# IMPROVING STUDENTS ABILITY IN SPEAKING DESCRIPTIVE TEXT BY USING MIND MAPPING

# Fitra Murni AR **SMAN 3 Padang Panjang**

#### Abstract

This classroom action research was conducted to see the improvement of students' ability in speaking descriptive text by using mind mapping. The research was done at the first year 7 (X7) SMAN 3 Padang Panjang in the 2015/2016 academic year in two cycles. There were twenty nine students in this class. The data were collected through pre-test, formative test and observation. The students were led to speak descriptive text by using mind mapping and guided to speak it well. Through observation and formative test, it seemed that the students liked and enjoyed speaking descriptive text. It could be seen from their achievement improved from cycle to cycle and their test results. The improvement got was 61 % in the first cycle and 78 % in the second cycle. In conclusion, the students' speaking ability can be improved if they know and understand what and how to speak and the use of the appropriate teaching aids is very important. One of the teaching aids that can be used to improve students' ability in speaking descriptive text is mind mapping. It is suggested to English teachers to use mind mapping in teaching speaking descriptive text.

**Keywords:** speaking, descriptive text, mind mapping

# A. INTRODUCTION

Speaking is one of English skills that are asked to be able to do. It is as important as the other three skills like reading, writing and listening. Moreover, speaking is a barometer to see how well someone in understanding English. By speaking, it is seen clearly how well is the speaker's grammar, pronunciation, vocabulary, and ability in comprehending a message and in delivering ideas.

Learning speaking is not easy, however, especially for foreign students. Shumin (in Suryani Desi, 2011:1) says that speaking is a language is especially difficult for foreign language learners because effective oral communication requires the ability to use the language appropriately in social interactions. He adds that learning to speak a foreign language requires more than knowing its grammatical and semantic rules. Learners must also get the knowledge of how native speakers use the language. Variety in communication involves not only verbal communication but also paralinguistic elements of speech such as pitch, stress, and intonation. In addition, there are non-linguistic elements such as gesture and body language/posture, facial expression, and so on.

> **ELTAR** ISSN 2614-1108

Students should be given more chance to speak. Harmer (in Suryani Desi, 2011:1) states there are three main reasons why the students have to speak in the classroom. First, speaking activities provide trial chances. Second, speaking tasks provide feedback for teacher and students. Third, the more students practice the elements of language, the better it will be. Therefore, it can be concluded that speaking plays a crucial part to master English.

Speaking should be mastered by the students. To come to an enough skill, each student has to be active in speaking class. They are taught to have involved optimally in speaking class. All the students should be able to achieve sufficient speaking skill. The students are hoped to have good skill to express their feeling or ideas in speaking.

In this case, the researcher will apply descriptive texts for the research. Descriptive texts are learnt by the first year students in the second semester. They are still new for them. From the learning process done, it was discovered that students are not able to speak. Speaking is such a hard work to do for the students. They are difficult to express their feeling or ideas in speaking. They do not know what and how to say. They find speaking very boring. They are not free to speak. It seems that they are memorizing. It is not effective. Various attempts have been done to improve students' speaking skill or ability, but they do not work in other word, students' speaking ability does not improve.

It was found that students still find difficulties to speak a descriptive text they have known. Students still have some problems, such as, choice of words (vocabulary), the use of language features (grammar), class of words, pronunciation and fluency. Because of that the students were afraid of making mistakes while speaking. Even, they were not brave to speak in front of the class.

Based on the pre-test done, the researcher got the data of speaking skill. It can be concluded that there was a problem in developing the students' speaking skill in the grade X 7. The problem should be overcome soon. If not, the purpose of standard competence and basic competence cannot be reached or unsuccessful. Therefore, the researcher tried to find a way that could help the students easy to speak or express their ideas. The way found by the researcher was using a media. Meyer (2010) states teaching English to speakers of other language requires more than just an understanding of the grammar or perfect pronunciation. Using

specific methods and appropriate media, English teachers can have better interact with their students and help them achieve their language learning goals.

The researcher finally found an appropriate media called "mind mapping". The researcher believed that mind mapping was an effective media because the mind mapping gave the students inspiration to speak directly. In other words by making mind mapping, the students could speak naturally. The mind mapping could make the students easy to speak. The mind mapping could guide the students to speak. The students could see the real pictures that were described and there were some words which helped and guided them to speak.

In this case, the researcher considered that using mind mapping was useful and helpful in improving the students' speaking ability especially in descriptive texts. As stated in Tony Buzan. retrieved from http://www.tonybuzan.com/about/mindmapping/ on 10 October 2013 at 3 am, a mind mapping is a powerful graphic technique which provides a universal key to unlock the potential of the brain. It harnesses the full range of cortical skills-word, image, number, logic, rhythm, color and spatial awareness- in a single, uniquely powerful manner. In so doing, it gives you freedom to roam the infinite expanses of your brain. The Mind mapping can be applied to every aspect of life where improved learning and clearer thinking will enhance human performance. When you use mind mapping on daily basis, you will find that your life becomes more productive, fulfilled, and successful on every level. There are no limits to the number of thoughts, ideas and connections that your brain can make, which means that there are no limits to the different ways you can use mind mapping to help you. Pandley (2004: 45) also says that mind mapping is used to build students' knowledge in studying systematically. In other word, it is a technique to improve students' knowledge in mastering a concept of a subject. Furthermore, mind mapping is very meaningful and helpful. Thus, the students had a lot of ideas and opinions to speak. They were able to speak chronologically based on the correct arrangement of the mind mapping they made reflecting a sequence of the sentences, for example, which sentence came first, second, third, and fourth from the key words of mind mapping. They tried to combine the sentences from words in mind mapping. In conclusion, mind mapping could enhance the students'

ability in speaking a descriptive text at the first year class 7 (X7). It can be said that the students' ability in speaking descriptive increases.

By using the mind mapping, it is believed that what is written on the picture with is able to enhance the students' ability in speaking a descriptive text. Through mind mapping, the students can speak easily and well. The students will speak better if they know what and how to speak. Enjoyable and challenging teaching aids should be prepared well, so that the students' can develop their ideas of what and how to speak better, orderly and systematically.

#### B. Identification of the Problem

The first year class 7 (X7) students of SMAN 3 Padang Panjang are difficult to speak a descriptive text. They look doubtful in speaking a descriptive text. This is caused the students do not know what and how to speak. They tend to memorize. For example, when the students are asked to speak a descriptive text, they look confused and even they are not able to speak. Most of them do not know how to speak a descriptive text they have. This condition makes the students find English is complicated, boring and frightening. Indeed, they feel that English is not interesting. As a result of this condition, what the curriculum wants the students to get is unsuccessful.

#### C. Focus of the Research

Based on the above identification of the problems, the researcher needs to clarify the research focus. The problem to be researched is an effort to enhance students' ability in speaking a descriptive text.

#### D. Theoretical Review

Speaking is an interactive process of constructing meaning that involves producing, receiving and processing information (Brown, 1994: 24). Furthermore, Herbert in Richard and Renandya (2002: 201) says that speaking usually involves two or more people using language for interactional and transactional purpose. It means that there are at least one speaker and one listener in this activity. When the speaker speaks, she/he expresses her/his attitudes, feelings and interests towards the topic being talked with the listener. Thus, it may be concluded that people as social creatures tend to interact each other in order to share information, ideas/opinion, and express feelings through speaking skill.

Further, Nelasco (1987: 42) explains what people actually do when they are speaking. They are as follows:

- a) They share meaningful information
- b) They take turn
- c) They use body language and gesture to emphasize
- d) They use stress and intonation

In other words, people try hard to convey their feeling, ideas and arguments

by using non verbal language, such as: gesture, body language, stress and intonation.

Finoocchiaro and Bonomo (1973:32) say that there are 6 important things considered in speaking:

- 1. To decide what speaker wants to say
- 2. To select word that falls into the pattern that they are going to use
- 3. To select word that falls into the pattern conveying the meaning
- 4. To use correct arrangements of words
- 5. To make sure the appropriate situation
- 6. To place tongue and lips in certain position to produce sounds

It means that there are some aspects involved in speaking, such as: content, vocabulary, grammar, pronunciation, and culture. Those aspects should be well mastered in order to have good speaking ability.

In speaking people involve and interact. They construct meanings, use language for interaction and transaction, share information and take turn. Even speakers will use strategies in communicating to emphasize certain expressions such as, use stress, intonation, body language and gesture. Even, speakers have to consider the elements of language such as, select word, use correct arrangement of words, place tongue and lips in the correct position, to choose the topic and situation correctly. It concludes that, doing speaking is interesting because the speakers are involved creatively, actively and communicatively.

It is believed that speaking is the hardest kill for students to do. The problem faced by the students are being afraid of making mistakes, pronouncing words, expressing ideas, and speaking fluently and being laughed.

To face this problem, mind mapping is an effective way. It is believed that ideas can be developed. The students can speak easily as well.

Mind mapping is a useful technique that helps you learn more effectively, improves the way that you record information, and supports and enhances creative problem solving. Mind mapping is popularized by author and consultant, Tony Buzan. stated in mind tools article, retrieved from www.mindtools.com/pages/article/new on 15 September 2013 at 10 pm, mind mapping is an extremely effective method of taking notes. Not only do mind maps show facts, they also show the overall structure of a subject and the relative importance of individual parts of it. They help you to associate ideas, think creatively, and make connections that you might not otherwise make. Mind mapping is useful for summarizing information, for consolidating large chunks of information, for making connections, and for creative problem solving. As also said in Quantum Teaching, mind mapping is a creative writing method which makes us easy to remember a lot of information. Damasio (in Quantum teaching, 1994) says that when brain remembers information, it is usually done in colorful picture, symbol, sound and feeling. Thus, good mind mapping is a mind mapping which is colorful and uses picture and symbol. It looks art. Tony Buzan, retrieved form <a href="http://www.tonybuzan.com/about/mind-mapping/">http://www.tonybuzan.com/about/mind-mapping/</a> on 10 September 2013 at 3 pm, a mind map is a powerful graphic technique which provides a universal key to unlock the potential of the brain. Buzan says mind maps are so easy to do and so natural because they just need blank unlined paper, colored pens and pencils, your brain and your imagination.

Seven steps to make a mind map:

- 1. Start in the center of a blank page turned sideways.
- 2. Use an image or picture for your central idea.
- 3. Use colors throughout.
- 4. Connect your main branches
- 5. Make your branches curved rather than straight-line
- 6. Use one key word per line
- 7. Use image throughout.

## Conceptual Framework

Initial condition that has been identified revealed that the learning activities did not show students' ability in speaking. The students had low speaking ability. Based on this fact, a series of planning and action should be done to improve students' ability in speaking a descriptive text. There were several activities done at the planning stage namely designing lesson plan, preparing teaching aid (mind mapping), and designing observation instruments. Then, the implementation (action) was carried out in cycles. This action research was planned in two cycles.

#### Cycle 1

# 1. Planning

The researcher planned the activities on applying mind mapping in teaching speaking skill. Before coming to the classroom, the researcher did the following things:

- Preparing the lesson plan of teaching speaking by mind mapping.
- Preparing mind mapping teaching speaking.
- Preparing a research instrument ( observation sheets, field note, a test of speaking)
- Arranging the research schedule.

#### 2. Acting

In this phase, the researcher did the action by applying the scenarios of teaching that had been designed in planning phase. The researcher also collected the data while the process of action was going on. The researcher also gave final test at the end of cycle of action.

#### 3. Observing

While doing the action, the researcher and the observer observed the teaching and learning process, the activities done by the students and the teacher herself.

The researcher took field note for each step in teaching and learning process and the observer filled out the observation checklist. Taking photographs and video are also done by the researcher with other data resources. This was to see the classroom events and interactions.

# Reflecting

In this last phase, the researcher discussed and interpreted the data with the observer. There were two kinds of data: quantitative (speaking test) and qualitative data (observation). The researcher and observer analyzed both data and

make the conclusion. Finally, the researcher and observer reflected and interpreted the result and discussed the weakness of the process to make an improvement for the second cycle.

# Cycle 2

In cycle two, the activities were rather the same with the first cycle, but there were some emphasis based on the revised plan.

Since there were several things had to be done to deal with in enhancing students' speaking skill, cycle 1 focused on two things. First, students chose a favorite person or an idol and asked to get his/her picture. Then they are asked to describe the idol by using mind mapping. In other words, they are asked to write some important words of the idol. Second, students are asked to describe the idol by using their own sentences. Teaching and learning processes during cycle 1 were observed as a reflection for the second cycle. Based on the result of cycle 1, it was revised the plan for action at cycle 2.

Besides reviewing cycle 1, cycle 2 elaborated in details about mind mapping. Students were asked to say a sentence (Simple present) from the picture of the idol or the mind mapping and then discuss with other students.

Based on the result, it is believed that having passed the two cycles, students are expected to have mastered the correct tense for descriptive text (Simple Present Tense). But, in speaking a descriptive there is another important thing necessary namely generic structure of a descriptive text. So, there are two things are emphasized at cycle 2. First, identifying the generic structure of a descriptive text and second speaking a descriptive text by using mind mapping freely.

#### RESEARCH METHODOLOGY

#### The subject of the research 1.

The subject of this research is the first year class 7 (X7) of SMAN 3 Padang Panjang, West Sumatera. There were twenty seven students, 11 males and 16 females. This class was chosen because of the following reasons: Firstly, the students in this class do not have good enough ability in speaking. This can be seen from their ways in learning English and their English marks. Secondly, the students are not able to speak in good ways. They are afraid of speaking or express their ideas. Thirdly, English class begins at unfortunate periods, namely

on Friday, after "Kultum" in the school yard and the last period on Monday. These periods make the students too tired to study and hard to concentrate their mind on studying. Fourthly, the students in this class are more interested in sport and art class since they believe that they are more interesting. Therefore, they are not interested enough in English.

#### 2. Research Setting

This classroom research was done at SMAN 3 Padang Panjang, West Sumatera.

### 3. Research Design

The first thing to do was to give pre-test to the students. The students were asked to speak a descriptive text that they have known. The result of these tests was analyzed, and these become input for designing the learning process at cycle 1. Next, this research was designed to pass through two cycles (cycle 1, cycle 2). Each cycle consisted of three meetings.

Because the title of this research is "Enhancing students' ability in speaking a descriptive text by using mind mapping at the first year class 7 (X7) of SMA N 3 Padang Panjang", there were a number of things which should be provided. First, mind mapping which was made by the students contained some important words. Besides, a picture described in descriptive text was also provided. The mind mapping provided was given to help the students understand and speak a descriptive text. These are some activities done by the students at each cycle.

# Cycle 1

To create a good speaking with received English, the students need to be provided with appropriate choice of words, class of words, and also grammar. The first cycle is focused on the mastery these components. It is started by asking the students to speak a descriptive based on the mind mapping. Then, the students will do various and challenging tasks related to the picture they had and mind mapping they made. Finally, the students are asked to speak a descriptive.

This cycle would emphasize on the grammar (tense) used in speaking a descriptive. It is known that to speak a descriptive is quite difficult. In speaking a descriptive, Simple Present tense is mostly used.

# Cycle 2

After passing the first cycle, the students are expected to master language components and tense (grammar) used to speak a descriptive text by applying the appropriate choice of words, tense / language features (Simple present tense) and class of words.

In this cycle, what has been done at cycle 1 is reviewed. Cycle 2 would emphasize on the language component (the generic structure of a descriptive text). In this cycle, the students are hoped to know what to speak and how to speak a descriptive. The students were given various descriptive texts and asked them to identify the generic structure of the text. At the end of cycle 2, the students were given a test by asking them to speak a descriptive by using mind mapping they made. This test was to see if any enhancement in the students' ability in speaking a descriptive by using the teaching aid," mind mapping".

#### 4. Research Instrument

Speaking test was used to identify students' speaking skill. The researcher used speaking rubric scoring based on Harris (1969: 84). There are five components:

- 1) Content
- 2) Pronunciation
- 3) Grammar/structure
- 4) Fluency
- 5) Vocabulary

# **Speaking Instrument**

#### Note:

Con : content

Pro : Pronunciation

**Gram:** grammar (language rules used)

Flue : fluency

**Vocab : vocabulary (choice of words)** 

Besides using the above instrument, the students' activities in speaking were also observed by arranging paragraphs to produce a good descriptive text.

The observation sheets were used to see direct activities done in teaching and learning process. To know about any progress done. This observation was also

used to know the speaking skill of the students and classroom activities by using mind mapping.

Because the objective of this research was to enhancing the students' ability in speaking a descriptive, the students' activities in speaking were observed. These things were observed the students' activities in speaking a descriptive by using mind mapping, how to start (a general classification) and what to be had in general classification. The students had to be able to speak a descriptive in good order based on the mind mapping they made.

**For example**: I have an Idol. His name is Bryan Adam.

The next things observed were the students' activities to continue their speaking a descriptive and do the next step (description). How the students relate the first paragraph to the next paragraph by mind mapping.

For example: He is well-dressed and very neat.

## 5. Data Analysis

There were several things to be considered concerning data analysis. The data that were analyzed were the result of pre-test, and the result of formative test (the test given at the end of each cycle). The analysis used percentage.

Then, the result of the mean score of the students' speaking ability was interpreted to the speaking level based on Harris (1969: 134)

| NO | RANK OF QUALITIES | RATING QUALITIES |
|----|-------------------|------------------|
| 1. | 80% - 100%        | EXCELLENT        |
| 2. | 60% - 79%         | GOOD             |
| 3. | 50% - 59%         | FAIR             |
| 4. | 0% - 49%          | POOR             |

### G. RESEARCH FINDINGS AND DISCUSSION

#### 1. Research Setting Description

The first condition when the action done showed that most students of class X7 could not speak a descriptive text. They did not know how to speak a descriptive well. They got serious problems when they were asked to speak a descriptive even a single sentence speaking a descriptive, for example: David Beckhum *has* a sharp nose.

The second, the students had low motivation in speaking a descriptive text. It seemed that they did not want to speak a descriptive text they have known. They found speaking a difficult or hard work. They did not know how to speak a descriptive and what to speak a descriptive. They were bored and incapable of speaking.

# 2. Research Findings

Using mind mapping as a teaching media can make learning activities interesting and easy to students. Elaborating what is the picture and stated in the mind mapping will make students eager to speak a descriptive text. Their eagerness can be seen from the test result of each cycle.

The students began to speak a descriptive what they had although at first they could not speak in a sentence. This ability gradually improved from cycle to cycle. This improvement can be seen from the following table.

| NO | ASPECT            | CYCLE 1 | CYCLE 2 |
|----|-------------------|---------|---------|
| 1. | Content           | 74%     | 80%     |
| 2. | Pronunciation     | 50%     | 75%     |
| 3. | Grammar/structure | 55%     | 75%     |
| 4. | Fluency           | 55%     | 80%     |
| 5  | Vocabulary        | 71%     | 80%     |
|    | Sum               | 305%    | 390%    |
|    | Mean              | 61      | 78      |

### 3. Discussion

It was found that mind mapping could enhance students' ability in speaking a descriptive. Mind mapping could help and encourage students speak a descriptive text they had known. The activities on how to make use of mind mapping in speaking class can be elaborated in the following research cycles. In order to be able to speak a descriptive well, there are several things concerning language competence the students should keep in mind. The most important aspects are content, pronunciation, grammar, fluency and vocabulary. By mastering at least the five aspects, the students are expected to be able to improve their ability to speak a descriptive.

#### Cycle 1

Cycle 1 focused on the students' activities to speak a descriptive based on their mind mapping. The activity started by understanding their own descriptive they had. After understanding their descriptive, the students were asked to draw mind mapping.

It was discovered that the activities could make the students enjoy and encourage them to speak a descriptive text they had. Some students already knew how to speak a descriptive by using mind mapping they drew, such as Bryan Adam is very handsome.

Since speaking is difficult and it needs mastery on several aspects, the improvement from cycle to cycle moves slowly and the learning process should be handled systematically. Cycle 1 showed a slight improvement (61% in average). Pronunciation shows the least improvement because pronunciation is the most complicated aspect among the other four aspects. The students were not used to speaking correct pronunciation. The second one is Grammar. They still found problems in tense used in a descriptive text, for example they used wrong verbs in present, such as, Bryan Adam *have* a sharp nose.

The other aspects (vocabulary, fluency, content) were still in problem. In vocabulary, some of the students still found it hard to do. They were not successful in the choice of words and class of words. He has *smell* ears.

Another aspect was fluency. Even though they had mind mapping, they still looked confused to express their ideas fluently. It seemed that they were still hard to speak a descriptive.

The last aspect was content. This was a problem for most students. Although they could speak a descriptive based on the mind mapping, the result was not successful yet. The content of their descriptive was not satisfying. They could not speak a descriptive in good orders.

In conclusion, at this cycle these problems in speaking a descriptive were discussed in order to make the students realize their mistakes and weakness. They had become motivated to speak well even though some problems still remained in

their mind. They had become aware of their mistakes. All of this improvement could be observed at cycle 1.

#### Cycle 2

Cycle 2 focuses on the use of the correct five aspects (pronunciation, grammar, vocabulary, fluency, and content). When speaking a descriptive, we must use simple present tense (not simple past tense). It was found out that the students did not master simple present tense well, even though they had learnt in the previous semester. The students were exposed by doing some exercises in simple present tense such as, finding an error of each sentence and correct it. For example, Bryan Adam had nice smile. Discussion was done while checking their answers. Then the students and teacher discussed the correct one. It was done to convince the students' understanding in this form of simple present tense. The teacher provided practicing using simple present tense, choice of words, pronunciation, and also the content of a descriptive based on the good generic structure.

This step could make the students aware of their mistakes in applying what they discussed and correct it. They began to speak a descriptive in the correct grammar, the suitable choice of words, the right pronunciation, good content and fluency. By continuous practice, their weaknesses/ mistakes could be solved.

To sum up, cycle 2 brought students some courage and competence to enhance their ability to speak or tell a descriptive. This can be seen from their test result which shows significant improvement (78% in average).

#### H. CONCLUSION AND SUGGESTION

The enhancement of students' ability in speaking a descriptive text so far faces serious problems since the students did not know and understand "what and how to speak a descriptive text". This means that the steps of speaking a descriptive text was not clear enough for the students. The students never got enjoyable and challenging speaking aids. In fact, these problems can be solved by various techniques and media. In other word, the students' ability in speaking a descriptive can be improved by using various technique and media.

One of the media is mind mapping. Mind mapping helps and motivates students to speak especially in speaking a descriptive. Mind mapping is enjoyable and interesting for students. It makes the students understand and know how to express their ideas into speaking. The students know what and how to speak a descriptive well. This aim can be reached if the learning process using mind handled well in accordance with the steps of teaching speaking a mapping is descriptive.

It was revealed that the learning process using mind mapping could enhance students' ability in speaking a descriptive text at the first year class 7 (X7) of SMA N 3 Padang Panjang. It could be seen by data got. The enhancement could be proven and shown by the percentage of their achievement from each cycle. At first, the students found speaking a descriptive text difficult to do. After making mind mapping, the students found that speaking a descriptive text interesting and enjoyable. The students could gradually improve their own ability in speaking, especially in a descriptive text.

This research report can give us a proof that students' language skill can be enhanced from time to time if we know the students' problems. Speaking is one of the skills that have to be enhanced. For that purpose, my suggestions are: First, enhancing students' ability in speaking descriptive should be managed systematically in order that the students know what and how to speak a descriptive text. Second, a collection of teaching aid / media should be available, interesting, enjoyable and fruitful. Third, the ways in teaching speaking a descriptive text should be more various (not monotonous) so that the students have high motivation in the learning process. Speaking tasks should be challenging, interesting, and enjoyable. The last one is students' speaking works should be shown on the class events, so it gives an appreciation to the speakers of the speaking tasks and make them proud of themselves. For other students, they can hear various descriptive texts from various speakers.

### REFERENCES

Brown. Gillian and George Yule. 1999. Teaching the spoken language (The second ed.). Melbourne: Cambridge University Press.

Brown. H. Douglas. 1994. Teaching by Principles – An Interactive Approach to language Pedagogy. New Jersey: Prentice Hall Regents.

Bryne, D. 1983. Teaching English Perspective. London. Longman

Finocchiaro, mary and Michael Bonomo. 1973. The Foreign Language Learner: A Guide for teacher. New York: Regent Publishing Company,Inc.

Harmer. Jeremy. 2001. The practice of English Language Teaching. New York: Longman Publishing.

http://www.tonybuzan.com/about/mind mapping/on100ctober 2013

http://www.mindtools.com/pages/article/new 15 September 2013

http://www.tonybuzan.com/about/mind mapping/on September 2013

Hughes. 1999. Testing for Language Teachers. Cambridge: Cambridge University.

Nelasco. Rab. 1987. Conversation. New York: Oxford University Press.

Suryani Desi, 2011. The effect of Using Real problem Solving on Students' Speaking ability at SMA 3 Padang Panjang, Thesis