industrial Revolution (4IR). Alakrash et al. (2022), for example, looked into the use of digital platforms for English language acquisition. Even though students' usage and digital knowledge were only minimal, their quantitative investigation showed that students had generally good sentiments regarding digital platforms. They discovered no connection at all between students' usage of digital platforms and their attitudes or skills in digital literacy, underscoring the challenges of using digital technologies for learning. Comparably, Hameed & Hashim (2022) looked at the difficulties teachers had while incorporating 4IR technology into their ESL (English as a Second Language) instruction. Their qualitative research revealed a number of obstacles, such as poor internet access, a lack of experience, and inadequate technology tools, highlighting the necessity of improved infrastructure and assistance for educators to successfully integrate technology into language learning.

Apart from the use of digital instruments, alternative research has concentrated on modifying educational methodologies to fulfill the requirements of the industrial revolution. In order to improve foreign language proficiency by fusing conventional and contemporary teaching techniques, Irwan & Anggraini (2020) presented a language learning model that integrates inquiry-based learning,

contextual teaching, and local wisdom values. Curriculum adaptation is crucial to satisfy the industrial and societal demands of the 4.0 age, according to Ansari & Agussani (2020). Their qualitative study demonstrated how important it is for curricular changes to keep up with the latest developments in technology and the changing skill needs of the labor market. Together, these studies highlight how important it is to modify curricula and teaching methodologies in order to prepare students for the opportunities and challenges of the Fourth Industrial Revolution.

Although a great deal of research has been done on how to use cutting-edge teaching methods and technology to enhance language acquisition in the context of the Fourth Industrial Revolution, there is still a significant lack of attention paid to the unique requirements and difficulties that Indonesian junior high school students face. The majority of previous research, including that conducted by Alakrash et al. (2022) and Hameed & Hashim (2022), focuses mostly on adult learners or higher education, as well as the difficulties that teachers have when integrating technology into their lessons. Furthermore, research conducted by Irwan & Anggraini (2020) and by Ansari & Agussani (2020) highlights curriculum adaptation and the blending of traditional and modern teaching methods, but it does not go into great detail about the specific linguistic and educational needs of younger students in secondary education. According to Data Indonesia (2023), there is a large disparity in the English Proficiency Index (EPI) scores between different age groups in Indonesia, which is particularly noteworthy. Closely examining grammar training and its effects on junior high school students' English competence could close this gap and offer insightful and workable recommendations for improving English language instruction at this crucial educational level.

For various reasons, this study is essential reading for Indonesian junior high school students, particularly in light of the Fourth Industrial Revolution. First off, the Fourth Industrial Revolution is defined by the speed at which technology is developing and the digitalization of many industries. As a result, a workforce fluent in English is required to interact with international markets and technical breakthroughs (Schwab, 2017). A solid foundation in English grammar is essential for junior high school students because it supports their capacity to understand,

interact, and communicate in a world that is becoming more interconnected by the day. Furthermore, as seen by the inconsistent and usually poor English Proficiency Index (EPI) scores across various age groups in Indonesia Data Indonesia (2023), focused interventions at the fundamental stages of schooling are obviously needed. Improving grammar teaching in junior high school can greatly raise students' general English competence and get them ready for college and future employment.

This study also takes into account the unique learning requirements of junior high school pupils, who are in a crucial phase of their language and cognitive development. Better writing, critical thinking, and reading comprehension are all facilitated by effective grammar training and are necessary for both academic performance and lifetime learning (Harmer, 2007). By concentrating on this group of students, the study hopes to close the gap between the requirements of the Fourth Industrial Revolution and present educational methods, giving young learners the language skills, they need to succeed in a world that is changing quickly. As a result, the study's conclusions can influence instructional strategies and policies, advancing the overall objective of strengthening English language instruction in Indonesia and raising its standing internationally.

B. Identification of the Issues

Based on the background provided, several critical issues have been identified regarding the English language education of junior high school students in Indonesia, particularly in the context of the Fourth Industrial Revolution:

1. Low Overall English Proficiency:

Indonesia's English Proficiency Index (EPI) scores continue to be low despite steady gains, suggesting a pervasive lack of proficiency in the English language. Indonesia is classified as having low competence in the 2023 EPI, with a score of 473. This indicates that more effective educational measures are required to improve English proficiency among the population (Data Indonesia, 2023).

2. Challenges Faced by Young Learners:

The EPI scores of the youngest age group (18–20 years old) are either dropping or unchanged, indicating a need for substantial reinforcement of

basic English teaching. Junior high school kids will soon be in this age group, thus in order to stop further declines in proficiency levels, it is imperative to address their unique educational and linguistic demands.

3. Need for Enhanced Grammar Instruction:

A key element of proficient language use and communication is grammar. However, it's possible that grammar training isn't receiving enough attention in the classroom today. Students must have a strong grasp of grammar in order to communicate effectively, understand difficult texts, and interact critically with reading materials (Harmer, 2007; Ur, 2012).

4. Integration of Technology in Education:

Prior study has examined the incorporation of digital platforms and 4IR technologies in language education; however, there is a dearth of studies that concentrate on the Indonesian junior high school student population. Although the difficulties and complications of using digital technologies for learning have been brought to light, there is still a lack of research on workable solutions and focused interventions for younger students (Alakrash et al., 2022; Hameed & Hashim, 2022).

5. Curriculum Adaptation to Industrial Demands:

Curriculum changes must keep up with the rapidly changing needs of the Fourth Industrial Revolution and the skills needed in today's workforce. Teaching strategies and curricula must be modified to better educate students for the technologically sophisticated, globalized world (Ansari & Agussani, 2020; Irwan & Anggraini, 2020).

6. Gap in Research on Junior High School Students:

Most existing research focuses on higher education or adult learners, leaving a notable gap in understanding the specific needs and challenges faced by junior high school students in Indonesia. Addressing this gap is crucial for developing targeted educational strategies that can enhance English proficiency from an early stage, ensuring students are well-prepared for future academic and professional success (Data Indonesia, 2023).

C. Delimitations of the Study

This study focuses exclusively on the grammar proficiency of junior high school students in Indonesia in the context of the Fourth Industrial Revolution. It does not address broader issues such as the overall exposure to English language outside the classroom or the teaching methods that prioritize other language skills like listening and speaking. Instead, the research is delimited to explore need analysis of grammar for teaching junior high school students.

The participants of this study are limited to junior high school students ranging from the seventh grade to the ninth grade. By narrowing the research to these specific aspects—grammar instruction and digital integration—the study aims to provide detailed insights and practical recommendations that directly enhance the grammar skills of SMP students. This focused approach is intended to yield actionable solutions that can be implemented within the existing educational framework to improve English proficiency at a foundational level.

D. Research Questions

The questions that are going to be answered in this research are as follows:

- 1) What are the characteristics of a good English grammar resource for junior high school students in the fourth industrial revolution based on literature?
- 2) What are the needs of a good English grammar resource for junior high school students in the fourth industrial revolution?

E. Aims of the Study

The aims of this study are as follows:

- 1) To discuss the characteristics of a good English grammar resource for junior high school students in the fourth industrial revolution based on literature?
- 2) To explore the needs of a good English grammar resource for junior high school students in the fourth industrial revolution?

F. Significances of the Study

Figuring out the characteristics of a good English grammar resources is important for the following reasons:

- 1) Theoretically, it will give better understanding of what types of English grammar resources that are most suitable for junior high school students.

- 2) Practically, for the researcher, it will give the researcher some insights on what types of English grammar resources that are most effective to use in learning English grammar, and even English in general. For teachers, it will give them an idea of what types of English grammar resources that are most suitable for junior high school students. For students, it will help them learn English grammar better due to easier materials to digest based on their capabilities.

G. Theoretical Background

1. English Grammar Learning

a. Definition of grammar in English language learning

The primary component of English grammar is its syntax, which establishes the patterns and orders in which words are placed in phrases. This definition does not take into account the ability to use a sentence, ignores contexts larger than a single sentence, and treats meaning as a distinct concept (Sekardini et al. (1982). Harmer (1987) asserts that mastery of grammar principles is essential to language learning. Without understanding word arrangement, people cannot use words efficiently. According to Coghill (2003) grammar is a system of rules that control how words are arranged to produce meaningful units in a language.

It is clear from the definitions given that grammar is a set of rules necessary for learning a language. Grammar, which includes the rules and structures governing word, phrase, and sentence order, is the cornerstone of language acquisition. (Qizi, 2023). It serves as a framework for comprehending and utilizing language in a precise and effective way. (Tulkinovna, 2023). According to recent study, grammar involves more than just learning rules; it also entails comprehending how these rules facilitate successful and clear communication (Malek, 2023). Grammar comprises two components: morphology, which deals with the formation and structure of words, and syntax, which deals with the arrangement of words in a sentence. (Zaynitdinovna, 2023).

Grammar is essential for studying English so that one can become proficient and fluent in the language (Zhang, 2023). According to the opinion of

Tulkinovna (2023) It helps students understand the nuances of the language so they can construct coherent, situation-appropriate phrases. Furthermore, grammar training can increase students' self-assurance and motivation by providing them with the skills they need to communicate effectively (Peredrienko et al., 2023). Additionally, as digital learning platforms have grown in popularity, grammar instruction has changed to incorporate technology-based and interactive techniques that engage students and enhance their comprehension (Alakrash et al., 2022b).

Learning grammar is fundamental to learning English because it provides the necessary structure for efficient and transparent communication (Qizi, 2023). It enables students to accurately communicate with others and understand written and spoken language. The systematic mastery of grammar improves one's abilities in speaking, writing, reading, and listening (Kulaeva & Kulaev, 2023). Additionally, it boosts students' motivation and self-esteem, allowing them to express themselves more freely (Gameil & Al-Abdullatif, 2023). Digital platforms that are integrated into grammar training boost student engagement, offer instant feedback, and accommodate different learning styles. Furthermore, having a solid grasp of grammar helps students recognize linguistic quirks and cultural settings, which makes it easier for them to speak English in a variety of scenarios. This demonstrates how crucial grammar is to achieving both successful communication and thorough language mastery. A more thorough description can be found in the parts that follow:

1) Structural Foundation for Effective Communication

Grammar is essential to learning English because it provides the framework for clear and concise communication. For students to communicate effectively and accurately and to comprehend the language in both spoken and written forms, they must become proficient in grammar. Communication can become unclear and complicated without a firm command of grammar, which can result in misunderstandings (Panugot, 2023).

2) Facilitates Language Skills Development

According to recent research, knowing grammar helps language learners build their language skills methodically, which makes it simpler for them to learn how to read, write, speak, and listen (Vo et al., 2023). Correct sentence construction, comprehension of text structures, and general language mastery are all made possible by grammar teaching, and these skills are essential for both academic and ordinary communication.

3) Grammar instruction enhances learners' confidence and motivation.

Learners are more inclined to communicate when they are aware of grammatical norms since it gives them greater confidence to express themselves (Peredrienko et al., 2023). This self-assurance is especially crucial in professional and educational contexts where using exact language is necessary. A solid command of grammar can help students communicate more clearly and confidently. Integration of Digital Platforms in Grammar Instruction.

It has shown to be advantageous to incorporate digital platforms into grammar training. These resources provide innovative and captivating approaches to grammar instruction, enhancing the process' vibrancy and accessibility (Alakrash et al., 2022). This method offers instant feedback and accommodates different learning styles, both of which are essential for language learning. For modern learners, the use of digital resources can enhance the effectiveness and appeal of grammar instruction.

4) Understanding Nuances and Cultural Context

Additionally, grammar helps students understand the finer features of the language, like cultural context and meaning nuances. With this increased comprehension, students are able to utilize the language more correctly and successfully in a variety of situations (Higginbotham, 2023). Understanding grammar improves a learner's ability to communicate effectively by enabling them to recognize small meaning distinctions and use language in ways that are suitable for their culture and situation.

b. The Importance of Grammar

Communication is one of language's most crucial functions. In order for writers, readers, and speakers to accomplish the objectives of communication in both oral and written forms, it is imperative that grammar be understood as a system of rules. According to Thornbury (1999), in all languages, grammar is the basic mechanism that produces conversation. Learners who lack excellent grammar abilities will struggle to decide what to write and how to write it. Students will not be able to understand words with several meanings if they do not master grammar. In conclusion, grammar is critical for language learners. Students who don't know grammar will find it difficult to learn English. For instance, reading an English text without knowing its grammar can result in misunderstandings. This demonstrates the significance of grammar in the English language since it helps learners comprehend the structure, function, and meaning of the language. Therefore, in order for students to increase their comprehension of English, they must learn grammar.

c. Role of grammar in effective communication

Effective communication requires grammar, which provides the structures and norms required for precision and clarity (Normawati, 2023). It prevents misconceptions by guaranteeing that phrases are clear and concise (Panugot, 2023). Particularly in formal and academic settings, using good language increases professionalism and trustworthiness. It makes it possible for people to express difficult concepts and feelings in a straightforward and compelling way (Tarawneh, 2023) Furthermore, well-constructed words improve comprehension and audience engagement, resulting in more effective communication. Teryokhin et al. (2023) Grammar makes sure that speech respects different expectations by conforming to cultural and contextual conventions. These elements emphasize how crucial grammar is to enabling clear communication. To shed further light on this, consider the following explanation:

1) Provides Clarity and Accuracy

Grammar offers the fundamental structures and principles needed to communicate ideas precisely and effectively. It guarantees that words are comprehended and used correctly in various situations. According to Kim (2023) Grammar provides a structure for creating clear and concise phrases, preventing misconceptions and guaranteeing the intended meaning is communicated correctly.

2) Enhances Professionalism and Credibility

Correct grammar increases credibility and professionalism, especially in academic and professional contexts. Lokita et al. (2023) Grammar correctness enhances the credibility of the speaker or writer by demonstrating attention to detail and a high degree of education. Gaining the audience's trust and projecting a professional image need mastery of this grammar rule.

3) Facilitates Expression of Complex Ideas and Emotions

Grammar enables the clear communication of difficult concepts and feelings. People can organize their thoughts rationally and persuasively and increase the impact of their communication by learning and using grammatical rules. Peredrienko et al. (2023) Learning grammar helps authors and speakers communicate their ideas clearly, which improves audience comprehension and engagement.

4) Improves Audience Engagement and Understanding

Improved comprehension and audience engagement are facilitated by proper grammar. Alakrash et al. (2022) Sentences that are well-written make it easier for readers or listeners to follow along, which improves connection and communication. Maintaining the audience's interest and making sure the message is understood as intended depend heavily on this clarity.

5) Ensures Cultural and Contextual Appropriateness

Understanding and adhering to cultural and contextual communication conventions is made easier with the use of grammar. Peredrienko et al. (2023). Different language structures and degrees of

formality are needed in different circumstances, and using grammar correctly guarantees polite and acceptable communication. Understanding grammatical conventions in diverse cultural and situational contexts is essential for polite and successful communication.

2. English Learning Resources

a. Definition of learning resources

Any apparatus, material, or content that aids in the development of information, abilities, and competences is referred to as a learning resource. These resources, which are all intended to enhance the educational process, come in a variety of formats and include interactive software, textbooks, digital media, and instructional materials. According to Kim (2023) learning materials are designed to make difficult ideas simpler so that students of all ages can comprehend and retain them. By accommodating different learning styles, the employment of a variety of learning tools improves the overall efficacy of the educational process. Digital learning resources, including online platforms and multimedia tools, have become increasingly popular in the context of modern education due to their capacity to offer dynamic and captivating learning experiences.

These resources support active learning and critical thinking abilities in addition to helping with subject matter knowledge. (Alakrash et al., 2022). The quality, relevance, and alignment of effective learning resources with educational objectives guarantee that they fulfill the requirements of both educators and learners. (Peredrienko et al., 2023). There are many distinct formats for English learning resources, all of which are designed to meet the needs of different types of learners and cover different areas of language acquisition (Kim, 2023). These materials can be divided into two main categories: digital and traditional media. Resources for blended learning integrate the best features of digital and conventional teaching approaches, Almusaed et al. (2023) this hybrid strategy makes use of the advantages of each kind of resource to maximize engagement and improve overall language skills. To shed further light on this, consider the following explanation:

1) Traditional Resources

Textbooks, workbooks, and printed materials with scheduled lessons and activities are examples of traditional resources. According to Melnyk (2023) These resources, which provide thorough instruction in grammar, vocabulary, reading, and writing, are frequently used as basic teaching aids in classrooms. Conventional tools aim to methodically lead students through different facets of language learning, guaranteeing a complete comprehension of the fundamentals.

2) Digital Resources

Because digital tools are entertaining and interactive, they have grown in popularity. These consist of interactive software, mobile apps, multimedia content, and internet platforms. Alakrash et al. (2022) with features like individualized learning paths and fast feedback, digital platforms like language learning applications and websites give learners the freedom to practice their abilities whenever and wherever they choose. Incorporating auditory and visual learners with immersive language exposure, multimedia materials such as audio recordings, interactive games, and films improve the learning process.

3) Blended Learning Resources

Resources for blended learning, which integrate digital and conventional approaches, are becoming more popular. (Phillips et al., 2023) These materials combine the interactive features of digital technologies with the advantages of structured, textbook-based learning to create a thorough and flexible learning environment. Peredrienko et al. (2023) illustrates how these hybrid techniques, which include the best features of both types of resources, can increase learner engagement and total language ability. A balanced approach is provided by blended learning environments, which combine the creativity of digital technology with the dependability of older approaches (Albatti, 2023).

b. Characteristics of a good learning resource

The effectiveness of the teaching and learning process is greatly influenced by the quality of learning resources in the quickly changing field of education Ghafar & Lestari (2023) Knowing what makes a successful learning resource grows in significance as educators work to fulfill the needs of various learners and adjust to technology changes. Lionenko & Huzar (2023) These qualities guarantee that instructional materials not only communicate pertinent and correct information, but also excite and engage students, accommodate different learning preferences, and foster critical thinking and problem-solving abilities. This talk explores what characteristics are necessary for a learning resource to be effective, emphasizing the value of precision, interest, clarity, adaptability, and the capacity to develop higher order cognitive abilities (Cudney et al., 2023). We may gain a better understanding of the fundamental function that top-notch learning resources play in obtaining academic achievement by looking at these essential components (Nusraningrum, 2023). The following will be explained more clearly:

1) Accurate and Up-to-date

A top-notch educational resource needs to be current and accurate, offering trustworthy data that represents the most recent advancements in the industry. According to Albatti (2023) Accuracy guarantees that students are getting pertinent and accurate information, which is necessary for developing a strong comprehension of the subject. Students are more likely to interact with the material deeply and gain a thorough understanding of the subjects being studied when they have confidence in the reliability of their sources.

2) Engaging and Interactive

Maintaining learners' motivation and interest requires an interactive and engaging learning resource. Multimedia components like movies, animations, and interactive activities that accommodate various learning styles can be used to increase engagement. Alakrash et al. (2022) highlight how interactive elements, including tests and feedback systems, let students take an active role in their education and strengthen their knowledge through

practice and fast correction. These components improve memory and comprehension in addition to making learning more pleasurable.

3) Clarity and Simplicity

Simplicity and clarity are also crucial qualities. A well-designed learning resource should eliminate needless complexity and convey knowledge in a clear, succinct, and organized manner. Peredrienko et al. (2023) demonstrates how comprehension may be greatly improved by using simple language, logical topic sequencing, and visual aids like charts and diagrams. The learning process is made more effective and efficient by this method, which makes it easier for students to understand and remember new ideas.

4) Adaptable and Flexible

A good learning resource should be versatile and adaptive so that learners with diverse requirements can use it in different learning environments. This entails being available on many platforms and devices and providing adjustable choices to customize the educational process to suit personal preferences. (Albatti, 2023). Flexibility makes a resource more inclusive and user-friendly by ensuring that it can suit a variety of learning contexts and preferences.

5) Promotes Critical Thinking and Problem-solving

Critical thinking and problem-solving abilities should be encouraged in a top-notch learning resource. Tools that enable students to apply their knowledge, engage in critical analysis, and work through real-world challenges are vital for promoting comprehension and knowledge retention over the long term. As noted by (Peredrienko et al., 2023) In both academic and real-world contexts, these abilities are crucial for students to be able to manage challenging situations and make wise judgments.

c. Benefits of using learning resources in grammar learning

The learning process and results are greatly improved when learning resources are used in grammar education. These tools offer systematic methods for comprehending language, simplifying complicated rules (Vinita & Ilankumaran,

(2023). They facilitate good grammar comprehension in students, provide dynamic and captivating learning opportunities, offer adaptability and accessibility, give prompt feedback, and facilitate a thorough learning environment through the use of blended learning techniques. Together, these advantages make learning grammar more efficient and pleasurable (Sihombing et al., 2023). The following will be explained more clearly:

1) Enhanced Understanding and Retention

Learning resources, especially those that are methodically organized and well-structured, aid pupils in more efficiently understanding difficult grammar rules and concepts. According to Albatti (2023) Workbooks and textbooks offer thorough study of grammatical concepts, enabling students to develop a strong foundation and gradually improve their proficiency. These materials' repetition and practice help to strengthen learning and improve memory of grammar rules.

2) Interactive and Engaging Learning

Grammar instruction can be made more dynamic and interesting with the use of digital learning materials like language learning applications and internet resources. Alakrash et al. (2022) Take note of the features that these tools offer, such as interactive exercises, immediate feedback, and gamified learning experiences, which keep students engaged and motivated throughout the learning process. Grammar instruction is made more fun by the interactive aspect of digital resources, which accommodates a variety of learning preferences.

3) Flexibility and Accessibility

The flexibility and accessibility of digital materials is one of its main advantages. Grammar classes and practice problems are available to learners at any time and from any location, which is very helpful for self-paced study. Because of this flexibility, students may fit grammar study into their schedules and go over the content whenever necessary (Peredrienko et al., 2023). Accessibility is further improved by the resources' availability across several devices, guaranteeing that learning is not limited to the classroom.

4) Immediate Feedback and Self-Assessment

Instant feedback on quizzes and exercises is a feature of many digital platforms, and it is essential for efficient grammar acquisition. Instant feedback promotes a deeper comprehension of grammatical principles by assisting students in recognizing and

quickly fixing errors (Alakrash et al., 2022b). Furthermore, self-assessment tools encourage independent learning by allowing students to monitor their development and concentrate on areas that require work.

5) Comprehensive and Adaptable Learning

Blended learning tools provide a thorough and flexible approach to grammar training by fusing traditional and digital approaches. Peredrienko et al. (2023) demonstrates how these hybrid resources combine the interactive features of digital tools with the organized learning of textbooks to create a flexible and well-rounded learning environment. This method meets the requirements and preferences of a wide range of learners while maximizing engagement and effectiveness.

3. Junior High School Students in Indonesia

a. Definition of junior high school students according to the Indonesian education system

Junior high school pupils, or "SMP" (Sekolah Menengah Pertama) students in the Indonesian educational system, are usually in the 12–15 age range. This phase of schooling serves as a crucial transition between elementary and senior high school education. In Indonesia, junior high school consists of grades 7 through 9, and pupils are called seventh, eighth, and ninth graders (Kemdikbud, 2023). In Indonesia, there's an equivalent education program to that of Junior High School held by Ministry of Religious Affairs (Kemenag) called Madrasah Tsanawiyah, abbreviated MTs (Kemenag, 2023). Just like SMP, MTs also takes three years to attend and have the same age range between 12-15 years old teens as its students. In order to prepare pupils for the more specialized and advanced courses they will encounter in senior high school, Indonesian junior high school curricula expand on the fundamental knowledge taught in elementary school. According to the kemdikbud (2023) The junior high school curriculum covers a variety of topics, including arithmetic, science, social studies, natural sciences, English, physical education, and moral and religious education. The goal of this educational phase is to enhance pupils' critical thinking abilities, problem-solving capabilities, and general intellectual aptitude. The Indonesian government has made junior high school attendance mandatory for all pupils, demonstrating its dedication to provide all young

citizens with a thorough and mandatory education World Bank (2023) In Indonesia, junior high schools are divided between public and private establishments, with public schools being more common and easily accessible throughout the nation. The government provides funding and regulations for public junior high schools, guaranteeing uniform educational standards and accessible for all students, irrespective of their financial status.

b. General characteristics of junior high school students

Ortiz et al. (2023) Junior high school children, who are usually in their 12–15 year old years, are going through a crucial developmental stage that is marked by a variety of changes in their social, emotional, and cognitive growth as well as academic challenges and a dependence on technology. To effectively encourage their growth, educators and parents must have a thorough understanding of these characteristics. We'll go over the following in greater detail:

- 1) **Mental Advancement** Students in junior high school show notable improvements in their cognitive abilities, particularly in the areas of abstract thought and problem-solving. They get better at comprehending difficult ideas and exercising critical thought. (Utepbergenova, 2023).
- 2) **Sensitivity to emotions** This period of education makes students very sensitive to emotions and vulnerable to mental health problems like despair and anxiety. Their emotional health is greatly impacted by the nature of their interpersonal relationships with their parents, teachers, and peers. (Li & Yu, 2023).
- 3) **societal advancement** Peer interactions become more significant as students look to their peers for affirmation and approval. This may have an impact on their conduct and sense of self (Wang et al. (2023).
- 4) **Academic Difficulties** Students in junior high school have a variety of academic obstacles, such as adjusting to increasingly demanding courses and handling higher standards. For them to succeed academically, effective teaching techniques and encouraging learning settings are essential. (Wibowo et al., 2023).

- 5) Technology Dependency Junior high school students are notorious for depending heavily on technology for both social and academic purposes. Technology can improve learning, but there are drawbacks as well, such longer screen times and possible reliance (Ortiz et al., 2023).

c. Challenges in teaching English to junior high school students

Ortiz et al. (2023) Junior high school kids have different developmental stages and experiences, which makes teaching English to them a challenging task. These difficulties include dealing with a range of skill levels, staying motivated, handling behavioral problems, and adjusting to technology advancements. We shall go into further detail about the following:

- 1) Diverse Degrees of Proficiency

Students in junior high school have varying degrees of English competence, from non-learners to fluent speakers. It may be challenging for educators to create classes that adequately serve every student as a result of this discrepancy. In order to fulfill the varying requirements of their students and make sure that every learner is engaged and supported in their language development, teachers must use differentiated instruction and a variety of assessment strategies. (Suryati et al., 2023).

- 2) Sustaining Interest and Motivation

It might be especially difficult to keep junior high school pupils motivated and engaged in learning English. Teenagers may find academic work less interesting and are frequently more engaged in social relationships. Students' interest and motivation in learning English can be sustained by including realistic and dynamic information, such as multimedia materials and real-world communication scenarios. Collaborative projects and gamification are two more powerful methods for getting kids interested. (Rohman et al., 2023).

- 3) Handling Problems with Behavior

Junior high kids frequently struggle with behavioral challenges as they negotiate the complexities of puberty, such as growing independence and peer pressure. Establishing a conducive learning

environment requires the use of effective classroom management practices. Important tactics for controlling conduct and fostering a respectful learning environment in the classroom include establishing clear expectations, enforcing rules consistently, and cultivating strong connections between teachers and students. (You, 2023).

4) Adjusting to Shifts in Technology

Technology is being incorporated into education at a rapid pace, which brings both benefits and concerns. The use of digital tools and platforms by teachers to improve English instruction must be skillful. It's possible that some educators are not at ease using these tools. Teachers must receive professional development and continuous training in educational technology in order to successfully incorporate digital resources into their lesson plans, which will improve student engagement and learning objectives. (Khomenko, 2023).

5) Limited Assistance and Resources

It's possible that schools in some areas don't have enough supplies or assistance when teaching English. This can include a dearth of opportunities for professional growth, inadequate instructional resources, and restricted access to technology. Systemic support is required to give instructors the resources and tools they need to teach English successfully, such as access to digital platforms, high-quality textbooks, and training programs. (Wu, 2023).

4. The 4th Industrial Revolution and the Need for English

a. Definition of the 4th Industrial Revolution

The integration of digital technology has brought about a fundamental transformation in the way industries function, known as Industry 4.0 or the Fourth Industrial Revolution. Driven by developments in artificial intelligence (AI), robotics, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and other technologies, this revolution is typified by the merger of the physical, digital, and biological worlds (Signé, 2023). It entails using smart technologies and data interchange to change conventional

manufacturing and industrial methods in order to improve productivity, efficiency, and innovation across a range of industries (Bekmurzaeva & Kovalev, 2023). The development of highly adaptable and integrated networks that enable quick and localized production processes characterizes the fourth industrial revolution (Vo et al., 2023).

b. Key Characteristics of the 4th Industrial Revolution

Bratu et al. (2023) The integration of cutting-edge digital technology has resulted in a significant revolution in the way industries function, which is referred to as Industry 4.0 or the Fourth Industrial Revolution. A defining feature of this revolution is the integration of digital, biological, and physical technology. These are the salient features.:

1) Cyber-Physical Systems (CPS)

These systems combine physical processes, networking, and computation. Through feedback loops in which computations are impacted by physical processes and vice versa, embedded computers and networks track and manage these activities. (Bekmurzaeva & Kovalev, 2023).

2) Internet of Things (IoT)

The internet of things (IoT) is a network of physical objects that have been embedded with software, sensors, and other technologies to allow them to communicate and share data with other systems and devices. This connectivity makes it possible to monitor and regulate industrial processes in real time, as well as to exchange data with ease (Hossain, 2023).

3) Artificial Intelligence (AI) and Machine Learning

Machines can now carry out activities like speech recognition, visual perception, decision-making, and language translation that traditionally need human ability thanks to artificial intelligence and machine learning. These technologies are essential for process optimization, maintenance demand prediction, and improving product quality (Imanova et al., 2023).

4) Big Data and Analytics

Machines can now carry out activities like speech recognition, visual perception, decision-making, and language translation that traditionally need

human ability thanks to artificial intelligence and machine learning. These technologies are essential for process optimization, maintenance demand prediction, and improving product quality (Vo et al., 2023).

5) Autonomous Robots

Complex jobs can be completed by sophisticated robots systems with extreme precision and flexibility. These robots are employed to increase productivity and decrease human intervention in a variety of industries, such as manufacturing, healthcare, and logistics (Ntlatlapa, 2023).

6) 3D Printing and Additive Manufacturing

Complex constructions can be precisely created using 3D printing straight from digital models. This technique is applied in customized manufacturing, fast prototyping, and waste reduction in production processes (Udvaros et al., 2023).

7) Blockchain Technology

Blockchain offers a safe and decentralized method for recording transactions on numerous computers. In supply chains and other applications, it is used to improve traceability, security, and transparency (Czerwińska & Grebski, 2022).

c. Impact of the 4th Industrial Revolution on education

Oke & Fernandes (2020) The merger of digital, physical, and biological technology is the hallmark of the 4th Industrial Revolution (4IR), which has a profound effect on many industries, including education. The fourth industrial revolution has had the following main effects on education:

1) Digital Transformation and Enhanced Learning

The 4th Industrial Revolution (4IR) is characterized by the convergence of digital, physical, and biological technologies and has a significant impact on numerous industries, including education. The following are the primary impacts of the fourth industrial revolution on education:(Shenkoya & Kim, 2023).

2) Education 4.0

Education 4.0 focuses on giving students skills that will prepare them for the future by integrating educational methods with Industry 4.0's technology breakthroughs. In order to prepare students for the difficulties of the digital age, this educational approach places a strong emphasis on critical thinking, problem-solving, and the use of digital tools (Udvaros et al., 2023).

3) Increased Motivation and Engagement

It has been demonstrated that incorporating digital tools and resources into the classroom increases students' motivation and involvement. The usage of digital tools and cellphones by students has greatly increased their interest in and motivation for learning subjects such as Islamic education (Saputra & Noor 'Azizah, 2023).

4) Enhanced Teaching and Learning Efficiency

The Internet of Things (IoT) and artificial intelligence (AI) are two examples of 4IR technologies that have increased the effectiveness of teaching and learning procedures. These technological advancements improve education by providing access to a wealth of instructional resources, virtual classrooms, and real-time feedback (Lezama et al., 2023).

5) Need for Digital Literacy and Teacher Training

The swift progression of 4IR technologies demands that instructors and students cultivate digital literacy. To effectively incorporate new technologies into their teaching practices, educators need to be prepared with the necessary abilities. Training and ongoing professional development are crucial for educators to help them adjust to the changing technology environment (Murad et al., 2023).

6) Addressing Educational Inequalities

Even though 4IR technologies have many advantages, there are issues with educational inequality that need to be addressed. There may be regional differences in the availability of cutting-edge digital tools and resources, which can result in unequal educational possibilities. It is necessary to make

efforts to guarantee that all pupils have fair access to these technology (Alam & Forhad, 2023).

d. The need for English skills in the 4th Industrial Revolution era

Coles (2023) The convergence of digital, physical, and biological technology has brought about the 4th Industrial Revolution (4IR), which has had a profound impact on a number of industries, including business, manufacturing, and education. English language proficiency has grown in importance in this day and age for a number of reasons:

1) Global Communication and Collaboration

The world is now more globalized and interconnected because to the 4IR. Since English is the most widely spoken language worldwide, it is crucial for cross-border cooperation and efficient communication. English language proficiency is a requirement for industries and global corporations in order to promote smooth communication and teamwork (Saputri et al., 2023).

2) Access to Knowledge and Information

English-language publications contain a wealth of scientific research, technological developments, and scholarly materials. Being able to read, understand, and use this abundance of information allows people to stay up to date on the most recent advancements in their industries (Diani & Amiruddin, 2023).

3) Enhancing Employability

Being able to communicate in English is frequently required for jobs in multinational companies and other globally operating organizations. Employers seek applicants who can converse and write in English fluently in order to engage with partners and clients throughout the world (Saputri et al., 2023).

4) Educational Advancement

English is frequently used as the primary language of instruction when integrating digital tools and technology into the classroom, such as online courses and e-learning platforms. Strong English language proficiency puts

students in a better position to benefit from these educational options, which improves their educational experiences and results (Coles, 2023).

5) Technical and Business Proficiency

English is the predominant language used for professional communication, documentation, and manuals in many technical and business disciplines. English language proficiency is essential for participating in professional training, comprehending technical publications, and communicating in business (Roshid & Kankaanranta, 2023).

e. Relationship between English proficiency and employment opportunities in the 4th Industrial Revolution

Because of the changes brought about by the 4th Industrial Revolution (4IR), English proficiency is becoming more and more necessary for work prospects worldwide. Advanced technology integration and industry globalization have increased the need for workers with strong English communication skills (Coles, 2023). The following are the main ideas that highlight how, in the 4IR period, employment prospects and English proficiency are related:

1) Enhanced Employability

Being proficient in English greatly improves one's employability because it's frequently a requirement for positions in worldwide marketplaces and multinational corporations. English is an essential ability for professional success since employers respect people who can interact effectively with clients and partners around the world (Saputri et al., 2023).

2) Access to Global Opportunities

Proficiency in English provides access to global employment prospects. Employees with proficiency in English have a competitive advantage in the context of globalization, as it enables them to operate in a variety of multinational jobs and diverse geographical locations (Coles, 2023).

3) Improved Job Performance

According to studies, workers with good English proficiency typically do better in their jobs because they can communicate effectively, access and

understand crucial information, and work well with coworkers from around the globe (Uong & Vu, 2023)

4) Higher Earnings and Job Satisfaction

Being able to communicate in English is linked to better pay and more job satisfaction. Because they can participate in more meaningful work and professional contacts, employees who are fluent in English frequently have better career prospects, are able to negotiate better compensation, and report higher levels of job satisfaction (Nam et al., 2023).

5) Essential for Technical and Managerial Roles

Technical and management positions in the 4IR frequently call for advanced English proficiency. The majority of technical documentation, software interfaces, and professional communication are written in English, so being able to communicate effectively in this language is essential for these professions (Feri et al., 2021).

H. Previous Studies

In terms of similarities, many previous studies have emphasized the integration of technology in language learning, reflecting the same concern as this research. For instance, Alkrash et al. (2022) explore the use of digital platforms in English language learning, focusing on students' attitudes and digital literacy. Similarly, Hameed & Hasyim (2022) discuss the challenges and benefits of implementing 4IR technology in ESL teaching. This current research aligns with these studies by examining the needs for grammar resources that cater to the technological advancements of the 4th Industrial Revolution, emphasizing the evolving role of technology in education. Additionally, several studies also address specific English language skills. Zakaria et al. (2024) focus on writing skills among ESL postgraduate students, while Dhivya et al. (2023) investigate the use of the ELSA app to enhance professional English communication skills among business students. Both of these studies target the improvement of English proficiency in specific contexts. Furthermore, Peredrienko et al. (2019) examine the changing role of teachers in a technology-driven learning environment, which resonates with this research's interest in how grammar resources must evolve to meet the needs of

students in this era.

Prior research, such as that by Alkrash et al. (2022) and Hameed & Hasyim (2022), has highlighted the growing importance of digital platforms and 4IR technologies in English language teaching. Similarly, this current study investigates the specific needs for grammar resources tailored to the digital landscape, contributing to the broader discourse on how educational tools must evolve to meet the challenges of modern technology. This alignment with previous studies underscores the shared understanding of technology's role in reshaping language education.

In addition to these shared themes, this research also mirrors the focus on specific linguistic skills observed in studies like Zakaria et al. (2024) and Dhivya et al. (2023). While Zakaria et al. explore challenges in writing skills among ESL postgraduate students, and Dhivya et al. investigate communication skills enhanced through multimedia tools, this study zeroes in on grammar—a fundamental component of language acquisition. By focusing on grammar resources for junior high school students, this research contributes to the specialized exploration of how targeted linguistic skills can be effectively supported in a rapidly changing educational context.

Despite these similarities, this research diverges from previous studies in several significant ways. Whereas studies like Zakaria et al. (2024) and Dhivya et al. (2023) concentrate on older learners, this study focuses on junior high school students, a younger demographic with different educational needs. This shift in focus is crucial as it addresses the foundational nature of grammar instruction at a stage where students are still developing their core language skills. Moreover, unlike Hameed & Hasyim (2022), who examine the challenges faced by teachers in integrating 4IR technology, this research emphasizes the learner's perspective, exploring the specific grammar resources needed to enhance student learning outcomes in a technologically driven environment.

The research gap addressed by this study is particularly significant, as there has been limited exploration of how technological advancements impact grammar instruction at the junior high school level. While studies like Fikri et al. (2021)

discuss technological adoption in language learning, their focus on Arabic language education leaves a gap in understanding its implications for English grammar instruction. Similarly, Peredrienko et al. (2019) examine the evolving role of teachers in a technology-rich learning environment but do not explore the specific needs of grammar instruction. This research fills this gap by providing a focused analysis of how grammar resources must adapt to the demands of the 4th Industrial Revolution, offering insights into optimizing grammar instruction for younger learners in a digital context.

Moreover, my research extends the conversation on curriculum adaptation in response to the 4th Industrial Revolution and the forthcoming Society 5.0. Unlike Ansari & Agussani (2020), who discuss broader curricular changes in higher education, my study hones in on the specific needs of junior high school students learning English grammar. This focus on curriculum adaptation highlights the necessity of rethinking traditional grammar instruction to incorporate digital tools and methodologies that align with students' evolving learning environments, ensuring that educational resources remain relevant and effective.

In summary, while my research shares common ground with previous studies in recognizing the importance of technology in language learning, it distinguishes itself by addressing the unique needs of junior high school students in mastering English grammar. By filling a critical gap in the research, this study contributes to the development of more effective and relevant educational resources that can support students in a rapidly changing digital age, ensuring they are well-equipped to meet the challenges of the 4th Industrial Revolution.

I. Research Design

1. Research Design and Steps of Research

This research employs a descriptive qualitative approach, which focuses on exploring and understanding complex human experiences through detailed descriptions of participants' perspectives (Wijaya, 2020). Qualitative research is particularly suited for this study as it does not rely on statistical analysis but instead seeks to gain deeper insights into the perceptions, attitudes, and experiences of teachers and students regarding English grammar instruction (Sulistiyo, 2023). The

study follows a Research and Development (R&D) model, which is commonly used in education to create, evaluate, and refine products such as instructional materials, curricula, and teaching aids (Mokalu et al., 2022). In the context of this study, the R&D model helps design a new English grammar resource tailored to junior high school students' needs in the fourth industrial revolution, where technology and innovative teaching methods play a crucial role.

However, this study did not finish all of the stages that are normally engaged in an R&D model. As directed by The Institute of Education Sciences and the U.S., the researcher carried out three distinct steps. Judijanto et al., (2024), It declared that not every step had to be finished in a single project. This study's accomplishments included defining the goals, creating a draft model, and researching pertinent literature. Based on the particular needs and parameters of this investigation, a selected approach to the R&D procedures was taken (Wulandari & Oktaviani, 2021).

The R&D approach used here emphasizes the importance of iterative feedback from both teachers and students. The development process is structured into phases, beginning with defining the objectives, gathering relevant data, and analyzing the findings. This helps ensure that the developed resource is practical, effective, and suitable for real-world classroom settings (Judijanto et al., 2024). The study will focus on creating a grammar resource that integrates technology and modern pedagogical methods, addressing common issues faced by both educators and learners.

2. Sources and Types of Data

The study's primary data sources are junior high school teachers and students from grades 7 to 9. Teachers were selected for their expertise in curriculum delivery and teaching practices, while students were included to provide direct feedback on their learning preferences and experiences with grammar instruction. By including both perspectives, the study aims to create a resource that balances the needs of educators and learners. The data collected will be primarily qualitative, focusing on participants' thoughts, insights, and experiences, providing rich, in-depth information essential for product development (Gustiani, 2019).

In addition to primary data, the study also incorporates secondary data obtained through a literature review. This secondary data will help contextualize the findings from the surveys and interviews, offering a broader understanding of existing research on grammar instruction and educational resource development (Wijaya, 2020). The literature review will cover recent studies in English language teaching, exploring successful approaches, strategies, and challenges related to teaching grammar in a digital age.

3. Data Collection Techniques and Instruments

a. Literature Review

A literature review was conducted to gather insights from existing academic research on grammar instruction, focusing on innovative methods, effective practices, and the challenges faced in teaching English grammar to junior high school students. The review synthesizes findings from recent studies, helping to identify gaps in current instructional materials and uncover best practices in grammar education (Sulistiyo, 2023). The information obtained from the literature review informs the development of the grammar resource by highlighting effective pedagogical strategies, such as technology-assisted learning tools and interactive exercises, which can enhance student engagement and comprehension (Smucker & Grant, 2022).

The literature review also explores the integration of technology in grammar instruction, particularly in the context of the fourth industrial revolution, where digital learning platforms and interactive tools have become central to educational practices. The goal of this review is to ensure that the new grammar resource is aligned with contemporary teaching trends and utilizes modern technologies to support grammar learning.

b. Survey

A survey was conducted among junior high school teachers and students to gather data on their experiences, preferences, and challenges related to grammar instruction. The survey consisted of both closed-ended questions, which allowed for quantitative data analysis, and open-ended questions, and provided qualitative insights into the participants' opinions and suggestions (Sulistiyo, 2023). The

teacher survey focused on identifying key challenges in teaching grammar, such as areas where students typically struggle and the teaching methods that have been most effective. The student survey gathered data on students' learning preferences, such as whether they prefer visual, auditory, or interactive learning materials.

Surveys are an effective method for collecting data from a large group of participants, providing a broad overview of general trends and patterns. By using both types of questions, the survey aims to capture both the quantitative trends (such as the most common difficulties faced by students) and the qualitative insights (such as the reasons behind these challenges) that are essential for designing a comprehensive English grammar resource.

4. Data Analysis Techniques

a. Literature Review Analysis

The literature review analysis involves a thematic analysis of existing research related to English grammar instruction. This analysis helps identify key trends, challenges, and strategies in teaching grammar, with a particular focus on innovative teaching methods and digital tools that enhance learning (Mokalu et al., 2022). The goal is to synthesize the findings and identify best practices that can be applied in developing the grammar resource. The thematic analysis also examines any gaps in existing research or areas that require further investigation, such as the integration of artificial intelligence or other emerging technologies in grammar instruction.

The findings from the literature review provide a theoretical foundation for the development of the grammar resource. This analysis guides the creation of content that aligns with current pedagogical practices and addresses the identified needs of both teachers and students.

b. Survey Analysis

The survey analysis for this study focuses entirely on qualitative data. Since the survey includes open-ended questions, the analysis involves identifying patterns, recurring ideas, and meaningful insights related to the participants' experiences and preferences regarding English grammar instruction (Sulistiyo, 2023).

The process involves several stages:

- **Data Familiarization:** The researcher will begin by reading and re-reading the survey responses to gain a thorough understanding of the content. This stage ensures that the researcher is familiar with the nuances of the data and can identify key ideas that emerge.
- **Coding:** In this stage, the researcher will organize the data into smaller segments by assigning labels or codes to different parts of the text. These codes may correspond to specific ideas, challenges, or preferences expressed by the participants.
- **Theme Development:** Once the data is coded, the researcher will group related codes into broader themes. For example, if multiple participants mention the difficulty of understanding specific grammar rules, a theme related to "common challenges" may emerge. This step will help the researcher identify overarching patterns across responses.
- **Interpretation:** After the themes are developed, the researcher will interpret the findings, considering the context of the responses and how they contribute to the development of the grammar resource. The goal is to understand the underlying reasons behind participants' preferences and difficulties, which will inform the design of the instructional tool.

This approach allowed for a detailed exploration of the survey responses, providing valuable insights into the experiences, challenges, and suggestions of both teachers and students. The qualitative analysis will form the foundation for the design and refinement of the English grammar resource, ensuring it addresses the real needs of the users.

J. Research Timeline

| Time of the Research | Activity |
|-------------------------------------|---|
| 1 September 2021 – 15 November 2021 | Background of the Research Identification of the Issue Delimitations and Focus of the Study Research Questions |

| | |
|--|---|
| | <p>Aims of the Research</p> <p>Significances of the Research</p> |
| <p>16 November 2021 – 15 December 2021</p> | <p>Theoretical Foundation</p> <p>Previous Studies</p> <p>Frame of Thoughts</p> <p>Research Method</p> <p>References</p> |

