ABSTRACT

This research aimed to address the difficulties faced by students in listening comprehension, particularly in understanding spoken vocabulary and grasping the overall meaning of audio materials. The study focused on investigating the effect of introducing suprasegmental features on students' listening ability. The significance of this research lies in its potential to enhance students' comprehension of auditory content. The research followed a pre-experimental design, specifically utilizing a pre-test and post-test approach. The participants consisted of 16 students from XII IPA at SMA N 2 Bukik Barisan. Data collection involved assessing the students' performance through pre-test and post-test scores. The intervention involved providing materials on suprasegmental features supported by audio and video. Data analysis was conducted using the t-test formula, with the obtained t-value compared to the critical t-value at a 5% significance level (α=0.05) and 15 degrees of freedom. The results revealed a significant effect of introducing suprasegmental features on students' listening ability, as the obtained t-value (2.827) exceeded the critical t-value (1.753). Moreover, the post-test scores (68.75) exhibited improvement compared to the pre-test scores (55.31). In conclusion, the findings demonstrate that the introduction of suprasegmental features positively impacted students' listening ability. The results imply that integrating suprasegmental features in teaching practices can assist students in enhancing their listening comprehension skills. Therefore, educators are encouraged to incorporate suprasegmental features to foster improved listening abilities among students.

Keyword: Suprasegmental features, Listening, Listening ability

INTRODUCTION

Listening, the most widely carried activity by people in everyday communication is complex and systematic process but becomes an important ability. It is an activity that involves the ear as a tool of hearing sounds contain messages and then interpreting it into meaning. In the language learning, listening is essential to be taught to students. Through listening, the students listen to the real model of native language. Therefore, listening activity has become part of learning English at school levels in Indonesia.

In senior high school, students are expected to demonstrate proficiency in listening skills, which includes the ability to identify main ideas, extract detailed information, and
make inferences from spoken content. To attain these competencies, students should prioritize their understanding of word and sentence stress, as they convey the primary meaning and emphasize key words. Moreover, paying attention to intonation is essential for comprehension. Furthermore, students should shift their focus from individual words to the overall auditory experience. These aspects, encompassing stress, intonation, and sound patterns, are closely intertwined with pronunciation. Thus, in order to listen effectively and meet the required competencies, students need to acquire adequate knowledge and mastery of pronunciation techniques.

The preliminary research conducted through interviews with teachers and 12th-grade students revealed several problems in English listening activities. The average listening scores of students were found to be low, with an average of 54. Three main issues were identified. Firstly, students struggled to grasp the general understanding or message of the audio, as they had difficulty keeping up with the speaker's pace and often requested slower speech. Consequently, they were unable to comprehend the audio's message by the time it ended. Secondly, students faced challenges in comprehending words they knew in written form but struggled to understand when spoken. When the teacher provided words or sentences orally, most students remained silent, whereas they could understand them when presented in written form. The unfamiliarity with spoken vocabulary hindered their comprehension. Thirdly, students had a tendency to focus on understanding individual words while the audio continued, causing them to miss out on the overall content. To address these issues, further research and instructional interventions are needed to enhance students' listening skills and improve their performance in English listening activities.

In addition, previous theories and research by Bloomfield (2010) and Walker (2014) have highlighted the significant challenge of listening comprehension, specifically related to the discrepancy between the pronunciation of words and their written form. Additionally, Amir's study (2019) focused on the listening difficulties faced by senior high school students, including issues with the speed of recordings and the presence of unfamiliar words, which hindered their understanding of the content. Expanding on this, Diora and Rosa (2020) categorized the difficulties in listening comprehension into three main areas. First, the complexity of the listening material, such as intricate grammatical structures and the difficulty in comprehending every word spoken, posed challenges for students. Second, the interpretation of meaning in long spoken texts and the comprehension of unfamiliar topics and vocabulary added to the students' struggles. Furthermore, Tersta and Novianti's recent research (2023) revealed that a majority of students (89.4%) agreed that one of the primary
problems in listening was related to the listening material. Factors contributing to this difficulty included understanding unfamiliar words, encountering complex structures, inferring meaning from long spoken texts, interpreting the overall message, experiencing fatigue, and unfamiliarity with the topic.

In addressing the problems related to listening comprehension, various theories and studies have proposed potential solutions. Gilbert (1995) suggests that students' difficulties in understanding native speakers who speak quickly stem from a lack of training in English language reduction and intonation patterns. Students need to be familiar with these features to comprehend grammatical and discourse signals. Vandergrift (2006) and Walker (2014) highlight the importance of identifying words despite unfamiliar pronunciations and determining the boundaries between linguistic parts. Suprasegmental features, such as stress, weak and strong forms of words, and intonation, also significantly impact the comprehension of oral texts.

Building on these theories and studies, the researcher assumes that introducing and practicing suprasegmental features during listening activities can help alleviate listening problems. Kenworthy (1987) supports the idea that pronunciation instruction, including the distinction of words in listening comprehension, is essential. Working on suprasegmental features can enhance learners' understanding of longer utterances and improve their ability to identify meaning. Therefore, explicit teaching of suprasegmental features becomes a prerequisite in listening activities to ensure accurate understanding and interpretation.

Given the significance of suprasegmental features, the researcher aims to investigate the impact of introducing these features on students' listening ability. Specifically, the research objectives include examining the effect of introducing suprasegmental features on students' ability to identify the general understanding, extract detailed information, and make inferences from audio materials.

METHOD

Research Design

In this research, an experimental research design was employed. Experimental research aims to test hypotheses and establish relationships between causes and effects. Within experimental research, there are three types: pre-experimental, true experimental and quasi-experimental designs. For this study, a pre-experimental design known as the one-group pretest-posttest design was utilized.
The one-group pretest-posttest design involves observing a single group before and after the application of a treatment to determine whether the treatment has the potential to cause change. In this case, the pretest (T1) was conducted to establish a baseline, followed by the treatment (X), and then the posttest (T2) to assess the effects of introducing suprasegmental features on students' listening ability.

The treatment was administered for a duration of 90 minutes, following the pretest and prior to the posttest. To introduce the suprasegmental features, a combination of audio and video materials was used. Students were engaged in practice activities to reinforce their understanding and application of the features. The treatment was repeated three times to ensure sufficient exposure and practice.

The posttest consisted of the same questions as the pretest but presented in a different format to assess the impact of the treatment on students' ability to identify the general understanding, extract detailed information, and make inferences from the audio.

**Participants**

The participants of this research were selected from the 12th grade students of SMAN 2 Bukik Barisan. Specifically, the sample for this study was drawn from the XII IPA (Science) class, which consisted of 16 students. The selection of participants was done using purposive sampling.

The decision to choose the XII IPA class as the sample was based on two main considerations. Firstly, there were only two classes available for selection: social class and science class. Since the research focused on the effects of introducing suprasegmental features on listening ability, it was important to select a sample that had a background in science, which could potentially influence their linguistic abilities. Secondly, after conducting tests of normality and homogeneity, it was found that the XII IPA class demonstrated normal distribution, while the XII IPS class did not meet the criteria for normality.

By selecting the XII IPA class as the sample, the researcher ensured that the participants were representative of the population under investigation. This approach allowed for a more focused analysis of the impact of introducing suprasegmental features on the listening ability of science class students in XII grade at SMAN 2 Bukik Barisan.

**Instrumentation**

The test was listening test and the type of the test was multiple choices with five alternatives per item. In preparing the test, it began with the preparation of a grid that
includes: basic competencies, indicators, aspects to be measured as well as the assessment scores and numbers question item. After making a grid of questions, it was continued by compiling questions and scoring rules for each item. The total items were 20 questions with the 5 total audio. Then, the total duration of the test was about 40 minutes.

**Technique of the Data Collection**

The researcher gave the pre-test before giving the treatment or before introducing suprasegmental features. The purpose of the pre-test is to assess the students' listening ability at the beginning. After introducing suprasegmental features, the researcher gave the post-test. The post-test is used to determine the students’ listening ability at the end and as the comparison and the evaluation of students’ score before and after introducing suprasegmental features. The pre-test and post-test were administered with the listening test. The researcher played the 5 audios to the students to answer the printed questions.

**Technique of the Data Analysis**

The t-test formula was the technique that the researcher used to analyze the data and determine how the effect of introducing suprasegmental features towards listening ability. The researcher used the statistical calculation of t-test to determine the final calculation (t-calculated) of introducing suprasegmental features towards listening ability. There were some steps conducted in one group pre-test and post-test design suggested by Ali as follows:

1. Choose the subject as the sample
2. Conduct the pre-test (T1)
3. Give the treatment (introducing suprasegmental features) to the students (x)
4. Conduct the post-test (T2) after the treatment
5. Find the mean scores and standard deviation of pre-test and post-test and then compare them

   a. Find mean score (x)

   \[
   (x) = \frac{\Sigma X}{N}
   \]

   b. Calculate standard deviation (s)

   \[
   S = \sqrt{\frac{\Sigma (xi-x)^2}{n-1}}
   \]

6. Test the differences of mean score by using T-test
Arikunto suggested using the formula below to examine the result of experiment that used one-group pretest-posttest design:

\[ t = \frac{Md}{\sqrt{\frac{\sum x^2d}{N(N-1)}}} \]

Md= mean of pre-test and post-test
Xd= deviation of pre-test and post-test
\( \sum x^2d \) = sum of quadratic deviation
N= total number of subject

This formula is used to look at the post-test score to see if the students' listening ability differs significantly or not after introducing suprasegmental features. The t-test was used by the researcher to compare or determine whether the value of t-obtained indicates a significant difference between the pre-test and post-test mean scores. The data were calculated using the t-test formula, and the results were compared to the t-table and the degree of freedom at a significance level of 0.05. The null hypothesis (Ho) is accepted if t-obtained is less than t-table (t-obtained<t-table), while the alternative hypothesis (Ha) is accepted if t-obtained is more than t-table (t-obtained>t-table).

**Procedure of introducing suprasegmental features**

In order for suprasegmental features to be used effectively in teaching listening, teachers must follow certain procedures. The teacher must be well-prepared and provide students with clear explanations. In this research, Saber and Maleki's procedure was used in an experimental class. It begins with (1) the students doing the regular activity based on course book which is the regular activities are the things that teacher usually do in starting the class such as giving the greetings, asking who did not come to the class, and conveying the learning competencies to the students. (2) then, the teacher give explanation about suprasegmental features (stress and intonation) using manual explanation and also showing the explanation video and practice together with the students with some words and sentences (3) next, the teacher will play the related materials audio about twice using speaker about offering and responding help/services and ask the students to perform the activity (4) the teacher asks the students to pronounce the words and sentences using their transcription that they have written (5) last, the students listen to the audio once more to improve their ability to
listen and make the better understanding and comprehension about the audio so that can do
the best of the task given.

FINDINGS AND DISCUSSION

Finding

The results of students’ pre-test and post-test can be drawn in the following table.

| Table 1: The Data of Pre-test and Post-test |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                               | N     | Minimum | Maximum | Sum  | Mean  | Std. Deviation | Variance         |
| Pre-Test                      | 16    | 25      | 80      | 885  | 55.3  | 18.750          | 351.562         |
| Post-test                     | 16    | 35      | 95      | 1100 | 68.7  | 17.369          | 301.667         |
| Valid N (listwise)            | 16    |         |         |      |       |                 |                 |

The table provided displays the data for the pre-test and post-test scores of 16 students. A descriptive analysis was conducted to examine the differences between the two sets of scores. The pre-test scores ranged from 25 to 80, with a total sum of 885 and a mean of 55.31. The standard deviation was 18.750, and the variance was 351.562. The post-test scores, on the other hand, ranged from 35 to 95, with a total sum of 1100 and a higher mean of 68.75 compared to the pre-test.

As can be seen from the table above, the pre-test and post-test scores were not the same. The minimum score of post-test was higher 10 point from pre-test. The maximum of post-test was also higher 15 point from pre-test. Next to the sum of score was 215 that more than the pre-test. So that the mean score was 13,43 between pre-test and post-test. The standard deviation and variance in post-test was lowest compared to the pre-test, it means that the data at the post-test was closer to the mean.

Furthermore, the score of 16 students is shown in the chart below. It can be seen there was the difference score of pre-test and post-test. The blue bar is pre-test score and the red bar is the post-test score. There were 9 students that made an improvement on their score. There were 4 students that had the same score or did not make an improvement on their score. Then, there were 2 students that had the lower score of post-test than their pre-test.
1. Analysis of the data

After describing the minimum score, maximum score, sum, mean score, standard deviation and variance of the data, the researcher got the t-obtained by analyzed the data. First, the researcher calculated the gain (d) which is the distinction between pre-test and post-test (post-test - pre-test). Then, before getting the xd, the researcher found the Md by this formula Md = \( \frac{\sum d}{N} \) where \( \sum d \) is the sum of the (d). After that, the researcher squared the xd in order to get the number for t-test formula and the t-test formula was used to calculate the data to get t-obtained. The last, the researcher compared the t-obtained and the t-table.

The researcher used the following table to get the xd which is deviation of pre-test and post-test then the \( x^2d \) which is the sum of quadratic deviation.

<table>
<thead>
<tr>
<th>No</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Gain (d) post-test and pre-test</th>
<th>xd (d-Md)</th>
<th>( x^2d )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55</td>
<td>55</td>
<td>0</td>
<td>-13,4</td>
<td>179,56</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>80</td>
<td>55</td>
<td>41,6</td>
<td>1730,56</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
<td>75</td>
<td>0</td>
<td>-13,4</td>
<td>179,56</td>
</tr>
<tr>
<td>4</td>
<td>75</td>
<td>85</td>
<td>10</td>
<td>-3,4</td>
<td>11,56</td>
</tr>
</tbody>
</table>
To know the mean of the difference between pre-test and post-test, it used the sum of the difference of post-test and pre-test score and divided with total subject which was 16 students, the researcher have calculated with this formula below:

\[ Md = \frac{\sum d}{N} = \frac{215}{16} = 13.44 \]

After getting mean of the difference between pre-test and post-test (post-test – pre-test), deviation of pre-test and post-test (d-Md), sum of quadratic deviation. The researcher entered all of the number calculated to t-test formula.

T-test formula as follow:

\[ t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}} \]

The formula above was used to compare the pre-test and post-test mean score with divided mean of pre-test and post-test with squared root of sum of quadratic deviation divided total number of subject times total number of subject minus 1.
The t-obtained had gotten, then the researcher found the t-table from the distribution table by using t 0.05 and d.b = n-1= 16-1= 15. The researcher found t-table= 1.753. Thus, t-obtained > t table= 2.827 > 1.753.

Based on the t-test analysis above, the mean of the difference between pre-test and post-test (post-test pre-test) was 13.43, the sum of gain (the differences between students’ pre-test and post-test) was 215, and the sum of quadratic deviation was 5435.96. The t-test of the scores was 2.827. After that, the t-table was obtained by the researcher on 15 degree of freedom and alpha 0.05 level of significances. The researcher chose alpha 0.05 because the data was obtained from research that was considered not to have high accuracy and the error rate in concluding research results is slightly looser than 0.01. From the data calculation, it was found that t-obtained was 2.827 while the t-table was 1.753. It means that t-obtained was higher than t-table and it can be implied that there was significant difference between the pre-test and the post-test.

2. Testing the hypothesis

After analyzing the pre-test and post-test scores, the hypothesis was tested. The hypotheses of this research were:

a. The first hypothesis

Ha: There is significant effect of introducing suprasegmental features towards students’ listening ability
H0: There is no significant effect of introducing suprasegmental features towards students’ listening ability

The formula was used by the researcher to measure whether the hypothesis was accepted or rejected. t-obtained > t-table. It means that Ha is accepted and Ho is rejected.

According to the result of the first hypothesis, there was a significant effect on students’ listening ability by introducing suprasegmental features at the 12th grade students of SMA N 2 Bukik Barisan. (Ha: t-obtained > t-table). The hypothesis was tested by the researcher using the t-test formula. T-obtained was found to be higher than t-table. (2.827>1.753). This indicated that Ho was rejected and Ha was accepted.
From the curve above, because t-obtained was found after t-table (t-obtained > t-table), the alternative hypothesis (Ha) was accepted, which indicates that the null hypothesis (Ho) was rejected. As a result, it is possible to conclude that introducing suprasegmental features has a significant impact on listening ability.

b. The second hypothesis
Ha: Listening ability of students after introducing suprasegmental features is better than before introducing suprasegmental features
Ho: Listening ability of students after introducing suprasegmental features is not better than before introducing suprasegmental feature

To see which one was the better listening ability whether before or after introducing suprasegmental features can be seen in the pre-test and post-test scores. It was discovered that students' listening ability after introducing suprasegmental features better than before introducing suprasegmental features. From the pre-test score and post-test score which are 55,31 and 68,75, there were 13,44 score of post-test higher than pre-test. It can be said that alternative hypothesis (Ha) was accepted and null hypothesis (Ho) was rejected.

Discussion
Based on the findings, it was observed that introducing suprasegmental features (stress and intonation) had an impact on the listening ability of 12th-grade students at SMA N 2 Bukik Barisan. Through the treatment, students gained awareness of the importance of stress and intonation in understanding audio content. They became more attentive to sentence stress, which conveys crucial ideas. Some students demonstrated significant improvements between the pre-test and post-test, with the post-test mean score showing an increase from 55.31 to 68.75. However, students still faced challenges in accurately parsing the sentences spoken by the speakers. While they made efforts to extract important words, they struggled to place them within the context of the original sentences. In summary, although most students showed
improvement in their listening ability, the introduced suprasegmental features did not have a significant impact on all students.

Furthermore, the analyzed data was compared using a t-test to determine the results of both tests. The obtained t-value was found to be higher than the critical t-value at a significance level of 0.05 (2.827 > 1.753). This indicates that the introduction of suprasegmental features had a significant effect on students' listening ability. In other words, students who were introduced to suprasegmental features performed better in listening tasks.

These findings are supported by previous studies. Fauzanna (2014) highlighted the importance of integrating word stress teaching in listening classes to introduce students to the English sound system. Khaghaninejad and Maleki (2015) found that pronunciation instruction positively affected the listening comprehension ability of intermediate EFL learners. Additionally, Yenkimaleki (2016) demonstrated that training focused on prosodic feature awareness significantly improved students' listening comprehension.

In conclusion, the introduction of suprasegmental features, specifically stress and intonation, significantly impacted students' listening ability. Recognizing and understanding stress and intonation in audio content enables students to identify topics, gather detailed information, and make inferences, facilitating better comprehension of the audio. Stress and intonation play a crucial role in conveying important messages to students, aiding their overall understanding and comprehension of spoken material.

CONCLUSION AND SUGGESTION

In conclusion, the research findings indicate that the introduction of suprasegmental features has a significant effect on students' listening ability. The pre-test and post-test scores demonstrated improvement, with the post-test scores showing a higher mean compared to the pre-test. The statistical analysis confirmed that the treatment had a significant impact on students' listening abilities, as evidenced by the calculated t-value exceeding the critical t-value. Based on these results, it is recommended that English teachers incorporate the introduction of suprasegmental features, specifically stress and intonation, into their listening instruction. Emphasizing the importance of stress and intonation in comprehension can enhance students' ability to understand spoken language. Teachers should focus on practical application by discussing and analyzing words and sentences from audio sources, rather than overwhelming students with excessive theoretical explanations. For future research, it is suggested to include an experimental and control group design to compare the effectiveness of introducing suprasegmental features with traditional listening instruction. This would provide
a clearer understanding of the specific impact of suprasegmental features on students' listening abilities and allow for more robust conclusions to be drawn.

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