Chapter Four

Findings and Discussion

The fourth chapter discusses the result of the research including findings and discussion. In findings, the researcher explains the result of gathering the data including the means of the pretests and posttests, testing of hypothesis by T-test analysis, and effect size of audio books toward listening skill. Additionally, the normality and reliability of the tests are discussed. Finally, the result of this research is discussed with previous studies.

Findings

This study was conducted at SMP Muhammadiyah 1 Yogyakarta. This research used an experimental design with a time series approach. In a time series approach, students took pretest 1, 2, and 3. By these steps, the researcher knew students' condition before the treatments. After that, the researcher treated students with some interventions using audio books. Students followed experimental treatments, which was given by the researcher. The treatments included identifying the definition of narrative text, identifying generic structure of narrative text, how to use past tense, and reviewing all previous material. To check students' progress in every meeting, they did some exercises in the end of the meeting. The treatments were done in four meetings, in which each meeting took 40 minutes. Finally, the researcher measured the students' performance by conducting posttest 1, 2, and 3.

This part discussed students' listening skill before and after they were taught using audio books. The analysis of the effectiveness of audio books in improving listening skill was done by comparing students' score between pretests and posttests. The researcher checked hypothesis using T-test. Besides, to analyze the effectiveness

of using the audio books, the researcher calculated the effect size of audio books. In addition, the researcher also checked the normality and the reliability of the tests.

Students' listening skill before treatment. The researcher administered pretests to know students' previous condition before the treatments. The pretests were conducted in March 2016. The tests were done three times because those helped the researcher to know the consistency of students' score.

The Standard of Minimum Completeness or *Kriteria Ketuntasan Minimal*, which is known as *KKM* of English subject of ICT class at SMP Muhammadiyah 1 Yogyakarta academic year 2015/2016 is 77. The mean of pretest scores showed that students achieved 60.24 (table 4.1). According to scoring rubric (table 3.1), the students were in fair level meaning that students were able to identify the main idea, general and specific information. In this level, students showed the ability to infer implied information. However, they also have some problems with recognizing vocabulary and expressions.

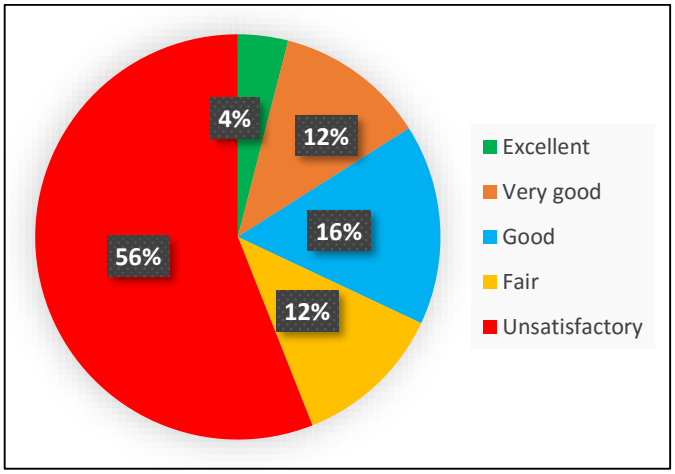
Table 4.1 Statistic of pretest score

N	Valid	25
	Missing	0
Mean		60.24
Std. Error of Mean		3.446
Std. Deviation		17.230
Minimum		33
Maximum		95

The mean of pretest scores was obtained from the pretest score statistic, which the highest score was 95 and the lowest score was 33. The gap of score between pretest and *KKM* was 16.76. The gap of students' achievement score to

KKM was significant. It showed that students' initial performance in listening prior to the treatments was far from satisfying.

Figure 4.1 Students' level performance of pretest



Based on figure 4.1, it found that the majority of students' level were in unsatisfactory level. Out of 25 test takers, 4% students were categorized in excellent level, 12% in very good level, 16% in a good level, 12% in fair level. However, more than a half students were in unsatisfactory level. It revealed that most of students obtained bad performance. The treatments that were designed for all students in this study regardless the result of the pretests.

Students' listening skill after treatment. After the treatments, students were required to take the posttests. Like the pretests, the posttests was also conducted three times. The questions of pretests and posttests were exactly similar, but the sequences were rearranged.

The result of posttests revealed that students' score improved. The mean score in the pretests was 60.24 (table 4.1) and after the treatments, it was 72.16 (table 4.2). From the score, it can be seen that the achievement made was approaching the

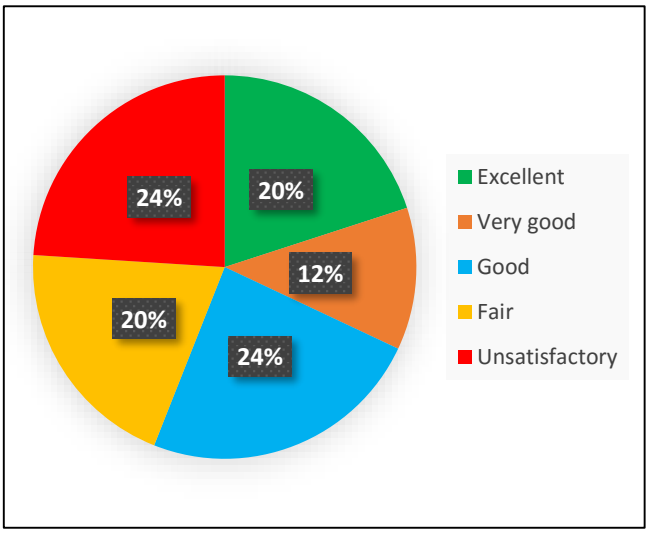
KKM. The mean score showed that students' level of listening performance developed to a good level.

Table 4.2 Statistic of posttest score

N	Valid	25
	Missing	0
Mean		72.16
Std. Error of Mean		2.893
Std. Deviation		14.467
Minimum		49
Maximum		97

The posttests statistic showed that the mean of posttests were increasing to 72.16. The score of posttests was closer to the *KKM* than pretests score. The gap of pretests score to *KKM* was 16.76 while the gap between posttests to *KKM* was 4.84. Another significant result was made on the lowest and the highest score. On the pretests, the lowest score was 33 and the highest score was 95. Meanwhile, on the posttests, the mean score was increasing to 49 in the lowest score and 97 in the highest score.

Figure 4.2 Students' level performance of posttest



Based on figure 4.2, students' level performance also revealed good improvement. There were 20% students in excellent level, 12% in very good level, 24% in a good level, and 20% in fair level. The unsatisfactory level decreased to 24%. The treatments using audio books had helped students to increase their score of listening.

The normality. The normality of pretest and posttest were checked to ensure that the distribution of data was normal. Cohen (2011) stated that the data is normal if skewness and kurtosis value are -1 up to 1. Skewness means how far the data are asymmetrical in relation to a normal curve of distribution, while kurtosis deals with how steep or flat is the shape of a graph or distribution of data.

Table 4.3 The normality of pretest

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pretest1	25	.073	.464	-.946	.902
Pretest2	25	.397	.464	-.629	.902
Pretest3	25	.675	.464	-.603	.902
Valid N (listwise)	25				

Table 4.4 The normality of posttest

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Posttest1	25	-.128	.464	-.975	.902
Posttest2	25	.209	.464	-.917	.902
Posttest3	25	.209	.464	-.921	.902
Valid N (listwise)	25				

Based on the analysis, it was found that the data of pretests and posttests were considered normal. The data above showed that the range of stretched from -1 up to 1. Therefore, the distribution both pretests and posttests were normal.

The reliability. Cohen et al. (2011) stated that the test is reliable if the Cronbach's Alpha value (α) is up to 0,6 (table 3.2).

Table 4.5 The reliability of pretest

Cronbach's Alpha	N of Items
.915	3

Table 4.6 The reliability of posttest

Cronbach's Alpha	N of Items
.900	3

Based on the table, it found that the test of pretest and posttest were reliable. The reliability of pretest was 0.915 and posttest was 0.900. According to Cohen et al., the pretest and posttest categorized in very highly reliable (table 3.2).

The testing of hypothesis. The researcher used T-test analysis to measure the hypothesis of this research. The research revealed that there were differences between before and after the treatments. The mean of pretests was 60.24 and the mean of posttest was increasing to become 72.16 (table 4.7), with an increase of 11.92. It showed that students obtained higher score after the treatments.

There are two hypotheses in this research:

Null Hypothesis (H_0). There is no significant difference between a new condition and previous condition of students' listening skill after they are taught by using audio books.

Alternative Hypothesis (H_1). There is a statistically significant difference between a new condition and previous condition of students' listening skill after they are taught by using audio books.

The hypothesis was measured by T-test Paired sample. The analysis can be seen in the table below:

Table 4.7 Paired sample statistic

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	60.24	25	17.230	3.446
	Posttest	72.16	25	14.467	2.893

Table 4.8 Paired sample test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pretest - Posttest	-11.920	11.003	2.201	-16.462	-7.378	-5.416	24	.000

The testing of the hypothesis was checked by comparing means of pretests and posttests, the significant level, and comparing T-value and T-table. Based on T-test analysis, the research found that there were significant differences of the means. The significant value statistic was in 0.00. Cohen et al. (2011) stated that when the significant level is < 0.05, the null hypotheses is rejected. Based on the result of T-test analysis, the significant level was 0.00, which meant that the null hypothesis was rejected. Additionally, the result showed that T-value was higher than T-table. Table 4.8 showed that T-value is 5,607 and T-table is 2,064 with df 24 at the confident level of 95%. Therefore, the result showed that T-value is higher than T-table (figure 4.1). It meant that null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. For the calculation, it can be seen on figure 4.3.

Figure 4.3 T-test analysis

T-value = 5,416 T-table = 2,064

T-value > T-table

5,416 > 2,064

= alternative hypothesis (H_1) √

The use of audio books was effective in improving students' listening skill. To analyze the effect of audio books in improving students' listening skill, the researcher used effect size formula to examine the size of the effect. The result of the effect size revealed the potency of experimental treatments to affect students' listening skill. Cohen (1992) made a complement dimension of effect size.

Table 4.9 The criterion of effect size according to Cohen (1992)

Effect size (r)	Level	Criterion
0,10	small effect	the effect explains 1%of the total variance
0,30	medium effect	the effect accounts for 9% of the total variance
0,50	large effect	the effect accounts for 25% of the variance

The effect size of this research can be calculated:

$$r = \sqrt{\frac{t^2}{t^2+df}}$$

$$= \sqrt{\frac{5{,}416^2}{5{,}416^2+24}}$$

$$= \sqrt{\frac{29{,}333}{53{,}333}}$$

$$= \sqrt{0{,}550} = 0.74$$

Notes: r = effect size, t = t-value, df = degree of freedom

The effect size of the research was 0.74. According to Cohen (1992), the result was categorized to have a large effect (table 4.6). It meant that audio books had a significant effect in improving students' listening skill.

Discussion

This study is aimed to identify the effectiveness of using audio books in improving students' listening skill of ICT class at SMP Muhammadiyah 1 Yogyakarta. The research question of this study is "Is there any significant differences of students' listening skill after they are taught by audio books?" Based on the findings, the research found that there were significant differences between before and after the treatments using audio books. The result was obtained by checking the mean of both pretest and posttest, T-test analysis, and effect size analysis of using audio books.

Discussion of pretest and posttest. Before the treatments, students showed unsatisfactory performance. It can be seen from students' performance level that more than a half of students' scored under 59. Moreover, only 16% students passed from tests based on *KKM* of school's standard. Therefore, this study was supporting Hamouda (2013), Bingol et al. (2014), Renukadevi (2014), and Walker (2014) that listening is a hard skill in language learning due to the low performance of students' passing.

The unsatisfactory result of pretest might be related to some problems that students faced during the listening test. When the researcher played the audio file of the pre-test, some students asked to repeat the question, and some other students failed to answer the question in the given time. It indicated that those students did not understand the question well. After the pretest, the researcher asked about

students' feeling. Some students argued that they did not understand what the speaker said, and the others said that there were unfamiliar vocabularies to them. Students in this research did not specify the particular difficulties that hampered them from successful listening.

This case was similar to previous studies. Students mentioned that they did not understand what the speaker said and there were many unfamiliar vocabularies referred to students' grammar and vocabularies. This is related to Hamouda (2013) and Renukadevi (2014) said that grammar and vocabulary are the factors that make listening becomes difficult. Additionally, grammar and vocabulary are the keys of successful listening to learn foreign languages.

There were significant differences after the treatments by comparing the means of pretest and posttest. It can be seen from the findings of pretest in which students' mean scores were only 60.24, and it improved to 72.16 after the treatments using audio books. The gap of score between pretest and posttest were far enough, which was 11.92 points. Students' level had improved from fair to good level as the statistic showed that the mean of posttest approached *KKM*. In details, students' statistic of posttest also revealed some improvements. There were 36% students passed *KKM* score. Out of 9 students, there were five students in excellent level, three students in very good level, and one student in good level.

Another fact showed that there was only one student got the score below 50. It showed that students had a good performance after being treated by audio books. However, there were some students who failed to reach the *KKM*. It can be because the limited time of applying audio books in the classroom.

This finding supported the previous study believing that audio books were effective for students' listening performance. Kartal and Simsek (2011) said that audio books were an innovation in teaching and learning. Their experimental study showed a good result that audio books improved students' listening skill even students' reading skill. Similarly, Talalakina (2010) also had the same result when she used audio books in her experimental class. She stated that audio books improve students' listening comprehension in advance ESL classroom of Russian students.

Discussion of audio books to improve students' listening skill. During the treatments, it was indicated that audio books were helping students to reach good performance in listening. This study is in line with previous studies stating that audio books give benefits in teaching and learning. Talalakina (2011) argued that audio books as alternative media help non-native English teacher in the classroom. The use of audio books as learning media applied by the researcher in learning was different from the English teacher usually used; that was the textbook. Nevertheless, this media gave a positive atmosphere in the classroom instead because audio books were quite interesting for students. Students were excited when they listened to the audio books. The excitement shown by students supported Alcantud and Gregori's (2013) study who said that audio books give music effect and dramatical sounds that engage students' interest. It also made students more motivated, and students enjoyed being given audio book listening activity. Similarly, Cardillo et al. (2007) believed that audio books could motivate and engage students' interest in learning.

Audio books are appropriate media with students in this era. Technology support to the implementation of audio books was suitable as Prensky (2001) said that digital native is more interested in technology-based tools. During the

treatments, students showed an enthusiasm to the use audio books and classroom atmosphere was very positive. It can be seen from students' respond when the researcher prepared the audio books. First, students received the text of audio books. Some of them read the text right away. Then, when the text was displayed on the screen, almost all of students looked at it. The class's condition become quiet when an audio book was playing. All students listened to the audio books. With the feature of audio books that it has interesting sound, most students paid attention the media. The treatment in this research were conducted based on the steps of teaching listening as formulated in Brown (2006), and Vandergrift and Goh (2012). There are some stages in teaching listening. There are pre-listening stage including students' prior knowledge activation, while-listening stage that includes purpose of listening for students, and post-listening stage that includes meaning elaboration, language analysis, and evaluation and planning.

At the beginning, the researcher used pre-listening stage. Pre-listening stage included activating students' prior knowledge (Vandergrift & Goh, 2012). The researcher always started the treatments by activating students' prior knowledge. The researcher started the class by asking students what story that student liked, what students' dream were, and reviewing the discussion of the previous meeting. Then, students were required to share their opinions.

In the while-listening stage, the researcher used listening for purpose when playing audio books. Listening for purpose means that students knowing why they listen to such as listening for main ideas, for detail information, or for making inferences. This was aimed to make students more focused than they just listen without any reason (Brown, 2006). During playing audio books, students should

identify general ideas and detailed information, the generic structure of a narrative text, and tenses of the text.

In post-listening stage, the researcher did some approaches including meaning elaboration, language analysis, and evaluation and planning (Vandergrift & Goh, 2012). In meaning elaboration stage, the researcher elaborated students' listening by elaborating their speaking skill as well through discussion and presentation activity. This way is meant to improve their speaking skill and listening skill at the same time. When students listen, they synthesize and evaluate the text of audio books (Brown, 2006). They also learned how to organize and present the words that they had listened into speaking activity. In line with Brown (2006), Rost (2011) stated that developing proficiency in listening is the key to achieve proficiency in speaking. Another activity was language analysis, in which students analyzed tenses that used in the story by games. The researcher used a magic box to call students randomly to answer the question. Students were required to underline verbs that were used in the text of audio books, and then, students and teacher analyzed the tenses together. Language analysis is good to provide students' cognitive ability (Brown, 2006). The researcher gave reflection and feedback at the end of each treatment. The researcher reflected by asking what students had learned today, students' feeling during the activities, and what they want for next meeting. The researcher also gave feedback by reviewing and concluding the material. In the last section, the researcher motivated the students to improve their listening skill. This step was beneficial to solve students' problem in listening (Brown, 2006).

During the treatments using audio books, students showed an indication of rising performance. It could be seen when students were asked to complete the task

which was a part of the treatments to monitor students' progress. In the treatments, after listening to audio books, students were required to discuss the main ideas, detail information, and generic structure of audio books. During the discussion, the researcher observed that there were some students asked some word in the text. Meanwhile, other group used digital dictionary in their notebook. Almost all groups showed an engaging group discussion. In presentation section, almost all students used *Bahasa Indonesia*. Although the explanation was given in very short explanation, most of students showed a considerable comprehension about the story.

The next treatment was analyzing tenses. In this section, students played a game, which required them to find out verbs used in the story. In this exercise, more than half students could not determine the correct verb used in the narrative text. Some of them also found problems in pronunciation. Finally, in last treatment, the researcher repeated all exercises including identifying general ideas and detailed information, generic structure, and tenses by games. The result revealed that students had better performance in the last meeting than previous meetings.

By seeing students' performance in the last treatment, the researcher concluded that students had some improvement in every treatment. First, students' knowledge of vocabulary improved. It can be seen from the decreasing of students' mistakes in the last exercises. This result was in line with Carbegue and Harris (1996) who stated that audio books stimulate vocabulary because students have an opportunity to hear and see the word at the same times. It was an effective approach in enriching vocabularies. Another improvement was on students' fluency. Students minimized their mistakes in pronunciation in each meeting. However, most of them still hard to pronounce accurately though their best performance was made in the last

meeting. This finding was in line with those of Alcantud and Gregori (2013) and Cardillo et al. (2007) who argued that audio books increased students' fluency. It indicated that audio books improved students' listening skill.

Discussion of hypothesis. The alternative hypothesis was accepted in this research. Based on findings, the result showed that T-value was higher than T-table, in which T-value score was 5,416 while T-table score was 2,064. It meant that the alternative hypothesis was accepted and null hypothesis was rejected. In other words, there is a significant difference between a new condition and previous condition of students' listening skill after they were taught by using audio books.

Audio books had a large effect toward students' listening performance. The researcher analyzed how big audio books affect students' listening using effect size. The research found that r = 0,74. It revealed that the effect was in large effect. It meant that the use of audio books in improving students' listening skill of ICT class at Muhammadiyah 1 Yogyakarta was effective. Based on the result, audio books can be an effective tool to improve students' listening skill in the classroom.