THE EFFECT OF FORMAL SCHEMA ON THE STUDENTS' ACHIEVEMENT IN LISTENING COMPREHENSION

SKRIPSI

Submitted In Partial Fulfillment of the Requirements
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ABSTRACT

Pestaria S "The effect of Fomal the Schema on Students' Achievement in Listening Comprehension. Skripsi. English Department, Faculty of Teacher's Training and Education- University of Muhammadiyah Sumatera Utara. Medan 2017.

The objective of this research was to find out the significant effect of Fomal the Schema on Students' Achievement in Listening Comprehension and to find out the students' achievement taught by Schema to students' Lestening Comprehension Achievement. The population of this study was XI students of SMA Pembangunan Nasional Pagar Merbau 2017/2018 academic year that contained two classes: they were XI IPA 1, XI IPA 2. Cluster sampling technique was applied in this research. The sample of this research were IPA 1 and IPA 2. The sample were divided into two group: IPA 1 as experimental class, and IPA 2 as control class. The sample were divided into two group: IPA 1 as experimental class not using by media and IPA 2 as cotrol class was taught without Using Media. The data were acquired by administrating the essay test which was given in pre-test and post-test. After analyzing the data by using t-test formula, it was obtained that t-critical was 4.2 and t-table was 1.99 with $\alpha = 5\%$. It showed that t-critical > t-table (4.2> 1.99) and the degree of freedom (df) was 1.34 and formula df = n1 + n2 – 2 with df = 36 + 36 – 2 = 70. Ho is rejected and Ha is accepted. The hypothesis was accepeted. The result of this study showed that there is significant effect of Using Formal Schema to Students' Listening Comprehension Achievement. The finding of this study showed that there is significant effect of formal schema on the students' achievement in listening comprehension. The students' achievement in listening is good.

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CHAPTER I

INTRODUCTION

A. The Background of The Study

Listening is the most frequently use language skill in everydaylife. The effect of the teaching of english listening directly influences the students' language reception and practical communacative competence. However, listening course is not regarded as important as other courses in some school China and the teaching quality is unsatisfactory. In language teaching, listening comprehension useed to be regarded as a passive skill and listeners were even called as tape-recorders. Such a view on listening fails to account for the interpretations listeners make as they hear the spoken text according to their own porpose, their expectatations and their own store of background knowledge. In school english listening class in China, many teachers just play the tape without presenting necessary hints or background knowledge to students and they usually plunge the students into listening directly without any preparation, which makes listening comprehension difficult. Students are passive receivers in the process of listening. Teachers emphasize decoding, but neglect the role of cognitive faculties of students to ward comprehension. Students seldom have chance to devote their intellegence to listening process.

But now, listening comprehension is treat as an active process. Listeners are thought as active searchers for meaning. When listening, they will use all relevan background knowledge to understand theincoming input. Rumelheart (1980) thinks are role of background knowledge in language comprehension has

been formaliz as schema theory. According to schema theory, comprehending a text is an interactive process between the leaner's background knowledge and the text. And it is suggest that one of the goals of the goals of the goals of the teaching of college English listening is to help students activate their backgrond nowledge and use the knowledge and use the knowledge to understand the new text. Lacking background knowledge can result in all kinds of difficulties. So teachers should help students to improve both their linguistic and non-linguistic knowledge.

Furthemore, there are some types of listening comprehension in academic level. One of them is procedure text. Procedure text is the vast majority of what is read in school and life. For this reason,it is critical that students understand how to listening, analyze ditinguish, syn the size, create, and extend ideas present in procedure texs.

While, procedure text shares certain characteristics with the other types of text, procedure makesits own demands on the reader through the unique use of structure, devices, and conventions. Teachers need to teach students how to read procedure text and how to listening them successfully.

The problem of this reserch came from the real problem in the classroom. Base on the resercher's experience in field teaching practing program (PPL) at the XI grade students of SMA Pembangunan Nasional of the accademic year 2016/2017, at Pagar Merbau Pakam. The resercher found the students had low ability in finding the meaning of words and mentioning the detail information imply in the procedure text. The written test was given by the resercher , it was

found that the students had difficulties in comprehending listening especially in listening procedure text. They could not find the general idea with made them did not understands what the topic explained in that text. There were some factors which influence the students' difficulties in listening comprehension.

Base on the problem above, the researcher would like to help them to solve the problem. It is by using formal schema in learning Listening procedure text. Formal schema presents a conversational style of teaching besed on listening and writing. It is based on the same postulate. It presopposes that some rules applied to one language can be applied to other languages as well. Therefore, in the class organized from the very beginning, students are taught through a series of classroom intructions in the target language. The clear classroom intructions, the use of concreate vocabullary through structure and objects and careful grammar approach represent some of the principles of the formal schema.

Base on the background above, the researcher is interested to choose the tittle " The Effect Of Formal Schema On The Students' Achievement in Listening Comprehension".

B. The Identification of The Problem

The problems of the research are identify as follows :

1. The students have low ability if finding the meaning words.
2. Students find it difficult to understand english in the process of hearing.

C. The Scope and Limitation

The scope of this research in listening comprehension and it is limited on procedure text.

D. The Formulation of The Problem

The problem of this research in formulate as follows :

- Is there any significant effect of formal schema on the students' achievement in listening comprehension.

E. The Objective of the Study

The objective of the research as follows :

- To find out the significant effect of formal schema on the students' listening comprehension achievement.

F. The Significant of the Study

The significances of the research are expect to be useful :

a. Theoretical

The result of this research is hope to give contribution to the listening comprehension teaching especially to the teaching of procedure text.

b. Practical

1. English teachers, as an input to increase their knowledge in teaching listening comprehension especially procedure text.

2. Students' to increase their achievement in listening comprehension especially in procedure text.
3. Other researchers, to provide information for futhe researc about procedure text.

CHAPTER II

REVIEW OF LITERATURE

A. Theoritical Framework

In cluding a research theories are need to explain some concepts and terms applied in research concern. Some terms are used in this research and they need to be theoretically explain.

1. Listening

Listening is more than merely hearing words. Listening is an active process by which students receive, construct meaning from, and respond to spoken and or nonverbal messages (Emmert, 1994). As such, it forms an integral part of the communication process and should not be separated from the other language arts. Listening comprehension complements reading comprehension. Verbally clarifying the spoken message before, during, and after a presentation enhances listening comprehension. Writing, in turn, clarifies and documents the spoken message.

Teachers can help students become effective listeners by making them aware of the different kinds of listening, the different purposes for listening, and the qualities of good listeners. Wolvin and Coakley (1992) identify four different kinds of listening:

Comprehensive (Informational) Listening--Students listen for the content of the message.

Critical (Evaluative) Listening--Students judge the message.

Appreciative (Aesthetic) Listening--Students listen for enjoyment.

Therapeutic (Empathetic) Listening--Students listen to support others but not judge them

Traditionally, secondary schools have concentrated on the comprehensive and critical kinds of listening. Teachers need to provide experiences in all four kinds. For example, listening to literature read, listening to radio plays, and watching films develop appreciative in addition to comprehensive and critical listening. When students provide supportive communication in collaborative groups, they are promoting therapeutic listening. For example, the listening behaviour can show understanding, acceptance, and trust, all of which facilitate communication. Students benefit from exposure to all four types of listening.

Listening is a general purpose in most learning situations. To be effective listeners, however, students need a more specific focus than just attending to what is said. See the following chart which contrasts effective and ineffective listening habits.

1.1 Listening Process

For listening to be effective and meaningful, the *process of listening* should involve the following steps.

1.1.1Hearing

Hearing is the first essential step in the listening process and relates to the sensory perception of sound. The listener further processes the perceived sound. For learning to be effective, hearing needs to be done with attention and concentration.

1.1.2 Filtering

The next step involves sensing and filtering of heard sounds. The heard message is categorized as wanted or unwanted, useful or useless. The unwanted message is discarded. In this step, the sense of judgement of the individual comes into play, that is, the filtering process is subjective and a person chooses to retain what makes sense to him.

1.1.3 Comprehending

The next *level of listening* consists of comprehending or understanding. The listener understands or interprets what the speaker has tried to convey. This activity can be described as absorbing, grasping or assimilating. In order to grasp the meaning of the message, the listener uses his knowledge, experience, perception and cognitive power. The verbal and auditory message is coupled with *non-verbal communication* to understand it.

1.1.4 Remembering

Remembering relates to a process whereby the assimilated message is stored in memory to facilitate future recall. Remembering assumes significance because many times messages received are meant not for immediate consideration but for future use.

1.1.5 Responding

For listening to be complete, a response is important. Responding to a message may take place at the end of the communication, immediately after or later. When it is stored for future use, the response may take place later. However, if there is a need to seek clarification or to empathize with the listener, it may take

place earlier. Responding may also take the form of prodding or prompting in order to show that the message is being received and comprehended.

1.2 Types of listening

Here are six types of listening, starting with basic discrimination of sounds and ending in deep communication.

1.2.1 Discriminative listening

Discriminative listening is the most basic type of listening, whereby the difference between difference sounds is identified. If you cannot hear differences, then you cannot make sense of the meaning that is expressed by such differences.

We learn to discriminate between sounds within our own language early, and later are unable to discriminate between the phonemes of other languages. This is one reason why a person from one country finds it difficult to speak another language perfectly, as they are unable distinguish the subtle sounds that are required in that language.

Likewise, a person who cannot hear the subtleties of emotional variation in another person's voice will be less likely to be able to discern the emotions the other person is experiencing.

Listening is a visual as well as auditory act, as we communicate much through *body language*. We thus also need to be able to discriminate between muscle and skeletal movements that signify different meanings.

1.2.2 Comprehension listening

The next step beyond discriminating between different sound and sights is to make sense of them. To comprehend the meaning requires first having a lexicon of words at our fingertips and also all rules of grammar and syntax by which we can understand what others are saying.

The same is true, of course, for the visual components of communication, and an understanding of body language helps us understand what the other person is really meaning.

In communication, some words are more important and some less so, and comprehension often benefits from extraction of key facts and items from a long spiel. Comprehension listening is also known as *content listening*, *informative listening* and *full listening*.

1.2.3 Critical listening

Critical listening is listening in order to evaluate and judge, forming opinion about what is being said. Judgment includes assessing strengths and weaknesses, agreement and approval.

This form of listening requires significant real-time cognitive effort as the listener analyzes what is being said, relating it to existing knowledge and rules, whilst simultaneously listening to the ongoing words from the speaker.

1.2.4 Biased listening

Biased listening happens when the person hears only what they want to hear, typically misinterpreting what the other person says based on

the *stereotypes* and other biases that they have. Such biased listening is often very evaluative in nature.

1.2.5 Evaluative Listening

In evaluative listening, or *critical listening*, we make judgments about what the other person is saying. We seek to assess the truth of what is being said. We also judge what they say against our *values*, assessing them as good or bad, worthy or unworthy.

Evaluative listening is particularly pertinent when the other person is trying to persuade us, perhaps to change our behavior and maybe even to change our *beliefs*. Within this, we also discriminate between subtleties of language and comprehend the inner meaning of what is said. Typically also we weigh up the pros and cons of an argument, determining whether it makes sense logically as well as whether it is helpful to us.

Evaluative listening is also called critical, judgmental or interpretive listening.

1.2.6 Appreciative listening

In appreciative listening, we seek certain information which will appreciate, for example that which helps meet our *needs* and *goals*. We use appreciative listening when we are listening to good music, poetry or maybe even the stirring words of a great leader.

1.2.7 Sympathetic Listening

In sympathetic listening we care about the other person and show this concern in the way we pay close attention and express our sorrow for their ills and happiness at their joys.

1.2.8 Empathetic Listening

When we listen *empathetically,* we go beyond sympathy to seek a truer understand how others are feeling. This requires excellent discrimination and close attention to the nuances of emotional signals. When we are being truly empathetic, we actually feel what they are feeling.

In order to get others to expose these deep parts of themselves to us, we also need to demonstrate our empathy in our demeanor towards them, asking sensitively and in a way that encourages self-disclosure.

1.2.9 Therapeutic Listening

In therapeutic listening, the listener has a purpose of not only empathizing with the speaker but also to use this deep connection in order to help the speaker understand, change or develop in some way.

This not only happens when you go to see a therapist but also in many social situations, where friends and family seek to both diagnose problems from listening and also to help the speaker cure themselves, perhaps by some cathartic process. This also happens in work situations, where managers, HR people, trainers and coaches seek to help employees learn and develop.

1.2.10 Dialogic Listening

The word 'dialogue' stems from the Greek words 'dia', meaning 'through' and 'logos' meaning 'words'. Thus dialogic listening mean learning through conversation and an engaged interchange of ideas and information in which we actively seek to learn more about the person and how they think.

Dialogic listening is sometimes known as 'relational listening'.

1.2.11 Relationship listening

Sometimes the most important factor in listening is in order to develop or sustain a relationship. This is why lovers talk for hours and attend closely to what each other has to say when the same words from someone else would seem to be rather boring.

Relationship listening is also important in areas such as negotiation and sales, where it is helpful if the other person likes you and trusts you.

1.3 Listening Strategy

Listening is the one skill that you use the most in everyday life. Listening comprehension is the basis for your speaking, writing and reading skills. To train your listening skills, it is important to listen actively, which means to actively pay attention to what you are listening to. Make it a habit to listen to audio books, podcasts, news, songs, etc. and to watch videos and films in the foreign language. You should know that there are different types of listening:

1. **Listening for gist**: you listen in order to understand the main idea of the text.
2. **Listening for specific information**: you want to find out specific details, for example key words.
3. **Listening for detailed understanding**: you want to understand all the information the text provides.

Before you listen to a text, you should be aware of these different types. You will have to decide what your purpose is. Becoming aware of this fact will help you to both focus on the important points and reach your goal.

1.4 Listening Comprehension

Listening comprehension is more than just hearing what is said; rather, it is a child's ability to understand the meaning of the words he hears and to relate to them in some way. When children hear a story, for instance, good listening comprehension enables them to understand it, remember it, discuss it, and even retell it in their own words. This is an important skill to develop even at an early age, because good listeners grow up to become good communicators.

Speaking out loud is the most common form of communicating, and learning to fully understand what is being said is paramount if children are to thrive. Tone of voice, pauses between words, where the emphasis is placed in a sentence, and the rhythm and pattern of speech all have an impact on the meaning of the words being spoken and the message they are meant to convey. Learning to listen carefully and comprehend those subtleties is not only an important prerequisite to reading comprehension, but also provides a rich resource for your children to draw upon when they want to convey their own thoughts and feelings.

In the *All About Reading* Pre-reading program, we foster your children's listening comprehension by discussing stories and characters, expanding vocabulary, and exposing your children to a wide variety of listening experiences. In addition, through the poetry in our books, *The Zigzag Zebra* and *Lizard Lou*, and through the read-alouds, your children will absorb language patterns that are not used as frequently in normal conversation, but that are commonly used in books. And throughout our reading program we encourage you, the parents, to spend at least twenty minutes a day reading aloud to your children.

All of this combined activity will provide your children with hours and hours of delightful stories, factual accounts, and interesting information about people and places near and far—developing in your children not just the skill of listening comprehension, but also an eagerness to listen and learn and comprehend the big wide world around them.

2. **Text**

There are five major texts types: narrative, expository, descriptive, directive and argumentative (Routledge, 1992). Doris M. Cook (2004:12) stated that text is any print material that contains meaning. It commonly include basal readers, subject area textbooks, fiction and nonfiction trade books and paperbacks, and articles from from newspaper and magazines. There are, of course, other forms of print matter, which teachers may wish to use, including personal correspondence and message on television, signs, and bulletin boards. Texts differ widely in content, structure, style, and the writer's intent, which may be to inform, persuade, or entertain, or some combination of the three.

2.1 Types of the Text

2.1.1 Narrative text

Narrative is a text focusing on specific participants which tells an interesting story. It social function is to tell stories or past events and entertain or amuse the readers. The generic structures of narrative text are :

1) Orientation, in which the writer introduces the participants and informs the time and the place;

2) Complication, in which the rising crises which the participants have to do with are describe
3) Resolution, in which the writer shows the way of participants to solve crises, better or worse.

2.1.2 Expository text

Expository text or exposition text is the vast majority of what is read in school, work and life. For this reason, it is critical that students understand how to read, analyze, distinguish, synthesize, create, and extend ideas present in expository texts. Expository texts include essays, speeches, workplace and government documents, newspaper and magazine articles, instructions and directions.

2.1.3 Descriptive text

Descriptive text is concerned with the location of persons and things in space. It will tell what lies to the right or left, in the background information which, perhaps, sets the stage for narration. It is immaterial whether a description is more technical-objective or more impressionistic-subjective.

2.1.4 Directive text

Directive text is with concrete future activity. Central to these text is imperative (Hand me the paper) of forms which substitute for them, such as polite questions (Would you hand me the paper?) or suggestive remarks (I wonder what the paper says about the weather).

2.1.5 Argumentative text

Argumentative text departs from the assumption that the receiver's beliefs must be change. It often start with the negation of a statement which attributes a quality or characteristic activity to something or someone. It also include advertising text, which try to persuade their readers that a product is somehow better, at least implicitly, than others.

2.2 Procedure Text

Procedure text is a piece of text that give us instructions for doing something. Procedure text is a text that is designed to describe how something is achieved through a sequence of actions or steps. Some of the characteristics of prosedure text is Use Simple Present Tense (S+V1), type imperative/command form, Use action verbs, example: *make, take, boil, cook,* Use temporal conjunctions, example: *First, then, next, after that, las.*

Example :

How to Make a Glass of Coffee

Materials : water, Sugar, Coffee, Glass, Spoon, kettle

Steps : Boil the water First, Second, take two spoons of coffee and two spoons of sugar. put into a glass, Next pour the hot water into a glass, Then stir it gently, Finally your coffee is ready to drink.

3. Formal Schema

3.1 Defintion

Before reviewing the schema theory it is necessary to make clear what schemata is. Recent literature has it that it is the British psychologist Frederick Bartlett that

first used the term of schema to refer to an active organization of past reactions or past experience in his classic work Remembering.

There are basically three areas of schema that played a part in the act of listening comprehension, which are linguistic schemata, formal schemata, and content schemata. (1) Linguistic schema refers to linguistic knowledge, which is the knowledge of phoneme, vocabulary, phrase, paragraph, sentence structure, grammar, and cohesive structure, etc, which play a basic role in a comprehensive understanding of the text. Linguistic stage is the first step in the whole listening process, during which the listener mainly focuses on the meaning of words, phoneme, pronunciation and syntax. (2) Formal schemata refers to the knowledge of organizational forms and rhetorical structures of a discourse. It includes knowledge of differences in genre, differences in the structure of fables, simple stories, scientific text, newspaper articles, poetry, and so forth. Formal schemata is described as abstract, encoded, internalized, coherent patterns of media-linguistic and textual organization that guide expectations in listeners' attempts to understand a meaningful piece of language.(3) Content schema deals with the knowledge relative to the content domain of the text, including systems of factual knowledge, values and cultural conventions. Language is not only the simple combination of vocabulary, grammar points and sentence structures, but also the bearer of different levels of the culture. Therefore, the content schemata can facilitate the readers' comprehension of a text, enabling them to predict, choose information and remove ambiguities. "In schema theory research, this type of formal schematic knowledge is usually contrasted with content schematic knowledge, which is claimed to be background knowledge on the topic and relevant social-cultural knowledge. A learner's failure to activate an appropriate

schema during learning leads to various degrees of non-comprehension (Carrel and Eisterhold, 1988). They also think that “this failure to activate an appropriate schema may either be due to the speaker’s not having provided sufficient clues in the text for the listener to effectively utilize a bottom-up processing mode to activate schemata the listener may already possess, or it may be due to the fact that the listener does not possess the appropriate schema anticipated by the author and thus fails to comprehend. In both instances there is a mismatch between what the speaker anticipates the listener can do to extract meaning from the text and what the listener is actually able to do. The point is that the appropriate schemata must exist and must be activated during text processing”.

Schema theory, however, is the realization of the characteristics of schema. Bartlett proposed his schema theory as: “The role of background knowledge in language comprehension has been formalized as schema theory.” (Bartlett, 1932) It means that a text only provides directions for listeners or readers as to how they should retrieve or construct meaning from their own, previously acquired knowledge.

According to the Schema theory, listening is not a simple one-way flow of information to the brain after a sound is heard, but an interactive process of two-way communication during which the listener's background knowledge plays an important role. Listeners do not listen word for word, but rather use their background knowledge, and various strategies such as predicting and confirming to construct meaning from the text. In other words, listening is a meaning-making process involving an interaction between the listener and the text. In summary, the

nature of the listening process is an active interactive process to serve certain communication, in which the listener's previous knowledge takes effort with the heard content interactively.

A schema (plural: schemata) is an abstract structure of knowledge, a mental representation stored in memory upon which all information processing depends. It may represent knowledge at different levels, e.g. cultural truths, linguistic knowledge or ideologies. They are mental templates that represent a person's knowledge about people, situations or objects, and which originate from prior knowledge or experiences.

3.2 Process Formal Schema

The pedagogical sequence of pre-listening, during-listening and post-listening activities is not new. However, few studies have ever centered upon how Schema Theory can be applied through the whole procedure. In light of this, the author designs a Schema Theory-based Teaching Mode of English Listening, which is a framework of pre-listening, during-listening and post-listening activities for classroom listening teaching. This mode aims to improve reasonably and effectively school English listening teaching.

3.3 The Advantage and Disadvantage of Formal Schema

3.3.1 Advantages

1. Students get guidance from teachers at the time of study.
2. The exploration centers on the brain.
3. Students learn according to the stage of their development.

3.3.2 Disadvantages

1. The cognitive functional ability of each student is considered equal.
2. Students can not find their own learning style.
3. Quantity of cognition is more emphasized than quality.

4. The Application of Formal Schema in Listening

A. Pre-listening Activities Pre-listening stage is a necessary phase, which turns the students' passive state of mind into an active one and prepares students for the while-listening with a purpose, a high motivation, anticipation as well as some necessary listening skills.

1. Establishing a purpose for listening There is an association between expectation, purpose, and comprehension; therefore, a purpose should be given to the learners. Listening purposes vary according to whether learners are involved in listening as a component of social interaction, listening for information, academic listening, listening for pleasure, or for some other reasons. By the same token, listening tasks may vary according to whether they require global comprehension or partial comprehension. The definition of a purpose enables the listener to listen selectively for significant information, easier as well as more natural than trying to understand everything.
2. Activating existing knowledge Teachers should give students the questions before they listen to the target text. By reading the questions, students may build up their own expectations about the coming information, and also by trying to find answers to these questions, their prior knowledge on the topic

can be activated. If we ask the students to read the questions carefully, they will know what the main idea of the passage is, and the speaker will mainly talk about the benefits of social recognition of the affair. It can make the understanding of the listening materials become easier.

3. Brainstorming Brainstorming is “a technique whose purpose is to initiate some sort of thinking process, which involves students in a rapid-fire, free-association listing of concepts or ideas or facts or feelings relevant to some topic or context.”(Brown, 2001, p.181) Brainstorming serves as a “warming-up” to the theme, as well as the framework for the introduction of some new information. The teacher introduces the general topic and students are asked to brainstorm possible events, characters, feelings, any information they know about the topic. By brainstorming, good learners can make intelligent guesses, use contextual clues and trigger a variety of potentially relevant schemata to help their comprehension.

4. Providing necessary cultural background information

   At the pre-listening stage, the teacher should provide students with much more cultural background knowledge concerned with the listening material. Listeners who are not familiar with the culture may have considerable difficulty in interpreting the words that they hear even if they can understand their surface meaning.

5. Multi-media Projector, computer, scanner, and video presenter will achieve satisfactory results in listening comprehension. Pictures are also very important for listeners to construct complete and permanent schema. It will

help them better remember and comprehend and recall the information in the listening materials. For example, while talking about traveling in New York, teachers could show some pictures of the famous places in New York, together with key words below them. Features and history about these places can be explained by teachers. Some English programs about traveling could also be projected here. Thus, students can retrieve or construct relevant schema. After some actively prepared work at pre-listening stage, students are willing to receive the incoming information.

4.1 Treatment

In the control class, the author taught mainly in the traditional way, focusing on the acquisition of linguistic knowledge and explanation of linguistic phenomenon. The traditional approach was carried out in this way:

1) pre-teaching of new words and expressions;

2) intensive listening; detailed questions for the students to answer; detailed explanation of the text step by step, analyzing the sentence structures and translating some difficult sentences into English, even the repetition of the original sentence once the students come across difficulties in sound recognition;

3) extensive listening; questions about general context to check whether the students have understood the text or not;

4) examination of vocabularies or exponents of grammar to check the students' performance.

As to the experimental class, a schema-oriented teaching was conducted. Schema activation was emphasized by employing the classroom activities which were

prepared in light of schema theory. At the beginning of the listening class, pre-listening activities were emphasized.

Lesson 28 “Transportation” in *step by step book 2* is chosen as an example to show the application of schema theory into listening teaching in the experimental class.

The sample lesson is conducted in the following steps:

Step 1: Before listening, arouse students’ interest by giving warm- up questions: How do you prefer to travel when you are on vacation? Why?

Step 2: Help students with prediction as a top- down processing skill by giving the direction that Jason traveling around in London and by writing down the key word “transportation” on the blackboard. To activate existent schemata，divide students into groups then to brainstorm what are some ways he can travel by human power. Elicit answers from a few students.

Step 3: After the first extensive listening with audio only, check prediction results. To build up a general schema，then define “transportation” orally and specifically according to Jason’s own description.

Step 4: Play the audio again for another extensive listening. Then inject the pictures of different means of transportation: boat, bicycle, tube, plane, bus, train taxi to build up a specific schema.

Step 5: Have students review questions in listening exercise to locate important points which should be paid more attention to. Play the audio again for intensive listening. Ask students finish the exercise

Step 6: Introduce new words, phrases and language points to modify students' misunderstandings of linguistic schemata and remind them bottom-up processing skills. Play the audio as a final check. Give students correct answers.

Step 7: Offer feedback of errors and allow students to watch a relative video to consolidate the new schematic knowledge in the follow-up activities.

B. Previous related Study

According to (Yule, 2006, p. 132) in the use of enhancing listening performance through schema construction activities A schema is a general term for a conventional knowledge structure that exists in memory" There however still has been a controversy over the role of schema construction activities as an aid to L2 listening learning. This research thus aims to examine the effect of schema construction activities on EFL learners' listening performance at Saigon Technology University (STU).

According to Shi Liyan and Wwang Duqin (2014: *Vol. 3 No. 2, pp. 35-49),* in the use of The Effect Of Formal Schema On College English Listening Comprehension In Efl With CET 4 listening tests as empirical materials, and second-year non-English majors as subjects, the present study attempted to explore the effect of schema on listening comprehension in EFL. The research reveals that Chinese college students lack formal schema, which results in their unawareness of genres and structures of exposition and argumentation. To enhance students‟ listening comprehension, it is necessary to build up their formal schema through intended listening activities. The experiment also indicates that where there is lack of relevant formal schema, there will be a definite non-comprehension of listening comprehension, which will lead to students‟ failure to predict content, select information, guide attention, promote code and recall, and facilitate inference. The study also suggests that only with a basic and relevant linguistic schema can formal schema take its full effect.

The present research also reveals that there are many factors that affect one‟s listening comprehension, among which linguistic competence is a critical factor. Formal schema might be powerless when the students lack the basic linguistic competence. That is, even they have certain formal schema, but because of a deficiency in their linguistic knowledge, they fail to understand the discourse. Then how can we coordinate different factors in listening instruction? Will it be possible and effective to conduct a training of formal schema in the future? Further research is needed to explore effective listening instruction. Anyway, the findings of the present study can help the instructors better understand the process

of listening comprehension, which might help them better design their instruction and provide relevant instruction to students. Since there is close relationship between the formal schema and English listening comprehension, it is important to use schemata to improve listening comprehension. As ESL or EFL teachers, it is not enough for us to understand the complex interactive nature of the listening in order to provide our students with an appropriate variety and range of listening experiences; we must also improve their listening comprehension teaching with the use of formal schema.

According to Xiaoli Hu (2012: Vol. 2, No. 2, pp. 282-288), in the use of The Application of Schema Theory in College English Listening Teaching, Listening comprehension is a process of interaction between the listener's background knowledge and the presupposed knowledge in the listening text. Schema theory which emphasizes the importance of background knowledge in the process of listening comprehension provides theoretical foundation for it; based on this, the author designs a Teaching Mode of English Listening, which is a framework of pre-listening, during-listening and post-listening activities for classroom listening teaching. Through the text, the new approach based on schema theory is more effective than traditional approach in improving students' listening comprehension ability. The study shows that schema theory facilitates listening comprehension and thus can be applied to practical teaching. Although schema theory contributes greatly to listening comprehension, it is still imperfect, for it cannot provide explicitly the explanation of all the phenomenon or process concerning listening comprehension. For example, it provides no explanation of

why one schema rather than another might be selected to guide comprehension and inference. So, the study is limited. Therefore, much broader research in this respect needs to be further studied.

According to David Nunan (1997) in the use of the a schematic approach to teaching listening comprehension despite the fact that listening is the most frequently used language skill in our daily lives, in general, listening courses are not considered as important as the other skills. That is why, in the late 1990s, David Nunan (1997) referred to listening as the 'Cinderella' skill. Yet, unlike in the past when the listening skill was viewed as a passive skill, today, listening comprehension is strongly believed to be a process of interaction between the listeners' background knowledge and the expected knowledge in the spoken text, that is, listeners employ all relevant previously stored knowledge to comprehend the incoming input. The role the background knowledge plays in comprehension has been formalised as 'schema theory' (Rumelhart, 1980). In the light of the notion of schema theory, it becomes essential to trigger the learners' background knowledge and utilise this knowledge to fully comprehend the listening text. Thus, language teachers should aid their students in improving notonly their linguistic knowledge, but also their non-linguistic skills through some classroom activities and teaching techniques. The application of schema theory in teaching listening provides effectiveness and efficiency and this has been proven by a number of studies. Since the schema theory strongly demonstrates that it can help the students with achieving better comprehension in listening and making the

listening courses more interesting and motivating, it should be applied in language classes.

CHAPTER III

METHOD OF RESEARCH

A. Location and Time

This research was conducted to the XI grade students of SMA Pembangunan Nasional of the academic year 2017/2018. The reason for choosing this school because base on the researcher's experience in the field practice teaching in this school, the students had low achievement in listening comprehension and not interest in learning English especially listening because they did not understand what the teacher had explain and the teacher only gave them text and play the record when the listening material was given. It made the students became confus and not interest. They did not know what they should do.

B. Population and Sample

1. Population

Population is totally of research subject (Arikunto, 2013: 38). The XI grade students of SMA Pembangunan Nasional of the academic year 2017/2018 Population of this research was the which distribut into 2 classes, with 72 total numbers of students.

2. Sample

By using total sample technique all population with total number of 72 students were taken as the sample.

Table 3.1

The Population and Sample

Class	Population	Sample
XI -IPA 1	36	36
XI-IPA 2	36	36
Total	72	72

C. Research Design

An experimental research design was apply in this research. Experimental design aim to get the relation between cause effect clearly and between the cause factors with the problem of research (Syahrum, 2012: 34). The design was apply in order to investigate the effect of formal schema on the students' achievement in listening comprehension.

Table 3.2

Research Design for Experimental Group and Control Group

Group	Pre-test	Treatment	Post-test
Experimental	✓	X	✓
Control	✓	Y	✓

Where :

X : the experimental group where the students taught by using Media Formal Schema.

Y = the control group where students were taught by using audio media.

1. Pre test

Both groups, the experimental group and control group were given pre-test before the treatment. The pre-test was administrate to both groups with the same

test. The pre-test was useful to know the mean score of experimental and control group.

2. Post-Test

After being award a teaching presentation (treatment), post-test was given to each students on the experimental group in order to determining their average values. Post test was used to determine the effect of formal schema on the students achievement listening comprehension in learning process.

3. Teaching Presenting (Treatment)

The experimental and control group were taught by using same material, that was listening but different in treatment. It meant that in the experimental group was taught by using formal schema, while in the control group was taught by using audio media.

Table 3.3

Treatments in experimental and control group

No	Experimental group	Control group
1	Teacher greet the students to open the class.	Teacher greet the students to open the class.
2	The teacher motivate the students by explaining that listening comprehension is a key to understand spoken language.	The teacher motivate the students by explaining that listening comprehension is a key to understand spoken language.
3	The teacher gave a brainstorming procedure text	The teacher gave a brainstorming procedure text
4	The teacher select a audio relates to the material	The teacher spread the script
5	The teacher give the schema to the students	The teacher play the record for 3- 4 times

6	The teachers explain the material by using the schema before playing the audio	The teacher ask the students to submit the script.
7	The teacher play the audio and gave instruction to the students to look the schema and listen the audio carefully.	The teacher spread the script to different students
8	Teacher ask the students to answer the test by looking the schema and listen the audio.	The teacher and the students correct the works together by listening the record again
9	The teacher collect the answer sheet and correct them	The teacher ask the students to submit the correct work

D. The Instrument of Research

Multiple-choice test is used as the instrument in collecting the data. The test in this research are made by research herself in oerder to meet the research purpose. The test consisted of 20 items, each item of the test consisted of 4 options, namely a, b, c, and d. Each corret answer is given 1, and an incorret answer is given 0 score. The highest score is 100 calculated by using this formula:

$S = \frac{R}{N}$ x 100 %

Note:

S= Score

R= True item which students answer

N= Number of item

E. Technique for collecting data

To collect the data of the research, the researcher used some steps:

a. Giving pre-test to both of the groups.

b. Giving treatment:

1. Experimental group (Class XI-A) : Using the formal schema
2. Control group (Class XI-B) : Using Conventional approach

c. Giving pos-test with the similar test to both of the groups.

d. Collecting the students' answer sheet.

F. Technique of Analyzing the Data

In this reaserch, experimental quantitative applied to analyze the data, and the step were:

1. Giving the score for each sample answer of students

   $S = \frac{R}{N} X\ 100$

   Note :

   S = score

   R = number of the correct answer

   N = number of items

   100 = cumulative range

2. Listing the score into two tables, first for the experimental group scores and second for the control group scores.
3. Calculating the total score pre-test and post test in experimental group and control group.
4. Finding Mean of the score of pre-test and post-test in experimental group and control group by using the formula:

   a. Mean variable X (variable 1)

      $M_X = \frac{\Sigma x}{n_1}$ (Sudijono,2012 : 84)

   b. Mean variable X (variable 2)

$M_y = \frac{\Sigma y}{n_2}$ (Sudijono,2012 : 88)

5. Finding standart deviation by using the formula:

   a. Standart deviation (SD) for variable 1

   $SD_X = \frac{\Sigma x^2}{N_1}$ (Sudijono,2012 : 157)

   b. Standart deviation (SD) for variable 1

   $SD_X = \frac{\Sigma y^2}{N_2}$

   c. Standart error of mean variable 1

   $SE_{M1} = \frac{SD_1}{\sqrt{N_1 - 1}}$ (Sudijono,2012 : 282)

   d. Standart error of mean variable 2

   $SE_{M2} = \frac{SD_2}{\sqrt{N_2 - 1}}$

   e. The differences of standart error between M_1 and M_2 by using the formula :

   $SE_{M1\text{-}M2} = \sqrt{SE_{M_1}^{\ 2} + SE^2}$ (Sudijono,2012 : 283)

6. Finding the normality test by using the formula :

   $X^2 = \Sigma \frac{(Oi - Ei)^2}{Ei}$ (Sudijono,2012 : 270)

It was used to know the normality of the data that is going to be analyzed whether groups that have normal distribution or not. The normality test with Chi-square was done to find out the distribution data. Determining the distribution normality with test criteria :

IF $X^2_{count} > X^2_{table}$ so the data was not normal distribution and the other way if the $X^2_{count} > X^2_{table}$ so the data was normal distribution. (Sudjana, 2005:272)

7. Finding of fomogeneity test

It was meant to get the assumption that sample of research come from a same condition or homogenous. It was used to know whether experimental group and control group, those were taken from population that have same variant or not. Determining the distribution homogeneity with test criteria :

IF $F_{count} > F_{table,}$ the data was not homogeneous and the other way if the $F_{count} < F_{table,}$ the data was homogeneous. (Sudjana,2005:272)

8. Finding the hyphotesis by applying observe

$$T_0 = \frac{M1-M2}{SE_{M_1-M_2}}$$ (Sudijono,2012 : 284)

Notes :

M_x = Mean for variable 1 or X

M_y = Mean for variable 2 or Y

N_1 = Number of Cases for variable 1

N_2 = Number of Cases for variable 2

SD_1 = Standartd deviation for variable 1 or X

SD_2 = Standartd deviation for variable 2 or Y

SE_{M1-M2} = Standart error between M_1 and M_2

X = the score sample

t_o = $t_{obsorve}$

Z = transformation of the class interval limit on the normal distribution. (normal distribution table).

Oi = frequency of observation result in classification

Ei = frequency in classification

G. Statistical Hypothesis

1. Ha : There was a significant effect of formal schema on the students' achievement in listening comprehension

2. Ho : There was no significant effect of achievement in listening comprehension.

CHAPTER IV

DATA AND DATA ANALYSIS

A. The Data

The data collected by using five indicators that refer to the rules of writing and the following tables are the calculation and the result of the data collected. Both of the experimental group were given a test in the from of writing descriptive text. The result of the pre-test and the post-test were presented in the following tables.

1. The Scores in Experimental Group

Table 4.1

The Scores of Pre-test in Experimental Group

No.	Students Initial	Pre-test	Post-test
1	WA	60	70
2	W	65	80
3	DD	40	65
4	AR	65	80
5	H	65	80
6	DH	60	70
7	AWN	75	95
8	DS	55	70
9	YA	70	80
10	PA	50	65
11	DPS	35	75
12	IYA	65	80
13	NAS	60	75
14	JT	70	95
15	MAS	50	70
16	MR	45	65
17	JP	75	80
18	MR	65	80
19	FP	60	80
20	AG	70	75
21	MAPS	75	95
22	DP	45	65

23	RD	55	70
24	TD	60	95
25	HI	55	80
26	AS	50	75
27	MB	55	75
28	N	70	90
29	A	45	85
30	R	65	80
31	AP	60	75
32	MNL	50	80
33	RS	70	90
34	MI	55	85
35	FAM	50	70
36	BR	75	90
	Total	2135	2830

Table 4.1 shows the scores of experiment group both in pre-test and post-test. Based on the total it was showed that there was increasing from the pre-test and post-test, it was from 2135 to 2830.

2. The Scores in Control Group

The data in table 4.2 showed that the calculation result scores of the test in control group was shown in the following table

Table 4.2

The Scores of Pre-test and Post-test in Control Group

No.	Student Initial	Pre-test	Post-test
1	LMS	70	85
2	V	60	70
3	RF	40	60
4	EW	55	75
5	DA	70	80
6	DS	60	80
7	NA	50	60
8	DS	55	65
9	H	65	75
10	AI	60	70
11	G	60	70
12	WL	40	55
13	AS	50	60
14	A	50	60

15	AS	60	80
16	A	65	80
17	D	60	65
18	SS	50	60
19	DA	65	80
20	R	50	65
21	UB	60	70
22	TA	50	65
23	AR	60	70
24	DL	55	65
25	Y	60	70
26	LA	55	70
27	A	45	60
28	J	55	65
29	H	60	75
30	PU	55	55
31	RS	70	80
32	RSF	55	65
33	AS	70	85
34	KA	60	70
35	DTS	65	80
36	CM	65	75
	Total	2075	2515

Table 4.2 is the students' score of control group both in pre-test and post-test. It showed that there was increasing from the pre-test and post-test, it was from 2075 to 2515

B. Data Analysis

After scoring and listening the students' pre-test and post-test scors, the next step was analyzed the data by measuring the mean score of the experimental and control group.

Table 4.3

The Differences Scores of Pre-tes and Post-test in Experimental Group (X)

No.	Student initial	Pre-test(X_1)	Post-test(X_2)	X_2_X_1(X)
1	WA	60	70	10
2	W	65	80	15
3	DD	40	65	25
4	AR	65	80	15
5	H	65	80	15
6	DH	60	70	10
7	AWN	75	95	20
8	DS	55	70	15
9	YA	70	80	10
10	PA	50	65	15
11	DPS	35	75	40
12	IYA	65	80	15
13	NAS	60	75	15
14	JT	70	95	25
15	MAS	50	70	20
16	MR	45	65	20
17	JP	75	80	5
18	MR	65	80	15
19	FP	60	80	20
20	AG	70	75	5
21	MAPS	75	95	20
22	DP	45	65	20
23	RD	55	70	15
24	TD	60	95	35
25	HI	55	80	25
26	AS	50	75	25
27	MB	55	75	20
28	N	70	90	20
29	A	45	85	40
30	R	65	80	15
31	AP	60	75	15
32	MNL	50	80	30
33	RS	70	90	20
34	MI	55	85	30
35	FAM	50	70	20
36	BR	75	90	15
TOTAL		2135	2830	Σ 695

Based on the data in the table above, the mean score was calculated as follows:

Mean Score of Experimental Group

$M_X = \frac{\Sigma X}{n_1}$

$= \frac{695}{36}$

$= 19.30$

Note :

M_x : The mean scores of experimental group

ΣX : The score of $X_2 - X_1$

N : Sample of Experimental Group

Table 4.4

The differences Scores of Pre-test and Post-test of Control grooup (Y)

No.	Student Initial	Pre-test(Y_1)	Post-test(Y_2)	Y_2-$Y_{1(Y)}$
1	LMS	70	85	15
2	V	60	70	10
3	RF	40	60	20
4	EW	55	75	20
5	DA	70	80	10
6	DS	60	80	20
7	NA	50	60	10
8	DS	55	65	10
9	H	65	75	10
10	AI	60	70	10
11	G	60	70	10
12	WL	40	55	15
13	AS	50	60	10
14	A	50	60	10
15	AS	60	80	20
16	A	65	80	15
17	D	60	65	5
18	SS	50	60	10

19	DA	65	80	15
20	R	50	65	15
21	UB	60	70	10
22	TA	50	65	15
23	AR	60	70	10
24	DL	55	65	10
25	Y	60	70	10
26	LA	55	70	15
27	A	45	60	15
28	J	55	65	10
29	H	60	75	15
30	PU	55	55	0
31	RS	70	80	10
32	RSF	55	65	10
33	AS	70	85	15
34	KA	60	70	10
35	DTS	65	80	15
36	CM	65	75	10
TOTAL		2075	2515	Σ 440

Based on the data in the table 4.4 the mean score was calculated as follows :

$$M_y = \frac{\Sigma Y}{n_2}$$

$$= \frac{440}{36}$$

$$= 12.22$$

Table 4.5

The Calculation of Mean and Standart Deviation of the Experimental Group

No.	Student Initial	(X_2-X_1)	$(X-M_X)$	$(X-M_X)^2$
1	WA	10	-9.3	86.49
2	W	15	-4.3	18.49
3	DD	25	5.7	32.45
4	AR	15	-4.3	18.49
5	H	15	-4.3	18.49
6	DH	10	-9.3	86.49
7	AWN	20	0.7	0.49
8	DS	15	-4.3	18.49
9	YA	10	-9.3	86.49
10	PA	15	-4.3	18.49
11	DPS	40	20.7	428.49

12	IYA	15	-4.3	18.49
13	NAS	15	-4.3	18.49
14	JT	25	5.7	0.49
15	MAS	20	0.7	0.49
16	MR	20	0.7	0.49
17	JP	5	-14.3	204.49
18	MR	15	-4.3	18.49
19	FP	20	0.7	0.49
20	AG	5	-14.3	204.49
21	MAPS	20	0.7	0.49
22	DP	20	0.7	0.49
23	RD	15	-4.3	18.49
24	TD	35	15.7	246.49
25	HI	25	5.7	32.45
26	AS	25	5.7	32.45
27	MB	20	0.7	0.49
28	N	20	0.7	0.49
29	A	40	20.7	428.49
30	R	15	-4.3	18.49
31	AP	15	-4.3	18.49
32	MNL	30	10.7	114.49
33	RS	20	0.7	0.49
34	MI	30	10.7	114.49
35	FAM	20	0.7	0.49
36	BR	15	-4.3	18.49
TOTAL		695	0.2	2325.52

Table 4.6

The Calculation of Mean and Standart of the Control Group

No.	**Students Initial**	**$(Y_2 - Y_1)$**	**$(X - M_y)$**	**$(Y - My)2$**
1.	LMS	15	-7.22	52.12
2.	V	10	-2.22	4.92
3.	RF	20	7.78	60.52
4.	EW	20	7.78	60.52
5.	DA	10	-2.22	4.92
6.	DS	20	7.78	60.52
7.	NA	10	-2.22	4.92
8.	DS	10	-2.22	4.92
9.	H	10	-2.22	4.92
10.	AI	10	-2.22	4.92
11.	G	10	-2.22	4.92
12.	WL	15	-7.22	52.12

13.	AS	10	-2.22	4.92
14.	A	10	-2.22	4.92
15.	AS	20	7.78	60.52
16.	A	15	-7.22	52.12
17.	D	5	-7.22	52.12
18.	SS	10	-2.22	4.92
19.	DA	15	-7.22	52.12
20.	R	15	-7.22	52.12
21.	UB	10	-2.22	4.92
22.	TA	15	-7.22	52.12
23.	AR	10	-2.22	4.92
24.	DL	10	-2.22	4.92
25.	Y	10	-2.22	4.92
26.	LA	15	-7.22	52.12
27.	A	15	-7.22	52.12
28.	J	10	-2.22	4.92
29.	H	15	-7.22	52.12
30.	PU	0	-12.22	149.32
31.	RS	10	-2.22	4.92
32.	RSF	10	-2.22	4.92
33.	AS	15	-7.22	52.12
34.	KA	10	-2.22	4.92
35.	DTS	15	-7.22	52.12
36.	CM	10	-2.22	4.92
Total		440	-109.92	1110.32

Based on the calculation of tables X and Y, the following formula was implemented to find out the critical value of both groups as the basic to tes the hypohesis by using formula :

$$SD_x = \sqrt{\frac{\sum x^2}{N_1}}$$

$$= \sqrt{\frac{2325.52}{36}}$$

$$= \sqrt{64.59}$$

$$= 8.03$$

$$SD_y = \sqrt{\frac{\sum x^2}{N_2}}$$

$$= \sqrt{\frac{1110.32}{36}}$$

$$= \sqrt{30.84}$$

$$= 5.55$$

Based on the calculation above it shows the following facts :

$SD_x = 8.03$

$SD_y = 5.55$

$N = 36$

$M_x = 19.30$

$MY = 12.22$

Therefore, the following formula was implemented :

$$SE_{M1} = \frac{SD_1}{\sqrt{N_1 - 1}}$$

$$= \frac{8.03}{\sqrt{36-1}} = \frac{8.03}{\sqrt{35}} = \frac{8.03}{5.9} = 1.361$$

$$SE_{M2} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

$$= \frac{5.55}{\sqrt{36-1}} = \frac{5.55}{\sqrt{35}} = \frac{5.55}{5.9} = 0.940$$

Next, the following formula was implemented to both deviation between M_1 dan M_2.

$$SE_{M1-M2} = \sqrt{SE_{M1} + SE_{M2}2}$$

$$= \sqrt{1.361^2 + 0.940^2}$$

$$= \sqrt{1.852321 + 0.8836}$$

$$= \sqrt{2.735921}$$

$$= 1.6$$

1. Normality Test

The normality test was used to know whether the data is normally distributed or not. To find out the distribution data Chi-Square was used normality test

Ho : the data of normal distribution

Ha : the data of un formal distribution

With criteria, Ho accepted if $x^2_{count} < x^2_{table}$ with $\alpha = 5\%$ and df = k-1

a. Pre-test of Experimental Group

Hypothetical Test:

Maximun score : 75

Minimum score : 35

Range (R) : 75 – 35 = 40

Class interval (k) : 1 + 3.3 log n = 1 + 3.3 log 36 = 6.1357 = 6 class

Length of the class (P) : 40/ 6 = 6.6 = 7

Table 4.7

The Table of frequency Distribution

Class Interval	f_i	X_i	Xi^2	$F_i.X_i$	$F_i.X_i^2$
35 – 41	2	38	1444	76	2888
42 – 48	3	45	2055	135	6075
49 – 55	10	52	2704	520	27.040
56 – 62	6	59	3481	354	20886
63 – 69	6	66	4356	396	26136
70 – 76	9	73	5329	657	47961
	Σ = 36			Σ = 2138	Σ = 130986

$$X = \frac{\sum fiXi}{\Sigma fi}$$

$= \frac{2138}{36} = 59.3$

$S^2 = \frac{n\Sigma fiXi}{n\,(n-1)}$

$= \frac{\sum fiXi}{\Sigma fi}$

$= \frac{4715496-4571044}{36\,(35)}$

$S^2 = \frac{144.452}{1260}$

$S = 114.65 = 10.70$

Table 4.8

The Table of Normality Test

Class	Limit class	Z for the limit class	Probability of Z	Wide to Z	Ei	Oi	$\frac{(Oi - Ei)^2}{Ei}$
	34.5	-2.31	0.1004				
35 – 41				0.0381	13	2	0.3
	41.5	-1.66	0.0485				
42 - 48				0.1102	2.9	3	0.0
	48.5	-1.00	0.1587				
49 - 55				0.5219	18.7	10	4.0
	55.5	-0.35	0.3632				
56 – 62				0.7491	5.9	6	0.0
	62.5	0.29	0.3859				
63 – 69				0.2148	6.7	6	0.0
	69.5	0.95	0.1711				
70 - 76				0.1163	4.1	9	5.8
	76.5	1.60	0.0548				
						X^2	10.1

With α = 5% and df = 6 -1 = 5, from the chi-square distribution table, obtained X^2_{table} = 11.07. because X^2_{count} is lower than X^2_{table} (10.1 < 11.07). So, the distribution list is normal.

b. Pre-test of Control Group

Hypotheticl Test

Maximum score : 70

Minimum score : 40

Range (R) : 70 – 40 = 30

Class interval (k) : 1 + 3.3 log n = 1 + 3.3 log 36 = 6.1357 = 6 class

Lenght of the class (P) : 30/ 5 = 6

Table 4.9

The Table of Frequency Distribution

Class Interval	f_i	X_i	X_i^2	$F_i.X_i$	$F_i.X_i^2$
40 - 45	3	42.5	1806.25	127.5	5418.75
46 - 51	6	48.5	2352.25	291	14113.5
52 – 57	7	54.5	2970.25	381.5	20791.75
58 – 63	11	60.5	3660.25	665.5	40262.75
64 – 69	5	66.5	4422.25	332.5	22111.25
70 – 75	4	72.5	5256.25	290	21025
	Σ = 36			Σ = 2088	Σ = 123723

$$X = \frac{\Sigma fiXi}{\Sigma fi}$$

$$= \frac{2088}{36} = 58$$

$$S^2 = \frac{n\,\Sigma fiXi^2 - (\Sigma fiXi)^2}{n\,(n-1)}$$

$$= \frac{36*123723-(2088)^2}{36\,(36-1)}$$

$$= \frac{4454028-4359744}{36\,(35)}$$

$$S^2 = \frac{94284}{1260}$$

$$S = 74.82 = 8.64$$

Table 4.10

The Table of Normality Test

Class	Limit class	Z for the limit class	Probability of Z	Wide to Z	Ei	Oi	$\frac{(Oi - Ei)^2}{Ei}$
	39.5	-2.14	0.0162			3	0.3
40 – 45				0.0587	2.1		
	45.5	-1.44	0.0749			6	0.0
46 – 51				0.1517	5.4		
	51.5	-0.75	0.2266			7	8.8
52 – 57				0.7067	2.4		
	57.5	-0.05	0.4801			11	0.6
58 – 63				0.7444	8.7		
	63.5	-0.63	0.2643			5	0.1
64 – 69				0.1725	6.2		
	69.5	1.33	0.918			4	0.0
70 – 75				0.1252	4.5		
	75.5	2.02	0.217			X^2	9.8

With α = 5% and df = 6 – 1 = 5, from the chi-square distribution table, obtained X^2_{table} = 11.07. Beacause X^2_{count} is lowr than X^2_{table} (9.8 < 11.07). So, the distribution list is normal.

Table 4.11

The Result of Normality Pre-test of Experimental and Control Group

No.	Class	Test	x^2_{count}	x^2_{table}	Criteria
1.	Experimental	Pre test	10.1	11.07	Normal
2.	Control	Post test	9.8	11.07	Normal

Based on the analysis above it could be seen thatx^2_{count} both of class was lower than x^2_{table} (x^2_{count} <x^2_{table}) so Ho accept. It could be concluded that the distribution data of experimental and control group were normal.

c. Post-test of Experimental Group

Hypotheticl Test

Maximum score : 95

Minimum score : 65

Range (R) : 95 – 65 = 30

Class interval (k) : 1 + 3.3 log n = 1 + 3.3 log 36 = 6.1357 = 6 class

Lenght of the class (P) : 30/ 5 = 6

Table 4.12

The Table of Frequency Distribution

Class Interval	f_i	X_i	X_i^2	$F_i.X_i$	$F_i.X_i^2$
65 – 69	4	67	4489	268	17956
70 – 74	6	72	5184	432	31104
75 – 79	6	77	5929	462	35574
80 – 84	11	82	6724	902	73964
85 – 89	2	87	7569	174	15138
90 – 94	3	92	8464	276	25392
95 – 99	4	97	9409	388	37636
	Σ = 36			Σ = 2909	Σ = 236764

$X = \frac{\Sigma fiXi}{\Sigma fi}$

$= \frac{2902}{36} = 80.6$

$= \frac{36*236764-(2902)^2}{36\ (36-1)}$

$S^2 = \frac{8523504-8421604}{36\ (35)}$

$S^2 = 80.87 = 8.99$

Table 4.13

The Table of Normality Test

Class	Limt class	Z for the limit class	Probability of Z	Wide to Z	Ei	Oi	$\frac{(Oi - Ei)}{Ei}$
	64.5	-1.79	0.0367				
65 – 69				0.0726	2.6	4	0.7
	69.5	-1.23	0.1093				
70 – 74				0.1421	5.1	6	0.1
	74.5	-0.67	0.2514				
75 – 79				0.7036	2.3	6	5.9
	79.5	-2.12	0.4522				
80 – 84				0.7858	7.2	11	2.0
	84.5	0.43	0.3336				
85 – 89				0.1701	4.1	2	2.7
	89.5	0.98	0.1635				
90 – 94				0.1017	3.7	3	0.1
	94.5	1.54	0.0618				
95 – 99				0.0797	2.8	4	0.5
	99.5	2.10	0.0179				
						X^2	10.3

With α = 5% and df = 6 – 1 = 5, from the chi-square distribution table, obtained X^2_{table} = 11.07. Because X^2_{count} is lower than X^2_{table} (10.3 < 11.07). So, the distribution list is normal.

d. Post-Test of Control Group

Hypotheticl Test

Maximum score : 85

Minimum score : 55

Range (R) : 85 – 55 = 30

Class interval (k) : 1 + 3.3 log n = 1 + 3.3 log 36 = 6.1357 = 6 class

Lenght of the class (P) : 30/ 5 = 5

Table 4.14

The Table of Frequency Distribution

Class Interval	f_i	X_i	Xi^2	$Fi.X_i$	$f_i.X_i^2$
55 – 59	2	57	3249	114	6498
60 – 64	6	62	3844	372	23064
65 – 69	7	67	4489	469	31423
70 – 74	8	72	5184	576	41472
75 – 79	4	77	5929	308	23716
80 – 84	7	82	6724	574	47068
85 - 89	2	87	7569	174	15138
	Σ = 36			Σ = 2587	Σ = 188379

$$\mathbf{X} = \frac{\Sigma fiXi}{\Sigma fi}$$

$$= \frac{2587}{36} = 71.8$$

$$S^2 = \frac{n\,\Sigma fiXi^2 - (\Sigma fiXi)^2}{n\,(n-1)}$$

$$= \frac{36*188379-(2587)^2}{36\,(36-1)}$$

$$= \frac{6781644-6692569}{36\,(35)}$$

$S^2 = \frac{89075}{1260}$

= 70.69 = 8.40

Table 4.15

The Result of Normality Post-test of Experimental and Control Group

Class	Limt class	Z for the limit class	Probability of Z	Wide to Z	Ei	Oi	$\frac{(Oi - Ei)}{Ei}$
	54.5	-2.05	0.0202				
55 – 59				0.519	1.8	2	0.0
	59.5	-1.46	0.0721				
60 – 64				0.1228	4.4	6	0.5
	64.5	-0.86	0.1949				
65 – 69				0.5885	3.1	7	4.9
	69.5	0.27	0.3936				
70 – 74				0.7681	7.6	8	0.0
	74.5	0.32	0.3745				
75 – 79				0.1931	6.9	4	1.2
	79.5	0.91	0.1814				
80 – 84				0.1159	4.1	7	2.0
	84.5	1.51	0.0655				
85 – 89				0.0834	3.0	2	0.3
	89.5	2.10	0.0179				
						X^2	8.9

With α = 5% and df = 6 – 1 = 5, from the chi-square distribition table, obtained X^2_{table} = 11.07. Because X^2_{count} is lower than X^2_{table} (8.9 < 11.07). So, the distribution list is normal.

Table 4.16

The Result of Normality Post-test of Experimental and Control Group

No	Class	Test	x^2_{count}	x^2_{table}	Criteria
1	Expermental	Post test	10.7	11.07	Normal
2	Control	Post test	8.9	11.07	Normal

2. Homogeneity Test

The homogeneity test was used to know whether the group sample that was taken from population homogeneous or not.

Ho = $\sigma^{12} = \sigma_2^2$ = (homogeny variance)

Ha = $\sigma^{12} \neq \sigma_2^2$ = (non homogeny variance)

With criteria, Ho accepted if Fcount>Ftable with α = 0.05 and df = k-1

The calculation :

Formula :

$F_{count} := \frac{maximum\ variance}{minimum\ variance}$

Ho accepted if F ≤ ½ α (nb-1):(nk-1)

The collection of homogeneity of pre test of experimental and control group :

$S_x^2 = \frac{N\Sigma x^1 - (x^1)}{(N)(N-1)}$

$= \frac{36\ \Sigma 225300 - (\Sigma 2830)^2}{(36)(36-1)}$

$= \frac{8110800 - 8008900}{(36)(35)}$

$= \frac{101900}{1260}$

= 80,87

= 8,99

$S_Y^2 = \frac{N\Sigma y^2 - (y^2)}{(N)(N-1)}$

$= \frac{36\ \Sigma 178175 - (\Sigma 2830)^2}{(36)(36-1)}$

$= \frac{6414300 - 6325225}{(36)(35)}$

$= \frac{89075}{1260}$

$= 8{,}40$

$F_{count} = \frac{maximun\ variance}{minimum\ variance}$

$F = \frac{8.99}{8.40} = 1.07$

For α = 5% with

df 1 = n1 – 1 = 36 – 1 = 35

df 2 = n2 – 1 = 36 – 1 = 35

$F_{(0.05)(35:35)} = 1.75$

Table 4.17

The Result of Homogenity Pre-test of Experimental and Control Group

No	Class	Variance	N	F_{count}	F_{table}	Criteria
1	Experimental	8.99	1.07	1.05	1.75	Normal
2	Control	8.40	1.07	1.05	1.75	Normal

Based on the computation above it was obtained that F_{count} was lower than F_{table} so Ho accepted. It could be concluded that the data of pre-test from experimental and control group had the same variance oe homogeneous.

The calculation of homogenity of post test of experimental and control group:

$$Sx^2 = \sqrt{\frac{n.\Sigma x^2 - (\Sigma x)^2}{n(n-1)}}$$

$$= \frac{36\ \Sigma\ 130475 - (\Sigma x)^2}{(36)(36-1)}$$

$$= \frac{4697100 - 4558225}{(36)(35)}$$

$$= \frac{138875}{1260}$$

$$= 110.21$$

$$= 10.4$$

$$S_y^2 = \frac{N\ \Sigma\ Y^2 - (Y)^2}{(36)(36-1)}$$

$$= \frac{36\ \Sigma\ 121725 - (\Sigma 2075)^2}{(36)(36-1)}$$

$$= \frac{4382100 - 4305625}{(36)(35)}$$

$$= \frac{76475}{1260}$$

$$= 60.69$$

$$= 7.79$$

$$F_{count} = \frac{maximun\ variance}{minimum\ variance}$$

$$F = \frac{10.49}{7.79} = 1.34$$

For α = 5% with

df 1 = n1 – 1 = 36 – 1 = 35

df 2 = n2 – 1 = 36 – 1 = 35

$F_{(0.05)(35:35)} = 1.75$

Table 4.18

The Result of Homogenity Post-test of Experimental and Control Group

No	Class	Variance	N	F_{count}	F_{table}	Criteria
1	Experimental	10.49	35	1.34	1.75	Normal
2	Control	7.79	35	1.34	1.75	Normal

Based on the computation above it was obtained that F_{count} was lower than $F_{table,}$ so Ho control group had the same variance oe homogeneous.

C. Testing Hypotesis

Based on the previous result, t_o was then applied to test the hypotesis.

$$t_o = \frac{M1 - M2}{SEM1-M2}$$

$$= \frac{19.30-12.22}{1.65}$$

$$= 1.65$$

$$= 4.2$$

After calculating the data above by using t-test formula, the result showed that t-observe was 4.2.Then based on the table of distribution of t-observe as the basic of counting t-observe in certain of the degree of freedom (df), the calculation of df used the formula df= $n_1 + n_2$ -2 whit df= 36+36-2=70s. The fact showed that t-observe> t-table (4.2>1.99). Therefore, the null hyphotesis was rejected and the alternative hypothesis accepted. In other words, the student who were taught by its mean that there was significant effect of formal schema to students' listening comprehension acievementbe better than those who were taught without using formal schema.

D. Research Findings

After conducting the pre test and post test for both experimental and control group, then the finding of this study could be reported as following:

1. There is significant effect of using audio media to students' listening comprehension achievement, which been proven from the result of test $t_{observe} > t_{table}(4.2 > 1.99)$

CHAPTER V

CONCLUSION AND SUGESSTIONS

A. Conclusion

Having analyzed the data, the conclusion is:

There was significant effect of using formal schema to students' listening comprehension achievement which was proved from the result of t-critical > t-table (4.2 > 1.99). So it was meant that Ho rejected and Ha accepted.

B. Suggesstion

In relation to the conclution before, suggestion are put below:

1. It is suggested to the English teacher to using formal schema in teaching learning inlistening because it enable student to active their prior knowledge.
2. As English teacher can using formal schema to the student because this media can help them in getting better understanding listening.
3. It is suggested to student to practice formal schema by themselve to encourage their confidence and to help them when they following final examination.

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