Bottom-up Strategy in Teaching Listening for Academic Purposes for EFL in Pesantren-Based University

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Abstract

Receiving information begins with listening. EFL learners at universities should master listening for academic purposes with appropriate strategies. This article examined the strength of the bottom-up strategy in teaching listening for the academic purpose of the third-semester female students in the Department of English Language Education, the University of Darussalam Gontor, which is a pesantren-based university. This research utilized a quasi-experimental with one group pretest-posttest design. The participants involved 14 who were regarded in English language teaching. They were tested by pre-and post-treatment listening for academic purposes. The data were analyzed by paired sample t-test. The results showed a significant inequality between the mean score of the pre-test and post-test. The mean score of the post-test of learners was improved than theirs in the pre-test. Thus, the female learners in this research achieved well in promoting teaching listening for academic purposes after being treated using a bottom-up strategy.

Keywords: Academic purposes; Bottom-up; EFL; Listening; Pesantren-Based University

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Introduction

Learning strategies play a pivotal role in delivering material to students. They are a set of devices used by educators to achieve control overthrown the learning process (Jenny X. Montaño-
In addition, the precise learning strategies for EFL have become the main factor in assisting students in enrolling in foreign language acquisition (Oxford, 2003). Accordingly, educators need to create an effective and innovative learning environment to support the EFL learners in gaining their learning goals.

Utilizing the effective strategy can be considered a triumph in teaching listening. The perspective of the English teacher also influences the accomplishment in teaching listening. English language instructors believe that the main goal of teaching listening in the classroom is to train the students to comprehend the meaning of the spoken language. It is also believed that delivering material listening concerns the specific skills to enhance listening (Wang, 2010). Those statements reinforce that explicit proficiency, such grasp the meaning in spoken activity, is the main core of teaching listening, especially on listening academic purposes.

This study focused on teaching listening for academic purposes to female students in the Department of English Language Education, the University of Darussalam Gontor, considered a pesantren-based university. The students struggled when they had to comprehend the content or main idea of audio recording in listening for academic purposes because the students had a shortcoming of experience and strategy in understanding listening activities. Moreover, they were also abortive in listening exercises and tests. In addition, the target of the exam results of listening for academic purposes was still far from expectation, whereas listening skill is crucial for the EFL learner at the university level. Accordingly, the urgency of appropriate strategy to assist them in understanding the content of audio recording in listening activities was considered essential.

Some learners did not gain a specific goal during the listening comprehension process because some did not know how to apply learning strategies during the listening activities. They argued that they had difficulties gaining meaning due to the recording speed and mishearing. According to the previous study, students also commented on challenges in knowing words in the speakers’ styles (Graham, 2006). Accordingly, a bottom-up strategy was assumed as an appropriate teaching approach to deliver listening material for the EFL learner at the university level.
For these reasons, this study exposed the strength of the bottom-up strategy in teaching listening for academic purposes to 14 female students at the University of Darussalam Gontor Indonesia. The classroom was a standard for the EFL learner, especially in the language lab. This condition is appropriate with the regulation for the post-secondary teaching of English for Foreign Language, which recommends no more than 20 students (Philips & Ahrenhoester, 2018). The female students of English Language Education at the University of Darussalam Gontor had several characteristics. They implemented independent learning in some subjects. They were assumed to have much prior knowledge to aid their learning activities. In addition, pesantren is a kind of educational institution that has organized an effective learning environment dealing with language proficiency. The pesantren environment helps to support students’ language capability and attracts the learners to practice English more. They can speak English as their daily language for their daily communication (Umam, 2014). This study also explored the factors influencing the bottom-up strategy in teaching listening for academic purposes. Accordingly, the result contributed to a new experience for the female learners to acquire strategy in teaching listening.

In detail, the main purpose of this discussion is highlighted in one problem; Do female learners of English Education better accomplish listening for academic purposes by implementing the bottom-up strategy?

Literature Review

Listening skills

This study reviews current issues in teaching listening for academic purposes because the listening skill is commonly investigated as the most arduous or impressive. Listening skills are also neglected, with much less time devoted to instruction than other language skills (Al-Nafisah, 2019). Accordingly, it needs a more exceptional approach so that listening is considered easy by the learner, especially for EFL learners.
Listening is a skill in language proficiency that can directly affect other skills and be affected by several other strategies or techniques. Listening competency is essential for communicating with others (Wang, 2010). The term listening comprehension is defined as the process of understanding speech in a first or second language. This skill is crucial in foreign language learning because the key to learning a language is to receive language input (Gilakjani & Sabouri, 2016). The study of listening comprehension processes in second language learning.

Listening is the ability to understand the information that listeners hear. Nunan (2001) stated that listening requires a learner to receive and understand information. Furthermore, Naizhoa & Robin (2009) stated that in the broadest sense, listening is a process of receiving what the speaker says, constructing meaning then comprehending all spoken activity.

Buck (2001) argued that listening comprehension is also the process of constructing meaning heard. Listening comprehension activities typically address many listening functions, including recognition, orientation, comprehension of main ideas, understanding and recall of details (Richard & Schmidt, 2002). Furthermore, all definition of listening skill relates to the level of listening mastery, such as listening for academic purposes, which can be a special subject at the university level.

**Listening for Academic Purposes**

Listening is a cognitive skill that works automatically for a person to process what they hear efficiently. Learners develop meaning by connecting information from sources or audio with experiences (Vandergrift & Goh, 2012). In addition, listening comprehension significantly benefits students’ academic achievements (Jeon, 2007). These statements are completely appropriate for the learner at the university level because they are required to have a good academic ability.

University students are assumed to have a high level of learning. They are expected to understand all aspects of science in the academic field. For EFL Learners, listening for academic purposes is designed to train learners to understand academic lectures (MacDonald et al., 2000). In addition, academic listening skill is necessary for English for academic purposes (EAP) for
university-level students (Rahimirad & Moini, 2015). They not only focus on one academic subject but are enforced to comprehend general or specific discussion in another academic field.

The material of English subjects at the university level is structured to understand academic aspects. Chou (2015) stated that listening for academic purposes is to comprehend all aspects they learn in class. Thus, the EFL learners can respond to the main idea they hear in the audio recording. Besides, the listening skills required in a strictly academic field are those needed for listening to all courses (Mcerlain & Carande, 1999).

### Bottom-up Strategy in Teaching Listening

Listeners use bottom-up when they use linguistic knowledge to understand the text, topic, or audio meaning. According to Richard (2008), bottom-up refers to input as the basis for understanding the message. In addition, Brown (2000) stated that in the bottom-up process, the listener gains understanding following an order that is available from sounds to word grammatical relations to linguistic meaning.

A bottom-up strategy can help the learner to understand the linguistics element. This strategy is often discussed in receptive skills such as listening and reading as a process to reinforce critical thinking for successful listening comprehension (Kartikabayu, 2020). Bottom-up processing is decoding the sounds one hears linearly, from the smallest meaningful units to complex texts.

The bottom-up strategy trains the learner to gain the meaning of audio text from general to specific meaning. Learners construct the assumption and experiences by starting to comprehend the conversation in audio. (Al-Nafisah, 2019). learners utilized keywords from the sound in audio to arrange the content of what they listened to (Hedge, 2000). The output of this process was developing the understanding that the listener focuses on the selected pieces of audio text, then tries to connect with their experiences (Karimi et al., 2019). Hence, a bottom-up strategy is like studying details to fulfill the aims. A bottom-up strategy is also used by learners when they rely on specific components of the second language for aural comprehension.
Brown (2004) said the bottom-up focus on sentences, word stress, and the grammatical formula of spoken language. A bottom-up strategy is also used by learners when they rely on specific components of the second language for aural comprehension. It involves building meaning from the sound heard. Sounds are changed into words, grammatical relationships, and upward until the meaning is created. In short, sound units connected to form words, phrases, utterances, and finally, complete meaningful contents. In other words, it needs the right sequence process to accomplish comprehension in listening.

Vargas and González (2009) stated three steps in using a bottom-up strategy in teaching listening. Recognizing the vocabulary, providing paper to take a note and playing audio. It was better if the teacher played the audio more than once because the bottom-up strategy is like studying details to fulfill the aims. Then, they studied the influence of listening activity when utilizing a bottom-up strategy. In this study, they observed eight graders of high school in Pereira. The study revealed that the learner accomplished the listening goal when employing a bottom-up strategy due to most of the students gained the learning target on listening exercises.

Method

This research employed a quantitative research design. This design was used in the study as its purpose is to explain the real phenomenon through collecting quantitative data analyzed using a mathematically based method. Statistical data analyses were implemented to analyze the research finding. The core of the experimental research is “a test under controlled conditions that is made to demonstrate unknown truth the validity of a prediction” (Muijs, 2004, p. 13).

Research Design

This experimental study showed the liaison between two or more variables by examining those variables using a certain analysis technique. This study employed a quasi-experimental design. It is the experimental kind that examines a hypothesis of several indicators. It is also assumed that gaining the objectives should be measured by a pre-specified set of indicators (White & Sabarwal, 2014). The experiment design employs-group-pretest-posttest. The design
measures the result of the pre-test and post-test in one group. It is expected that the experiment design answered the contribution of the bottom-up strategy in teaching listening for academic purposes. Table 1 describes the design of the study.

Table 1. Study Design

<table>
<thead>
<tr>
<th>O1</th>
<th>X</th>
<th>O2</th>
</tr>
</thead>
</table>

Explanations:
O1 = Pretest
X = Treatment
O2 = Posttest

Moreover, this study employed an alternative hypothesis as a research result. The alternative hypothesis (Ha) in this research found that the participants accomplished the goal when they implemented the bottom-up strategy in teaching listening for academic purposes. Accordingly, the bottom-up strategy contributed some beneficial inputs for the students of the English Education Department in obtaining listening for academic purposes.

Instrument

To gain information and data, the researchers used tests and worksheets. The worksheets were used as a strategy to examine the pupils’ achievement for academic purposes. They were also used to determine the student’s understanding of listening activities. The aim was to assure the validity of the data. Accordingly, the main measurement of this study was a test. The study focused on measuring students’ experiences in comprehending audio text, including the student’s ability to understand the component of listening activities, which was also defined as a retelling test. A retelling test may determine students’ abilities to master this skill (Brown, 2004). Therefore, it utilized a suitable indicator of test based on the focus of the research.
Data Collection Technique

In collecting the data, an achievement test was employed where a test is defined as a set of stimuli presented to an individual to find responses based on which a numerical score may be assigned (Ary et al., 2010). Pre-test and post-test designs were used to distinguish groups and to measure changes resulting from the treatments than to equal one or more control groups who did not receive the treatment (Dimitrov & Rumrill, 2003). At the beginning of the teaching activities, a pre-test was used for the students to attain the data of the scores before being given any treatment. Whereas, after the treatment, a post-test was conducted. The results were then calculated, analyzed, and compared.

Data Analysis

The data was measured using a statistical calculation to determine the differences between the pre-test and post-test results. The data was measured to know the differences in scores between the pre-test and post-test by the statistical calculation. In this study, data analysis was conducted using a normality test in the first analysis through Kolmogorov-Smirnov. If the data was normal, the t-test could be analyzed by Paired sample test. However, if the data was not normal, the data could be analyzed by the Wilcoxon Signed Rank test. The steps of the analysis are explained as follows: (1) Determining hypothesis. \( H_a \): There is a difference between learners on pre and post-test learners in acquiring listening for academic purposes through a bottom-up strategy. \( H_0 \): There is no difference between students on pre-test and post-test in acquiring listening for academic purposes through bottom-up strategy. (2) Determining significance number. This analysis used two-tailed significance. The researcher took a significant number of 5 % and took the risk of rejecting the true hypothesis for 5% (0.05). (3) Determining t number and t table. After determining the significance number, it continued by determining the t Number and t Table. The distribution of t table on \( \alpha = 5\%: 2 = 2.5\% \) (2 - Tailed) with degree of freedom (df) n-2. It could be continued by analyzing the criterion of examining. (4) The criterion of examining and interpretation. \( H_a \) is accepted if t values are more than t table (t values > t table). In contrast, \( H_a \) is rejected if the t value is less than the t table (t values < t table). On the
other hand, $H_a$ is accepted if the $P$ value is less than $P_{\text{value}} < 0.05$) or $H_a$ is rejected if the $P$ value is more than 5% ($P_{\text{value}} > 0.05$).

This study also used observation to support the findings and acquire reliable data because the researcher could observe, evaluate, draw conclusions and comment on interactions and relations during the class (Ciesielska et al., 2018). The observation showed that two factors had contributed to the bottom-up strategy in teaching listening for academic purposes for the female students at the University of Darussalam Gontor.

**Findings**

After knowing the students’ condition, a normality test was conducted. This test was required to analyze the character of the data by analyzing the students’ pre-test and post-test scores. Kolmogorov-Smirnov analyzed the sample to calculate the research problem’s answer and the post-test analysis score. As specified in the beginning part of the study, the research question was, “Do female students of the English Language Education better accomplish listening for academic purposes by implementing the bottom-up strategy? Then, the research question answered that the English Department’s female students had accomplished well in employing listening for academic purposes by using a bottom-up strategy. It can be proven by statistical analysis shown by Kolmogorov-Smirnov Test and Paired sample $t$-test or Wilcoxon Rank Test Formula.

**Table 2. One-Sample Kolmogorov-Smirnov Test**

<table>
<thead>
<tr>
<th>Normal Parameters$^{ab}$</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>69.29</td>
<td>79.29</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>8.957</td>
<td>7.810</td>
</tr>
<tr>
<td>Absolute Differences</td>
<td>,183</td>
<td>,179</td>
</tr>
<tr>
<td>Positive Differences</td>
<td>,183</td>
<td>,178</td>
</tr>
<tr>
<td>Negative Differences</td>
<td>-,173</td>
<td>-,179</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>,183</td>
<td>,179</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>,200$^{-d}$</td>
<td>,200$^{-d}$</td>
</tr>
</tbody>
</table>
This table analyzes students’ listening for academic purposes. The analysis was started by calculating the data normality with a one-sample Kolmogorov-Smirnov test. If the result is normal, the t-test can be analyzed by paired sample t-test. If the data is not normal, the t-test can be analyzed using the Wilcoxon sign rank formula.

Table 2 shows that the mean value of the pre-test is 69.29 while 79.29 for the post-test with the significant (2-tailed) value was 0.200. The pre-test and post-test distribution values were normal because the significant value of 0.200 is more than 0.05. Furthermore, the next data analysis should be calculated through paired sample t-test. The analysis is described in Tables 3 and 4.

Table 3. Paired Sample T-Test Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>pre-test</td>
<td>69.29</td>
<td>14</td>
<td>8.957</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>79.29</td>
<td>14</td>
<td>7.810</td>
</tr>
</tbody>
</table>

Table 4. Paired Sample T-Test

<table>
<thead>
<tr>
<th></th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>Difference</th>
<th>Lower</th>
<th>Upper</th>
<th>T</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>pretest - posttest</td>
<td>5.547</td>
<td>1.482</td>
<td>-13,203</td>
<td>-6,797</td>
<td>-</td>
<td>13</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>10.00</td>
<td>6.74</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This analysis used two-tailed significances. It took a significant number of 5 %, meaning it took a risk to reject the true hypothesis by 5% (0.05). Table 3 reveals that the t value on equal variance assumed is -6.745. Then, the distribution of the t table is 0.695.

Probably value or significant 2-tailed was 0.000. According to this analysis, the alternative hypothesis (Ha) was accepted, and the Null Hypothesis (H0) was rejected due to t value was less
than 5 % (0.000 < 0.05). There was an inequality in students’ scores between the pre and post-test in achieving listening for academic purposes through bottom-up strategy.

**Discussions**

Following the analysis result, this study showed the effectiveness of the bottom-up strategy in enhancing students’ comprehension of listening for academic purposes. The bottom-up strategy was impressively implemented to enforce students’ listening skills. Nonetheless, no studies have previously analyzed its strength in listening for academic purposes on female students at the University of Darussalam Gontor. In addition, the data analysis found a significant difference between listening for academic purposes of the students in pre-test and post-test after utilizing the bottom-up strategy. This strategy served the students attain an understanding of the listening aspect. The lecturer provided the appropriate technique for how to give understanding from audio recording into written form in 14 meetings in the classroom.

The teaching procedures implemented by the English lecturer of the Department of English Language Education in conveying material were based on the condition of the students. The lecturer employed teaching procedures on the bottom-up strategy, such as procedures advised by Siegel, J., & Siegel, A. (2013). The first was **counting words.** In this activity, the lecturer read the text on the material. Students listened to the lectures’ voices. Then, the lecturer repeated the sentences slowly and counted the words. This activity will recognize various aspects of connected speech. The second was **identifying lexical differences.** The lecturer selected the sentences from the materials. The pure sentence was marked as “sentence 1,” and the variation was marked as “sentence 2.” The lecturer read both sentences, and students identified any lexical differences. This activity will effectively review any grammar lesson covered in class by varying other linguistic aspects.

The third was the **prediction of syntactic.** The lecturer distinguished the materials. Students listened to one or two words at a time. The lecturer asked the students to predict the next word. The fourth was **headlining connecting speech.** Lecturer used material content, pointed out common sets of connected speech, and then listened to the audio while students
worked on cloze test. The last was **short transcriptions**. The lecturer explained the contents of the material. Afterward, the lecturer shared the answer and headlined the content of the discourse. By utilizing these procedures, the researcher believed that the female students accomplished better in comprehending material in listening for academic purposes.

Moreover, the females’ cognition has influenced the effectiveness of these teaching activities. Most of these students have good prior knowledge to support their listening skills because the lecturer accommodated the material related to Islamic topics such as Islamic education, Islamic history, Islamic economics, Islamic law (Sharia) and politics in Islam. The students were so familiar with those Islamic terms that the students were obvious to recognize the term, phonemes, words and sentences. This strategy was also appropriate for teaching English in a pesantren environment. This argument is suitable that the material of EFL in pesantren (pesantren-based university) should be contributed for the knowledge base on the pesantren views (Fahrudin, 2012). Furthermore, the Department of English Language Education, the University of Darussalam Gontor, has consistently tried to provide teaching materials based on Islamic teachings.

Secondly, the availability of learning devices such as sound and the classroom atmosphere also contributed to the success of listening activities in this classroom. The sound produced from the audio recording was quite clear so that they could achieve the main idea easily, then the students were trained to develop meaning from the sound in recording form. Furthermore, the female students were motivated to learn listening classes when the lecture implemented a bottom-up strategy during the teaching and learning activity.

Hasriyanti’s study (2016) reinforced the achievement of this listening activity. It found that the result revealed that the result of the t-test is higher than the t value. In other words, there is significant inequality between the pre and post-test. Utilizing the bottom-up strategy enhanced students’ listening activity. In addition, Siegel, J. and Siegel, A. (2013) also investigated the effects of using a bottom-up strategy in teaching listening. The project was divided into five meetings. There were counting words, identifying lexical differences, syntactic predicting, highlighting
connected speech, listening and filling in the blanks and short transcriptions. The experiment result showed a significant increase in students’ listening achievement.

**Conclusion and Implication**

Based on the findings, the fulfillment of the bottom-up strategy benefited the students in listening for academic purposes revealed by the pre-test and post-test activity scores. The mean scores for the post-test were higher than the pre-test score.

The components contributed to the employment of the bottom-up strategy in teaching listening for academic purposes for the female class of the University of Darussalam Gontor. First, the teaching procedures that the lecturer implemented in conveying material were orderly. The steps applied started from counting words and identifying lexical differences, syntactic predicting, highlighting connecting speech and ending with short transcriptions to aid the students in understanding the listening comprehension material. Secondly, good prior knowledge also assisted the students in gaining the material provided by the lecturer. Additionally, the material with Islamic nuances also strengthened the students’ ability to comprehend listening material because they lived in an Islamic dormitory (pesantren). Thirdly, the availability of learning facilities was a determining factor in the female class’s listening activities.

As the findings suggested, this study found significant results in answering the problem statement in this experimental study. The assumption of a bottom-up strategy would effectively equip and promote students’ listening skills for academic purposes accepted. The null hypothesis was therefore rejected. This finding aligned with the bottom-up, which was more effective in helping students improve their listening comprehension skills and could give confidence to them to face English language assessments (Oh et al., 2021). Accordingly, the female students of the English Department of the University of Darussalam Gontor accomplished better in employing listening for academic purposes by using a bottom-up strategy.

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