

Growing Lecturing Listening Skill through Logic-Based Learning

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Abstract: This research aims to study a logical-based learning order and its impacts on the growth of students lecturing the listening skill. The method used in this study is Research and Development. Besides, the technique of data collecting was taken by examination, observation, and interview. The research was held for students in the 1st semester of the 2021/2022 academic year at the Faculty of Teacher Training and Education at Siliwangi University Tasikmalaya. The data were processed quantitatively. The result showed that syntax of learning based on the logic model positively impacts student lecturing the listening skill. It is suggested that research should be followed up and validated by those in the same profession to stretch the result of this research..

Keywords: lecturing model, logic-based learning, listening skill.

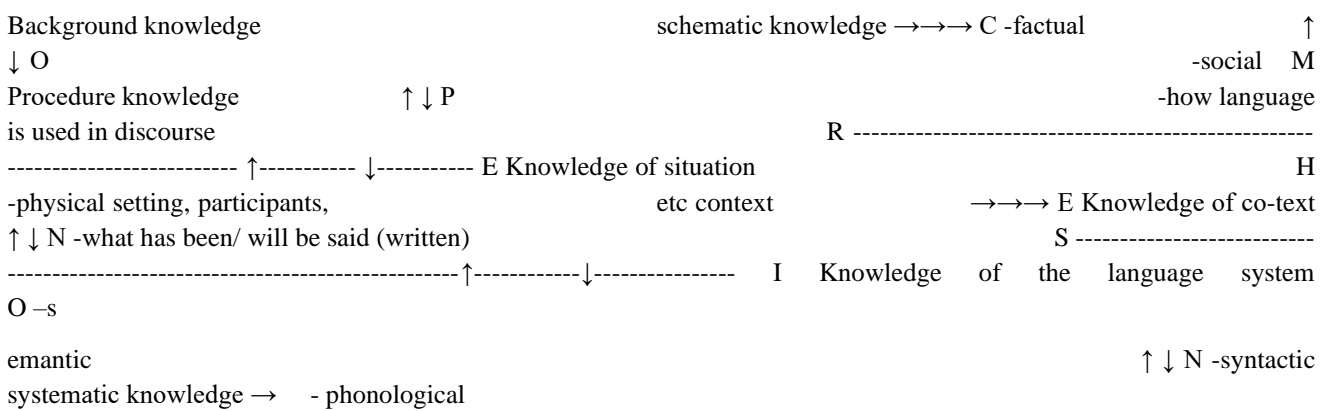
I. INTRODUCTION

In the interaction of teaching and learning at Siliwangi University Tasikmalaya, listening to the lecturer's explanation is still a mainstay taken by the students. From the results of the Internal Quality Audit Siliwangi University in 2020, it is known that, on average, two-thirds of the time allocated lectures available to students to listen to their lectures. Such circumstances are in line with the findings of [1], [2], "Listening plays an important role in communication, of the total time spent on communicating, listening takes up 40 – 50 %, speaking 25 – 30%, reading 11 – 16%, and writing about 9%". Although listening activities have the most considerable portion in communicating, few people still care about improving listening skills.

Many people think listening is easy because it only requires passive activity, even though, according to [3],. The label of passive skill applied to listening is a misnomer. This misunderstanding may stem from the fact that superficially learners seem to only sit in the language lab quietly, listen to pre-recorded dialogues and write the answers to the same questions to the oral stimulus, so listening teaching has attracted considerable attention. Listening is the more active and interpretive process in which the message is not fixed but is created in the interactional space between participants [4]. [3] explained complex activities in listening and that the Listening comprehension process consists of three steps: receiving, attending, and understanding in sequence. The understanding step may be followed by responding and remembering as listeners may respond immediately or remember the message to respond at a later time.

Each stage in the listening process demands substantial thinking activities. Very visible in the stages of attending and understanding (including responding and remembering). At the attending stage, the listener must focus on the subject matter contained in the sounds of the language that are linguistically structured and integrated with non-linguistic aspects. At the understanding stage, listeners must think about interpreting, judging, and responding appropriately to the content of the conversation. At the remembering stage, listeners must have a solid mind to remember all the contents of the conversation. The complexity of listening activities described by [5].

Because the listening process demands high thinking power, so to grow students' listening skills, it is necessary to improve their thinking abilities. This ability can be built either by way of habituation to think by using logic. Logic is a way of thinking to produce decisions. The method used is syllogism (deduction). In line with the opinion of Smith (2000), "A deduction is speech (*logos*) in which, certain things having been supposed, something different from those supposed results of necessity because of their being so. Each of the 'things supposed' is a **premise** (*protasis*) of the argument, and what 'results of necessity' is the **conclusion** (*superasma*). In the listening activity, thinking efforts to decide from the material being listened to often occur in the attending, understanding, and responding stages. For example, listening to low-grade students by using puzzles as a case of an English learning forum in America called American English State (2015) explained that everyone must listen carefully to identify important details. Beyond *developing listening and critical thinking skills*, these puzzles are a fun and challenging way for students to practice speaking, review vocabulary, and apply social skills related to teamwork.



The problem that will be answered through this research is whether logic-based learning is effective if it is used in improving listening in lecturing skills? The research was carried out on Siliwangi University students through the "Listening Teaching" course in the form of online lectures to answer this problem.

II. BODY OF ARTICLE

Literature Review

"Listening comprehension is an active process of constructing meaning, and this is done by applying knowledge to the incoming sound" in which a "number of different types of knowledge are involved: both linguistic and non – linguistic knowledge .He supposed that comprehension is affected by a wide range of variables, and that potentially any characteristic of the speaker, the situation or the listener can affect the comprehension of the message [5], [6] Listening is the students' most challenging skill to assess than other language skills. It involves an oral input where the students must listen to and transfer the information in their minds through their auditory insight. In listening, the information is given in the spoken text, so students need the most effort to recognize the information or the passage from what they hear, unlike in written text, where students can read the whole passages in a written form obviously [7]. Six (6) listening activities are needed to understand the speech text. Further disclosed by [7], "...there are six types of listening (reactive, intensive, selective, responsive, extensive and interactive). For any listening, students need to comprehend the indicative answer while the teacher has selected the task activity with the particular listening types. In reactive listening, the answer focus on the sound which is heard, intensive listening focus on the language form, responsive listening shows an understanding, extensive listening focus on the long text that connects the idea, and selective listening takes the important information such as location, time, and the last is interactive listening which assesses by combining listening with speaking,"

[8] stated that the problems in listening comprehension are: Lack of control over the speed at which speakers speak, not being able to get things repeated, the listener's limited vocabulary, failure to recognize the "signals," problem of interpretation, inability to concentrate (topic, effort, technical problems), and established learning habit or listening perfectionism. In accordance to [9] that poor quality of equipments, lack of concentration, un-clear pronunciation, speed

rate, unfamiliar word and topic, and psychological problem. These problems were in some categories of Listening Comprehension problems such as physical setting, lack of concentration, speaker, psychological characteristics, and listening material.

[3] stated that listening is one of the four basic skills taught in language learning and is not a passive process. Listening is a mental process in which linguistic and non-linguistic information is processed through some cognitive systems: attention, perception, and memory, such as a student listening to a lecture or news are paying attention to and trying to perceive information that a teacher or an anchor is informing. He will keep the information in his memory before using them for specific purposes. When the student is paying attention and trying to perceive the information, he is actively processing the information by the use of his own linguistic and non-linguistic knowledge". Intensive guidance is needed to build students' listening skills. [10] stated that guiding learners in the process of listening provides them with the knowledge by which they can complete a listening activity and puts them in control of the learning".

The logic is a science that aims to identify good and bad reasoning principles. In essence, it aims to develop criteria (rules or methods) for the identification of good and bad arguments" [11]. [12]–[14] stated, "The term of *logic* comes from the Greek word *logos*. The variety of senses that *logos* possesses may suggest the difficulties encountered in characterizing logic's nature and scope. Among the partial translations of *logos*, there are "sentence," "discourse," "reason," "rule," "ratio," "account" (especially the account of the meaning of an expression), "rational principle," and "definition." Not unlike this proliferation of meanings, the subject matter of logic has been said to be the "laws of thought", "the rules of right reasoning," and "the principles of valid argumentation that usage of certain words labeled 'logical constants,'" "truths (true propositions) based solely on the meanings of the terms they contain," and so on." These two opinions have in common that logic is a rule in thinking so that it can produce the correct argument.

Thought, covert symbolic responses to stimuli that are either intrinsic (arising from within) or extrinsic (arising from the environment). Thought, or thinking, mediates between inner activity and external stimuli. [11] Argue, "Having observed thought through the relationship between an object and its attributes, we found only one aspect of thought. It is important to note that perception, as already mentioned, has a functional nature, and attributes of a perceived object always have a functional nature. Thought reflects objects and attributes and is endowed with a specific content, expressed in terms of the meaning of the perceived attribute. In other words, the relationship between an attribute and image is ensured by thought which carries a certain functional content [11].

Logic or thought essentially involves three-element elements: the understanding of concept or words, the formation of *the proposition*, and the *conclusion* [12]–[14]. Words are an excellent place to begin our study of his logic. As we now understand it, logic chiefly concerns how we evaluate arguments. However, arguments are made of statements, which are, in turn, words. In Aristotelian logic, the most basic statement is a proposition, a complete sentence that asserts something. A proposition is ideally composed of at least three words: a *subject* (a word naming a substance), a *predicate* (a word naming a property), and a connecting verb, what logicians call a *copula* (Latin, for "bond" or "connection"). Consider the simple statement: "Socrates is wise." Socrates is the subject; the property of being wise is the predicate, and the verb "is" (the *copula*) links Socrates and wisdom together in a single affirmation. The conclusions were formed from syllogism. We can define a syllogism, concerning its logical form, as an argument made up of three categorical propositions, two premises (which set out the evidence), and a conclusion (that follows logically from the premises). [15], [16] argue there are five: element of practical thinking: understanding thinking deeply, igniting insight, constantly formulating and raising questions, seeing the flow of ideas (look back and look forwards), building on the last four elements and is about practicing practical thinking so that you be a lifelong learner and are constantly striving for improvement.

Research Method

This research uses *research and development* procedures to go through phases: (1) a preliminary study of the theoretical and empirical thorough inspection to get a grounding in logic-based learning model development; (2) the establishment of logic-based learning model; (3) The field test model is followed by analysis and revision of the model, (4) validation of the model; and (5) the dissemination of the model. An early model which can be formed can be seen in diagram 1.

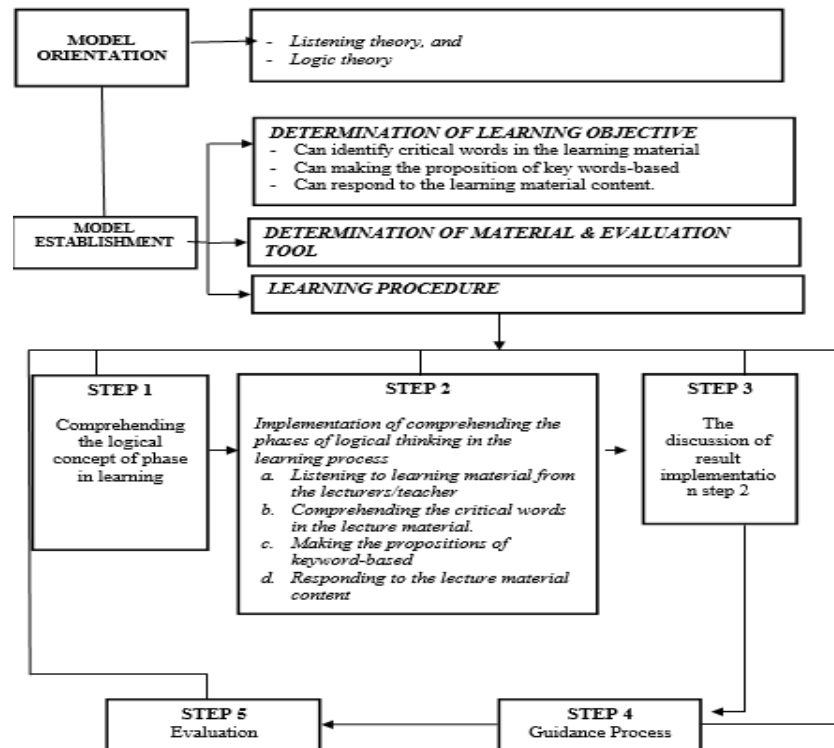


Diagram 1. Early Model of Logic-based Listening Teaching in Lecturing

The early model needs to be tested first to obtain a ready-made model. Field tests were conducted with the model through seven phases, namely: 1) conducting early tests of identification of keywords, making propositions based-key words, and response to lecture material content; 2) carrying out the learning process through procedures that have been designed; 3) carrying out final tests of comprehending the critical keywords in lecture material, making the propositions based keyword, and Responding the discourse content in listening to the lecture material; 4) analyzing test results; 5) interpretation; 6) asking for feedback; and 7) making improvements.

It is necessary to go back through the validation testing model to obtain a consistent logic-based learning model. The model validation test is conducted by doing a field test again on the group of students with the same level as the amount of ordinary in group classes. This validation test phase is done through the same steps as the earlier tests. The results are analyzed and discussed. The results of the validation process model are obtained logic-based learning model and were ready disseminated or published. The dissemination is carried out in the form of a seminar attended by lecturers at Siliwangi University and published in the journal. The syntax of logic-based learning that has proven effective in growth lecturing listening skills is as follows.

Body of article gives the complete description of research work. It includes problem statement, methodology used for solving problem, proposed solution of given problem, conclusion of complete research. All paragraphs/ Sections of the paper should be justified and well organized. We accept manuscripts written in English Language and should be in third person. Words used in body are around 2000 to 8000 words or 5 to 20 pages. Page Layout Details is given in TABLE: I.

Table 1: Syntax of Logic-Based Learning

Introduction Step
Providing orientation about learning that will be implemented
Core step
a. <i>Listening to lecture material from the lecturers' concentration all;</i>
b. <i>Comprehending the keywords of lecture material carefully and formed in mind-mapping;</i>
c. <i>Making the propositions based on mind mapping ;</i>
d. <i>Responding to the lecture material ;</i>

- e. *Discussing the work result of each student;*
- f. *Giving unique guidance to the students who face difficulties.*

Closing Step

- a. Reflecting learning result
- b. The measurement of the result

Data Collection and Analysis Techniques

Primary data needed is a lecturing listening ability (comprehending the essential keywords in lecture material, making the propositions keyword-based, and responding to the content of the lecturing material) as a result of logic-based learning. In addition, the primary data also support data (secondary data) as information about students' activities when the learning takes place, as well as about students' opinions about the course that has been taken. To obtain the data done by using measurement techniques. To realize the technique of data collection on lecturing listening ability set by using measurement instrument in test form as follows.

Table 2: Instrumen of Lecturing Listening Ability Measurement

No.	Indicator	Scor Scale	Quality
1.	comprehending the critical keywords in lecture material	- Complete and compiled (5)	10
		- Not complete and compiled (4)	
		- Not complete, not compiled (3)	
2.	making the propositions keyword-based	- Appropriate and compiled (5)	15
		- Less appropriate and compiled (4)	
		- Less appropriate and less compiled (3)	
3.	Responding to the content of the lecture material	- Appropriate and rational (5)	20
		- Less appropriate and less rational (4)	
		- Not appropriate and not rational (3)	

Prepare instrument of observations about students' activities when the learning process is ongoing to get supporting data. The object observed include creativity and sincerity when the lecture is ongoing. Then, to obtain additional information about students' motivation, attend a pattern of logic application used an interview instrument. There are two categories of collected data, namely quantitative and qualitative data. Quantitative data describes the score lecturing listening skill with a 10 -100 scale. Qualitative data is a description of student's activities in the lecture process and data about students' opinions concerning the lecture which is going through. Quantitative data is proponent data.

III. RESULT AND DISCUSSION

After testing the process of building a conceptual model, field test, revision of the model; the model validation test then, the research results in the syntax of logic-based learning activities and students' opinion about the learning which has experienced, as well as a brief description of students' lecturing listening skill scores from the field test result and validation test results.

The observation data obtained students' activities, including sincerity and creativity in learning. Of the 75 students who became the object of research shows, 72% (54 votes) demonstrated learning in earnest, accompanied by a creative task ordered by the lecturer. At the same time, the remaining 38% (21) show less seriousness even though they can do the task. The result of interviews for ten students randomly known about their opinion that the lecture had been through (logic-based learning model) declare that they are motivated and not saturated. The result of the assessment/test of the field test and validation of the logic-based learning model in growing listening skills in lecturing is listed in the following table.

From table 3, the logic-based learning treatment can be explained that the logic-based learning model tested twice is the field test as a model test phase model to look for parts that must be revised, and the validation test to determine the effectiveness of the model that has been revised. The field test result for the first group of students with a total of 30 people obtained the results of measurements about lecturing listening skills. Listening skills included identifying crucial words of lecture matter, making propositions based on keywords-based, and responding to lecture matter content) before giving

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treatment received an average score of 24.4 in the shallow category, whereas after treatment, the average score of 66.4 with enough category. Scores obtained in the field test phase become feedback for the revision model. The phases are revised in logic-based learning model syntax, a phase of guiding which is still less so that the revision needs additional activity.

Table 3: The Measurement Result Of Logic-Based Lecturing Listening Learning

No.	Activity Category	Before LBL Treatment				After LBL Treatment				T Critical	Significant Rate
		x1	x2	x3	\bar{x}	y1	y2	y3	\bar{y}		
1.	Field Test	29,9	21,2	23,9	24,4	70,2	62,0	67,0	66,4	9,21	0,01
2.	Validation Test	30,0	18,0	20,2	22,7	75,8	72,6	74,5	74,3	20,16	0,01

Note:

x1 = average of to identify of keywords of lecture matter before Treatment

x2 = average of to making of the proposition on key words-based before Treatment

x3 = average of responses of lecture matter content before Treatment

y1 = average of to identify of keywords of lecture matter after Treatment

y2 = average of to making of the proposition on key words-based after Treatment

y3 = average response of lecture matter content after Treatment

\bar{x} = average listening skill before treatment

\bar{y} = average of listening skills after treatment

After revising the model following the result of the analysis, then tested the model validation by conducting learning treatment for the second group with a total of 35 people. The result showed that the average lecture listening skill (which includes identifying keywords of lecture matter, making the proposition on key words-based, and responding to lecture matter content) before being treated could be obtained an average score of 22.7 with a low category. After being treated, an average score of 74.3 with a good category can be obtained. Its shows that guiding is necessary for steps of logic based-learning. [17], [18] agreed that guidance is necessary for learning because functional in petrify for complex student learning.

The data is used as the basis that the logic-based learning model can be expressed effectively in growing students' lecture listening skills, including identifying lecture matter keywords, making propositions based on keywords-based, and responding to responses to lecture matter content. After assessing the logic-based learning model, cognitive learning theory, communicative learning theory, cooperative learning theory, student active learning theory, and behavioristic learning theory can collaborate. This finding supports one of the assumptions of learning theory which states that in the learning process, teachers/lecturers should be able to collaborate on many theories of learning tailored to their needs. Collaborating with learning theories can build a pretty varied lecture, making the students more creative, earnest, and motivated to learn so that they avoid saturation.

The logic theory is very effectively used as an approach to the implementation of learning at the university. These findings have been demonstrated by the Logic-Based Learning model implemented in the students' FKIP of the first semester at Siliwangi University Tasikmalaya and support the view about the importance of the theoretical background of indiscipline as a basis in determining the learning method. The comprehension of listening nature, the nature of the learning process, and the logic theory were beneficial as a foundation (approach) to establish a learning model at university.

The students' first semester at FKIP Siliwangi University Tasikmalaya is enthusiastic and highly motivated, given a logic-based lecture. It occurs because they feel and realize the competencies learned through Logic-Based Lecture is necessary for life; then, the grain material is systematically arranged; and supported by various learning implementation systems. These findings support the learning theory that in improving learning motivation, lecturers must present learning materials needed in learners' life, and the arrangement of learning material presentation must have a good entanglement.

Besides the primary research study found, some findings need to be disclosed, namely: (1) Students are very suitable given a lecture with a logic-based learning model, is good intelligence, and have a high learning motivation; (2) The age and gender who owned by the students seemed not significantly affect their success in following this learning model. The findings, especially the age and gender of learners, were not in contradiction with the views of psychologists, such as Alfred Binet, known for his expertise in the measurement of intelligence. Piaget is famous for their expertise in the maturity of thought steps, always linking the capability of someone's thinking with age. Their study illustrated that age would align with the increasing maturity of thought. However, the findings of this study with data sources of students aged between 18 and 20 years do not affect their listening skills through this learning model.

From these results, it can be stated that the logic-based lecture model is suitable for students at the college level. Secondary education still needs to be done further research. As an example, the growth of listening skills in boarding school (self-reliance and self-discipline) is more suitable implemented through the habituation method, advising, methods of reward and punishment, as well as an exemplary method of the priest and the cleric [19]. Then, in the preschoolers' neighborhood, the growth of prosocial behavior turned out to be suitable by using game-based learning model [20].

IV. CONCLUSION

The research method and development phase consisted of establishing the conceptual model, experimenting with empirical models, and validating the model to form a logic-based learning model. Phases (syntax) of learning with the models are a) listening to lectures with total concentration from the lecturers, b) understanding the keywords in the learning material made in the form of a mind mapping, and c) Making the propositions based on mind mapping, d) responding to the content of the lecture matter with, e) Discussing the work result of each student, and f) giving unique guidance to the students who face difficulties. The impact arose from the interaction of the logic-based learning model system that can grow lecture listening skills.

Based on the findings and research conclusion, there are four suggestions. First, in fulfilling expository learning (speech), lecturers should underpin the logic theory because, in addition to increasing understanding of lecture content also to support the growth of literary character. Second, lectures at university were more likely to be expository (model), more geared to achieving the growth target of knowledge and students' skill. The comprehension should be abandoned because it does not match the demands of today's life and future. Third, in carrying out the lecture, it is time for the lecturers to create a model that can create the environment in shaping the character by the demand of life by working on the theory that the lecture development may invoke. Fourth, for this research findings to become helpful knowledge in lecture model development in university, the researcher and observer of learning can develop further in the form of research on broader data sources with different levels of education.

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