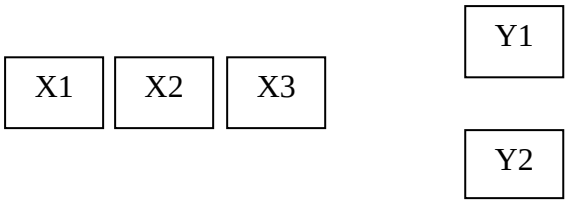
III. RESEARCH METHOD

This chapter illustrates how the research was implemented; what design of the research is, who the population and the sample are, and how the data were collected. It also covers the validity and realibility of the instrument, scoring system, research procedures, data analysis, and hypothesis testing.

3.1 Research Design

This research is quantitative by design. The writer used ex post facto design. In this research, the researcher used Independent t-test study, which is one of the kinds of ex-post facto design. The t- test is probably the most widely used statistical test for the comparison of two means. The t-test is used to compare means between two different groups and is taken in a different situation.(Setiyadi,169: 2011)

The design of this research could be decribed as follows:



X1 : Metacognitive Strategies' achievement

X2 : Cognitive Strategies' achievement

X3 : Social Strategies' achievement

Y1 : Successful learners

Y2 : Unsuccessful learners

(Primary Data)

Meanwhile, in the data collecting, the researcher gave a listening test first in order to see the students' listening comprehension ability. Having done the listening test, the students were distributed the questionnaire in order to know the learning strategies employed by the language learners in listening comprehension and for grouping them. Then, the researcher grouped the learners again into successful and unsuccessful learners from their listening achievement and compared the mean among all variables.

3.2 Population and Sample

3.2.1 Population

The population of this research is the second grade of SMA Negeri 14 Bandar Lampung in academic year 2013/2014. There are six classes of the second grade in that school. The number of the students of each class is about 36 students.

3.2.2 Sample

The sample was taken through probability sampling by using simple random sampling, where every individual in population has a chance to be chosen as sample. For this research, the researcher chose one class by using these procedures :

- The researcher collected the data based on the students' list.
- The researcher wrote down the six names of the classes in the rolled papers and put it into a bottle.
- The bottle was shaken and poured until one rolled paper came out.
- Finally, the rolled paper that came out was XI IPA 3.

3.3 Data Collecting Technique

To collect the data, the researcher uses the following techniques:

1. Administering the listening test

   Listening test is one of objective tests that is used to measure students' listening comprehension. Listening comprehension test consists of 40 items, with four options each (A, B, C,and D)

2. Administering the questionnaire

   The questionnaire is a list of statements and questions that are to be answered by the students to measure students' use of learning strategies in listening comprehension.

3.4 Research Instrument

In this present study, the researcher used two kinds of research instruments. They are language questionnaire and listening test. Research instrument is necessary and play important role in a research. Research instrument is the generic term that researchers use for a measurement device. Below is the discussion about the questionnaire and listening test used in this present study.

3.4.1 The Questionnaire

The first instrument used in this research is the questionnaire. Since this study concerns on the students'learning strategies in listening, the researcher used Language Learning Strategies Questionnaire (LLSQ) in Listening proposed by Setiyadi to assess L2 sudents ' learning strategies in listening. The questionnaire consists of

20 items where each of them refers to cognitive strategies, metacognitive strategies, and social strategies. Items 1-11aremetacognitive strategies, 12-18are cognitive strategies, and 19-20 are social strategies. The Likert Scale was used by the researcher in this research where each item has five alternative answers started from 1, 2, 3, 4, and 5.

Below is the list of statements dealing with the alternative scored:

1 = never or almost never true of me;

2 = usually not true of me;

3 = somewhat true of me;

4 = usually true of me;

5 = always or almost true of me.

No.	Questions	1	2	3	4	5
1.	I try to guess what somebody is saying by using grammatical rules.					
2.	I learn English by watching English TV programs.					
3.	I learn English by listening to English songs or other listening scripts.					
4.	I try to understand what somebody is saying by translating into Indonesian.					
5.	I draw an image or picture of the word in order to remember the word.					
6.	I connect the pronunciation of the word with the Indonesian word which has a similar sound.					
7.	I concentrate on the grammar rather than on a communication.					
8.	I try to understand the idea by referring to previous experiences I have had.					
9.	I try to guess by using a word(s) that is familiar to me.					
10.	In Listening, I take notes to remember ideas.					
11.	I try to understand every individual word to understand the passage.					
12.	I listen to what I say to practice my listening skill.					
13.	Before practicing my listening skill, I prepare a topic, pronunciation or grammatical rules which give me the greatest trouble.					
14.	I try to remember a sentence(s) spoken face-to-face on cassettes and analyze them by myself.					

15.	After a listening practice, I check and recheck my understanding.					
16.	I correct the mistake that I produce orally.					
17.	I try to be aware of which sounds give the greatest trouble. In this way I can pay special attention to them while I listen and practice.					
18.	If I cannot understand what somebody is saying, I ask him/her to slow down or say it again.					
19.	Listening to what somebody is saying improves my listening skill.					
20.	In a group discussion, my listening skill is improved.					

Adapted from Language Learning Strategies Questionnaire (LLSQ) proposed by Setiyadi

3.4.2. Listening Test

The second instrument is listening test. It is a series of questions that was given to the students in order to measure the students' listening ability in understanding the text they would hear.

3.5 Criteria of Good Test

In this research, to prove whether the test has good quality, it must be tried out first. A listening test will be said have a good quality if it has good validity, reliability, level of difficulty and discrimination power. The students' strategies questionnaire could also be called as a good test if it has good validity and reliability.

3.6 Validity of the Instrument

Validity is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. It is rare, if nearly impossible, that an instrument be 100% valid, so validity is generally measured in degrees. As a process, validation involves collecting and analyzing data to assess the accuracy of an instrument. There are numerous statistical tests and measures to assess the validity of quantitative instruments. The discussion below focuses on content and construct validity of the two instruments; the questionnaire and the listening test.

3.6.1 The Validity of the Questionnaire

The validity of questionnaire is also measured to find if the components are proportionally suitable and related to the relevant theories of students' learning strategies. According to Hatch and Farhady (1978) there are least two validity should be fulfilled; content and construct validity. Since the questionnaire was adopted from LLSQ constructed by Setiyadi, the researcher considered that the construct validity of the questionnaire has been standardized. Therefore the researcher measured the content validity only. The following table described the aspects of learning strategies used by the L2 students based in listening developed by Setiyadi.

Table 1. Specification Table of Language Learning Strategies Questionnaire

Aspects of Questionnaire	Number of items
Metacognitive strategies	1-11
Cognitive strategies	12-17
Social strategies	18-20

It can be seen from the table above that all the aspects oflearning strategies inlistening relate to the theories of learning strategies classification (*metacognitive, cognitive, and social strategies*). The construct and content validity of this questionnaire was proved since the researcher had asked three raters to analyze each indicator.

3.6.2 The Validity of the Listening Test

Validity is a matter of relevance; it means that the test measures what is claimed to measure. To measure whether the test has a good validity, it can be analyzed from its content validity and construct validity. Content validity is concerned whether the test is sufficiently representative for the rest of test or not. While construct validity focuses on the relationship between indicators within the test.

Table 2 : Specification of Listening Test

No.	Macro aspects of listening	Item	Percentage
1	Determing main idea	5	12.5 %
2	Finding specific information	15	37.5%
3	Inference	10	25 %
4	Vocabulary	10	25%
Total		40	100%

Since the writer put focus on macro skills, the item test would be the macro aspects of listening which consists of determining main idea, finding specific information, inference, and vocabulary. Those macro skills aspect were classified by Brown (2007).

3.7 The Reliability of the Instruments

Reliability can be called as a consistency. A good instrument is an instrument which consistently measures what it is intended to measure. In other words, a good instrument should have a good reliability. It is not possible to calculate reliability; however, there are four general estimators can be used in the research.

a. *Inter-Rater/Observer Reliability*: The degree to which different raters/observers give consistent answers or estimates.

b. *Test-Retest Reliability*: The consistency of a measure evaluated over time.

c. *Parallel-Forms Reliability:* The reliability of two tests constructed the same way, from the same content.

d. *Internal Consistency Reliability:* The consistency of results across items, often measured with Cronbach's Alpha.

The discussion below focuses on the measurement of questionnaire reliability by using Cronbach's Alpha.

3.7.1 The Reliability of the Questionnaire

The researcher collected the data by using the quantitative one. First of all, the result of questionnaire was scored based on Likert Scale. The score ranges from 1-5. To make sure that the data gathers from the questionnaire is reliable, the researcher used reliability analysis based on Cronbach Alpha Coefficient of SPSS for window. Cronbach Alpha Coefficient is the most common used to measure the consistency among indicators in the questionnaire which was counted based on the correlation between each items. The Alpha ranges from 0. to 1. The higher alpha, the more reliable the items of the questionnaire (Setiyadi,2006).

George and Mallery (2009) in 'SPSS for Windows Step by Step: A Simple Study Guide and Reference, 17.0' have a suggestion in evaluating the Alpha Cronbach coefficient:

> 0.9 = very high reliability

> 0.8 = high reliability

> 0.7 = medium reliability

> 0.6 = low reliability

> 0.5 = very low reliability

3.7.2. The Reliability of Listening Test

Reliability of the test can be defined as the extent to which a test produces consistent result when it is administrated under similar conditions (Hatch and Farhady, 1982:243). In this research, the researcher used *test retest* method by using *Pearson Product Moment Formula* of SPSS 19 to measure the reliability of the test. The researcher distributed the same listening tests two times i.e. on May 3rd and 5th 014.

3.8 Level of Difficulty

Level of difficulty is related to how easy or difficult the item is from point of view of the students who take the test. To know the level of difficulty, the researcher used the following formula:

$$LD = \frac{R}{N}$$

Where:

LD: Level of difficulty

R: The number of students who answer correctly

N: The total number of students following the test

The criteria are:

<0.30 = difficult

0.30-0.70 = average

<0.70 = easy (Shohamy, 1985:79)

3.9 Discrimination Power

The discrimination power refers to the extent to which the item differentiates between high and low level students on the test. A good item according to the criteria is one which good students will do well and bad students will fail. To know the discrimination power of the test, the formula that was used:

$$DP = \frac{U - L}{\frac{1}{2}N}$$

Where:

DP: Discrimination power

U: The proportion of upper group students

L: The proportion of lower group students

N: Total number of the students

The criteria are:

0.00 – 0.20 = poor

0.21 – 0.40 = satisfied

0.41 – 0.70 = good

0.71 – 1.00 = excellent

(Negative) = bad items (should be omitted)

(Heaton, 1975: 182)

3.10 Treatment of the Data

There are three underlying assumptions that need to be fulfilled if we are going to analyze the data by using Independent Group T-test, we need to consider these followings.

1. The data is interval or ratio.
2. The data is taken from random sample in a population.
3. The data is distributed normally.

(Setiyadi, 2006:170)

Therefore, the writer used the following procedures to treat the data:

1. Normality Test

The normality test was used to measure whether the data from students score were normally distributed or not. The writer used SPSS 19 to analyze the data. The hypothesis for the normality test are as follow:

H_0 : the data is not distributed normally

H_1 : the data is distributed normally

The criteria for the hypothesis is H_1 is accepted if sign > α, with the level of significance 0.05.

3.11. Research Procedures

In doing the research, the researcher used procedures as follows:

1. Determining the subject of the research

   In determining the sample, the researcher uses simple probability sampling, by using dice.This technique will be used because there is no priority class or in other words those six classes have the same chance to be chosen as the research subject. The researcher choosesone class out of six classes of grade XIstudents of SMA Negeri 14 Bandar Lampung as the research subject. The class consists about 36students.

2. Determining the try out class of the research

   Similar to the subject of the research explained before, the researcher will use simple random probability sampling in choosing one class for being the try out class. It is important to try out the instrument first in order to find out its content and construct validity, reliability, discrimination power, and level of difficulty.

3. Preparing the Instruments

   In this research, the listening test is about narrative text as stated on the curriculum (KTSP). The questionnaire used is LLSQ proposed by Setiyadi.

4. Conducting Try Out

   Try out is conducted to measure the reliability of instruments. The aim of try out is to know the quality of the test used as the instrument of the research, and determine which item should be revised. This research uses the result of the try out of listening test to measure the level of difficulty and discrimination power, and to find out the validity and reliability.

5. Administering the Listening Test

   The Listening test was administered to measure the students' ability in listening comprehension. The listening test is in the form of the recorded text and then the students are required to answer the 40 questions provided in the paper related to the text they heard. Each item has 4 options of answer (A, B, C, D). The listening test will be heard two times in 90 minutes.

6. Administering the Questionnaire

   The Questionnaire –in this case LLSQ items-was administered to measure the learning strategies used by the students in listening. The items of the questionnaire are in the form of limited statements which have range 1 to 5, explaining from never to always.

7. Analyzing the Data

   After conducting the test to the students, the researcher analyzed the data. The data were analyzed by using SPSS 19 to investigate whether there is any significant correlation between students' learning strategies and students' listening comprehension and to find out which strategies frequently used by the students.

8. Making a Report and Discussion of Findings

   After having gained all the data, the researcher made a report and discussion on findings of the correlation between students' learning strategies and students' listening comprehension.

3.12. Data Analysis

This research has dependent variable i.e. is variable that appears because of the independent variables and independent variable which is varied variable that is not affected by other variables. Learning strategies is the independent variable because the researcher assumes that language learning strategies are not affected by other variables. The researcher also divides the strategies into three elements namely; cognitive strategies, metacognitive strategies, and social strategies. The data from listening test is classified as the dependent variable because the ability is influenced by learning strategies, and is divided into two groups namely successful and unsuccessful.

In analyzing the data, the researcher used t- test study. It is used to compare the mean between successful and unsuccessful learners in using different learning strategies in English listening comprehension ability. The result of the students' achievement in listening comprehension was analyzed by using Independent Group T-test of SPSS for windows version in 19.0.

3.13. Hypothesis Testing

To conclude a possible difference between successful and unsuccessful learners in using different strategies in English listening ability, the researcher used the criterion of the hypothesis acceptance. To determine whether the first hypothesis is accepted or rejected, the following criteria for acceptance:

$H_0 = t_{value} < t_{table}$

$H_1 = t_{value} > t_{table}$

Notes:

H_0 : There is no significant difference between successful and unsuccessful learners in using different strategies in English listening ability. We can accept this hypothesis if t_{value} is lower than t_{table}.

H_1 : There is a significant difference between successful and unsuccessful learners in using different strategies in English listening ability. We can accept this hypothesis if t_{value} was higher than t_{table}.