

Increasing Lecturing Logic-Based Learning Improves Listening Skills

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ABSTRACT

The purpose of this study is to investigate a logical-based learning order and its effects on the growth of pupils lecturing the listening skill. The first approach employed in this study is R&D. Furthermore, data was gathered through inspection, observation, and interviews. The study was conducted for students in the first semester of the 2021/2022 academic year at Siliwangi University Tasikmalaya's Faculty of Teacher Training and Education. The information was quantitatively processed. The findings revealed that logic-based learning syntax positively influenced student lecturing and listening skills. It is advised that the research be followed up and confirmed by people in the same profession to stretch the research results.

KEYWORDS

lecturing mode; listening skill; logic-based learning

INTRODUCTION

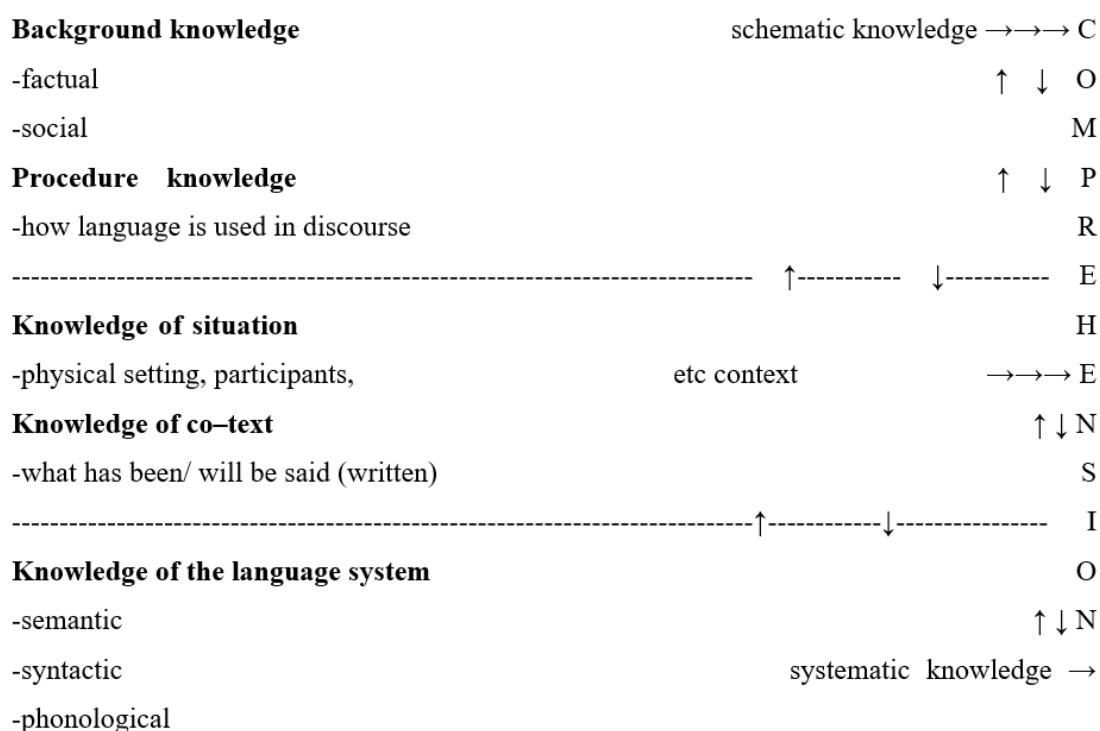
Listening to the lecturer's explanation is still a cornerstone in the interaction of teaching and learning at Siliwangi University Tasikmalaya. According to the Internal Quality Audit results at Siliwangi University in 2020, two-thirds of the time, assigned lectures are available for students to listen to the material. Such situations are consistent with the findings of (Cohen, 1996; Ghaed et al., 2018), which state that "hearing plays an essential part in communication, taking up 40-50% of the total time spent on communicating, speaking 25-30%, reading 11-16%, and writing approximately 9%." Even though listening activities account for most communication, few people are concerned with developing their listening abilities.

Many believe listening is simple since it needs passive action, even though (Idrissova et al., 2015). The term "passive skill" when used for listening is misleading. This misperception may originate from the fact that learners appear to sit silently in the language lab, listen to pre-recorded conversations, and write responses to the same questions as the oral stimulus. Therefore listening teaching has gotten much attention. Listening is an active and interpretative process. The message is formed in the interactional space between participants rather than fixed (Hue, 2019; Idrissova et al., 2015). (Idrissova et al., 2015) described complicated listening activities and how the hearing comprehension process comprises three sequential steps: receiving, attending, and comprehending. Responding and remembering may follow comprehending since listeners may reply immediately or remember the message to respond later.

Each level of the listening process involves significant mental efforts. Very obvious in the phases of attendance and comprehension (including responding and remembering). At the attending stage, the listener must concentrate on the subject matter contained in the language's linguistically organized and integrated sounds. Listeners must consider interpreting, assessing, and reacting correctly to the conversation's substance during the comprehension stage. Listeners must have a clear mind during the remembering stage to recall all of the conversation's details. The sophistication of listening actions, as stated by

(Solak & Erdem, 2016) Responding and remembering may follow comprehending since listeners may reply immediately or remember the message to respond later.

Because the listening process requires a high level of thinking ability, it is vital to increase pupils' thinking abilities to improve their listening skills. This capacity may be developed by habituation to think logically. Logic is a technique of thinking that results in decisions. Syllogism is the approach employed (deduction). According to (Bailey, 2011), "a deduction is discourse (logos) in which, some things having been assumed, something distinct from those assumed results of necessity since they are so." Each of the supposed items' is a premise (protasis) of the argument, and the result of necessity is the conclusion (*superasma*). Thinking efforts to determine from the content being listened to frequently occur during the listening activity's attending, comprehending, and reacting stages. For example, an English learning forum in America called American English State (2015) emphasized that everyone must listen attentively to find crucial facts by listening to low-grade pupils utilizing puzzles. These puzzles are fun and challenging for students to practice speaking, review vocabulary, and use social skills connected to collaboration and building listening and critical thinking abilities.



This study will address whether logic-based learning helps develop listening and lecturing abilities. To address this issue, Siliwangi University students were studied using the "Listening Teaching" course in the form of online lectures.

RESEARCH METHODS

This study employs research and development procedures to go through the following phases: (1) a preliminary study of the theoretical and empirical thorough inspection to gain a grounding in logic-based learning model development; (2) the establishment of a logic-based learning model; (3) the field test model is followed by analysis and revision of the model, (4) model validation, and (5) model dissemination. Diagram 1 depicts an early model that can be developed.

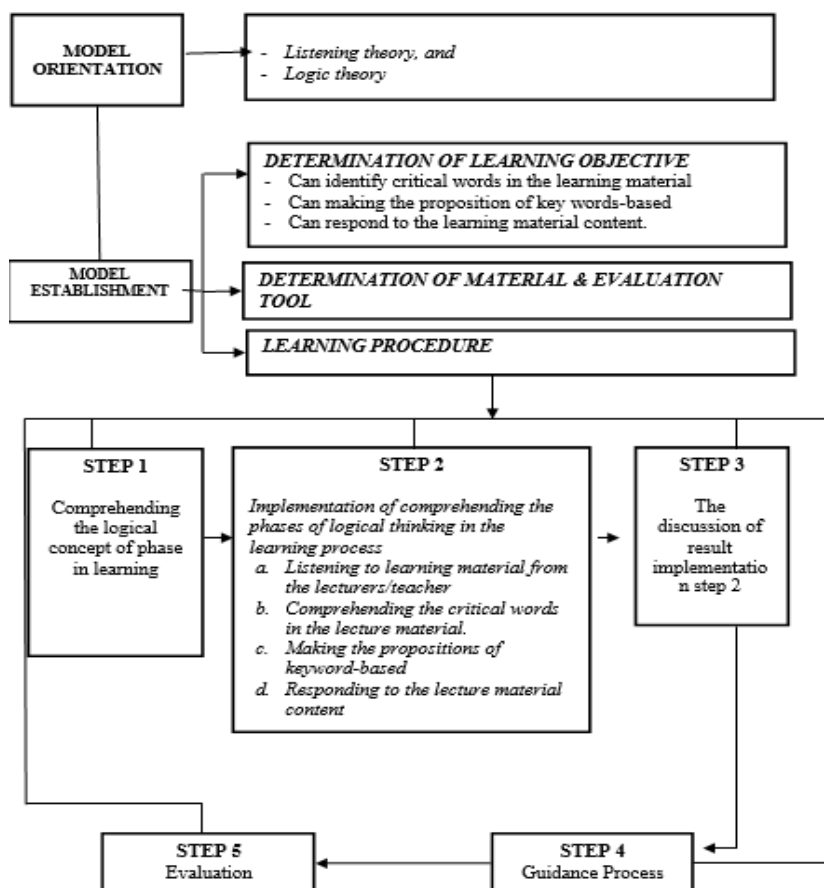


Diagram 1. Early Model of Logic-based Listening Teaching in Lecturing

The early model must first be evaluated. Field tests with the model were conducted in seven phases to acquire a ready-made model: 1) conducting early tests of keyword identification, making proposition-based keywords, and responding to lecture material content; 2) carrying out the learning process through procedures that have been designed; and 3) carrying out final tests of comprehending the critical keywords in lecture material, making proposition-based keywords, and responding to the discourse content in listening to the lector.

The validation testing model must be repeated to create a consistent logic-based learning model. The model validation test is carried out by repeating a field test on a group of students with the same ordinary level in group classes. This validation test phase follows the same processes as the previous tests. The findings are examined and debated. The validation process model's outcomes were acquired from logic-based learning models and were disseminated or published. The distribution takes the form of a seminar attended by Siliwangi University academics and published in the journal. The logic-based learning syntax that has shown useful in developing lecture listening abilities (Dudi, 2022).

The body of the essay contains a detailed overview of the research study. It covers the issue description, the technique utilized to solve the problem, the recommended solution to the problem, and the conclusion of the fundamental research. The paper's paragraphs/sections should be justified and neatly ordered. We welcome manuscripts written in English and the third person. The words utilized in the body range from 2000 to 8000 words, or 5 to 20 pages. Table: I contain page layout details.

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.	<i>Discussing the work result of each student;</i>
f.	<i>Giving unique guidance to the students who face difficulties</i>
Closing Step	
a.	<i>Reflecting learning result</i>
b.	<i>The measurement of the result</i>

Data Collection and Analysis Techniques

As a result of logic-based learning, the primary data required is a lecturing listening skill (comprehending the main keywords in lecture material, forming keyword-based propositions, and reacting to the content of the lecturing material). Furthermore, the leading data includes support data (secondary data), such as information on students' activities while learning as well as students' thoughts regarding the course that was taken. In order to gather data, measuring techniques are used. To implement the data collecting approach on lecture listening ability, use measurement equipment in test form as follows.

Table 2. Instrumen of Lecturing Listening Ability Measurement

No.	Indicator	Score Scale	Quality
1.	Understanding the critical terms in lecture materials	- Complete and compiled (5) - Not complete and compiled (4) - Not complete, not compiled (3)	10
2.	Creating the proposals keyword-based	- Appropriate and compiled (5) - Less appropriate and compiled (4) - Less appropriate and less compiled (3)	15
3.	Responding to the lecture material's substance	- Appropriate and rational (5) - Less appropriate and less rational (4) - Not appropriate and not rational (3)	20

Prepare an instrument for observing students' activities while the learning process is in progress to collect supporting data. When the lecture is in progress, the objects noticed include inventiveness and sincerity. Then, to learn more about the pupils' motivation, they will participate in a pattern of a logic application using an interview instrument. There are two types of data collected: quantitative data and qualitative data. On a scale of 10 to 100, quantitative data reflects the score of lecturing listening skills. Qualitative data is a description of students' activities throughout the lecture process, as well as data on student's thoughts about the lecture that is taking place. Proponent data is quantitative data.

RESULTS AND DISCUSSION

The study results in the syntax of logic-based learning activities and students' views on the learning that has occurred, as well as a brief description of students' lecture listening ability scores from the field and validation test results.

Students' actions were observed, including sincerity and originality in learning. 72% (54 votes) of the 75 students who became the subject of the study displayed serious learning, coupled with a creative activity assigned by the professor. At the same time, the remaining 38% (21) display less seriousness even though they can do the assignment. The ten random interviews with students regarding their opinions on the lecture (logic-based learning paradigm) show that they are motivated and not saturated. The following table summarizes the results of the field test assessment/test and validation of the logic-based learning model in developing listening skills in lecturers.

According to (Justice et al., 2018) the following problems in listening comprehension exist: a lack of control over the speed at which speakers speak, an inability to get things repeated, the listener's limited vocabulary, a failure to recognize "signals," a problem of interpretation, an inability to concentrate (topic, effort, technical problems), and an established learning habit or listening perfectionism. Poor equipment quality, lack of focus, unclear pronunciation, speed rate, unfamiliar terms and topics, and psychological difficulty, according to (Justice et al., 2018). These issues fell under several categories of Listening Comprehension issues, including physical environment, lack of focus, speaker, psychological features, and listening material.

According to (Hue, 2019) listening is one of the four fundamental abilities taught in language learning and is not a passive activity. Listening is a mental activity in which language and non-linguistic information is processed by some cognitive systems: attention, perception, and memory, such as a pupil paying attention to and attempting to understand information that a teacher or anchor is telling. He will remember the knowledge before applying it to specific goals. When a learner is paying attention and attempting to perceive information, he actively processes it using his language and non-linguistic knowledge. "To improve kids' listening abilities, intensive mentoring is required. "guiding learners through the listening process gives them the knowledge they need to complete a listening task and puts them in charge of their learning." (Gilakjani & Sabouri, 2017)

Logic is a science that seeks to distinguish between good and faulty reasoning concepts. It seeks to construct criteria (rules or procedures) for distinguishing between excellent and bad arguments." (Shadrikov et al., 2016). (Hidayah et al., 2017; Perbowosari et al., 2020; Suralaga, 2021) noted, "The term logic derives from the Greek word *logos*. The range of senses possessed by *logos* may allude to the problems experienced in articulating the nature and extent of logic. "sentence," "discourse," "reason," "rule," "ratio," and "account" (particularly the account of the meaning of a statement), "rational principle," and "definition" are partial translations of *logos*. Logic has been described as the "laws of mind," "the norms of sound reasoning," and "the standards of valid argumentation that usage of particular words called 'logical constants,'" "truths (true propositions) based purely on the meanings of the phrases they include," and so on. These two points of view agree that logic is a rule in thinking that produces the proper argument.

According to table 3, the logic-based learning treatment is the field test as a model test phase model to look for areas that need to be updated and the validation test to verify the efficacy of the model that has been amended. The findings of measures concerning lecture listening abilities were collected in the field test for the first group of students, which included 30 participants. Listening skills (including identifying keywords in lecture material, making propositions based on keywords, and responding to lecture matter content) before

treatment received an average score of 24.4 in the shallow category, whereas after treatment, received an average score of 66.4 in the excellent category. The results of the field-testing phase serve as feedback for the revision model. The stages are changed in logic-based learning model syntax, with a phase of directing still insufficient to warrant continued action.

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 = before treatment, the average of to discover keywords of lecture topic

x2 = average of developing a statement based on keywords 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 updating the model in response to the analytical results, the model validation was checked by conducting learning therapy for the second set of 35 participants. Before being treated, the average lecture listening skill (detecting keywords of lecture matter, generating propositions based on keywords, and responding to lecture matter content) received an average score of 22.7 in the poor group. Following treatment, an average score of 74.3 in the good category is possible. It demonstrates that guidance is required for the phases of logic-based learning. (Dudi, 2022; Tanshzil, 2012; Theresa, 2018) both felt that supervision is required for learning because functioning is petrifying for sophisticated student learning.

The data is utilized as the foundation for successfully expressing the logic-based learning model in improving students' lecture listening abilities, such as detecting lecture matter keywords, forming propositions based on keywords, and responding to lecture matter material. The evaluation of the logic-based learning model with cognitive and communicative learning theory, cooperative learning theory, student active learning theory, and also behavioristic learning theory can work together. This conclusion confirms one of the learning theory's assumptions, which stipulates that during the learning process, teachers/lecturers should be able to cooperate on various learning theories adapted to their requirements. Collaborating with learning theories might result in a very diversified presentation, encouraging students to be more imaginative, sincere, and driven to study to prevent saturation.

At the university, the logic theory is employed exceptionally efficiently as a technique for learning implementation. These findings support the idea that the theoretical backdrop of indiscipline is essential in shaping the learning technique, as proven by the Logic-Based Learning model adopted in the students' FKIP of the first semester at Siliwangi University Tasikmalaya. The understanding of listening nature, learning process nature, and logic theory were used as a basis (method) to develop a learning model at the university.

Thought, hidden symbolic reactions to either internal (from inside) or exogenous stimuli (arising from the environment). Thought, or thinking, serves as a bridge between internal activity and external stimuli. (Shadrikov et al., 2016) "Having seen cognition through the

interaction between an object and its properties, we discovered just one component of thought," argue the critics. It is vital to remember that, as previously said, perception has a functional aspect, and the properties of a seen object always have a functional nature. Thought reflects objects and qualities and is endowed with a specific content articulated in terms of the observed attribute's meaning. In other words, thinking, which bears a certain functional content, ensures the link between a characteristic and a picture (Shadrikov et al., 2016).

Logic or cognition consists primarily of three elements: the idea or word comprehension, proposition construction, and conclusion (Hidayah et al., 2017; Perbowosari et al., 2020; Suralaga, 2021). Words are a superb location to start our investigation of thinking. Logic, as we presently understand it, is primarily concerned with how we assess arguments. Conversely, arguments are made up of assertions, which are made up of words. The most fundamental statement in Aristotelian logic is a proposition, which is a whole phrase that states something. A proposition should have at least three words: a subject (a word identifying a substance), a predicate (a word name a property), and a linking verb, known as a copula by logicians (Latin, for "bond" or "connection"). Consider the straightforward statement, "Socrates is wise." Socrates is the subject, wisdom is the predicate, and the word "is" (the copula) connects Socrates and wisdom in a single affirmation. Syllogism was used to derive the findings. In terms of logical form, a syllogism is an argument composed of three categorical statements, two premises (which give out the evidence), and a conclusion (that follows logically from the premises). (Kirubhakaran, 2021; Komarov, 2019) contended that there are five elements of practical thinking: a deep understanding of thinking, igniting insight, constantly formulating and raising questions, seeing the flow of ideas (look back and look forward), building on the previous four elements and is about practicing practical thinking, becoming a lifelong learner, and constantly striving for improvement.

The first semester of students at FKIP Siliwangi University Tasikmalaya is exciting and motivating, with logic-based teaching. It happened because they felt and realized that the competencies gained through Logic-Based Lectures are essential for life; then, the grain material is methodically organized; and supported by various learning implementation systems. These findings confirm the learning idea that lecturers must offer learning materials needed in learners' lives in order to improve learning motivation, and the organization of learning material presentation must have a good entanglement.

The following findings must be disclosed such as (1) Students are very suitable given a lecture with a logic-based learning model, intelligent, and have a high learning motivation; (2) The student's age and gender disappeared to affect their success in the following learning model significantly. The findings, particularly the age and gender of learners, did not contradict the ideas of psychologists such as Alfred Binet, recognized for his expertise in intelligence testing. Piaget is well-known for their skill in the maturation of cognitive stages, constantly associating someone's thinking abilities with age. Their research demonstrated that age correlates with growing cognitive maturity. However, the outcomes of this study, which included data from students aged 18 to 20, show that this learning paradigm did not affect their listening abilities.

Based on these findings, the logic-based lecture format is appropriate for college-level students. Further study on secondary schooling is required. For example, in boarding school, listening skills (self-reliance and self-discipline) are better accomplished through the habituation technique, counseling, reward and punishment methods, and an ideal way of the priest and the cleric (Tanshzil, 2012). Then, in the preschoolers' neighborhood, the development of prosocial conduct was found to be appropriate by employing a game-based learning paradigm (Brown, 2000; Solak & Erdem, 2016).

CONCLUSION

The research technique and development phase included developing a conceptual model, experimenting with empirical models, and verifying the model to create a logic-based learning model. The phases (syntax) of learning with the models are as follows: a) listening to lectures with complete attention from the lecturers, b) understanding the keywords in the learning material made in the form of a mind mapping, and c) making propositions based on mind mapping, d) responding to the content of the lecture matter with, e) discussing each student's work result, and f) providing unique guidance to students who face difficulties. The interaction of the logic-based learning model system, which can improve lecture listening abilities, had an influence.

There are four recommendations based on the data and research conclusion. First, lecturers should underlie logic theory in fulfilling expository learning (speaking) since it also supports the development of literary character in addition to boosting knowledge of lecture material. Second, university lectures were more likely to be expository (model), focusing on accomplishing the knowledge and skill growth targets. Because it does not meet the demands of today's life and future, understanding should be abandoned. Third, it is time for lecturers to establish a model that may create an environment in forming the character by the demands of life by working on the idea that the lecture development may trigger. Fourth, for the study findings to be helpful information in the construction of lecture models in universities, the researcher and observer of learning might expand further in the form of research on more extensive data sources with varying degrees of education.

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