The top-down strategies in an EFL class of the vocational high school: an experimental study on enhancing students’ listening comprehension skills

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Abstract

Despite numerous studies emphasizing the benefits of using background knowledge and vocabulary in EFL listening courses, there is a lack of rationale for implementing top-down strategies that holistically integrate prior knowledge, vocabulary enhancement, and self-assessment. In order to address the issues, this study aimed to investigate the effectiveness of the teacher’s top-down strategies in improving students’ listening skills. Therefore, we utilized pre-experimental research, particularly a one-group pretest-posttest design, to ascertain the strategies’ effectiveness. Twenty-one participants in this study were selected randomly. We used paired sample T-test with SPSS software to figure out if there was a statistically significant difference between the pretest and posttest scores after repeated intervention encounters. The statistical analysis showed that the average post-test score (M= 77.8571) was considerably higher than the average pretest score (M= 63.5714). The findings indicated that the students’ listening proficiency improved after being addressed with top-down strategies. This finding suggests that the teacher’s top-down approach helps students raise their listening comprehension skills. The study’s results call for using top-down strategies in enhancing students’ listening skills.
strategies to stimulate students' listening comprehension, to learn more effectively, and increase their listening consciousness.

**Keywords:** background knowledge; listening comprehension; pre-activity; self-assessment; top-down strategies

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**Introduction**

Vocational high school (VHS henceforth) prepares and assists students in work once they graduate (Direktorat Pembinaan SMK [Directorate of VHS Development], 2017). Obtaining a quality job in the Industrial Revolution 4.0 era is only possible if they have foreign language competence (English henceforth) in addition to their specific skill. Without a doubt, English fluency considerably assists VHS graduates in obtaining jobs in their field of specialization. It is more accessible for those who can speak English to acquire employment than those who cannot (Natsir et al., 2022; Safira & Azzahra, 2022; Ting et al., 2017). Their verbal communication skills demonstrate their English proficiency. Therefore, the competence to effectively transmit and receive messages is critical for effective communication. In other words, communication will go smoothly if the interlocutor can perceive the speaker's messages.

Speaking verbally involves excellent language knowledge and listening ability (Brink & Costigan, 2015; Gilakjani & Ahmadi, 2011; Mart, 2020). According to Richards (2008), listening’s major function in second language learning is to promote speech comprehension. Generally, language learning heavily depends on the input received through reading or hearing activities. Additionally, according to a survey performed by Safira and Azzahra (2022), around 38% of VHS teachers claimed that listening skills were highly important, whereas speaking abilities ranked first (52%). It suggests that improving VHS students'
listening abilities is necessary to boost their oral communication skills for future needs.

Many ELT practitioners have long acknowledged the benefit of listening in ESL/EFL learning, such as (Bailey, 2020; Gilakjani & Sabouri, 2016b; Kazemi & Kiamarsi, 2017; Nushi & Orouji, 2020). The development of listening skills should be given top priority in instruction because it is the primary method of L2 acquisition (Karimi et al., 2019; Rost, 2014). Yet, according to Vandergrift and Goh (2012), the ability to listen is crucial for students of foreign languages because it helps them take in and respond to language information while supporting other language skills development. This understanding of listening is predicated on the idea that understanding spoken language is the primary goal in second language learning (Richards, 2008). Learners can make their learning achievement significant by correctly understanding input (Canh & Renandya, 2016). Therefore, as meaning is constructed by the listener and included in the passage, listening is a proactive process involving hearing, comprehending, integrating, and responding.

However, most EFL students find listening comprehension challenging since it entails a complicated process that requires both linguistic knowledge (such as vocabulary or grammar) and non-linguistic information (such as a broad understanding of the world) (Siegel, 2013; Vandergrift & Baker, 2015; Wang & Treffers-Daller, 2017). The speaker sometimes needs to provide clear content information, leaving the listener to guess what the speaker intends. Tran and Duong (2020), in their study with Vietnamese high school students, found discoursal problems in terms of implicit meanings, unknown topics, and ideas organization are issues in a listening course. Similarly, the current research teams identified students’ listening comprehension deficiency when the first author conducted a teaching practicum and the other authors supervised the students at the target school. The mock test of English subjects for the school examination (SE) is difficult for students to perform. The students encountered difficulties due to unfamiliar accents and topics. The difficulty of listening skills was also discovered in a survey done by Safira and Azzahra (2022), in which about 40% of the English teachers responded that listening skill is challenging, compared to 45% of their difficulty in speaking skills. Moreover, the Director of the Indonesian Ministry of Education and Culture's Research and Development Agency announced that the average national exam of the 2018/2019 learning period for VHS English courses was 35.26, which was lower than the average test score for high schools with 53.49 (Yunelia, 2019). The data indicate that the listening skills score is similarly inadequate, as the skills are examined in the national exam. Therefore, this study is essential to raise.
Regarding the issues in listening mentioned earlier, Richards (2008) further states that teaching listening must emphasize comprehension and acquisition. Bailey (2020) claims that, as a result, listening has been the cornerstone of many essential teaching methodologies and is also crucial to L2 acquisition. As part of an active learning process, listening demands learners to concentrate carefully on understanding the substance of the spoken discourse that has been presented. Richards (2005) asserts that listening is an active process of meaning creation in which knowledge is adapted to the incoming sound. The learners try to relate what they already know or have experienced to what is being said. Employing students' prior knowledge in listening classes is a crucial component of listening instruction since it helps students understand what is being said (Brown & Lee, 2015). Previous knowledge is one concept covered in the cognitive language processing model.

In light of the significance of students’ existing knowledge in increasing their listening comprehension, ELT teachers should reconsider using top-down processing as their effective teaching technique (Brown & Lee, 2015). Top-down processing refers to using background knowledge, content knowledge, and rhetorical schemata to understand the meaning of a message. Richards (2008) and Bailey (2020) define top-down processing as the prior information application that deciphers a message’s meaning. It moves from meaning to language (Richards, 2008). Background knowledge for top-down strategies may involve previous knowledge of the discourse’s subject and situational or contextual knowledge.

Multiple scholarly investigations have examined the effect of students' background knowledge on top-down listening processing characteristics. For example, Linh (2021), who involved 44 EFL university students in Vietnam, found that pre-listening activities that provide preexisting knowledge can assist students in performing better on their listening test than students who did not prepare before conducting listening exercises. Another study by Madani and Kheirzadeh (2018) on 80 students in Iran uncovered several findings regarding the students’ listening skills after having interventions of pre-listening activities in terms of pre-teaching vocabulary, content discussion, pre-reading questions, and topic discussion. They revealed that word preparation and content discussion affected the most pragmatic strategies in developing the advanced learners’ comprehension of a listening task. Still, pre-reading with words and questions was the most beneficial method for primary learners. Overall, prior knowledge and vocabulary are considered to facilitate students’ listening comprehension.
Various research has also been carried out on the effects of implementing top-down strategies. Hammad (2014) did a study on top-down listening processing, but his analysis focused on lecturers’ perspectives on the usefulness of top-down processing in enhancing high school students' listening skills. Similarly, Xu and Qiu (2023) did a qualitative study with Chinese tertiary education about the encouraging traits of EFL listeners. They discovered that learners with study abroad experience used more top-down methods than those without experience. Furuya (2019), on the other hand, a study involving 18 lower intermediate learners, 19 upper intermediate learners, and 23 advanced learners, discovered bottom-up approach contributed positively to lower intermediate learners. They also found that the top-down approach affected the upper intermediate students’ listening skills, but no significant changes were observed between bottom-up and top-down for advanced learners. As mentioned earlier, multiple investigations allow for additional investigation into other areas of implementing top-down strategies, as top-down listening processing is believed to aid in enhancing learners' listening comprehension.

In this current study, we enhanced students’ background knowledge through pre-listening activities, such as facilitating a discussion about the subject of the listening tasks and predicting the coming conversation from the audio. Several researchers have investigated the gains from pre-activities in listening comprehension practices. In 2019, Karimi et al. (2019) investigated 90 students and discovered that pre-listening activities significantly supported the Iranian EFL students’ listening comprehension proficiency. Next, Barjesteh and Ghaseminia (2019), who conducted a study with 33 students, uncovered that pre-listening tasks assist them in improving their listening skills teaching-learning process. In short, the results of two studies indicate that the pre-activity phase has a pivotal role in strengthening students’ listening skills, which EFL teachers should consider.

Despite numerous studies on incorporating top-down tactics in listening comprehension lessons, additional studies regarding top-down strategies in increasing students' listening skills, particularly VHS students in Indonesia, are needed. Furthermore, the issue with this research is that, especially at VHS, students' listening comprehension needs to be improved as what is called for by the curriculum. In order to address the aforementioned issues, we designed learning activities by employing top-down strategies. This study intends to facilitate students' listening enhancement by integrating students' background knowledge and topic-based vocabulary adopted from the characteristics of the top-down approach by Richards (2008). Consequently, the current study’s goal was to employ top-down strategies to help VHS students in learning listening
skills. The present study formulates the research question, “To what extent does the teacher’s top-down strategies enhance VHS students’ listening skills?”

**Literature review**

**Vocational education and English proficiency**

The primary goal of vocational schools is to sufficiently educate learners for faster employment after graduation. Vocational schools must generate graduates ready to create jobs (Saptono et al., 2020). Vocational education, also known as career and technical education (CTE), equips learners to obtain employability by working in industries and having certifications, training to adapt to actual jobs, work-based instruction, apprenticeships, and so on (Venkatraman et al., 2018). In addition, developing the skills required for employment is crucial for VHS learners (Suharno et al., 2020). In short, VHS is frequently referred to as a technical school because the learners receive hands-on training in a particular set of procedures or technologies.

Programs for vocational education are built up differently in different nations; some are put up at the secondary level, while others are set up at the higher level. Several other names, including *Technical Education and Training, Technological and Vocational Education*, and many others, also know vocational education. In Indonesia, vocational and technical education is provided at the senior secondary level (10th grade) under the supervision of the Directorate of Secondary Vocational Schools Management. It follows Section 15 of Indonesian Law Number 20 of 2003 regarding the National Educational System, which states that vocational schooling is a component of high school, and it helps learners get ready for jobs that match their majors. Besides, this type of education for work is offered at the postsecondary level, such as at polytechnics and higher education institutions in diploma programs. Additionally, the Ministry of Manpower and Transmigration’s Training Centers offer various vocational and technical training programs. Therefore, for students to become familiar with actual job responsibilities, an apprenticeship system is necessary for vocational education.

In connection with the demands of fulfilling job vacancies, VHS students must be able to adjust to the needs of 21st-century skills, namely communication skills, especially communicating in a foreign language. Thus, in enhancing VHS graduates’ power competitiveness, the capacity to communicate globally, with English as one of the primary goals for development, should be prioritized (Direktorat Pembinaan SMK [Directorate of VHS Development], 2017).
Everyone knows that teaching English as a second or foreign language (ESL/EFL) at any educational level is to develop students' communicative abilities or their capacity for productive interpersonal communication. Speaking abilities also involve the capacity for concentration and active listening to maintain a conversation. According to Yavuz and Celik (2017), improving students' listening abilities has been a major focus for researchers and educators seeking to increase communicative competence. Listening ability plays a key role in studying new languages because receiving information is the cornerstone of language learning (Gilakjani & Sabouri, 2016a). Hence, it is crucial for teachers to support their students in developing their listening abilities.

**Teaching listening skills**

Understanding the nature of listening is essential to creating effective teaching strategies for listening skills (Nunan, 2002). In communication, while good listening ensures that a listener understands what the speaker is saying, insufficient listening skills can diminish the effectiveness of the interaction and obstruct the speaker's ability to think (Lavee & Itzchakov, 2023; Pasupathi & Hoyt, 2010). Listening is necessary for almost all activities we engage in throughout our lives. In an educational setting, this skill is essential for attending a lecture and understanding learning materials provided in audio-recording. More importantly, Namaziandost et al. (2019)) claim that English listening learning is an active skill that necessitates individuals to engage in various intricate tasks, including differentiation of sounds and comprehension of stress patterns and intonation. We believe that EFL students used distinct tactics when listening to a discourse in their own and foreign languages. COVID-19 teaches students the importance of listening as they participate in all full-time online sessions provided by synchronous through Zoom and asynchronous learning systems through recordings or videos.

Given that VHS students are preparing to work in industries that employ foreign labor, listening in a foreign language can help them communicate with their coworkers. As a result, strategic techniques for learning listening skills are required. In line with the theory of listening as a communication ability, excellent job performance, and effective listening are inextricably linked (Cooper & Husband, 1993). As stated by Nunan (2002), listening is becoming increasingly important in foreign language courses as students of EFL focus not only on constructing expressions throughout the discussion but also on understanding the messages from their interlocutors. Rost (2014) says that listening is also essential for developing other language abilities, including speaking. In short,
VHS students must possess the skill of listening, which is the capacity to absorb and understand information during communication.

*The top-down strategies in an EFL class*

Two listening instruction approaches are commonly used: bottom-up and top-down. The former relates to the ability to identify language sounds. As stated by (Brown & Lee, 2015; Richards, 2005) bottom-up processing moves from sounds to words to grammatical links to lexical meanings, and further along until it reaches the final information. In this case, bottom-up listening happens when we understand language sound by sound or word by word with less use of prior information. The latter refers to prior information to interpret what we are hearing. Top-down strategies enable listeners to employ preexisting schemata to construct an accurate interpretation of the message and attribute a literal and intended meaning to the conversation (Brown & Lee, 2015; Richards, 2005). The listeners have some prior understanding of the subject, and the information they get corresponds to a previously constructed schema.

This study focuses on employing a top-down listening strategy proposed by Richards (2008). The top-down process is understood as a strategy for teaching listening. It facilitates students to mind up. The strategy provides students with background knowledge to infer the gist of discourse. It entails drawing on our prior experiences and knowledge; we have prior knowledge of particular subjects and circumstances and draw on that knowledge to understand (Nunan, 2002). It enables the learners to anticipate the words, phrases, or sentences connected to the discourse’s topic (Bailey, 2020; Richards, 2005). In other words, listeners can anticipate what they will hear next if the circumstance is familiar. They can even guess what the dialogue will be about. Understanding the context and location of the spoken discourse can also aid in accurate interpretation.

Richards (2008) top-down processing exercises help learners improve their capacity to create the discourse’s schema using important words, infer the context of a text, infer the actors’ roles and objectives, infer causes or effects, infer the situation’s undeclared specifics, and anticipate queries about the subject or circumstance. Top-down strategies, such as offering prior knowledge of relevant content and keywords, we believe, assist students in understanding the context of what they’ll be hearing. In addition, activating schema provides listeners an advantage in comprehending what they hear.

Some EFL practitioners have raised the contribution of listening strategies, including top-down strategies, in various research designs and objectives. For example, Ismail and Aziz (2020) conducted a systematic literature review study with a selection of papers regarding teaching listening strategies between 2004
and 2016. They discovered that students treated using top-down and bottom-up strategies regarded top-down strategies seemed more immediate, while bottom-up approaches were easier to utilize. It is because prior knowledge of the topic aids the students in comprehending information from listening exercises. Other research on the validation of EFL listening techniques on 315 participants by Nix (2016) found that bottom-up methods do not directly impact listening comprehension and need to be facilitated by top-down strategies. Another study by Raghibdust and Hamedi (2022) with eight foreign Persian learners discovered that previewing questions, offering prior understanding, and vocabulary learning in the pre-activity of listening courses positively affect students' listening performance. In this scenario, their prior knowledge and language helped them to interpret and comprehend the content.

Moreover, Hammad (2018) did a more practical study with 64 female university students and discovered that the top-down listening approach significantly helps students' EFL listening comprehension; however, the respondents were limited to a single sex. In research on schema theory-based listening with sophomore English majors, Bao (2016) revealed that listening training focusing on background knowledge can successfully improve students' hearing comprehension ability. Huang et al. (2015) on VHS published a more intriguing empirical investigation on the role of background information. They discovered that less competent English learners profited more from background information during L2 listening comprehension than more skilled English learners. While Hammad (2018) and Bao (2016) investigated the effect of top-down strategies at the tertiary level, Huang et al. (2015) focused on VHS, which is similar to the present study.

These past studies enable future studies to examine the benefits of top-down strategies in enhancing VHS students' EFL listening comprehension skills, broadening the relevant studies regarding participants, research field, or research design. As a result, the current study began by offering background knowledge and terminology of linked themes, previewing questions to grab students' interest, and incorporating a self-assessment process. Students were advised to self-evaluate their assignments guided by answer key sheets and re-listening to the recording. This initiation aligns with Nix (2016) that self-assessment can be integrated into the EFL listening strategy inventory to stimulate discussion on repeated listening. Brown et al. (2015) state that self-assessment (SA) is an alternative assessment process that allows students to judge and self-reflect on what they have learned and achieved. It can also promote self-awareness in learning (Yan et al., 2019). In a nutshell, SA empowers students to participate in their learning actively.
Method

Research design

This research adopted a quantitative approach to examining the top-down strategies on VHS listening comprehension skills, specifically pre-experimental research with a one-group pretest-posttest design because employing two groups was impossible. Researchers may employ a pre-experimental design when actual experiments and quasi-experiments are not feasible (Campbell & Stanley, 1963). A group of VHS in Indonesia was randomly selected in this research. The impact of top-down listening strategies could still be investigated, albeit using the pre-experimental research method, because it allows for investigating a single group and delivering an intervention during the experiment using a randomized sample (Creswell, 2014). Furthermore, the quantitative study is acknowledged to be applicable since it uses statistical tools to comprehend and describe events (Creswell, 2014; Johnson & Christensen, 2014). To explore the influence of top-down strategies, students were invited to participate in the pretest and post-test on listening comprehension after the treatment using top-down strategies.

We employed a pre-experimental study, particularly a one-group pretest-posttest design in which $X_T$ is the treatment and $O_1$ and $O_2$ represent the pretest and post-test assessments (Johnson & Christensen, 2014) visualized in Figure 1.

Figure 1
One-group pretest-posttest design

<table>
<thead>
<tr>
<th>Pretest measure</th>
<th>Treatment</th>
<th>Post-test measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>$O_1$</td>
<td>$X_T$</td>
<td>$O_2$</td>
</tr>
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</table>

As shown in Figure 1, the design has two variables, namely a dependent variable (students’ listening comprehension skills) and an independent variable (top-down strategies), in which we manipulated the independent variable to cause a change in the dependent variable. Before injecting the treatment conditions, the dependent variable ($O_1$) was tested on a set of research participants. After administering the independent variable, $X_T$, the dependent variable ($O_2$) is examined. Our first activity was administering the pretest (see Figure 1). We explained the test instructions to the students before taking it. We then intervened with the target group for ten meetings using the top-down listening strategies (see Table 2 for teaching-learning procedures). The treatment ended with the post-test that lasted 35 minutes, the same as the pretest. The
disparity between the pretest and post-test results is used to gauge how well the treatment plan worked. The current study includes a pair of variables. Therefore, to test the hypothesis of the study, the researchers employed the pretest ($O_1$) and post-test ($O_2$) between the series of treatments ($X_t$) and compared the result of both tests. In short, examining the pretest and post-test results yields information on the effects of the experimental treatment.

However, many scholars, such as Johnson and Christensen (2014) and Creswell (2014), claim that the one-group pretest-posttest design needs to be stronger because it needs more comparison. Thus, Gall et al. (2003) recommend employing a normality test to examine the pretest and post-test deviation before the hypothesis test through paired sample T-test.

**Participants**

The research, which was carried out in one of the VHS in Central Sulawesi, Indonesia, has seven expertise programs, namely Computer Network Engineering, Multimedia, Light Vehicle Engineering, Motorcycle Engineering, Sharia Banking, Pharmacy, Model Design, and Building Information. We chose the class randomly and got a Sharia Banking program as the research sample. The class involved 21 students, consisting of three males and 18 females. They were about 15 to 17 years old, and their native language was Indonesian. Table 1 displays the demographic characteristics of the participants.

**Table 1**

<table>
<thead>
<tr>
<th>Numbers of participants</th>
<th>Gender</th>
<th>Age (in years):</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 students</td>
<td>Male</td>
<td>15 (3 females)</td>
</tr>
<tr>
<td>18 students</td>
<td>Female</td>
<td>16 (5 males &amp; 4 females)</td>
</tr>
<tr>
<td>9 students</td>
<td></td>
<td>17 (2 males &amp; 7 females)</td>
</tr>
</tbody>
</table>

**Data collection**

The test comprised 20 items and was delivered twice, prior to the intervention and afterward. It was the only tool to gauge the students' listening abilities. We created the test using the curriculum for an English course for the tenth grade at a vocational high school. The pretest and post-test tests were similar in form, themes, and item amount but used different wording. Both the pretest and the post-test were completed in 35 minutes. The test contained two parts; choosing
images and true/false, with ten numbers for each. While section A instructed the students to pick the best picture out of three based on the recording, section B required them to determine if the assertions presented were true or untrue based on the audio. Overall, students were instructed to identify general information from audio recordings in both tests. We self-created the test using the recording from http://www.123listening.com (Listening123, n.d.), and the images used in section A from Google. However, because the audio scripts did not accompany the audio recordings, the first author wrote the script that was utilized to make the statements in section B. The materials tested in both tests differed from those taught during the treatment but in similar topics and contents. To ensure that the tests were valid instruments, they were validated for their content by a lecturer with experience teaching listening and English teachers of VHS who had at least five years of teaching. In comparison, we trailed the test twice to meet the reliability issue.

Treatment procedures

Between the tests, the students were treated following the procedures of top-down listening strategies recommended by Richards (2008), as described in Table 2. They received five weeks of intensive top-down techniques focused on building prior knowledge, collecting keywords, and inferring information to identify the general information from audio recordings. The top-down strategies were adopted throughout the teaching activities (see Table 2).

As explained in the introduction of this study that the treatment procedures adopted from (Richards, 2008), before students did listening activities, we provided reading text containing the background information of the target listening topic. Table 2 clearly shows that the model teacher engaged students’ understanding in the pre-activities by writing a topic on the board and asking some leading questions. Then in while activities, students read the related text to give the prior background and generate key words from the text. Then the gap-filling dialogue sheet was distributed, and he instructed them to read it. Then, they filled in the missing expression with their words after listening to the recording. After that, they did the exercises. The exercises consisted of a gap-filling dialogue, five items of choosing the right pictures, and five items of true/false. While-activities ended with asking the students to self-assess their responses utilizing the answer key and re-listen to the audio. Lastly, he led students to evaluate their learning.

In this research, we used audio materials to teach listening that facilitated students to listen. The material used was dialogue and monologue, such as short conversations and short stories. Teachers can design listening lessons using
monologue or dialogue as a form of spoken language (Brown & Lee, 2015; Richards, 2005). Short conversations involve an interaction between speaker and

Table 2
The procedures of the learning process

<table>
<thead>
<tr>
<th>Phases</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Teacher</td>
</tr>
<tr>
<td>Pre-activities:</td>
<td>Students</td>
</tr>
<tr>
<td>Building students’ prior knowledge</td>
<td>Stimulating students’ learning by writing the topic of the listening material, showing pictures, and leading some questions about the topic.</td>
</tr>
<tr>
<td>While-activities:</td>
<td>Students</td>
</tr>
<tr>
<td>Collecting keywords</td>
<td>Instructing students to read a related text and making a summary.</td>
</tr>
<tr>
<td></td>
<td>Guiding students to generate a set of questions they expected to hear.</td>
</tr>
<tr>
<td></td>
<td>Instructing students to generate keywords or new words from the text.</td>
</tr>
<tr>
<td>Inferring the information</td>
<td>Distributing a gap-filling dialogue sheet.</td>
</tr>
<tr>
<td></td>
<td>Playing a recording and instructing students to identify whether what they heard was aligned with the prior information.</td>
</tr>
<tr>
<td></td>
<td>Playing the second part of the recording and instructing students to do the gap-filling dialogue sheet and exercises.</td>
</tr>
<tr>
<td>Self-assessing</td>
<td>Instructing students for self-assessment assisted by the answer-key sheets and re-playing the recording.</td>
</tr>
<tr>
<td>Post-activity:</td>
<td>Students in reviewing their learning</td>
</tr>
<tr>
<td>Evaluating their learning</td>
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</tbody>
</table>
listener in which they share social ideas requiring specific goals. On the other hand, short conversations included structural and functional conversations. The former related to a conversation, which emphasized the structure of the sentence. The sentence in the conversation should be grammatical. This conversation used verbs, singular and plural objects, and subjects. The latter was a functional conversation that employed language function as a means of communication. The participants focused more on language function for their interaction. In addition, situational conversation intends to identify a particular function in communicating based on the situation, such as formal and non-formal conversation.

The materials utilized in the process of teaching and learning during the intervention were taken from the textbook officially used at the school (Get Along with English for Vocational School Grade X) and from the internet (http://www.123listening.com). The topics covered greeting, expressing regret and apologies, ordering things, jobs/professions, and invitations. The first writer also needed to write the audio script as the recordings, which were taken from the internet, were not provided with the script.

Data analysis

The IBM SPSS Statistics 23 application was used to process the quantitative data in this study. We coded participants with an "S" for ethical issues. For example, S1 stands for Student One, and so on. In analyzing the data, we first analyzed the students’ answers and tabulated their scores. As mentioned previously in the data collection section, we developed the tests to match the school syllabus and validated them by the experts. We employed a parametric statistical analysis, specifically paired sample from T-test, to examine the substantial change in the students’ listening comprehension before and after being treated by applying top-down listening strategies (Sheskin, 2004). However, because the data were only acquired from a limited sample size, they should be evaluated for their normality before determining if they may be examined using parametric or non-parametric statistical analysis. Using typical probability charting, it is possible to confirm whether data come from a normal distribution even with small sample sizes (Khoiriyah, 2021; Wachs, 2023). Data can be studied using parametric statistical analysis if they meet the criteria for normality testing. The study’s normality was determined using Kolmogorov-Smirnov with a sig. 0.05. We, thus, analyzed the normality of the data using Kolmogorov-Smirnov.
Findings

The present study intends to determine how adopting a top-down technique raises students' listening skills. Briefly, this study seeks to demonstrate whether a teacher's top-down strategies can boost students' listening comprehension (H1) or whether a teacher's top-down strategies cannot increase students' listening comprehension (H0). This part provides the students' performance before and after the intervention and the hypothesis testing.

The discrepancy between the student’s pretest and post-test scores

Both pretest and post-test scores are essential in educational activities such as educational research. Students’ pretest results have significance since they inform students’ prior performance. The results can help educators identify learning gaps. Figure 2 depicts the students’ listening abilities in the pretest.

Figure 2

Students’ pretest score

In general, Figure 2 shows that the average student’s listening score in the pretest is between 40 and 65 (18 students). It indicates that students’ listening performance needs to improve. While the lowest score on the pretest is 40, the highest score is 80.

We then assessed the students’ post-test scores to determine the student’s learning progress following the intervention. The post-test results of the students are shown in Figure 3. Figure 3 demonstrates that the students’ post-test results improved, with the majority of students scoring above 60. This finding suggests that the teachers’ top-down method obtains a considerable outcome on students’ listening abilities. The graph shows that three students received the highest score of 95. Even the lowest pretest score increased by 0.5.
Overall, Figures 2 and 3 clearly demonstrate the discrepancy between the student’s pretest and post-test scores. This analysis, however, cannot be utilized to proclaim the study’s hypothesis. Therefore, before performing a parametric statistical analysis, the data must first be checked for normality utilizing the Kolmogorov-Smirnov test for a single sample with a significance level of 0.05. Table 3 presents the findings of the normality test.

### Table 3
**Test of normality**

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Pretest</td>
<td>.156</td>
<td>21</td>
</tr>
<tr>
<td>Posttest</td>
<td>.180</td>
<td>21</td>
</tr>
</tbody>
</table>

*The implementation of top-down strategies in enhancing students’ listening skills*

Since the current investigation seeks to assess the influence of utilizing top-down strategies on students’ listening skills development, we have to employ a paired sample test to decide whether to agree with the alternative or null hypothesis. However, before utilizing it, we must check normality using the Kolmogorov-Smirnov test for a single sample with a significance level of 0.05. We used SPSS to present accurate data analysis in analyzing the normality and paired-sample tests.

Based on the Kolmogorov-Smirnov test, Table 3 demonstrates that the results from both tests have significant values (or p values) that are higher than 0.05; precisely, 0.200 > 0.05 and 0.75 > 0.05. It denotes insufficient data to disprove the
normality assumption (hypothesis) if a p-value is higher than 0.05 or a p-value is higher than 0.10. (Wachs, 2023).

The Shapiro-Wilk test is another test used to regulate normality. When the data set contains fewer than 30 participants, the Shapiro-Wilk test was advised for normality testing (Aktaş & Can, 2019). This test was run in this investigation since there were 21 data sets. The criteria according to Aktaş and Can (2019), if the p-value is larger than 0.05, it means that there is a normal distribution of data. The Shapiro-Wilk test further reveals in Table 3 that both tests had significant values of more than 0.05, namely 0.265 and 0.68, for each test. The results of the two analyses illustrate that the pretest and post-test data are distributed normally. It indicates that the research's hypothesis can be examined by customing the paired-sample T-test.

The student's scores were then examined to figure out whether there was a difference of statistical significance between the pretest and also post-test of students' listening comprehension after exposure to top-down listening processing. Table 4 displays the descriptive statistics performed on the pretest and post-test results.

Table 4
Descriptive statistics for comparing the pretest and post-test scores

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>63.5714</td>
<td>21</td>
<td>10.14185</td>
<td>2.21313</td>
</tr>
<tr>
<td>Posttest</td>
<td>77.8571</td>
<td>21</td>
<td>14.01530</td>
<td>3.05839</td>
</tr>
</tbody>
</table>

Table 4 summarizes the SPSS output table for descriptive statistics of the two samples tested, namely the value of the pretest and post-test. The average score of the pretest is 63.5714, while the average score of the post-test is 77.8571, with 21 respondents. Because the pretest's average value of learning outcomes is 63.5714, which is lower than the post-test's average value of 77.8571, in general, it indicates that the respondents performed better after the treatment of applying the top-down listening strategies. The mean score of the pretest improves by about fourteen points in the post-test. Even though not all students succeeded after receiving multiple treatments, as seen in Figure 4, the visual data showed a clear difference in achievement scores from the pretest to the post-test.

Figure 4 indicated that while seventeen students saw their results go up, three students had their scores go down on the post-test. On the other hand, S7’s score did not change between the pretest and post-test, which means S7 did not make any improvement after the interventions. Unlike S7, S1’s listening comprehension score increases significantly from 55 on the pretest to 95 on the
post-test. Overall, the average student shows satisfactory results from the pretest to the post-test.

**Figure 4**
The visualization of students' score improvement

As presented earlier in this section, the visual representation in the Figures 2, 3 and 4, and Tables 3 and 4 show how the teacher’s top-down approach benefits students' listening comprehension. However, to prove the research hypothesis, a paired sample t-test must be implemented (see Table 5). The criteria either confirm or discard the hypothesis if the p-value is lower than 0.05.

**Table 5**
Paired samples test

<table>
<thead>
<tr>
<th>Paired differences</th>
<th>Sig. (2-tailed)</th>
<th>t</th>
<th>df</th>
<th>95% confidence interval of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean Deviation Std. Error Lower Upper</td>
</tr>
</tbody>
</table>

Table 5 presents the SPSS output table for the “paired samples test” where the sig. (two-tailed) is 0.001, which is lower than 0.05, the significant level (0.001 < 0.05). It directs that the null hypothesis is excluded while the alternative hypothesis is confirmed. There is a significant difference between the Mean of the pretest score and post-test score in students' listening comprehension before and after the intervention of implementing top-down listening processing. In short, there is a gain in students’ listening comprehension comparing the pretest result to the post-test result after the treatment.
Discussion

Many professionals believe that listening in a foreign language should not be regarded as an ability that develops spontaneously and individualistically, albeit listening activity is the first skill developed from birth. In fact, listening skills are a skill that needs to be explicitly taught to be developed (Fathi et al., 2020; Goh, 2002; Ngo, 2019). Therefore, it is still interesting to research listening comprehension by employing various approaches, strategies, techniques, or other media.

This part presents the findings as an answer to the study's question. It sought to discover the impact of top-down strategies in enhancing EFL students' listening comprehension. After collecting and analyzing the data, this study uncovered that the average score of the post-test was developed compared to the average score of the pretest (Mean = 77.8571 vs. Mean = 63.5714), demonstrating that students fared better on the post-test after applying the top-down listening method. This study's findings about students' listening skills are consistent with many earlier studies (Karimi et al., 2019; Linh, 2021; Madani & Kheirzadeh, 2022).

However, this study differs slightly from those earlier studies in that they employed background information and pre-activity separately, both of which are components of the top-down strategy process. In this study, the model teacher assisted students in developing their listening comprehension by providing them with preceding knowledge regarding the topic of the conversation and assigning them to read and do some listening tasks to identify target vocabulary. We initiated employing the top-down listening strategies due to students' lack of content knowledge, which is in line with Linh (2021) in her study; EFL learners' problems in listening are lack of vocabulary and background knowledge, which results in their concentration on listening assignments. Linh's (2021) study indicates how vital background knowledge is in assisting students in understanding information. Top-down listening techniques focus on creating meaning from allegations, inferences, goals, and other pertinent information (Brown & Lee, 2015; Richards, 2005). Top-down processing is the incorporation of schemata or previous knowledge to figure out the information obtained. Schemata refers to the listener's familiar information about the subject at hand.

Furthermore, Brown and Lee (2015) recommend that prior knowledge as the characteristic of top-down processing can help understand the information from audio sources. Richards (2008) top-down processing provides contextual listening in which the students should be assisted in inferring some information, such as setting, participants, participants’ goals and roles, procedures typically employed, and expected outcomes. Nunan (2002) also asserts that knowing the
subject coming, the speakers, and their link to the setting and earlier events are all examples of context and scenario. The top-down strategies propose that the listener actively develops or reconstructs and draws on existing facts of the environment and circumstance in which the listening is performed to interpret what they hear.

Regarding the top-down strategies in this current study, the teacher assigned students to guess what they would hear according to the text they had read by listing information and identifying keywords or expecting words. People’s interpretations of what they listen to are shaped by their existing knowledge and assumptions (Edwards, 2011; Richards, 2005). The previous strategy is aligned with the research findings by Namazianost et al. (2019) that there is a link between the students’ listening constraints and the strategies used in which the students used keywords, experience, and prior knowledge in understanding the listening text.

Moreover, the teacher in this study enhanced students’ prior knowledge during the pre-activity phase, which was sufficient to increase students' eagerness to learn. In this case, he provided pictures, wrote a topic, and led some questions to generate their ideas relating to the picture. He also assigned students to summarize the reading text and ask questions relating to the conversation from the audio materials. These activities are based on the activities recommended by Richards (2008), such as generating a set of questions, generating a list of things the students already know, predicting the speaker’s expression after analyzing one speaker’s part in a conversation, and reviewing a list of essential points to be covered in a talk. Farangi and Saadi (2017) assert that students’ familiarity with a specific topic during the pre-listening phase can activate their schemata. Their studies uncovered that the students who got schema treatment outperformed their peers in listening tests. Thus, it is believed that motivating students to use content schemata consciously is a notably beneficial method. This context agrees with other studies, such as Barjesteh and Ghaseminia (2019) and Karimi et al. (2019). In addition, Balaban (2016), in a study involving 15 students, assigned students to summarize the reading text as pre-listening activity and found that this strategy effectively improves students’ listening performance. Fathi et al. (2020), in a study with 52 English major learners, discovered that listening strategy instruction (e.g., predicting and guessing the content and listing related words) meaningfully improved learners' listening comprehension ability and diminished learners' L2 listening anxiety. The result of previous studies indicated the worth of top-down strategies.

Furthermore, the data analysis results uncover that the teacher’s top-down strategies promote students’ listening proficiency. The effectiveness of the
teacher's strategy can be seen through the discrepancy of scores between the pretest and post-test. This evidence is aligned with the study performed by several educationists. Namaziandost et al. (2018) discovered that background knowledge, in this case, providing students with target culture and international target culture materials, enhances students' listening comprehension. Additionally, Kalsen (2016) discovered in his study that there is an indication of the gain of circumstantial knowledge in facilitating students' listening comprehension. Also, Chang and Millett (2016) share the benefit of providing students with listening-focused activities after reading in developing L2 listening fluency. In short, the three previous studies have proven that providing students with prior knowledge through reading and prior listening exercises as the characteristics of top-down processing benefit students to succeed in learning listening skills.

Besides, this current study integrated self-assessment (SA) model to encourage students' listening consciousness, which was not discovered in earlier research and becomes a new finding in connection to teaching listening skills. Indeed, SA is one of the most undervalued skills in the language classroom, including listening classes (Inan-Karakul & Yuksel, 2018). They further explained that using SA in listening classes is a great choice and can offer valuable information about students' language proficiency. In the SA activity, the teacher distributed the answer-key sheets and re-played the audio so that the students could identify which information they missed and match their answers. Self-assessment is an alternative evaluation procedure that allows students to evaluate and self-reflect on what they have learned and accomplished (Boud, 1989; Dolosic et al., 2019; Falchikov & Boud, 1989). Involving students in the evaluation process teaches them to evaluate their own abilities and shortcomings in relation to the criteria and create learning plans for the next level. However, this finding contradicts the outcomes of Dolosic et al. (2019), who discovered that SA did not correlate with learners' listening performance. Therefore, for future studies incorporating SA in listening comprehension classes, the researchers should employ additional instruments, such as an interview and a questionnaire, to evaluate the role of SA integration in listening courses.

Conclusion

This study was designed to examine the impact of top-down strategies on improving VHS students' listening comprehension skills. The data analysis revealed that the students' post-test scores outperformed their pretest results,
implying that their listening performance after experiencing top-down instructions outpaced their achievement before the intervention. It suggests that top-down strategies, e.g., building prior knowledge, collecting keywords, and inferring the information, should be encouraged in the listening instruction. The strategies have proven successful in boosting the students’ listening comprehension, particularly developing the gist, a global or comprehension knowledge. Furthermore, with the use of SA as the new finding regarding the implementation of top-down strategies, it can improve students’ listening awareness. However, it needs further investigation by distributing an instrument of SA to students.

Consequently, this study offers pedagogical implications regarding teaching listening. However, this study has some limitations, such as fewer participants and a need for more research instruments. Therefore, future studies should increase the number of participants, make the control group available, and use alternative data collection devices to maintain treatment effects. Future research must determine whether the treatment is similarly successful in other populations and geographical settings.

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No potential conflict of interest was reported by the authors.

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References


Larandang et al. The top-down strategies in an EFL class of the vocational high school

Studies, 6(8), 1670–1677. http://dx.doi.org/10.17507/tpls.0608.22
https://doi.org/10.23971/jefl.v11i1.2010


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