Improving reading skills through top-down approach: A case study in a high school in Vietnam

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Abstract

This study investigates the impact of the top-down approach on students' reading proficiency and motivation. The top-down approach activates students' background knowledge, also known as schemata, to enhance reading comprehension. According to Anderson [1] the terms schemata, background knowledge, and prior knowledge can be used interchangeably. The primary objective of this research is to evaluate the effectiveness of the top-down approach in improving students' reading skills and to examine its influence on their motivation to read. To obtain the data, a 12-week study was conducted as a field study at a high school using a mixed-methods approach that combined qualitative and quantitative analyses. This study included two 11th-grade classes (N=80): Class 11C3 functioned as the control group, following the traditional bottom-up approach, whereas Class 11C4 functioned as the experimental group, receiving instruction using the top-down approach. The quantitative data were analyzed using SPSS to compare the outcomes of the pre-test and post-test, as well as the questionnaires measuring students' reading motivation before and after applying the top-down approach. Additionally, student interviews were conducted to gather qualitative data, which offered valuable insights into the learning process and students' reading motivation. The findings indicate that the top-down approach significantly enhances students' reading comprehension and motivation compared to the bottom-up method. Further investigation is recommended to examine the enduring impacts of the top-down approach on reading abilities in various educational settings.

Keywords: Experimental group, Independent sample t-test, Paired sample t-test, Reading competence, Reading skills, Top-down approach.

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Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

1. Introduction

In the context of teaching and learning English as a Foreign Language (EFL) in Vietnam, especially reading skills, teachers tend to naturally prioritize the bottom-up approach while neglecting the top-down approach. The reason for this practice is that, due to the limited time available in a 45-minute period, teachers typically prioritize the traditional bottom-up approach in reading sessions. As a result, they often neglect the important role of top-down activities, also known as background knowledge-building activities, particularly during the pre-reading stage. Some teachers skip the initial stage of establishing background knowledge or the pre-reading stage and instead directly introduce new vocabulary, grammatical rules, and pronunciation rules without recognizing the advantages it brings to students. Other teachers often pose random or unsystematic questions, conduct various types of tasks, or proceed directly to the text without adequately engaging and developing learners' background knowledge (schemata) beforehand. A significant number of teachers continue to employ the conventional bottom-up methodology. Many teachers choose traditional text-based teaching methods due to their simplicity and efficiency in preparing lesson plans and accessing teaching resources. Students face challenges in understanding the text due to their low prior knowledge of the topic and their lack of effective and systematic tools for organizing ideas in a reading text, as they are being taught using a typical bottom-up approach.

Unlike the bottom-up approach, the top-down approach helps students activate their background knowledge related to the reading topic. Activating students' background knowledge enhances their engagement with passages by arousing students' interests in the text, resulting in improved performance in reading comprehension [1]. This is particularly evident in exercises that involve identifying key information, understanding the organization of text content, or making connections between ideas within a text or section. According to Nunan [2] top-down approach begins with the notion that comprehension resides in the reader. The reader draws on background knowledge, makes predictions, and then examines the text to confirm or reject those assumptions. Thus, even if not all of the individual words are understood, the text as a whole can still be comprehended. When utilizing the top-down approach in reading, teachers should stress meaning-generating activities rather than mastery of word recognition. Hudson [3] stated that when students are taught using a top-down approach, their background knowledge or schemata is active; they may continuously generate predictions about the text and extract the essential concepts of the delivered material, and a vast amount of background knowledge can be utilized to overcome linguistic barriers.

Based on the above issues and theoretical perspectives, this study aims to consider and apply the top-down approach in teaching reading skills at the high school level. The aim of the study is to investigate the effectiveness of the top-down approach in enhancing students' reading comprehension and to examine its influence on their motivation to read. Accordingly, the study addresses the following research questions: *(i) How does the implementation of the top-down approach enhance high school students' reading skills? (ii) How does the implementation of the top-down approach affect high school students' motivation to read?*

2. Literature Review

2.1. Reading

According to Goodman [4], reading is a psycholinguistic activity in which a language user, the reader, attempts to accurately reconstruct a message conveyed by a writer into a visual representation. Hafner and Jolly [4] contend that reading necessitates the identification and comprehension of printed and written symbols that function as stimuli for the recollection of previously acquired experiences and the subsequent development of new meanings through the reader's manipulation of previously acquired ideas. Furthermore, Anderson [5] asserts that reading is a dynamic endeavor in which readers construct meaning by integrating information from a text with their own background knowledge. The objective of reading is to understand the content that is being read. The process of reading is determined by the combination of the reader, fluency, procedures, and the text.

2.1.1. Reading Comprehension

Throughout the foreign language learning and instruction process, reading comprehension is essential. Goodman [6] asserts that reading should be a mental activity that is active, purposeful, and creative, in which readers derive meaning from both textual and contextual inputs. Klingner and Geisler [7] stated that reading comprehension is a process that involves the construction of meanings from texts and requires the participation of a variety of phases, including decoding, reading, fluency, and the readers' background knowledge and experiences. In the words of Grabe and Stoller [8] reading comprehension is the ability of an individual to recognize the information presented in a reading text and to explain it accurately. Al Odwan [9] defines reading comprehension as the process by which readers decode the information contained in the reading text using their knowledge and vocabulary to comprehend the text's meanings.

2.1.2. The principles for Teaching Reading

To teach reading effectively, teachers should follow certain key principles. Nunan [2] identifies several fundamental criteria for reading instruction, including: activating learners' prior knowledge and experiences; building a strong vocabulary base; teaching for comprehension; providing explicit instruction in reading strategies; and encouraging students to transform these strategies into effective, automatic reading skills.

2.1.3. The procedures for Teaching Reading

There are three stages of reading: pre-reading, while-reading, and post-reading [10]. Pre-reading, while-reading, and post-reading activities provide instructional purposes.

* Pre-Reading:
- Engaging background knowledge: This step is designed to establish a connection between the forthcoming material and the existing knowledge that students possess regarding the subject matter. This facilitates the establishment of linkages and enables the formulation of predictions regarding the content.
- Expanding lexicon: Educators may present unfamiliar lexical items that students will come across in the written material. This provides them with the essential resources for understanding.
- Establishing a reading objective: Directing students towards a particular objective for reading (such as identifying the primary idea or recognizing cause-and-effect links) enables them to concentrate their attention and comprehend the author's intention.
- Analyzing text features: Examining visuals, headings, organization methods, and other elements of a text helps students familiarize themselves with the structure and content of the reading material.

* While- Reading:
- Assessing reading performance: teachers assess students' reading fluency, accuracy, and comprehension by monitoring their understanding. This enables the possibility of making modifications to the level of assistance, if necessary.
- Employing reading methods: Students are urged to utilize previously acquired reading tactics such as making anticipations, elucidating perplexing sections, posing questions, and condensing material.
- Enhancing proficiency and precision: The primary objective is to provide a seamless and error-free reading experience. Teachers may demonstrate techniques for deciphering unknown words or managing intricate sentence constructions.

*Post-Reading
- Evaluating comprehension: This phase encompasses exercises that showcase the level of understanding. Possible tasks may include responding to inquiries, condensing essential information, analyzing characters' motivations, or filling out visual aids.
- Deepening comprehension: Activities at this level encourage students to expand their understanding beyond the text. This may involve establishing links to different areas of study, engaging in discussions about overarching concepts, or applying the acquired knowledge in practical situations.
- Fostering the development of critical thinking abilities: Students are prompted to scrutinize the text, assess the author's viewpoint, and construct their own interpretations.
- Facilitating discourse and cooperation: Engaging in discussions regarding the material promotes a more profound comprehension and enables students to gain insights from diverse viewpoints.

2.1.4. Reading Motivation

Seymour and Walsh [11] emphasized that motivation has an impact on the reading comprehension activities of learners. Although it plays a crucial part in the acquisition of language skills, the substantial significance of motivation in reading comprehension often goes unnoticed by many. Enhancing reading motivation among English as a Foreign Language (EFL) learners improves their reading efficiency. As stated by Hairul, et al. [12] reading motivation refers to the significant level of motivation that students possess to focus their favorable or unfavorable attitudes towards reading. Arnold [13] distinguishes between two key types of motivation: intrinsic and extrinsic. Intrinsic motivation occurs when students find learning inherently rewarding. These learners pursue knowledge because it is personally meaningful or enjoyable, rather than for external rewards. They are internally driven by curiosity, interest, or a sense of personal achievement, with no negative consequences associated with this form of motivation. In contrast, extrinsic motivation, as described by Arnold [13] involves learning that is driven by external factors such as grades, rewards, or teacher approval. In this case, students engage in reading activities to meet external expectations or avoid negative outcomes. While both forms of motivation can influence learning, fostering intrinsic motivation is generally more sustainable and beneficial for long-term reading development.

2.2. Top-Down Approach

The top-down approach views reading as an active process where readers utilize their background knowledge and expectations to rebuild the meaning of the text. This perspective is supported by various researchers such as Goodman [14] and Rumelhart [15], who emphasize the importance of prior knowledge and cognitive processes in comprehension as Cohen [16], Eskey [17] and Rumelhart [15]. The top-down approach suggests that comprehension begins with broad concepts, such as titles and main ideas, before focusing on specific words or phrases. This method relies on the reader's background knowledge and prior experiences. By analyzing the overall meaning first, readers can better interpret ambiguous information. Higher-level schemas guide the reading process and help make sense of the text. Prior knowledge and expectations play a vital role in understanding. As we read, our previous experiences shape how we interpret messages [18].

2.2.1. Top-Down Versus Bottom-Up

Grabe [19] argues that the bottom-up approach prioritizes text as the central element for decoded messages. Advocates of the bottom-up approach are concerned with the process by which students gather knowledge from written material and

whether they approach letters and words in a systematic manner. The bottom-up approach aims to achieve automatic word recognition and a high reading rate as a result. In order to achieve the desired goals, it is crucial to provide explicit phonics and spelling instruction. Hudson [20] indicates that the bottom-up approach views reading as a passive or decoding process, often known as "data-driven" processing. The bottom-up approach initially focused on young native readers but later expanded to second language learners, influencing reading instruction through a phonics-based method that emphasized letter-sound relationships while overlooking higher-level skills. In contrast, the top-down approach shifted how researchers and teachers viewed second language reading, promoting strategies that involve predicting, inferring, and interpreting meaning during reading [21, 22].

2.2.2. Top-Down Approach in Reading

Numerous concepts exist on top-down approach in reading. Mikulecky [23] argues that, in terms of understanding, the reader's interpretation of a text holds greater significance than the text itself. The importance of understanding the content of the text is highlighted over linguistic competence. Anderson [24] emphasizes the importance of focusing on advanced reading skills. These skills include integrating linguistic units across sentences, generating and updating a schema or representation of the entire text, and integrating textual information with background knowledge or schema. Nunan [2] asserts that the top-down approach operates on the idea that comprehension resides in the reader. The reader utilizes prior knowledge, formulates hypotheses, and subsequently scrutinizes the text to validate or refute those predictions. Therefore, even if there is a lack of understanding of some specific phrases, the overall meaning of the text can still be grasped. When using a top-down approach for reading, it is important for the instructor to prioritize exercises that focus on developing meaning rather than simply mastering word recognition.

2.3. Schemata

Schank and Abelson [25] define schemata as scripts. In addition, Lehnert [26] occasionally referred to schemata as plans. On the contrary, according to Pritchard and Woollard [27], most earlier studies defined schemata as encompassing world knowledge, past experiences, prior knowledge, previously acquired knowledge, background knowledge, and current knowledge. Anderson [1] defines schemata as a cognitive framework that represents a reader's knowledge in an interconnected manner. These definitions all pertain to schemas as either background knowledge or foundational information.

2.3.1. Types of Schemata

Many earlier studies exerted significant effort to categorize the term schemata/schema. Singhal [27] categories of schemata include three distinct types: linguistic knowledge, proper schemata, and content schemata. Additional scholars have proposed several other types, such as abstract/story schemata, formal schemata, and content schemata. However, there are two clearly distinct forms of schemata: formal schemata and content schemata [1, 28].

2.3.2. The Positive Effects of "Schemata-Building" Activities in Reading Class

Royer [29] acknowledged that comprehending a reading text involves the cognitive processes of awareness and interaction. The construction of schemata or background knowledge is crucial for the development of reading comprehension. Reading enables learners to comprehend a text. Reading is conveyed using words and sentences to enable readers to understand the text. Schemata are constructed based on an individual's life experiences. Schemata-building activities are beneficial for enhancing reading comprehension by aiding learners in the processing of information. Aylar and Khadijeh [30] assert that engaging in schema-building activities can enhance learners' understanding by facilitating connections between the text they are reading and their existing knowledge, hence expanding their knowledge regarding the text. Furthermore, according to Crilly [31] engaging in tasks that involve constructing schemata assists in establishing a structured foundation for understanding new concepts and terminology.

2.4. Top-Down Activities

Teachers who use this approach to teach reading must first activate students' background knowledge or schemata of the material because a reader's prior knowledge affects students' reading comprehension; it has a very significant role. There are numerous ways available for engaging learners' background knowledge. Teachers may use the following techniques: questioning, semantic mapping, skimming, previewing, graphic organizers, and the use of the results of semantic mapping and previewing.

2.4.1. Previewing

Previewing is a vital task to do during the pre-reading stage because it assists students in activating their content schemata or background knowledge and anticipating the meaning of the text. One benefit of previewing is that it may be accomplished regardless of the text's linguistic difficulties, since previewing does not need students to read the text fully. Another benefit is that it is essential to teach students that any information included in the text is important for reading. In other words, visual information such as photos, drawings, graphs, and charts should be highlighted since they are inextricably linked to the text's content and hence very useful in trying to obtain the main idea of the text [32].

2.4.2. Questioning

According to Williams [33] questioning is another kind of top-down processing in which the teacher prepares a series of text-related questions and distributes them to the class prior to teaching reading. This kind of activity also serves to activate and build students' content schemata or background knowledge. On the other hand, the selection of the questions is crucial; they must be ones that the students can answer. According to Kohn [34] there are three sorts of questions: "right there" questions, "think and search" questions, and "in your head" questions. The answers to "right there questions" are plainly expressed in the text.

2.4.3. Skimming

According to Grellet [35] when we skim, we move quickly through the reading material in order to get the main idea of the text, to learn how it is organized, or to get a sense of the author's tone or purpose. It simply states that the purpose of skimming is to determine the topic of a text. As a result, the key to really motivating learners to skim is to provide them with a series of texts and ask them to choose relevant titles. Skimming enables readers to grasp a text's main idea without getting engaged in the details.

2.4.4. Semantic Mapping

Semantic mapping, originally a vocabulary development technique [36] involves students generating and organizing word associations around a target word. It offers four advantages: it works with linguistically challenging texts, allows use of the native language to emphasize connections, activates background knowledge, and helps learners focus on organization and meaning [37].

2.4.5. Graphic Organizers

Graphic organizers help students understand text structure by visually displaying its organization. Grabe and Stoller [38] note that these tools allow learners to identify key ideas, content structure, and relationships within the text. However, since not all organizers suit every text type, teachers must select appropriate ones based on the material.

2.4.6. Use of the Results of Semantic Mapping and Previewing

For previewing, it is effective to have students compare and contrast what they think about the text before and after reading. In semantic mapping, students first write what they already know and what they predict will be in the text; these ideas come from them. After reading, their understanding comes from the text itself. Comparing their own ideas with the author's helps stimulate curiosity about the topic [37].

2.5. Previous Study
2.5.1. Previous Studies in Viet Nam

A study conducted by Nguyen [39] entitled "A study on the use of top-down approach to improve reading skills for learners at Equest English Centre," the researcher employed the top-down approach to teach reading skills in this study. The findings of the experimental investigation revealed a substantial difference in terms of reading performance between the experimental group and the control group. As a result, the top-down approach can be stated to have positive effects on students' reading performance. However, in this research, the author concentrated solely on a population with a mixed academic background.

2.5.2. Previous Studies in the World

Several studies have explored the implementation of the top-down approach in teaching reading. Misrun [40] investigated its impact on second-year students at MTsS Al-Manar Middle School and found that students in the experimental group significantly improved their reading comprehension by activating background knowledge and applying reading strategies. Similarly, Angosto Blanco, et al. [18] studied primary school students and confirmed that top-down techniques enhanced both reading skills and learner autonomy.. In Indonesia, H., et al. [41] demonstrated a strong correlation between top-down strategies and improved reading comprehension among second-year students at SMP 40 Pekanbaru. The approach also boosted classroom engagement and learner motivation. Syofianis, et al. [42] reached similar conclusions with 8th-grade students at SMP YLPI Pekanbaru, highlighting the effectiveness of using multiple top-down techniques. Additionally, Susanti [43] applied a Classroom Action Research model at MTs Muhammadiyah Tallo and reported that students became more active and enthusiastic readers after receiving top-down instruction across two learning cycles.

2.6. Research Gap

These studies, though varied in location and methodology, share common ground: all were conducted at the primary or middle school level, and all found top-down processing effective in enhancing reading comprehension. However, there remains a research gap regarding its application among high school students. This group possesses stronger linguistic abilities and broader background knowledge, which makes them ideal candidates for benefiting from the top-down approach. To address this gap, the current study aims to investigate the effectiveness of top-down processing on high school students' reading skills and motivation at a high school. The findings may offer valuable insights into the approach's potential at the secondary level and contribute to its broader application in high schools in Vietnam.

3. Methodology

3.1. Research Design

This study aimed to assess the impact of the top-down approach on enhancing the reading skills and reading motivation of 11th-grade students at a high school in Vietnam. A quasi-experimental research design was employed, integrating both quantitative and qualitative methods to ensure a comprehensive analysis of the outcomes. The study involved two groups: an experimental group and a control group. The experimental group received reading instruction based on the top-down approach, whereas the control group followed the traditional bottom-up method. Both groups were administered a pre-test and a post-test to evaluate any changes in reading proficiency. The quantitative data collected from these tests were analyzed using descriptive and inferential statistical methods, including paired-sample and independent-sample t-tests. Furthermore, the study also utilized a qualitative research methodology. The qualitative part of the study was employed to verify the quantitative data on the students' reading motivation after the implementation of the top-down approach. The interviews were conducted to gather qualitative data after the post-test, with the aim of enhancing understanding and interpretation of the results.

3.2. Participants

The researcher expected to gather a sample size of 80 participants from two intact classes for the experiment. The sample size consisted of 80 participants, with the intention of selecting 40 students for each group. This sample size was sufficient to ensure the accurate representation of the intended population. These participants were evenly assigned into two groups: Class 11C3 served as the control group, while Class 11C4 functioned as the experimental group. Each group consisted of 40 students. After the post-test, the researcher invited 10 students from the experimental group to participate in the interviews. The purpose of these interviews was to explore students' perspectives regarding the implementation of the top-down approach in reading and its influence on their reading motivation.

3.3. Instruments

3.3.1. English -Language Background Survey

The purpose of the survey was to evaluate students' language proficiency, background knowledge, learning attitudes, challenges faced in learning English, preferred learning styles and approaches, and their opinions on the role of the English language in the future.

3.3.2. Questionnaires

A questionnaire, as defined by Flores [45], is a research tool that comprises a well-organized series of questions intended to gather meaningful information from individuals participating in a survey. These tools can employ written or verbal inquiries and generally adhere to an interview structure. Questionnaires can be used for both qualitative and quantitative research methods and can be administered through several channels, including internet platforms, telephone surveys, paper-based forms, or in-person interviews, often without direct supervision from the researcher. The questionnaire consisted of some items presented in a 5-point Likert scale format, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.3.3. Tests

The researchers utilized both a pre-test and a post-test to gauge changes in speaking ability before and after the intervention. The evaluation aimed to measure students' aptitude in oral communication. Both groups underwent assessments designed to evaluate their speaking abilities, with the post-test administered to the experimental group after the intervention. This assessment aimed to ascertain the impact of the intervention on students' proficiency in spoken English.

3.3.4. Interview

To gain deeper insights into students' perceptions of the top-down approach and their reading motivation, semi-structured interviews were conducted with a subset of participants from the experimental group. After the post-test, 10 students were purposively selected based on their willingness to participate and their performance improvement.

3.4. Data Collection and Analysis

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection techniques. A variety of instruments were used to gather comprehensive data, including an English-language background survey, pre-tests and post-tests, questionnaires, and semi-structured interviews. The researcher utilized statistical techniques to assess the data gathered from experimental teaching. Analytical techniques such as mean, t-test, standard deviation, and percentage were employed for data analysis. The data analysis was performed utilizing the Statistical Package for the Social Sciences (SPSS® Version 20.0 for Windows). The data was systematically arranged and analyzed using statistical measures such as means and standard deviations.

4. Results and Discussion

4.1. Results

4.1.1. The Students' Feedback on Questionnaires

When students were asked which of the four language skills reading, speaking, listening, and writing they found to be the most challenging, a significant number of them (42 students, 52.5% of the total) identified reading as the most challenging. Following that, 21 students, 26.25%, indicated that listening was the most challenging, 10 students, 12.5%, indicated that writing was the most challenging, and seven students, 8.8%, mentioned speaking. The following Figure 1 provides an illustration of the distribution of responses:
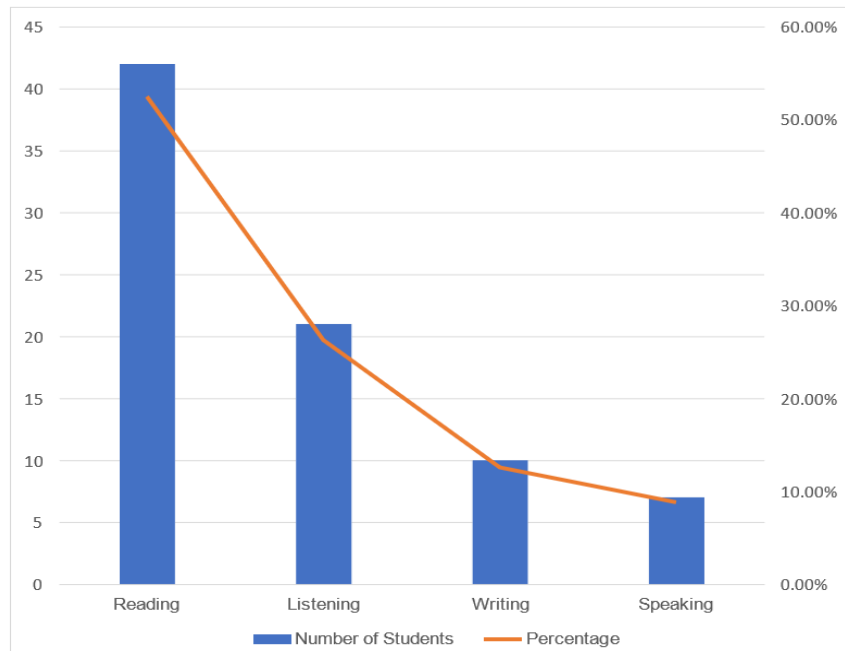

Figure 1.
The hardest language skill.

To assess students' background knowledge of the world, the question "How long have you been studying other natural and social science subjects?" was asked. This knowledge is crucial when applying the top-down approach during the experimental phase. The majority of students (95%) reported studying these subjects for 9 years, while 5% reported 8 years.

The question "When faced with challenging reading texts, how often do you feel discouraged and choose answers randomly?" revealed concerning insights about students' reading habits. A majority (65%) often felt discouraged and guessed answers without much thought. Another 22.5% reported feeling this way sometimes, while 5% rarely did so, and another 5% said they never did. Only 2.5% admitted to always feeling discouraged and performing poorly. The following diagram illustrates these results in detail.
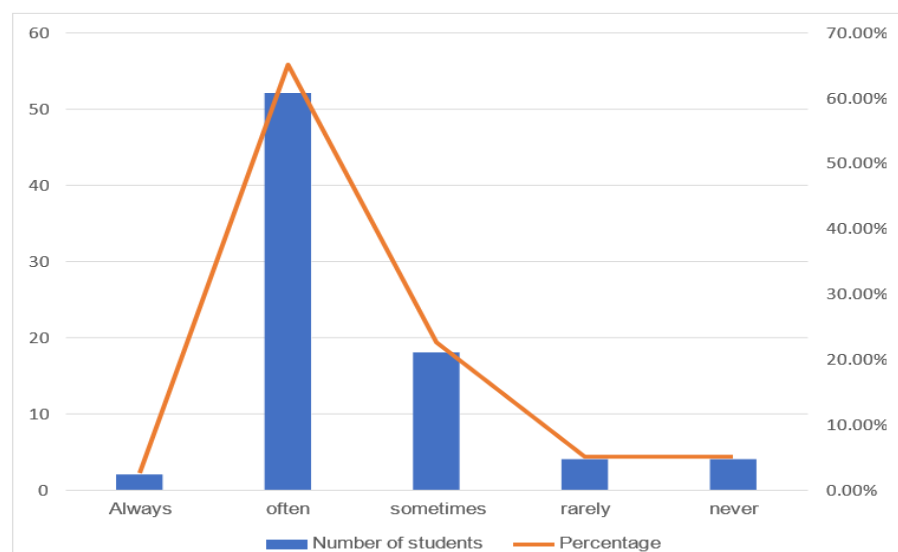

Figure 2.
Frequency of incidence involving students who felt discouraged and did the task irresponsibly.

In response to the question, "How often does your English teacher let you do top-down or background knowledge-building activities?", students revealed a strong reliance on traditional bottom-up methods. A significant 61.25% reported rarely engaging in such activities, while 25% said they occurred only occasionally, often during observations. Alarmingly, 13.75% stated they had never experienced top-down activities in reading lessons. The graph below illustrates these findings.
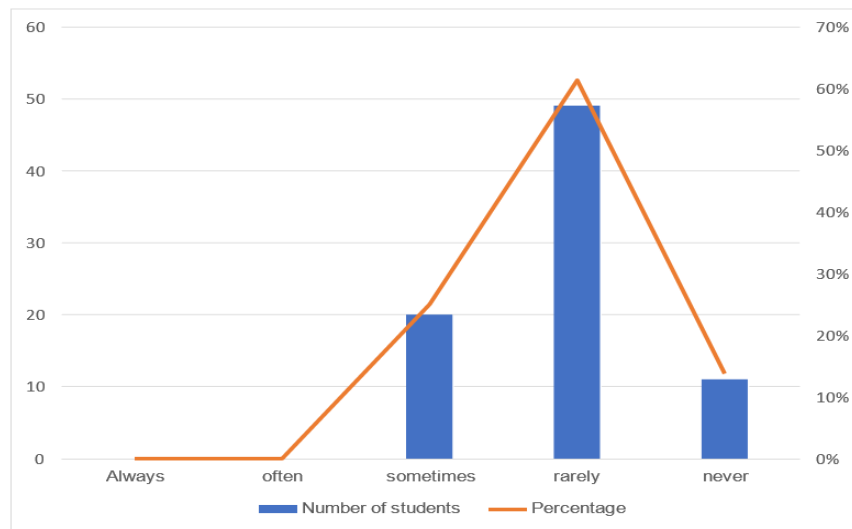

Figure 3.
Frequency of incidence involving the implementation of the top-down approach.

4.1.2. Pre-Motivational Questionnaire

Following that, a pre-motivational questionnaire was administered to the participants. After completing the pre-motivation questionnaire, students from both the control group and the experimental group were given the opportunity to participate in the experimental phase. The purpose of this activity was to determine whether there was a similarity in how students in both groups felt about the process of learning the English language and their motivation to read. It was established, following an analysis of the data obtained from the pre-motivational questionnaires of both groups, that there were no statistically significant differences between the two groups.

Table 1.
Means of pre-motivation questionnaire between the control and experimental group (Items 1 to 5).

	Control group	**Experimental group**
I am interested in learning English.	2.08	1.98
I am interested in learning reading skills.	2.25	2.38
I know that I will do well in reading exercises.	2.24	2.35
If the teacher talks about an interesting topic, I might read more about it.	2.33	2.63
I like to read about new things.	2.53	2.95

According to the table, the control and experimental groups showed similar results, with no statistically significant differences in attitudes toward English learning or motivation to read. For the item "I am interested in learning English," the control group had a mean of 2.08 and the experimental group 1.98, indicating low interest in English across both groups, an issue that suggests a need for pedagogical change. On the item "I am interested in learning reading skills," the control group scored 2.25 and the experimental group 2.38, reflecting declining interest likely due to ineffective teaching methods. For "I know I will do well in reading exercises," both groups scored low (2.24 and 2.35), showing that students lacked confidence in their reading abilities, a clear sign of low motivation. When asked if they would read more when the teacher introduced interesting topics, both groups disagreed (means of 2.33 and 2.63), indicating a fading curiosity in exploring new content. Finally, for "I like to read about new things," the control group scored 2.53 and the experimental group 2.95. This suggests that most students in the control group lacked motivation to seek new knowledge, while those in the experimental group were unsure. Limited access to updated materials may have contributed to poor reading performance.

Table 2.
Means of pre-motivation questionnaire between control and experimental group (Items 6 to 10).

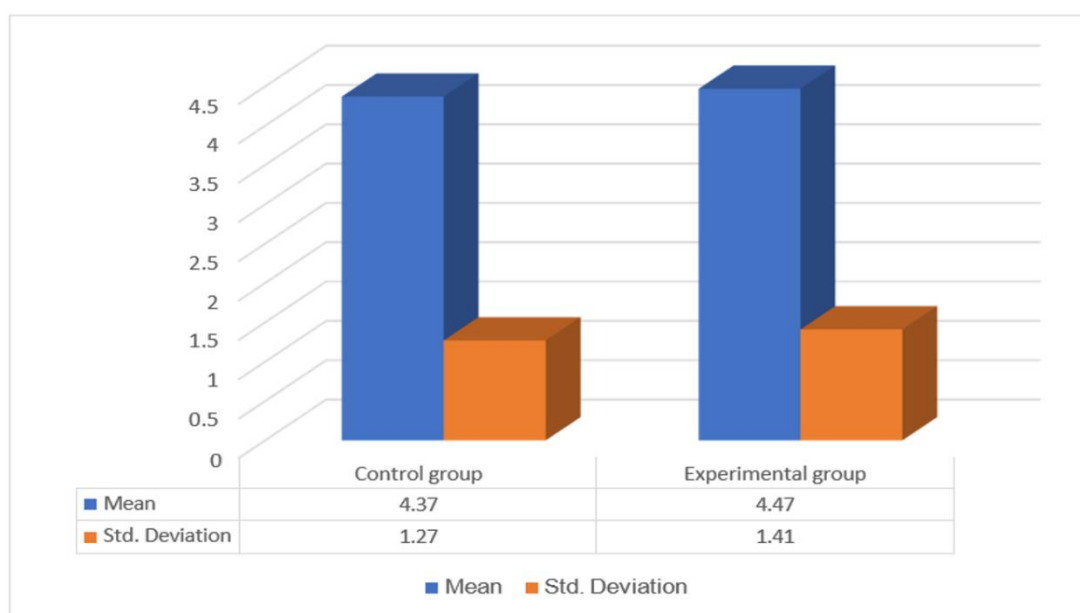|	Control group	Experimental group
I read to gain fresh knowledge on subjects appealing to me.	2.63	3.03
I like to get compliments from the teacher for my reading performance.	2.73	3.15
I like to discuss with my friends about what I am reading.	2.80	3.25
I like to visit the library with my family or friends.	2.90	3.33
My English classes are very important to me.	3.35	3.65

On the 6th item, "I read to gain fresh knowledge on subjects appealing to me," the control group scored 2.63 and the experimental group 3.03, both in the "Neutral" range, indicating uncertainty about whether students actively seek further information on topics of interest. For the 7th item, "I like to get compliments from the teacher for my reading performance," the control group scored 2.73 and the experimental group 3.15, again showing neutral responses. This suggests a lack of motivation or confidence in their reading performance. On item 8, "I like to discuss with my friends about what I am reading," the experimental group scored 3.25 and the control group 2.80. These neutral responses suggest limited peer interaction and possible difficulty with collaborative learning. For the statement "I like to visit the library with my family or friends," the control group scored 2.90, while the experimental group scored 3.33, still within the neutral range. This may reflect low motivation to explore learning resources or engage in shared reading experiences. The final item, "My English classes are very important to me," received mean scores of 3.35 (control) and 3.65 (experimental), suggesting moderate awareness of English's value in their lives. Overall, the results from the pre-motivational questionnaire showed no statistically significant differences between the two groups in terms of attitudes toward English learning and reading motivation.

4.1.3. Test Results
4.1.3.1. Pre-Test

The purpose of the pretest was to determine the level of reading comprehension ability possessed by the participants. Prior to the beginning of the experimental phase, the evaluation was given to both the control group and the experimental group. The pretest consisted of 40 questions, comprising different types of activities. These formats included matching, fill-in-the-gaps, true or false, and multiple-choice questions. The outcomes are illustrated in the chart that follows.

Figure 4 displays the statistics obtained from the pre-test. There was no statistically significant difference between the control group (mean=4.37, standard deviation=1.27) and the experimental group (mean=4.47, standard deviation=1.41), according to the data analysis.

Figure 4.
Pre-test descriptive statistics.

An analysis of the pre-test data indicated a variety of scores for both the control and experimental groups. The control group displayed scores ranging from a minimum of 2 to a maximum of 7, with a mode value of 5. Similarly, the scores of the experimental group varied between 2 and 8, with a mode of 4. Here are the details.

Table 3.
Statistics of the pre-test in both groups.

	Control group	**Experimental group**
Mean	4.37	4.47
Mode	5	4
Std. Deviation	1.27	1.41
Minimum	2	2
Maximum	7	8

The pre-test score distributions of both the control group and the experimental group were broken down in great depth in Table 3. According to the results of the control group, the scores ranged from 2 to 7. A closer look revealed that 3 students, who accounted for 7.5% of the total, received a score of 2; 12 students, who accounted for 30% of the total, received a score of 5; and 1 student, who accounted for 2.5% of the total, received a score of 7. The scores for the experimental group varied from 2 to 8, with 2 students (5%) scoring 2, 14 students (35%) scoring 4, 8 students (20%) scoring 6, and 1 student (2.5%) receiving a score of 8.

4.1.4. Post-Test

After implementing the top-down approach, a post-test was administered to both the control and experimental groups to assess improvements in reading comprehension. The test included 40 questions across various formats: matching, fill-in-the-blank, true/false, and multiple choice. The results are presented in the chart below.

	Control group	Experimental group
■ Mean	4.07	5.72
■ Std. Deviation	1.2	1.46
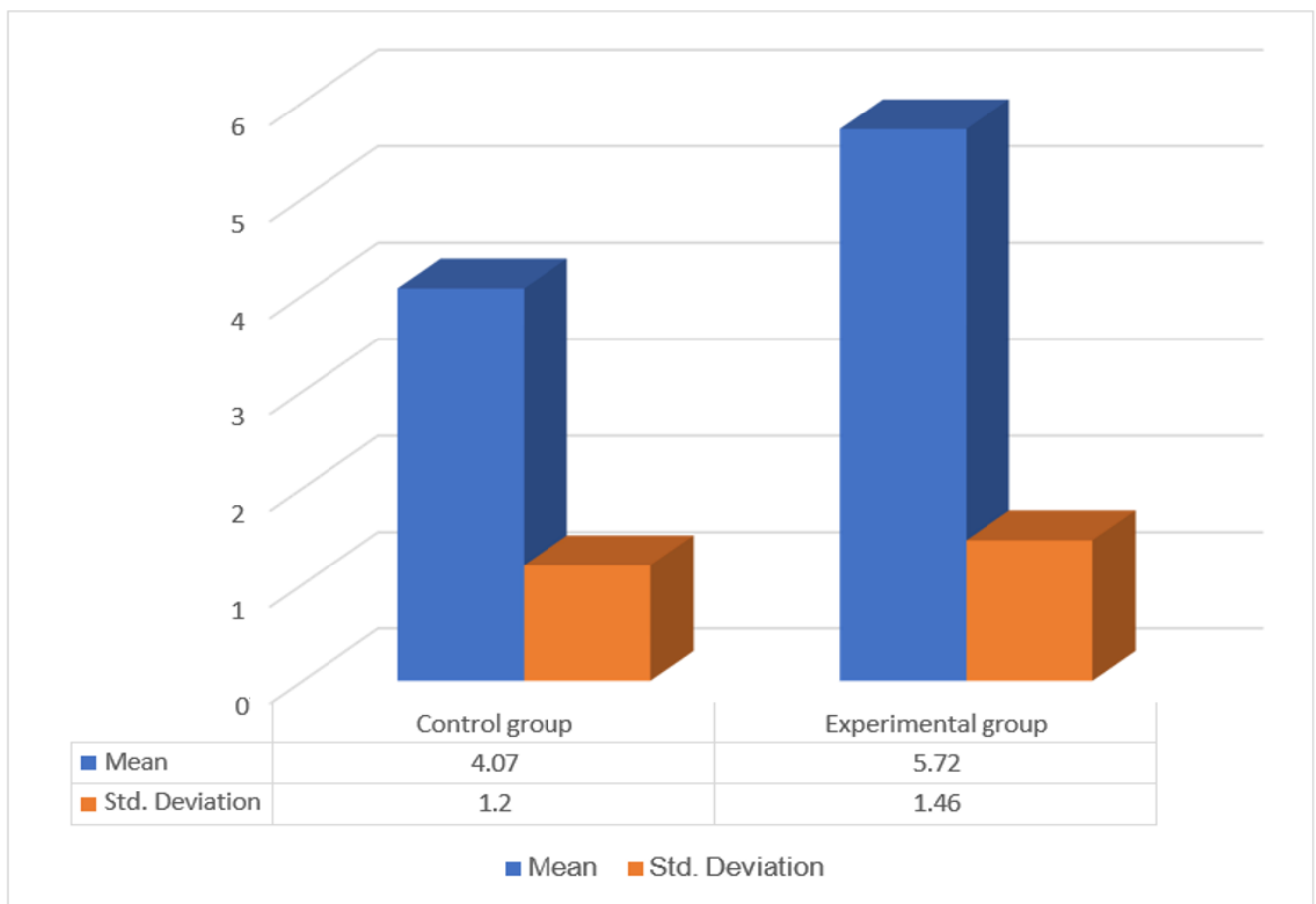
Figure 5.
Pre-test descriptive statistics.

Figure 5 displays the statistics obtained from the post-test. There was a statistically significant difference between the control group (mean=4.07, standard deviation=1.20) and the experimental group (mean=5.72, standard deviation=1.46), according to the data analysis.

Table 4.
Statistics of post-test in both groups.

	Control group	Experimental group
Mean	4.07	5.72
Mode	4	6
Std. Deviation	1.20	1.46
Minimum	1	3
Maximum	7	9

As can be seen from the Table 4 above, an analysis of the post-test data indicated a variety of scores for both the control and experimental groups. The control group displayed scores ranging from a minimum of 1 to a maximum of 7, with a mode value of 4. However, the scores of the experimental group varied between 3 and 9, with a mode of 6.

The post-test score distributions of both the control group and the experimental group were broken down in great depth in Table 4. According to the results of the control group, the scores ranged from 1 to 7. A closer look revealed that 1 student, who accounted for 2.5% of the total, received a score of 1; 14 students, who accounted for 35% of the total, received a score of 4; and 1 student, who accounted for 2.5% of the total, received a score of 7. The scores for the experimental group varied from 3 to 9, with 1 student (2.5%) scoring 3; 16 students (40%) scored 6; 4 students (10%) scored 7; and 1 student (5%) received a score of 9.

4.1.5. Interviews

The findings of the data collection interview for this study indicated that students who took part in the experimental group agreed that the top-down approach had a positive effect on the development of their reading skills and motivation toward reading.

In response to the first question, *"Do you think your reading motivation has increased compared to before?"*, all 10 students agreed that their motivation had improved. They expressed greater enjoyment in reading, driven by curiosity and a desire to gain knowledge. Some also mentioned increased motivation due to positive teacher feedback, which boosted their confidence and engagement in class. For the second question, *"Do you feel more confident in your reading skills when facing difficult texts?"*, 8 out of 10 students reported increased confidence, attributing it to the top-down techniques they had learned, such as predicting, making inferences, and identifying text structure using background knowledge. Two students partially agreed, citing limited vocabulary as a continuing challenge. In response to *"Did the top-down approach help you deal with difficult tasks like Main Idea, Author's Tone, Inference, and Reference?"*, all students agreed that the approach helped them tackle these tasks more effectively by combining background knowledge with vocabulary and grammar skills. Regarding the fourth question, *"What do you think about the types of top-down activities conducted in class?"*, students expressed highly positive views. They found activities like analyzing visuals and predicting content based on titles and headings to be both engaging and effective for improving comprehension. Students reported feeling more motivated and active during lessons. For the final question, *"Do you now feel a desire to read more about topics that interest you outside the classroom?"*, all students responded positively. They noted a shift toward intrinsic motivation to read for personal interest, driven by increased confidence and the helpfulness of top-down strategies.

4.1.6. Post-Motivational Questionnaire

Following the implementation of the top-down approach, a post-motivational questionnaire was administered to the experimental group to assess changes in reading motivation and attitudes toward learning English. The analysis revealed statistically significant improvements among students in the experimental group.

The post-motivational questionnaire revealed significant improvements in students' attitudes and motivation after applying the top-down approach. Interest in learning English increased from 1.98 to 3.38, and interest in reading skills rose from 2.38 to 3.65. Confidence in reading improved from 2.36 to 3.78, while curiosity about teacher-led topics increased from 2.33 to 3.90. Students also showed a stronger desire to read about new things (2.95 to 4.08) and explore subjects of personal interest (3.03 to 4.20). Motivation to receive teacher feedback rose from 3.15 to 4.55, and willingness to discuss readings with peers improved from 3.25 to 4.18. Additionally, students became more inclined to visit the library with others (3.33 to 4.17). Finally, their recognition of the importance of English classes increased significantly, with a mean score rising from 3.65 to 4.63. These results confirm that the top-down approach positively influenced students' motivation and engagement in learning English.

Taking into consideration the findings and explanations presented above concerning the means of the 10 items of the pre-motivation questionnaires and the post-motivational questionnaires in the experimental group, it was possible to assert that there were statistically significant differences among the students of the experimental group in terms of their attitudes toward learning the English language and their motivation towards reading after they had been instructed using a top-down approach in the process of teaching and learning reading skills.

4.2. Discussion

The study was conducted at a high school in Vietnam, with 11th-grade students participating as subjects. This section presents detailed explanations and in-depth discussions addressing the research questions.

Research question 1: *How does the implementation of the top-down approach enhance high school students' reading skills?*

In order to answer research question 1 thoroughly, the researcher attempted to consider the following aspects to highlight the improvement: the homogeneity of reading performance of students from the control group and experimental group in the pre-test, the comparative results of the control group's and experimental group's reading performance in the post-test, and the comparative results of reading performance within each group.

To analyze the pretest results from the experimental phase, the researcher used descriptive statistics and an independent sample t-test. The control group had a mean score of 4.37, while the experimental group scored 4.47. The small mean difference (MD = 0.1) indicated that both groups had comparable reading comprehension levels before the top-down approach was implemented. For the post-test results, the same statistical methods were used. The control group had a mean score of 4.07, while the experimental group scored 5.72, resulting in a mean difference of 1.65 indicating a clear improvement in the experimental group's reading skills after applying the top-down approach.

Table 5.
Descriptive statistics of the control group and the experimental group before and after the implementation of top-down approach.

Group	Test	N	Min.	Max.	M	Std.
Control	Pretest	40	2	7	4.37	1.27
	Posttest	40	1	7	4.07	1.20
Experimental	Pretest	40	2	8	4.47	1.41
	Posttest	40	3	9	5.72	1.46

The Table 5 above clearly demonstrates that the use of a top-down approach in reading classes resulted in a noticeable enhancement in the reading performance of students in the experimental group. In the control group, where students were taught using the traditional bottom-up approach, there was no significant improvement in the reading performance of students. The mean score remained relatively the same. Specifically, the control group had a mean score of 4.37 in the pre-test, which significantly reduced to 4.07 in the post-test. The pre-test and post-test had a mean score difference of 0.30, as measured by the mean difference (MD). The experimental group students obtained a mean score of 4.47 (M=4.47) in the pre-test, and a mean score of 5.72 (M=5.72) in the post-test. These data demonstrated that the mean score increased from the pre-test to the post-test. The outcome also indicated a mean difference (MD) of 1.25 in their scores. Accordingly, while examining the mean difference values between the control group and the experimental group, the researcher discovered that the experimental group students had a higher mean score than the control group students following the experimental phase (1.25 > 0.30). This indicated that the mean score of the students in the experimental group showed a substantial improvement. It can be inferred that including a top-down approach in the teaching and learning process significantly benefits students' reading performance of reading skills proved to be much more effective than learning reading skills without employing top-down approach.

Research question 2: *How does the implementation of the top-down approach affect high school students' motivation to read?*

To respond to this question, the researcher compared the pre- and post-motivational questionnaires in the experimental group using means. Some of the most important items and responses to these items are listed here, with the others found in the appendices. The next step involved the researcher discussing the results of the interviews.

The 1st item, "I am interested in learning English," showed a mean increase from 1.98 to 3.38, indicating that students became more engaged in English after receiving top-down instruction. This rise suggests that the instructional changes made students more enthusiastic and eager for English classes. The 2nd item, "I am interested in learning reading skills," increased from 2.38 to 3.65, reflecting enhanced motivation likely due to the effective use of the top-down approach. For the 3rd item, "I know that I will do well in reading exercises," the score rose from 2.36 to 3.78, showing improved confidence and belief in their reading abilities. The 4th item, "If the teacher talks about an interesting topic, I might read more about it," went from 2.33 to 3.90, indicating increased academic curiosity. Students began to see reading as a gateway to explore new ideas. The 5th item, "I like to read about new things," increased from 2.95 to 4.08, indicating students' growing desire to expand knowledge beyond textbooks. The 6th item, "I read to gain fresh knowledge on subjects appealing to me," rose from 3.03 to 4.20, suggesting a stronger motivation to explore topics of personal interest. The 7th item, "I like to get compliments from the teacher for my reading performance," showed a significant increase from 3.15 to 4.55 ("Strongly agree"), demonstrating that teacher recognition greatly boosts motivation. The 8th item, "I like to discuss with my friends about what I am reading," rose from 3.25 to 4.18, indicating increased peer interaction and collaborative learning. The 9th item, "I like to visit the library with my family or friends," increased from 3.33 to 4.17, reflecting a higher drive to seek knowledge-rich environments. Finally, "My English classes are very important to me" rose from 3.65 to 4.63 ("Strongly agree"), showing a deeper appreciation for the value of English.

4.2.1. Interviews

The results from the interviews with the students indicated that they had positive attitudes towards the implementation of the top-down approach. The students also demonstrated an increased level of motivation in reading, both intrinsic motivation and extrinsic motivation. According to the interviews conducted with 10 students from the experimental group, with top-down activities, the students could actively engage in the reading process. Students could activate and build their schemata (background knowledge) through various types of activities, which provided them with a set of techniques on how to draw the main idea and key points from any particular reading text. They were also equipped with the ability to determine the organizational structures of ideas in a reading text. In addition, learning reading skills with the top-down

approach can sharpen their inferring and referring skills. Moreover, the top-down approach also helped students build a vocabulary bank regarding any topic inside or outside the textbook. Furthermore, the top-down approach could motivate students to become passionate readers. Students developed a habit of reading for pleasure, not just for completing tasks in English classes, but also for the sake of gaining new and interesting knowledge of the world or any particular topic appealing to them, which was intrinsic motivation.

Based on the above findings, analyses, and explanations of the pre- and post-motivational questionnaires and the interviews conducted on the experimental group, it can be concluded that the implementation of the top-down approach had a positive influence on students' motivation in reading.

5. Conclusion
5.1. Findings
The study found that the use of the top-down approach significantly improved students' reading comprehension at a high school in Vietnam. Students in the experimental group outperformed those in the control group on the post-test, indicating the effectiveness of this method. The approach also enhanced students' ability to identify main ideas, understand text organization, and apply inferencing and referencing strategies. Moreover, both quantitative and qualitative data showed increased motivation to read. Students became more engaged, with many expressing intrinsic interest in reading, while others were motivated by external encouragement such as teacher feedback. Overall, the top-down approach not only boosted reading performance but also fostered students' confidence and interest in reading.

5.2. Implications
The research findings offer practical implications for high school English teachers and students. Students can enhance their reading proficiency by effectively applying the top-down approach, which plays a key role in reading development. By activating background knowledge and building vocabulary from both in-class and real-world contexts, learners can better understand new concepts and ideas. Therefore, both teachers and students are encouraged to adopt this approach in English reading instruction.

5.3. Limitations & Recommendations for Future Research
The research produced satisfactory results; however, certain limitations were unavoidable. First, due to external constraints, only 80 grade-11 students at a high school participated over a short 12-week period. Future studies should involve a larger sample and longer duration. Second, time restrictions prevented prolonged use of top-down activities, limiting students' opportunities for deeper practice and full benefit. Finally, the study could not include grade-12 students due to permission issues. Future research should explore the approach's effect on 12th graders' performance, particularly in national exams. Further studies should address the aforementioned limitations identified in this study. First, it is important to conduct such studies over an extended duration and with a greater number of participants across different levels, such as grade 12, to acquire a more comprehensive understanding of the impact of the top-down method on different types of participants. However, future research could explore different contexts, such as the university level. Researchers could also examine the effectiveness of the top-down approach on other language skills, including writing, speaking, listening, and vocabulary acquisition.

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