

English Materials Development Oriented to Left and Right Brains Accommodation for Senior High School

Bunga Putri Maulia¹, Margana²

¹Yogyakarta State University, Indonesian; bungaputri.2022@student.uny.ac.id

²Yogyakarta State University, Indonesian; Margana@uny.ac.idm

Received: 22/04/2024

Revised: 02/08/2024

Accepted: 05/09/2024

Abstract

English is a communication tool for obtaining knowledge and information in an interconnected world. This research analyzes the development of left and right-brain accommodation-oriented English language material for high school. This study applied research and development design to generalize the English material, accommodating the right and left brains. This study voluntarily involved the tenth-grade students at SMA Negeri 7 Yogyakarta, who consisted of 89 students to fill in the questionnaire, which dealt with target needs and learning needs. The materials development approach used in this research was based on The Dick and Carey model, which included conducting a needs analysis, designing the syllabus, developing the draft of the materials, validating the English materials from experts, and doing try-out. The result of the study shows that the developed English materials are appropriate for the students referring to the experts' responses to the questionnaire, with the average score from expert Judgment 1 being 3.68 and from expert Judgment 2 being 3.67. This is supported by students' responses to the questionnaire, with an average score of 3.05. This suggests that the English materials facilitate students to accommodate both sides of their brain

Keywords

Brains Accommodation; English Materials Development; English Learning

Corresponding Author

Bunga Putri Maulia

Yogyakarta State University, Indonesian; bungaputri.2022@student.uny.ac.id

1. INTRODUCTION

English is a communication tool for acquiring knowledge and information in our interconnected world. Its dominance in academia, with most scientific research and publications being in English, ensures that scholars and researchers worldwide can stay informed and contribute to the global pool of knowledge (Sukič Kuzma, 2022). Additionally, the internet, predominantly in English, provides abundant information on diverse topics, from educational resources to news articles and opinions. Proficiency in English is also crucial for success in international business and commerce, opening doors to global career opportunities (SUHARDIANA, 2019). Moreover, as a language of cross-cultural communication, English enables people from different backgrounds to connect, collaborate, and share ideas (Patricia Diane Mouboua et al., 2024). Whether for education, technology, travel, or cultural exchange, English's widespread usage cements its position as an indispensable medium for acquiring knowledge and fostering global understanding (Dwivedi et al., 2023).

Due to its significance in the global context, English has become a compulsory subject at almost all



© 2024 by the authors. This is an open access publication under the terms and conditions of the Creative Commons Attribution 4.0 International License (CC-BY-SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).

levels of education in Indonesia, especially Senior High School. (Maduw, 2020). According to Brown (2000), there are eight challenging language aspects: clustering, redundancy, reduced forms, performance factors, colloquial language, delivery rate, stress, rhythm, intonation, and interaction. In addition, various factors contribute to students' difficulties in learning English, such as limited vocabulary, incomplete grasp of grammar, lack of confidence, fear of making mistakes, especially in speaking, lack of motivation, and other factors. (Jusuf et al., 2021). These challenges may stem from external influences and students' brain dominance, impacting their language learning journey. (Samsudin, 2020). As the world becomes more interconnected, proficiency in English is essential for international communication, trade, and education. (Wardah, 2020). By mandating English education, Indonesia aims to prepare its students for an increasingly globalized world, offering them access to a broader range of opportunities and enhancing the country's competitiveness on the international stage. (Alviaderi Novianti et al., 2022). More than textbooks are needed as learning media for students. (Anak Agung Jagadhita Ari Geria, 2022). Therefore, teachers must be creative in finding ways to make language learning interesting, and students need to be passionate about learning and practicing language effectively. Teachers need to produce resources that engage their students and teach material effectively.

Teaching English to senior high school students in Indonesia is challenging, as verbal and physical teaching techniques are required to facilitate language acquisition. (Harlina & Yusuf, 2020). Teachers must develop engaging and interactive teaching methods to create a positive learning environment and improve students' language skills. Planning enjoyable English classes is essential, especially for young students who benefit from simple language to grasp the content. (Asari, Andi; Pali, Agustina; Amelia, Winda; Kurniadi, Yudi; Muhafid, Ervian Arif; Sari, Dhesi Wulan; Fitriani, Rani Ligar; Komala, Siti; Pramesti, Puji; Septianasari, Lina; Arianto, Tomi; Hasyim, Fuad; Parayil, 2023). The teacher must act as a facilitator, helping students find their desire to learn and supporting students to achieve what they want. This is done so that the right hemisphere of the brain and the left hemisphere develop in a balanced way. (Nurhaliza Putri Sabila & Siti Quratul Ain, 2023). Each individual has a different learning style, depending on the brain and environment. The brain also needs feedback from its activity for optimal learning. (Mufidah, 2017).

Their brain dominance influences each student's learning style. The brain is a complex organ responsible for various functions, including thinking, sensory perception, and physical activities. It is divided into two parts: the left brain and the right brain. Students with dominant left-brain accommodation prefer discussions, logical arguments, and precise problem-solving. In contrast, those with dominant right-brain accommodation learn better through visual and concrete methods in a colorful and hands-on environment (Wahab & Nuraeni, 2020). Left-brain thinking is focused on verbal, logical, and analytical aspects, while the right brain is more artistic, playful, and nonverbal. Some students have a dominant right brain, others have left-brain dominance, and only a few have balanced characteristics of both hemispheres (Wahyuningsih & Sunni, 2020). Brain-based activities foster a learning environment where students are encouraged to explore the teaching and learning process (Widiana et al., 2017). These activities align with how the brain learns best, promoting engagement, critical thinking, and retention. By incorporating brain-based strategies, educators can create dynamic and interactive learning experiences catering to students' unique cognitive preferences, enhancing understanding and knowledge retention. Brain-based learning aligns with the brain's functioning, positively affecting students' learning and brain features (El-Henawy, 2020). It emphasizes active engagement, multisensory experiences, and meaningful connections, fostering a conducive and effective learning environment.

Based on the exploration, it was discovered that the teaching and learning process requires improvement, as English instruction for senior high school students does not cater to their specific characteristics at this level. The current teaching approach often revolves around strictly adhering to the curriculum and fails to capture the attention of senior high school students, hindering their

enthusiasm for learning. Additionally, the exploration identified some problems students encountered, such as low self-confidence and difficulties in various language skills, including pronunciation, vocabulary, and grammatical accuracy. (Kristiawan, 2019). Lack of motivation was also a significant issue. Another problem found during the exploration was related to learning materials. The materials provided by the school needed to be more sufficient to meet the learning needs of students. Simply relying on traditional textbooks and materials may not be enough to engage students effectively in their studies. Therefore, teachers should innovate in developing resources that foster students' enjoyment and active participation in English language lessons. To achieve this, designing English learning materials is crucial. (Hendrizal, 2020). Such an approach will facilitate appropriate classroom activities and better cater to students' needs.

Learning English as a foreign language in Indonesia can be tough, especially for Senior high school students, as it is a new language for them (Susanthi, 2020). Various factors contribute to their difficulties, such as lack of vocabulary, grammar mastery, confidence, and motivation. Additionally, each student has a unique brain dominance style, some being left-brain dominant and others right-brain dominant. Balancing these brain accommodations can enhance learning. To support students' learning preferences, teachers should provide instructions aligned with both left and right-brain accommodations. Brain-based learning can improve students' abilities and engagement in teaching and learning. Appropriate learning materials catering to students' needs are crucial, as textbooks alone may not adequately address brain accommodation preferences. Students have a distinct capacity or learning style based on their brain dominance. Those with dominant left-brain accommodation prefer discussing, presenting logical arguments, examining details, problem-solving, accurate work, and effective communication. On the other hand, students with dominant right-brain accommodation prefer visual learning, concrete approaches, colorful environments, practical activities, spontaneity, and better response to displayed instructions (Ho & Wong, 2002; Suwarsih, 2013).

Innovative approaches in designing English learning materials that cater to left and right brain accommodations are essential to creating engaging classroom activities that effectively meet students' needs. This will help foster a more enjoyable and participative English language learning experience for senior high school students in Indonesia. English learning materials play a crucial role in the classroom. To meet students' needs, schools require adequate English resources based on the latest curriculum representing each subject at every level. However, an exploration revealed some issues affecting students' learning process, categorized into internal and external problems. Internal issues include low self-confidence and student skills like poor pronunciation, limited vocabulary, grammar accuracy, and lack of motivation. These impact English learning significantly. Vocabulary is a key component for second language proficiency. External problems involve insufficient learning materials the school provides, which fail to cater to left and right brain accommodations. Balancing these accommodations is crucial, as (Buzan, 1984) highlights the importance of utilizing both sides of the brain for optimal language learning. Thus, knowing how to create learning materials designed to accommodate both brain hemispheres is important.

The study's main focus was addressing the various issues affecting the teaching and learning process for senior high school students. Specifically, it aimed to develop learning materials catering to students' needs and interests in learning English while promoting a balanced brain accommodation. The significance of these materials lies in providing clear and essential information to help students enhance their language skills. The researcher aimed to create English learning materials for tenth-grade senior high school students as a five-unit course book. Based on the background and delimitation of the problem above, the problems of this research can be formulated as follows: What are the students' target needs for the tenth grade of SMA Negeri 7 Yogyakarta? What learning material is needed in the tenth grade of SMA Negeri 7 Yogyakarta? How are the learning materials appropriate for the tenth-grade students at SMA Negeri 7 Yogyakarta?

Related to the formulation of the problem above, the objectives of this study are as follows: to

identify the students' target needs of tenth-grade SMA Negeri 7 Yogyakarta students, to identify the learning needs of the tenth-grade SMA Negeri 7 Yogyakarta students, and to develop the learning materials that are appropriate for the tenth-grade students at SMA Negeri 7 Yogyakarta.

2. METHODS

A study design was required to conduct the study. Educational Design Research refers to a structured approach in research that focuses on designing, developing, and evaluating various educational aspects, such as teaching and learning programs, materials, products, and systems, to address particular challenges (Plomp & Nieveen, 2007). This research was conducted at SMA N 7 Yogyakarta. The purpose of instructional design research is to enhance understanding of the qualities and processes involved in creating, producing, and assessing educational-related issues. The Design-Based Research Concept (DBR) is a methodology developed by and for researchers and educators seeking to improve the effectiveness, transferability, and application of educational practices (Anderson & Shattuck, 2012). In this study, the researchers aimed to develop learning materials focused on four skills (Reading, speaking, writing, and listening) in Senior high school students

Based on the explanations above, educational design or design-based research involves researchers developing their skills to create useful new products. Consequently, this study is classified as Design-Based Research (DBR). The materials development approach used in this research was based on The Dick and Carey model, as suggested by (Mulyatiningsih, 2011), which emphasizes the creation of new educational materials through a systematic development process. The Dick and Carey model ensures that learning objectives are clear, measurable, and systematically revised at each stage of the development process. The main goal of R&D (Borg and Gall) is to develop teaching media for educational needs, it is proposed. The results of this study were applied to creating a new product. After that, the product undergoes systematic testing, evaluation, and modification until it satisfies the required efficacy, quality, or comparable standards.

3. FINDINGS AND DISCUSSIONS

In analyzing the data on brain dominance, the researcher categorized the questionnaire and tested it into four aspects: the student's needs, expert judgment, and the student's evaluation of the product. After conducting the needed analysis, consisting of interviews, questionnaires, and observations, the researcher gets some needed analysis, namely the necessities, lacks, wants, the learning input, and teacher role. This research was carried out in class X SMA 7 Yogyakarta. This research is to look at left and right brain activation. Before this media is tested, the product is reviewed by a material expert validator and a design expert validator. This is purposeful so that the Interactive PowerPoint media developed gets the recognition it deserves. This research uses the R&D (Research and Development) method with the ADDIE development model proposed by Dick and Carry (1996). Steps in ADDIE model development research include the Analysis Phase (Analysis), Design Stage (Design), Development Stage (Development), Stage Implementation, and Evaluation Phase. Based on research and development carried out, the following research results were obtained:

a. The result of Students' Needs Analysis
 - Necessities

Table 1. The Results Table of Necessities

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Short-term goal	1	a. For now, I must learn English to appropriately pronounce and spell words, phrases, and sentences in English.	89	20	22,47%
		b. For now, I need to study English to master grammar correctly.		21	23,59%
		c. I need to learn English to use technical terms in marketing correctly.		2	2,2%
		d. Currently, I am learning English to use formal and informal expressions and their responses in English.		31	34,83%
		e. Etc		15	16,85 %
Long-term goal	2	a. Regarding the future, my motivation for studying English is to obtain a job.	89	12	13,48%
		b. Regarding the future, my reason for learning English is to pursue my education.		65	73,03%
		c. My study		15	16,85%
Learning materials	3	a. I need English-learning materials that contain marketing-specific technical terms for my future job.	89	16	17,97%
		b. I need English learning materials that include basic business letters for my future job.		59	66,29%
		c. I need English learning materials that contain expressions and responses to communicate fluently in English for my future job.		14	15,73%
		d. etc		-	
Topic	4	a. The English-learning materials I use should focus on the office and marketing realm of work.	89	14	15,73%
		b. The English learning materials I use should focus on a business-related topic.		7	7,86%
		c. The topic of the English learning materials I use should be related to the school environment.		60	67,41%
		d. The topic of my English learning materials should be relevant to my daily existence.		8	8,98%
		e. etc		-	

The researcher divides the students' needs into four aspects to determine their needs. The four aspects are long-term goal, short-term goal, learning material, and topic. From that aspect, the researcher found that for the short-term goal, the students mostly choose to learn English due to their desire to respond to formal and informal situations in life, with 31 people out of 89 (34,83%) choosing that option. However, for the long-term goal, 65 out of 89 (73,03%) students stated they are learning English to pursue their education. Furthermore, since they learn English to help them in the future, and for helping them in the future, they state that they need English learning materials that include basic business letters for their future job, with 59 out of 89 students, or as many as 66,29%, choosing that option. Lastly, the students will easily understand when the topic or the material they learn relates to their school environment, with 60 out of 89 students agreeing with that or 67,41% of students needing that.

- Lacks

Table 2. The Results Table of Lacks

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
English proficiency	5	a. My English proficiency is categorized as elementary.	89	10	11,23%
		b. My English ability is categorized as early intermediate.		50	56,17%
		c. My level of English proficiency is intermediate.		20	22,47%
		d. My English proficiency is categorized as superior.		9	10,11%
		e. etc		-	-
Weaknesses	6	a. My weakness in learning English is that I cannot accurately apply English grammar.	89	22	24,89%
		b. Occasionally, I do not know how to use certain terms or expressions in the appropriate context.		17	19,10%
		c. Occasionally, I do not know how to pronounce certain words or expressions correctly.		50	56,17%

In learning, students will certainly find many imperfections and shortcomings in themselves so that they can know what they should improve and focus on learning to cover the shortcomings and make their learning achieve goals in learning. This deficiency is divided into two aspects: English proficiency and weaknesses. However, 50 out of 89 students mostly feel that their English is already at a superior level or the highest level, but this has not been proven by tests such as TOEFL or IELTS. As for weaknesses, 50 out of 89 students, or 56.17%, sometimes have difficulty using certain expressions in appropriate contexts.

- Wants

Table 3. The Results Table of Wants

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
The student's subjective needs towards English learning materials	7	a. I want English-learning resources that help me comprehend the terminology used in marketing.	89	30	33,70%
		b. I desire English-learning materials that can help me improve my knowledge of grammar.		22	24,71%
		c. I want English-learning materials that assist me in comprehending word meanings and using words, phrases, and expressions appropriately.		31	34,83%
		d. etc		6	6,74%

In addition, learning materials are also made based on students' subjective needs. Students, or as many as 34.83 %, want English learning materials to help them understand the meaning of words and appropriately use words, phrases, and expressions. In comparison, another 22 students (24.71%) want English learning materials to help them improve their grammar knowledge. Another 30 students (33.70%) want English learning materials to help them understand the terms used in marketing.

b. The Learning Needs

- Input

Table 4. The Results Table of Input

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Listening Input	8	a. I want the stimulus for listening to be in monologue format.	89	30	33,70%
		b. I desire input for listening in the form of conversation		15	16,85%
		c. I want to know the vocabulary from the script listening		20	22,47%
		d. I want to know how to pronounce the listening script		23	25,84%
		e. I want to improve my listening skill		1	1,1%
	9	a. The duration of the listening text should be brief (150 words or less).		25	28,08%
		b. The duration of the listening passage should be moderate (150 to 200 words).		41	46,06%
		c. The listening passage should be lengthy (at least 200 words).		15	16,85%
		d. etc		8	0,98%
		Speaking Input		10	a. I am interested in monologue-style input for public speaking.

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
		b. I am seeking input for speaking in the guise of dialogue.		35	39,32%
		c. I would like the input for speaking, a specific topic, to be discussed in pairs.		8	8,98%
		d. I desire input for oral communication in the form of information to be communicated verbally.		19	21,34%
Reading Input	11	a. For reading input, I choose functional text	89	30	33,7%
		b. Such as memos, application letters, announcements, job vacancies, and brochures.		39	43,82%
		c. For reading input, I choose a text that contains several marketing technical terms		10	0,11%
		d. etc		10	0,11%
The length of the reading input	12	a. The reading passage should be brief (150 to 200 words).	89	64	71,91%
		b. The text should be between 200 and 250 syllables long.		16	17,97%
		c. The reading passage should be lengthy (at least 250 words).		9	10,11%
Writing Input	13	a. I select a model or example of text to be written as input for my writing.	89	36	40,44%
		b. For writing input, I require a list of words that will be written.		5	5,6%
		c. I require an explanation of the text's sentence structure for writing input.		36	40,44%
		d. For writing input, I prefer images, diagrams, and graphics.		7	7,86%
		e. etc		5	5,6%

In addition to the needs of students, in developing left-right brain-oriented materials for students, teachers also need to pay attention to students' learning needs, namely input for students such as abilities that help students improve their English level, such as listening input, speaking, reading, the length of reading input, and writing input. For listening input, most students, or as many as 41 out of 89, chose that the material to improve students' listening skills should be more than 150 words or of medium duration. More than that, 30 or 33.70% of students also stated that they wanted to know how to pronounce the script they listened to. In addition, for speaking input, most students, or as many as 35 (39,21%), choose speaking learning by dialoguing with friends, while 64 (71.91%) prefer to do monologue style speaking learning or do public speaking. Furthermore, in developing reading input, some students choose reading learning with texts containing some marketing, with 36 out of 89 students, while others choose to learn using functional input.

- Procedure

Table 5. The Results Table of Procedure Activity of Listening

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Activity of listening	14	a. My favorite form of listening practice is listening to a conversation and filling in the blanks based on the text.	89	28	31,46%
		b. My favorite form of listening activity is listening to a conversation and then responding to questions.		12	13,48%
		c. My favorite listening activity is to listen to a dialogue/monologue and then write down the material in detail.		30	33,70%
		d. I chose to listen to the dialogue and to recognize expressions in the dialogue as my listening assignment.		16	17,97%
		e. I enjoy listening to a dialogue/monologue and then determining if the offered claims are true or incorrect.		3	3,37%

In developing the materials, the researcher questioned students about what materials they need to practice in learning so that students can interact in English. Listening is one of the skills that must be practiced; as many as 30 out of 89 students (33.70) chose activities to improve their listening skills by listening to a conversation and filling in the blanks based on the text. The other 28 students (31.46%) stated that the listening activity they liked was listening to dialog or monologue, and then students were asked to write down what they heard in detail.

Table 6. The Results Table of Procedure Activity of Speaking

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Activity of speaking	15	a. I prefer to share my thoughts regarding public speaking with friends.	89	35	39,32%
		b. In my speaking activities, I choose to cover professional-related themes.		16	17,97%
		c. Regarding public speaking, I enjoy giving presentations on themes relating to my expertise program.		26	29,21%
		d. Orally describing visuals is one of my favorite speaking activities.		7	7,86%
		e. In public speaking, I enjoy role-playing.		2	2,24%
		f. I enjoy practicing conversation and monologue during my speaking activities.		3	3,3%

In developing the materials, the researcher questioned students about what materials they need to practice in learning so that students can interact in English. One of the skills that must be practiced is listening; as many as 35 out of 89 students (39,32) chose activities to improve their listening skills by

listening to a conversation and filling in the blanks based on the text. The other 26 students (29.21%) stated that the listening activity they liked was listening to dialog or monologue, and then students were asked to write down what they heard in detail.

Table 7. The Results Table of Procedure Activity of Reading

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Activity of reading	16	a. In reading activities, I enjoy reading material and identifying key concepts.	89	32	35,95%
		b. My reading hobbies include reading a text and looking for certain information.		16	17,97%
		c. In reading activities, I like determining the meaning of words in the text.		18	20,22%
		d. In reading activities, I enjoy looking for synonyms for certain phrases in the text.		16	17,97%
		e. I enjoy reading and answering comprehension questions during reading exercises.		2	2,24%
		f. In my reading activities, I prefer to read and summarize a brief text about marketing.		7	7,86%
		g. etc		-	

Next up is reading. Reading is one of the main skills students must master in learning English. Reading skills can help students to discover more vocabulary and learn how to pronounce new vocabulary. Many activities can be chosen to teach reading skills, and 32 out of 89 students enjoy reading materials and identifying key concepts, which is 35.95% of the population. Another activity students liked in learning to read was finding synonyms for certain phrases in the text, which was chosen by 16 out of 89 students (17.97%).

Table 8. The Results Table of Procedure Activity of Writing

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Activity of writing	17	a. In writing tasks, I want to be given text examples and produce a comparable text in my own words.	89	24	26,96%
		b. In writing tasks, I enjoy filling in phrase gaps and arranging jumbled sentences to form a composition.		14	15,73%
		c. I prefer to create textual dialogue in my writing efforts.		27	30,33%
		d. In writing exercises, I prefer to create a paragraph of 100-200 words or more, beginning with the introduction and ending with the conclusions.		5	5,61
		e. I enjoy creating a work report as part of my writing hobbies.		7	7,86
		f. In my writing efforts, I prefer to use proper and exact punctuation.		12	13,48

g. etc	-
--------	---

Improving the writing is tricky since the students need to know vocabulary and good grammar. However, it is still one of the skills that students should master. As many as 30.33 % choose that creating textual dialogue in writing efforts could help them learn. Furthermore, the other 26,9% choose to be given text examples and produce a comparable text in their own words.

Table 9. The Results Table of Procedure Activity of Vocabulary

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
Activity of vocabulary	18	a. I enjoy matching English terms and their meanings to expand my vocabulary.	89	34	38,20%
		b. I prefer to expand my vocabulary by completing phrases or paragraphs using offered words.		18	20,22%
		c. I enjoy playing crossword puzzles to expand my vocabulary.		10	11,25%
		d. To expand my vocabulary, I prefer to list new terms from text and then check them in a dictionary.		12	13,48%
		e. I choose to practice pronouncing new terms from the book and determining their meanings.		15	16,85%
		f. etc		-	
Activity of grammar	19	a. I enjoy identifying errors in phrases when studying grammar.	89	24	26,96%
		b. I enjoy correcting sentence construction errors when studying grammar.		33	37,07%
		c. When studying grammar, I prefer to compose phrases like the ones provided.		15	16,85%
		d. etc		17	19,10%

The other crucial part of learning English is to know more vocabulary and good grammar. In vocabulary learning, there are several activities chosen by students; as many as 34 students, or 38,20% stated that activities such as matching English terms with their meanings could expand their vocabulary, while as many as 18 students or 18 out of 89 students chose to prefer to expand my vocabulary by completing phrases or paragraphs using offered words, as many as 10 or 11,25% chose crossword puzzles, and the other 15 students chose to make a list of new terms from text and then check them up in a dictionary. Students prefer activities that make them think and move rather than just writing down new vocabulary in their books.

As for improving students' grammar, most students enjoy correcting sentence construction errors when studying grammar, as many as 33 or 37.07% of 89 students. Others chose to identify errors in phrases when studying grammar, as many as 24 or 26.96%, then as many as 15 students, or 16,85 preferred to compose phrases like the ones provided, and 17 others chose the others.

- Teacher's Role

Table 10. The Table of Teacher's Role

Aspects	Item Number	Students Need	N	Total Number per Item	Percentage
The role of teachers	20	a. In terms of the teacher's position, I require a teacher who also serves as an educator.	89	35	39,32%
		b. Regarding the teacher's role, I require a teacher who can act as both an observer and a participant.		37	41,57%
		c. Regarding the teacher's role, I require a teacher who can act as an intermediary.		17	19,01%

In addition to the material presented, the role of the teacher has a very significant effect on students. This is evidenced by 37 students out of 89, or 41/57%, who felt they needed a teacher who could act as both an observer and a participant. This explains that students want a teacher who is kind and not too harsh in the learning process; 35 students require a teacher who also serves as an educator, where the teacher clearly and definitively understands the material before it is explained or given to the students. At the same time, the other five students chose to require a teacher who can act as an intermediary and provide students comfort in learning because the teacher becomes a facilitator and a friend for students.

Discussion

This study aims to develop materials oriented to the left and bright accommodation. Some steps were used in this study. The first step is to develop the materials. This study used the need analysis. The target needs in this study cover some necessities, the lacks, and the wants. The learning needs to cover the input, the procedures, the setting, the learner's role, and the teacher's role. From the components mentioned above, we can see that these are the basic things to develop English learning materials oriented to left and right brain accommodation. The first aspect is the input; based on the findings, the students need the input. The second aspect is the procedure. The procedure is based on the findings. The study served more than one variation of the learning procedure: listening, speaking, reading, and writing. The next aspect is the setting. According to the findings, students like to have group projects. This book provides the individual tasks and pairs to make the balance activities. The last one is the learner's role and the teacher's role. Then, this study develops the syllabus. The syllabus was made based on the curriculum. This study provides five units with speaking, writing, reading, and listening skills. Each unit consists of twenty tasks. The chapter or the units consist of the title, the unit's brief, or the purpose.

There are some inputs, such as listening input, speaking, reading, the length of reading input, and writing input. For listening input, most students or as many students chose that the material to improve students' listening skills should be more than 150 words or of medium duration, and they want to know how to pronounce the script they listened to. For speaking input, most students choose to learn speaking by dialoguing with friends, and some prefer to do monologue-style speaking learning or public speaking. For reading input, some students choose reading learning with texts containing some marketing, while others choose to learn using functional input.

Regarding the activities, to improve listening skills, the students chose activities to improve their listening skills by listening to a conversation and filling in the blanks based on the text. Most students enjoy reading materials and identifying key concepts to improve reading skills. To improve writing

skills, students choose to create textual text. While in vocabulary learning, students prefer activities that make them think and move rather than just writing down new vocabulary in their books. As for activities to improve students' grammar, most students enjoy correcting sentence construction errors when studying grammar.

Characteristics of English Learning Materials for Tenth-grade students in Senior High School

Based on the results of the materials evaluation, the developed materials are considered appropriate. The developed materials have the characteristics described in the following paragraphs. This book consists of 5 chapters. Chapter 1 talks about self, Chapter 2 talks about congratulating and complimenting others; Chapter 3 expresses intention, Chapter 4 is about which one is your best gateway and Chapter 5 is about letting's visit Niagara Falls. To provide an overview of the chapter to be studied, each chapter briefly explains what will be learned and the final target to be achieved, such as "After finishing this lesson, you will be able to Greet your friends and take leave."

In each unit, there are various kinds of tasks. Before students work on each task, students will get a warm-up to build initial knowledge regarding the material to be studied. The warm-up consists of pictures that describe the instructions. After warming up, students will be prepared to receive lessons. In preparing the lesson, students will learn two skills in English: listening and speaking and reading and writing. The main task of this book is to provide detailed material accompanied by relevant pictures. The vocabulary list for each chapter is also displayed in full in this book, including the meaning in Indonesian, so that students can easily understand the important vocabulary for each chapter.

Each chapter is equipped with a review of the material that has been discussed through questions so that it can train students to recall the material that has been explained. In addition, each chapter has a part, namely homework, where students have to do homework at home to avoid forgetting the material given at school. The last part of each chapter is a reflection to determine how deeply students understand the material. Students are asked to provide a checklist on each aspect they are expected to master with this book, with indicators such as very much, much, and little.

4. CONCLUSION

Based on the results of the needs analysis, it can be concluded that the target needs are as follows: Researchers found that for short-term goals, most students chose to learn English because they wanted to be able to respond to formal and informal situations in life (34.83%) chose this option. However, for long-term purposes, (73.03%) students stated that they studied English to continue their education. Most students (55 out of 89) feel that their English is at a superior or highest level, but this has not been proven by tests such as TOEFL or IELTS. For learning materials, 66.29% of students want English learning materials to help them understand the meaning of words and correctly use words, phrases, and expressions. In comparison, 17.97% of other students want English learning materials to help them learn. Improve grammar knowledge, and another 15.73% of students want English learning materials that can help them understand marketing terms.

The theoretical implications of this study highlight that selecting appropriate learning material designs significantly impacts the continuity of the learning process and students' academic achievements. This research contributes valuable insights by enriching the material for developing English education to cater to both right-brain and left-brain functions. The findings offer actionable guidance for teachers and prospective educators in crafting learning materials that facilitate easier comprehension of English by addressing both hemispheres of the brain. Future research should include various subjects and educational levels to explore further and enhance the development of both right and left-brain capacities in students.

REFERENCES

- Agustiono, A. (2011). Makna Simbol dalam Kebudayaan Manusia. In *Jurnal Ilmu Budaya* (Vol. 8, Issue 1, pp. 1–7).
- Aimen, A., & Khadim, U. (2024). Significance of Proficiency in the English Language within the Realm of Education in Pakistan. *English Education Journal*, 15(1), 1–8. <https://doi.org/10.24815/eej.v15i1.34863>
- Alviaderi Novianti, Martina Mulyani, Indra Sudrajat, & Retno Wiyati. (2022). Pentingnya Bahasa Inggris di Era Globalisasi: Edukasi pada siswa/i SMK. *Aksararaga*, 4(2), 72–75. <https://doi.org/10.37742/aksararaga.v4i2.67>
- Anak Agung Jagadhita Ari Geria. (2022). cit2_Challenges Faced Students in Speaking English in Indonesia: A Literature Study. *Challenges Faced Students in Speaking English in Indonesia: A Literature Study, Nomor 2 20*, 1–4.
- Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research? *Educational Researcher*, 41(1), 16–25.
- Arends, R. I., & Kilcher, A. (2010). Teaching for student learning: Becoming an accomplished teacher. In *Teaching for Student Learning: Becoming an Accomplished Teacher*. <https://doi.org/10.4324/9780203866771>
- Asari, Andi; Pali, Agustina; Amelia, Winda; Kurniadi, Yudi; Muhafid, Ervian Arif; Sari, Dhési Wulan; Fitriani, Rani Ligar; Komala, Siti; Pramesti, Puji; Septianasari, Lina; Arianto, Tomi; Hasyim, Fuad; Parayil, S. N. (2023). *Strategi Pembelajaran Bahasa Inggris* (Issue May).
- Buzan, T. (1984). *Use Your Memory*. Pdf.
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). “So what if ChatGPT wrote it?” Multidisciplinary perspectives on opportunities, challenges, and implications of generative conversational AI for research, practice, and policy. *International Journal of Information Management*, 71(March). <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- El-Henawy, W. (2020). Examining the Impact of Brain-Based Professional Development on EFL Novice Teachers’ Pedagogical Perceptions and Practices. *Journal of Scientific Research in Education*, July. https://jsre.journals.ekb.eg/article_107636.html?lang=en
- Gailea, N., & Indasari, I. (2023). Materials Selection in Teaching English Skills for Teachers of Senior High School in Serang City. *90 | Jelts*, 1(2), 90–102.
- Harlina, H., & Yusuf, F. N. (2020). Tantangan Belajar Bahasa Inggris di Sekolah Pedesaan. *Jurnal Penelitian Pendidikan*, 20(3), 325–334. <https://doi.org/10.17509/jpp.v20i3.28191>
- Hendrizar. (2020). Rendahnya Motivasi Belajar Siswa Dalam Proses Pembelajaran. *Jurnal Riset Pendidikan Dasar Dan Karakter*, 2(1), 44–53. <https://ojs.adzkie.ac.id/index.php/pdk/article/view/57/48>
- Herdiyanti, R., & Assery, S. (2021). Pengaruh Kepemimpinan Dan Lingkungan Kerja Terhadap Kinerja Karyawan Dengan Dimediasi Oleh Kedisiplinan Pada Sekolah Tinggi Teknologi Kedirgantaraan. *Jurnal Riset Akuntansi Dan Bisnis Indonesia*, 1(1), 171–189. <https://doi.org/10.32477/jrabi.v1i1.xxx>
- Ho, W. K., & Wong, R. Y. L. (2002). English language teaching in East Asia today: Changing policies and practices. (No Title). <https://doi.org/10.1016/j.sbspro.2011.03.320>
- Howard, J., & Major, J. (2015). *Guidelines for Designing Effective English Language Teaching Materials Why*

- English Language Teachers May Choose to Design their own Materials*. January 2004, pp. 101–109.
- Jusuf, H., Fatsah, H., & Dako, R. T. (2021). Students' Performance in Speaking English (A Case Study on Students' Poor Performance in Speaking English). *Jurnal Normalita*, 9(2), 303–322.
- Kristiawan, M. (2019). Analisis Pengembangan Kurikulum dan Pembelajaran. In *UPP FKIP Univ. Bengkulu* (Issue February).
- Lestariningsih, F. E., Susyeta, A., & Krisnawati, L. D. (2016). *Developing English Instructional Materials for the*. 11(4), 261–269.
- Long, M. H. (1990). The second language acquisition theory needs to be explained. *TESOL Quarterly*, 24(4), 649–666
- Lustig, M. W., & Koester, J. (2010). *Intercultural competence: Interpersonal communication across cultures*. Pearson. <https://thuvienso.hoasen.edu.vn/handle/123456789/10464>
- Maduw, B. (2020). PENTINGNYA PEMBELAJARAN BAHASA INGGRIS DI SEKOLAH. *Warta Edisi, May*, 31–48.
- McGrath, B. P., & Holmes, D. G. (2002). Multicarrier PWM strategies for multilevel inverters. *IEEE Transactions on Industrial Electronics*, 49(4), 858–867. <https://doi.org/10.1109/TIE.2002.801073>
- McLaughlin, B. (2013). *Second language acquisition in childhood: Volume 2: School-age Children*. Psychology Press. <https://doi.org/10.4324/9780203726341>
- Mufidah, L. luk N. (2017). 276698-Memahami-Gaya-Belajar-Untuk-Meningkatkan-7924C83a (1). In *Jurnal Perempuan dan Anak* (Vol. 1, Issue 2, pp. 245–260).
- Mulyatiningsih, E. (2011). Analisis Model-Model Pendidikan Karakter Untuk Usia Anak-Anak, Remaja Dan Dewasa. *Yogyakarta: UNY, Dari Http://Staff. Uny. Ac. Id/Sites/Default/Files/Penelitian/Dra-Endang-Mulyatiningsih,-M. Pd./13B_Analisis-Model-Pendidikan-Karakter. Pdf, Diakses Pada, 8*.
- Nufus, T. Z. (2018). Teaching English to young learners in Indonesia (Pros and Cons). *English Language in Focus (ELIF)*, 1(1), 65–70. <https://doi.org/10.24853/elif.1.1.65-70>
- Nurhaliza Putri Sabila, & Siti Quratul Ain. (2023). Peran Guru Sebagai Fasilitator Dalam Menumbuhkan Minat Membaca Siswa Kelas Ii Sdn 177 Pekanbaru. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, 9(2), 5953–5964. <https://doi.org/10.36989/didaktik.v9i2.1384>
- Patricia Diane Mouboua, Fadeke Adeola Atobatele, & Olateju Temitope Akintayo. (2024). Language as a tool for intercultural understanding: Multilingual approaches in global citizenship education. *Magna Scientia Advanced Research and Reviews*, 11(1), 019–030. <https://doi.org/10.30574/msarr.2024.11.1.0071>
- Plomp, T., & Nieveen, N. (2007). *An introduction to educational design research*.
- Samsudin, M. (2020). Faktor-Faktor yang Memengaruhi Belajar. *Eduprof : Islamic Education Journal*, 2(2), 162–186. <https://doi.org/10.47453/eduprof.v2i2.38>
- Siregar, N., Harahap, Y. S., & ... (2021). Hasil Belajar Bahasa Inggris Siswa Yang Memiliki Stifin Berbeda Dengan Menggunakan Learning Scientific Approach. *Prosiding Seminar ...*, 1. <https://www.e-prosiding.umnaw.ac.id/index.php/penelitian/article/view/755>
- SUHARDIANA, I. P. A. (2019). Peran Teknologi Dalam Mendukung Pembelajaran Bahasa Inggris Di Sekolah Dasar. *Adi Widya: Jurnal Pendidikan Dasar*, 4(1), 92. <https://doi.org/10.25078/aw.v4i1.934>
- Sukič Kuzma, M. (2022). English As the Language of Science. *Gamtamoklinis Ugdymas / Natural Science Education*, 19(2), 66–81. <https://doi.org/10.48127/gu-nse/22.19.66>
- Surahman, A. (2007). Earthquake-resistant structural design through energy demand and capacity.

- Earthquake Engineering & Structural Dynamics*, 36(14), 2099–2117. <https://doi.org/10.1002/eqe.718>
- Susanthi, I. G. A. A. D. (2020). Kendala dalam Belajar Bahasa Inggris dan Cara Mengatasinya. *Linguistic Community Services Journal*, 1(2), 64–70. <https://doi.org/10.55637/licosjournal.1.2.2658.64-70>
- Suwarsih, M. (2013). Metodologi Pengajaran Bahasa. Yogyakarta: UNY Pres.
- Wahab, I., & Nuraeni, N. (2020). The Analysis of Students' Learning Style. *Seltics*, 3(1), 41–46. <https://doi.org/10.46918/seltics.v3i1.509>
- Wahyuningsih, B. Y., & Sunni, M. A. (2020). Efektifitas Penggunaan Otak Kanan dan Otak Kiri terhadap Pencapaian Hasil Belajar Mahasiswa. *Palapa*, 8(2), 351–368. <https://doi.org/10.36088/palapa.v8i2.885>
- Wardah. (2020). *Di Perguruan Tinggi Islam Dalam Konteks Esp (English for Spesific Purpose)*. 205–218.
- Widagdo, A. (2021). Pengajaran Pengucapan Kata Bahasa Inggris: Tantangan Mengajar Efl Di Negara Yang Tidak Berbahasa Inggris. *Jurnal Kreatif: Jurnal Kependidikan Dasar*, 12(1), 224–233. <https://garuda.kemdikbud.go.id/documents/detail/2317461>
- Widiana, I. W., Bayu, G. W., & Jayanta, I. N. L. (2017). Pembelajaran Berbasis Otak (Brain Based Learning), Gaya Kognitif Kemampuan Berpikir Kreatif Dan Hasil Belajar Mahasiswa. *JPI (Jurnal Pendidikan Indonesia)*, 6(1), 1–15. <https://doi.org/10.23887/jpi-undiksha.v6i1.8562>