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**An Investigation of Lecture Comprehension through Note-Taking Strategies:  
The Case of Second-Year Students of English at Abbes Laghror University-  
Khenchela.**

**Dissertation submitted in Partial Fulfilment of the Requirements for the degree of  
Master in Language and Culture**

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## ***Dedication***

*Thanks to God and may his peace and blessings be upon his prophets for granting us the ability to successfully finish our study.*

*To my parents « Ouardi » and « Ouarda » for their support and endless love*

*To my brothers « Sohaib » and « Hanafi »*

*A special thanks to « Selma » who was always by my side and helping me « my savior »*

*To my best friend « Niamet-allah » for always being there and for believing in me*

*To my sister « Rayene » for her encouragement and support*

*To my best partner «Fatma »*

*To all my cousins and friends*

## ***Dedication***

*In the name of Allah most merciful most gracious*

*This dissertation is dedicated to my family for their support and encouragement. To my*

*mother, who truly was the hero of my academic journey, this success is hers, not mine*

*I am deeply grateful to my brothers, Abdrahim and Abdlmoumen, my source of strength and*

*to my partner Lamia, thank you for being the best partner over these last three years and to*

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## **Abstract**

This research study investigates students' attitudes towards the role of note-taking strategies in lecture comprehension. The study is conducted at Abbas Laghror University, faculty of Letters and foreign languages, department of English, second-year students of English with participation of 70 of students; data was gathered through 18 questions. This study attempts to investigate lecture comprehension and note-taking strategies. The analysis of obtained data show findings; lecture comprehension and note-taking strategies are linked, students who use these strategies in order to comprehend lectures are well-performed in exams, tests, and assignments more than students who do not.

**Key words:** lecture comprehension, note-taking strategies, and students' attitudes.

## **List of Abbreviations**

EFL: English as a foreign language

## List of tables

Table 1 participants' level in English.....	26
Table 2 participants' attendance at lectures .....	27
Table 3 participants' overall comprehension during lectures .....	28
Table 4 participants' post-lecture comprehension strategies .....	29
Table 5 participants' participation in the lecture material .....	30
Table 6 participants' engagement during lectures by teachers.....	31
Table 7 participants' receipt of lecture handouts from teachers.....	32
Table 8 participants' note-taking frequency during lectures.....	33
Table 9 participants' reasons for taking notes in their opinion.....	34
Table 10 participants' note organization strategy.....	35
Table 11 participats' usual note organization strategy.....	36
Table 12 participants' opinions on note-taking strategies.....	37
Table 13 participants' beliefs in note-taking as a helpful learning strategy.....	38
Table 14 participants' most effective note-taking strategies for lecture comprehension.	39
Table 15 participants' note-taking strategy for visually rich lectures.....	40
Table 18 Participants' Share Notes to Help Classmates Comprehend the Lecture Better	42

## List of figures

Figure 1 participants' level in English.....	26
Figure 2 participants' attendance at lectures .....	27
Figure 3 participants' overall comprehension during lectures .....	28
Figure 4 participants' post-lecture comprehension strategies .....	29
Figure 5 participants' participation in the lecture material .....	30
Figure 6 participants' engagement during lectures by teachers.....	31
Figure 7 participants' receipt of lecture handouts from teachers.....	32
Figure 8 participants' note-taking frequency during lectures.....	33
Figure 9 participants' reasons for taking notes in their opinion.....	34
Figure 10 participants' note organization strategy.....	35
Figure 11 participants' usual note organization strategy.....	36
Figure 12 participants' opinions on note-taking strategies.....	37
Figure 13 participants' beliefs in note-taking as a helpful learning strategy.....	38
Figure 14 participants' most effective note-taking strategies for lecture comprehension	39
Figure 15 participants' note-taking strategy for visually rich lectures.....	40
Table 18 Participants' Share Notes to Help Classmates Comprehend the Lecture Better	42



## Table of the content

Dedication.....	<b>VIII</b>
Dedication.....	<b>VIII</b>
Acknowledgments.....	<b>VIII</b>
Abstract .....	<b>VIII</b>
List of Abbreviations.....	<b>VIII</b>
List of tables .....	<b>VIII</b>
List of figures.....	<b>VIII</b>
List of content .....	<b>VIII</b>
<b>General Introduction</b>	
1 Statement of The Problem.....	<b>1</b>
2 Aims of The Study.....	<b>1</b>
3 Research questions.....	<b>2</b>
4 Basic assumption.....	<b>2</b>
5 Rationale.....	<b>2</b>
6 Research methodology.....	<b>2</b>
7 Research instrument .....	<b>4</b>
8 Structure of the study.....	<b>4</b>
<b>Chapter one Lecture Comprehension and Note-Taking Strategies</b>	
Introduction.....	<b>6</b>
Section one .....	<b>6</b>
1 Definition of Lecture Comprehension.....	<b>6</b>
1.2 Key Characteristics of Academic Lectures.....	<b>7</b>
1.3 Verifying Student Comprehending of Lectures .....	<b>10</b>

Section two	12
1 Note-Taking Definition .....	12
1.2 Significance of Note-Taking.....	12
1.3 The Purpose of Note-Taking.....	13
1.4 Phases of Note-Taking .....	14
1.5 The Note-Taking Strategies.....	15
1.6 Students' Attitudes Towards Note-Taking Strategies in Lecture Comprehension...	18
1.7 The Advantages of Using Note-taking in lecture Comprehension	19
Conclusion	21
<b>Chapter two Research Methodology and Data Analysis and Interpretation</b>	22
Introduction	23
1 Research Design	23
1.1 Research Methodology.....	23
1.2 Population and Sampling .....	23
2 Data Instrument.....	24
2.1 Questionnaire .....	24
2.2 Questionnaire Aim .....	24
2.3 Description .....	24
3 Data Analysis .....	25
Discussion of The Findings .....	43
Pedagogical Implications.....	44
Limitations of The Study.....	45
Conclusion.....	46
<b>General Conclusion.....</b>	<b>47</b>

# **General Introduction**

## **1 Statement of the Problem**

The problem at hand concerns the complex dynamics of note-taking techniques and lecture comprehension among university-level second-year English language learners. Although these abilities are vital for success in the classroom, there is still a lack of knowledge regarding the precise variables that affect students' ability to absorb lectures and the various approaches they use when studying English. This disparity prevents the creation of specialized teaching strategies to improve these abilities. Furthermore, the ever-changing field of digital tools adds a layer of complexity that makes it necessary to investigate the differences in comprehension between digital and traditional note-taking techniques. In order to maximize the learning experience for second-year English students and promote both critical engagement and content retention, educators and curriculum designers must address these gaps.

Choosing second-year English students at the university level is important because this is a crucial time in their academic journey. By looking at this group, we can identify the challenges they encounter and how they adapt during this critical phase. In their second year, students have a good grasp of basic language skills but are exposed to more advanced content. Studying how they understand lectures and take notes can help educators adjust their teaching methods to better support these students as they progress in their English studies.

## **2 Aims of the Study**

The main aim of this study is determining whether lecture comprehension and note-taking strategies, and students' perspective towards these strategies in lecture comprehension. Thus, the current study looks into how well students can employ effective note-taking strategies at their second year, which is crucial to their capacity to learn from the lectures and, eventually, to their overall academic learning.

### **3 Research questions**

1. What are the most useful note-taking techniques used by students in order to comprehend lectures?
2. Are students aware of the importance of note-taking and lecture comprehension on enhancing their academic achievement?

### **4 Basic assumption**

We assume students' perspective towards note-taking strategies in lecture comprehension, influencing their overall academic achievement.

### **5 Rationale**

This research study is to investigate how second-year university English students take notes during lectures and how they comprehend the material. In an area where language usage is prevalent, this inquiry is essential to comprehending how students interact with academic material.

### **6 Research Methodology**

We introduce the methodological approach and the research design of this study. Besides, we are going to define and describe the research tool. In addition, the sample of the study is also presented.

## **6.1 Design**

Quantitative research method is used in this research, according to Creswell and Creswell (2017), this approach offers a greater degree of understanding and explaining phenomena through numerical data analysis, also it helps us understand how things relate to each other and lets us make broader conclusions about the world. Quantitative research provides valuable insights into students' attitudes towards note-taking strategies in the lecture comprehension by gathering data using survey.

## **6.2 Population and sampling**

The whole population of second-year students of Abbes Laghrour Khenchela is collected of 200 students, to delve into their academic journey, focusing on the development of knowledge and skills after the initial challenges of the first year. We select for a simple random selection, according to Cohen (2005), this simple method tries to pick participants randomly, each member of the population under study has an equal chance to be a part of the selection, since there is no a specific characteristics that make us divide the population, and we are not able to differentiate between lecture comprehension and note taking strategies, the only strategy that match our research study is the simple random selection.

## **6.3 Sample strategy**

The whole population of second year students : 200, we opt for a simple random selection, according to Cohen (2005), this sample technique attempts to choose participants randomly, each member of the population under study has an equal chance to be a part of the selection, the representative size is 109 participants.

## **7 Research instrument**

In this research study, one data instrument is used, a questionnaire for second year students in order to investigate their attitudes towards note-taking strategies to comprehend lectures during sessions.

## **8 Structure of the study**

This current study consists of two main parts, theoretical and practical parts. First, the theoretical part consists of one chapter which is divided into two sections the first section is about lecture comprehension, key characteristics of academic lectures, and verifying student comprehension of lectures. The second section is concerned with the note-taking, its significance, purpose, phases, strategies, students' attitudes towards note-taking strategies in lecture comprehension, and the advantages of using note-taking in lecture comprehension.

The practical part of this research investigation gathered from the data instrument, students' survey, it consists of data analysis, discussion, and suggestions.

# **Chapter one**

## **Lecture**

### **Comprehension and**

### **Note-Taking**

### **Strategies**



## **Introduction**

This chapter offers two main parts of the theoretical part of the research investigation the lecture comprehension and note-taking strategies of second year students of English. The chapter includes two main sections: the first section consists of definition of the lecture comprehension, the key characteristics of academic lecture, and verifying student comprehending of lectures. As for the second section, it contains definition of note-taking, its significance, purpose, phases, strategies, students' attitudes towards note-taking strategies in lecture comprehension, and the advantages of using note-taking in lecture comprehension.

### **Section one The Lecture Comprehension**

#### **1 Definition of Lecture Comprehension**

According to "Effective Listening Skills " by Dr. John Smith (2019), lecture comprehension means being able to comprehend and remember what's being said during a lecture or presentation. It includes actively thinking about the information, linking it to what you already know, and getting the main ideas.

According to Pashler et al. (2007), lecture comprehension involves the mental processes used to comprehend spoken information in educational settings. This includes skills like paying attention to important details, mentally organizing the material, and forming a clear comprehending of what was presented during the lecture. Pashler et al. emphasize the value of using effective strategies to improve learning during lectures.

## **1.2 Key Characteristics of Academic Lectures**

This section reviews key aspects of both lecture format and content. Following description will help us comprehend the challenges students face in comprehending lectures and taking effective notes.

### **1.2.1 Key Formal Variables in Lectures**

Besides how content is presented, academic lectures have other formal characteristics. For example, listeners might hear different accents during lectures. Connor (1997) and Kachru (1998) talk about the different types of English spoken worldwide, like British, American, Australian, and Canadian English. These different English styles can be challenging for students learning English as a foreign language (EFL) in comprehending lectures. Richards (1983) mentions that accents can make it hard for non-native speakers to understand lectures. For instance, in Mason's study (1994), EFL students trained in standard academic English had trouble understanding informal or casual lecture styles.

Comprehending lectures can be difficult because of fast speech and changes in how words sound, leading to mishearing and mistakes in comprehending. Unlike reading, where people can control how fast they go, listening requires keeping up with the speaker's speed. Flowerdew & Miller (1992) say that even at a normal speaking speed, the amount of information can be too much for listeners who aren't well-prepared Flowerdew 1994. Because speech often seems fast, listeners must understand quickly.

Speakers might choose to speak in a way that's easy for them but hard for others to understand, leading to mistakes like using the wrong emphasis. Non-native speakers may struggle to be understood clearly, as shown in a study on non-native teaching assistants in American Universities (Tyler 1992). These lecturers often have trouble using voice features to emphasize important points; Non-verbal signs like facial expressions, eye contact, gestures,

posture, and body language also play important roles in how meaning is shared and understood during lectures.

### **1.2.2 Key Content of Lectures**

According to Fiorella & Mayer (2015), academic lectures have other important characteristics related to their content that affect how easy they are to comprehend. Just like the formal aspects, the content of lectures influences how well listeners can engage with the material. Important aspects of lecture content involve focusing on the amount of new information presented and the complexity of concepts, especially in literature courses.

One key aspect of lecture content is "propositional density", which means the amount of new information compared to the length of the text. Shohamy & Inbar (1988) note that lectures contain more information compared to everyday conversations, except for scripted talk like news broadcasts. Lectures where instructors read from notes can be even denser in terms of information. Comprehending these lectures therefore requires more mental effort.

The high density of information in lectures is because their main purpose is to share knowledge lectures often cover new, complex, and sometimes abstract ideas. Research by (Flowerdew & Miller 1992) shows that lectures challenge students mentally, especially when learning complex systems of ideas. These challenges can be particularly tough for EFL students. In Algerian English departments, students often study topics and concepts (literary, historical, linguistics) that are new or from foreign cultures, mainly encountered during lectures. Concepts like transcendentalism and linguistic theories such as Generativism add to the complexity of lectures in English departments, making them more demanding for EFL students. Therefore, comprehending lecture content about literature requires considering the cultural and language challenges faced by EFL learners.

Biblical references, often used in literature lectures, can present culture-specific challenges. Allusions to the Bible are common in early American and English literature. Concepts from different cultures, like varying moral codes, can also complicate comprehending for EFL students (Krsul 1989). Therefore, lectures on literature require more effort from EFL learners with different cultural and religious backgrounds.

### **1.2.3 The Language Factor in Lectures**

Language plays a critical role in lecture comprehension. The way lectures are structured and the words used can help EFL students' comprehending. Leki (1991), drawing from her experience learning French, found seventeenth-century French particularly challenging and frustrating due to its complexity. She highlighted vocabulary as a major issue in literary discussions. This is supported by research showing that EFL students often struggle with lecture vocabulary, especially when specialized terms are used (Benson 1989, Flowerdew 1994). Many terms used in literature and linguistics lectures may go beyond what EFL students typically know.

Literature lectures, in particular, can be challenging for EFL listeners. Literature instructors often refer to and analyze literary texts using specialized language. Furthermore, literature itself has a unique way of using words and sentence structures. Writers may use English syntax creatively and words in unique ways (Prodromou 1989, Topping 1968). Older literary works, in particular, can be linguistically demanding. Some studies (Krsul 1989, Slih 1989) found that EFL students may struggle to understand early English literature due to language barriers. Parry (1991) warns against using too many unfamiliar words in lectures, as EFL listeners may not have enough contexts to understand their meaning.

In terms of sentence structure, research (Flowerdew 1994, Hasen & Jensen 1994) has identified several features that characterize lecture content. For example, lectures often use

« that » clauses, subordinate clauses, conditional clauses, and indirect questions extensively. These complex structures can make lecture content longer and harder to understand, requiring more effort to grasp the relationships between ideas. EFL students may find it challenging to process longer sentences due to difficulties with references and maintaining continuity, especially with the frequent use of words like « that » and personal pronouns within the limits of short-term memory.

### **1.3 Verifying Student Comprehension of Lectures**

Evaluating how well students comprehend lectures is a complex task that demands a thorough strategy incorporating different methods and observations. One essential approach involves tracking signs of active participation demonstrated by students during the lecture. This includes actions such as note-taking, asking questions, and participating in discussions. Notably, research conducted by Hattie and Timperley (2007) underscores the significance of feedback loops in the learning process, emphasizing that student interaction with lecture material is paramount for comprehension. Moreover, observing non-verbal cues, such as facial expressions and body language, can provide invaluable insights into students' level of comprehending (Wittwer & Renkl, 2010). For instance, furrowed brows or perplexed expressions may indicate areas of difficulty or confusion, prompting the instructor to provide further clarification or adjust their teaching approach accordingly.

In addition to real-time observations, assessing student comprehension often involves evaluating their retention and application of lecture content over time. This can be achieved through a variety of means, including quizzes, assignments, and projects that require students to demonstrate their comprehending in practical contexts (Bligh, 2000). By analyzing the quality of students' responses and their ability to synthesize information, educators can gauge the depth of comprehension and identify areas for further reinforcement or review.

Furthermore, peer interactions and collaborative learning activities play a crucial role in assessing comprehension. Research by Johnson and Johnson (1994) highlights the benefits of cooperative learning environments, where students engage in discussions, debates, and group projects, allowing them to articulate their comprehending and receive feedback from their peers. This peer-to-peer interaction not only enhances comprehension but also provides instructors with valuable insights into individual students' thought processes and reasoning abilities.

Furthermore, incorporating formative assessments throughout the lecture can provide immediate feedback on student comprehension and inform instructional decisions. Techniques such as concept mapping, think-pair-share activities, and muddiest point reflections allow students to actively engage with the material and self-assess their comprehending (Tanner, 2012). By regularly assessing comprehension in this manner, instructors can identify misconceptions or gaps in understanding early on and address them proactively. Additionally, soliciting students' self-reported perceptions of their comprehension through surveys, journals, or reflective writing exercises can offer valuable insights into their learning experiences and help instructors tailor their teaching strategies to meet individual needs (Rust, 2002).

On the other hand, structured note-taking strategies also are essential for enhancing students' comprehension during lectures. They not only assist in capturing key points but also encourage active engagement and deeper comprehending of the lecture. According to Mueller and Oppenheimer (2014), employing structured note-taking strategies enhances retention and conceptual comprehending. By organizing information and summarizing key concepts, students can better synthesize and retain the content, facilitating comprehension and long-term learning. .

## **Section two Note-Taking Strategies**

### **1 Note-Taking Definition**

Many scholars have offered different definitions of note-taking. O'Malley & Chamot (1995) describe note-taking as "writing down the key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a language task" (p. 138). In other words, note-taking involves recording the main ideas from a lecture in various formats to aid student performance.

Dewitt (2007) defined note-taking as "an external memory aid that refers to writing a brief record of information to be remembered" (p.64). Note-taking is not just about writing things down; it's also about using those notes to recall and reuse ideas and words.

### **1.2 The Significance of Note-Taking**

Taking notes in class is a helpful way for students to remember what they learn. When students jot down what their teachers say, it helps them comprehend and remember the lecture better. Some researchers, like Peper and Mayer in 1986, say that taking notes helps students be more focused and organized. It also makes it easier for them to connect new information with what they already know. Another study by Barnett, Di Vesta, and Rogozinski in 1981 found that taking notes helps students remember important terms and concepts. They can either memorize them or write them down to review later.

More recent research by Zohrabi and Esfandyari in 2014 shows that taking notes assist students learn new terms and remember them for later. Dunkel and Pialorsi in 2005 found that students who take notes feel more comfortable and perform better on tests. Overall, studies have shown that taking notes is helpful for learning, especially when students need to

remember things for tests. For example, a study by Kiewra and others in 1991 found that students who take notes do better on tests compared to those who don't.

In summary, taking notes is an important skill, especially for learning a new language. It aids learners pay attention in class and retain what they learn. Plus, it is useful for doing well on exams and improving overall learning.

### **1.3 The Purpose of Note-Taking**

During University lectures, students receive a wealth of intricate information that can be challenging to process. Therefore, employing effective note-taking strategies becomes essential for meeting their learning objectives. Kiewra (1985) delineated the advantages, emphasizing that note-taking enhances lecture comprehension by activating deliberate mechanisms and involving learners' cognitive processes in encoding, integrating, synthesizing, and transforming orally received input into personally meaningful constructs. Additionally, these notes serve as an external repository of knowledge, facilitating later revision to reinforce memory retention (Zohrabi & Esfandyari, 2014).

Expanding on this, Kesselman-Turkel and Peterson (2003) argue that note-taking not only captures students' attention but also fosters active engagement throughout the lecture. By employing various cognitive processes to translate information into personalized formats through strategies like paraphrasing and summarizing, students enhance comprehension and retention. Summarizing content in one's own words aids comprehension, facilitates idea organization, and promotes memorization. Consequently, note-taking becomes pivotal for recording essential concepts, which students can later revise for exams or incorporate into assignments, ensuring thorough preparation and comprehension.



## **1.4 Phases of Note-Taking**

Taking notes in class is an excellent strategy for paying attention and retaining what's being taught. It starts before the class, as you prepare to take notes, and continues afterward when you review what you have written. This method facilitates better preparation for tests or discussions. Jones (2010).

### **1.4.1 Before the Lecture**

To take notes effectively, it's crucial to research a specific subject before attending class. This aids students in gaining a general comprehending of the main ideas and concepts, as well as providing background knowledge. Sitting near the front in class helps you stay focused. Before jotting down points, students should note the date and title to facilitate later information retrieval. Reviewing notes from previous lectures activates prior knowledge if time allows. Additionally, learners should ensure they have sufficient writing tools and paper available to avoid disruptions in the learning process (Boyle, 2007).

Brown et al. (2014) emphasize the importance of pre-class preparation in their research on effective learning strategies. They suggest that engaging with the material before class primes the mind for better comprehending and retention during lecture.

### **1.4.2 During the Lecture**

When the lecture begins, students must listen attentively to grasp the main points (Kiewra, 1985). They should focus on both verbal and visual cues from the teacher. Taking clear, comprehensible notes is crucial. Hughes and Suritsky (1991) advise using your own words to summarize the teacher's points when taking notes. They also suggest using abbreviations and symbols for quicker writing. Hughes and Suritsky (1994) argue that copying everything word for word is not effective for learning. Additionally, Kiewra (1985) recommends that students

identify the most important information and jot down brief, organized notes covering the main topics.

### **1.4.3 After the Lecture**

Reviewing your notes after class is crucial; as it helps you comprehend better what you have learned. Lazarus (1991) emphasizes that this review, whether immediately after class or while studying for a test, is paramount. Suritsky and Hughes (1996) elucidate that reviewing entails going over your notes to fill in any blanks, clear up confusion, and rectify mistakes. They also say that going over your notes can help people who have trouble taking good notes. Doing this promptly after class is particularly beneficial because everything is still fresh in your mind.

In summary, note-taking involves several steps. Sit in front of the teacher to listen well, then jot down the main ideas in your own words and organize them. Finally, after class, revisit your notes to fill in any gaps and clarify anything you didn't comprehend. Smith (2018) .

## **1.5 Note-Taking Strategies**

Throughout the years, researchers have proposed various note-taking strategies to help students organize their notes effectively. These strategies are primarily categorized as linear and nonlinear. Piolat (2001) argues that linear strategies closely resemble conventional texts and are widely used by students. Conversely, nonlinear strategies rely on graphical representations, structuring notes unconventionally. According to Piolat, Olive, and Kellogg (2005), the nonlinear approach offers greater benefits than the linear method as it fosters deeper connections between ideas. Well-known note-taking strategies include the Cornell strategy, the Outlining strategy, and the Mapping strategy.

### **1.5.1 Cornell Strategy**

The Cornell strategy, advocated by Walter Pauk in the 1950s at Cornell University, is a cornerstone of effective note-taking, particularly favored among English as a Foreign Language (EFL) learners in diverse learning environments. Renowned for its structured approach, efficiency, and capacity to streamline learning efforts, this strategy has become a mainstay in educational practice. Pauk (2001) emphasized that the essence of the Cornell strategy transcends mere transcription; it offers a systematic framework for transforming notes into potent study aids, fostering active engagement and critical thinking. The strategy's architectural design revolves around three distinct columns, each serving a strategic purpose. The rightmost column, known as the note-taking column, serves as a repository for essential details, including lecture dates, titles, supporting concepts, and intricate specifics. Encouraging students to leave ample space for further elucidation or potential revisions enhances the utility of this column. Positioned adjacent is the cue column, situated to the left, serving as a repository for keywords, main concepts, or probing questions, providing a scaffold for comprehension and retention. Lastly, a dedicated space for summarizing the essence of the notes encapsulates the key insights gleaned from the lecture, facilitating consolidation and review. With its multifaceted structure and emphasis on active engagement, the Cornell strategy remains a stalwart ally for learners seeking to optimize their study endeavours. Furthermore, in their seminal work on effective learning strategies, Dunlosky et al. (2013) highlighted the Cornell strategy as a key tool for improving academic performance and knowledge retention, emphasizing its practical support in many studies.

### **1.5.2 The Outlining Strategy**

The Outline strategy is a popular way for university students to take notes. According to Wong (2010), this strategy helps organize information neatly, showing how different ideas are connected. It also facilitates the process of reviewing notes later on. In this strategy, you

arrange your notes from main points to smaller details. You can use numbers and letters to show the order and importance of each point.

For example, if you are summarizing a lecture about the French Revolution, you could use Roman numerals for big topics like "Causes", "Key Figures", and "Consequences". Then, you could use numbers under each Roman numeral to break down subtopics, like "Economic Factors" under "Causes". This helps you comprehend complex events better. Also, using capital letters can help you distinguish main sources from secondary ones when you are researching for a paper. Johnson (2017).

Furthermore, Johnson (2015) suggests that the outline strategy enhances comprehending by visually representing the relationships between ideas, allowing students to grasp the overall structure of information, which facilitates remembering and recalling details later. Johnson emphasizes that this strategy is particularly effective for visual learners, providing a clear structure for organizing information.

### **1.5.3 The Mapping Strategy**

The Mapping strategy, also known as concept mapping, is a way to organize information visually. It helps you comprehend and remember things better by showing how different ideas are connected. You create nodes for concepts and draw lines to show relationships between them. This strategy helps with comprehending difficult topics and remembering important points. Novak and Gowin (1984) found that concept mapping enhances how you learn and think. It's useful for studying and comprehending complicated information because it lets you see connections between ideas. Moreover, Nesbit and Adesope (2006) discovered that utilizing concept maps improves comprehending and retention. They identified optimal strategies for employing concept mapping, including suitable tasks and teaching approaches. Their research demonstrated the effectiveness of concept mapping for learning across various

contexts, such as classrooms and online environments. Overall, their study affirmed concept mapping as a valuable tool for learning in diverse situations.

## **1.6 Students' Attitudes towards Note-Taking Strategies in Lecture Comprehension**

The critical role of note-taking strategies in enhancing lecture comprehension is fundamental in education, acting as the bridge between spoken information and internalized knowledge. A deeper examination reveals a complex interaction of cognitive processes and teaching methods, all contributing to the overarching aim of facilitating comprehending and memory retention Smith (2019). Central to this discussion is the crucial differentiation between passive transcription and active engagement, as outlined by Mueller and Oppenheimer (2014). Their influential research unequivocally demonstrated the superiority of summarization over verbatim transcription in bolstering comprehension and retention. By encouraging learners to condense complex ideas into concise summaries, note-taking becomes not merely a mechanical task but a dynamic process of sense-making and knowledge construction.

Furthermore, the incorporation of visual aids into note-taking practices emerges as a powerful catalyst for enhancing comprehension. Drawing from the insights of Bligh (2000), the inclusion of diagrams, charts, and other visual representations alongside written notes serves to clarify abstract concepts, reinforce connections, and stimulate visual memory. This multimodal approach leverages the brain's natural ability to process information through various sensory channels, thereby fostering a deeper and more enduring comprehending of the subject matter.

Moreover, structured note-taking strategies like the Cornell strategy exemplify the effectiveness of systematic approaches in optimizing comprehension and retention. Rooted in the pioneering work of Walter Pauk in the 1950s, the Cornell strategy advocates for dividing the note-taking page into distinct sections, each fulfilling a specific cognitive function. By

delineating spaces for key ideas, supporting details, and summarization, learners are provided with a framework for organizing and synthesizing information, thereby reinforcing comprehending and facilitating long-term memory consolidation.

Additionally, the integration of personal annotations and connections to prior knowledge represents a potent cognitive strategy for enriching the note-taking process. Building upon the insights of Kiewra (1989), contextualizing new information within existing cognitive frameworks not only enhances comprehension but also fosters deeper engagement and meaning-making. By actively relating the material to personal experiences, interests, and prior learning, learners infuse their notes with personal significance, thereby enhancing retention and facilitating retrieval.

In essence, the effectiveness of note-taking strategies in lecture comprehension goes beyond mere transcription to encompass a multifaceted interplay of cognitive processes, pedagogical methodologies, and individual engagement. From the strategic use of summarization techniques to the incorporation of visual aids and structured frameworks such as the Cornell strategy, each strategy offers unique avenues for enhancing comprehension, retention, and ultimately, nurturing a culture of lifelong learning and intellectual growth.

### **1.7 The Advantages of Using Note-Taking in Lecture Comprehension**

Research by Mayer (2009) & Guthrie (2004) highlight the importance of employing supplementary materials, such as slides and handout, during lectures to enhance student comprehension. These materials aid in visualizing and remembering key points, while concurrent note-taking further reinforces comprehending. However, the efficacy of supplementary materials may vary, particularly in challenging lectures or for students with diverse learning styles. Boyle & Weishaar's (2017) study in the *Journal of Educational Psychology* delves into various strategies to improve lecture comprehension, including pre-

reading, note-taking, questioning, mental imagery, summarization, and reflective thinking. They advocate for the integration of additional materials and interactive activities to optimize students' grasp of lecture content, drawing on evidence-based methods to enhance lectures effectiveness.

Previous research underscores the advantages effective note-taking strategies in bolstering learning outcomes. Mueller & Oppenheimer (2014) found that handwriting notes leads to improved comprehending and memory retention compared to typing on a laptop. Similarly, Kiewra et al. (1991) emphasized the effectiveness of strategic note-taking approaches, such as summarization and paraphrasing, in enhancing learning. These studies collectively emphasize the crucial role of employing effective note-taking strategies to augment comprehension during lectures.

## **Conclusion**

In this chapter, we examined how lecture comprehension and note-taking work together. We defined lecture comprehension, discussed how to ensure students comprehend lectures, and highlighted the importance of good note-taking. We covered what note-taking is, why it's important, how to do it well, and how aids in comprehending lectures. This chapter shows that comprehending lectures and taking good notes are closely linked, setting the groundwork for helping second-year students learn and remember class material more effectively.



# **Chapter two**

**Research**

**Methodology**

**And Data analysis**

**and**

**Interpretation**

## **Introduction**

This study describes the previous research of lecture comprehension and note-taking strategies by investigating their effect on second-year students at Abbas Laghrour-Khenchela University, specifically in the Faculty of Letters and Foreign Languages, English Department. We examine students' attitudes towards these strategies on lecture comprehension using a survey for data collection. This chapter outlines our research methodology, including the instruments used, data collection procedure, and analysis procedures.

## **1 Research Design**

### **1.1 Research Methodology**

Quantitative research method is used in this research. According to Creswell and Creswell (2017), this approach offers a greater degree of understanding and explaining phenomena through numerical data analysis, also it helps us understand how things relate to each other and lets us make broader conclusions about the world. Quantitative research provides valuable insights into students' point of view towards note-taking strategies in lecture comprehension by gathering data using survey.

### **1.2 Population and Sampling**

Second-year students of Abbas Laghrour Khenchela, department of English are chosen. Since they had an experience in their first year on comprehending lectures and taking notes, this attempts to help us to investigate how these skills evolve over time.

The whole population of second-year students consists of 200 students, we select for a simple random selection, according to Cohen (2005), this simple method tries to pick participants randomly; each member of the population under study has an equal chance to be a part of the selection, since there is no a specific characteristics that make us divide the population, and

we are not able to differentiate between lecture comprehension and note-taking strategies. The only strategy that matches our research study is the simple random selection.

## **2 Data Instrument**

In this research investigation, one data gathering tool is used a questionnaire for students, in order to investigate students' attitudes towards note-taking strategies in lecture comprehension.

### **2.1 Questionnaire**

The research study is based on a questionnaire collecting data. The whole population contains of Second-year students (200 students) of English Department, Abbas Laghrour , Khenchela, the questionnaire was divided to students of English Department ; However, only 70 from the whole population answered all the questions. Since the study is based on quantitative research method, findings will be presented relying on statistics in forms of percentages and diagrams.

### **2.2 Questionnaire Aim**

In this research study, the questionnaire aims at investigating students' attitudes towards lecture comprehension and note-taking strategies and their impact on lecture comprehension. The survey is divided into three main sections: introductory questions (participants' personal information), lecture comprehension and note-taking strategies, and students' attitudes towards these strategies in comprehending lectures.

### **2.3 Description**

#### **Section One Introductory Question**

The first section consists of one question, is about participants' level of English , if it is weak, average, good, or excellent .

### **Section Two Lecture comprehension and Note-taking strategies**

The second section of the survey includes 12 questions. The first set of questions (6) focuses on lecture comprehension: students' attendance of lectures, assess their comprehension during lectures, ensure their comprehension of lectures after class, their participation in the lecture material, if their teachers engage them during lectures, and if they provide them with handout.

The second set of questions (6 ) pertains to note-taking : how often students take notes and why they take them, and also if they organize their notes and which strategy they use, how they think note-taking strategies is, and if they believe that taking notes is a helpful learning strategy.

### **Section Three Students' Attitudes towards Note-Taking Strategies in Lecture Comprehension**

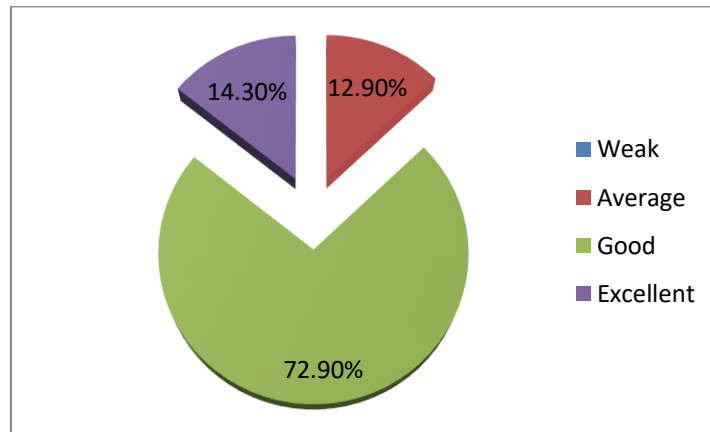
The third section of the questionnaire contains 5 questions; it concerns participants' opinions about the effect of note-taking strategies in enhancing their lecture comprehension, the best strategy for lectures that focus on visual content, the assistance of notes in preparing for exams or tests, adaptation of note-taking strategies for complex lectures, and sharing notes with classmates helps them comprehend lectures or not.

### **3. Data Analysis**

Q1: How do you consider your level in English?

**Table 1. Participants' level in English**

Option	Number	Percentage
Weak	0	0%
Average	9	12,90%
Good	51	72,90%
Excellent	10	14,30%



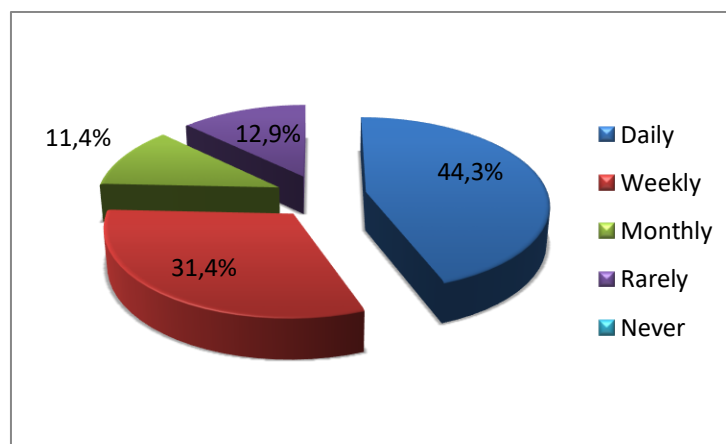
**Figure 1. Students' Level in English.**

The first question is concerned with second-year students of English personal information; the results show that the majority of participants (72, 9%) chose good, 14, 3% of students chose excellent, and 12, 9% of them chose average.

Q2: How often do you attend lectures?

**Table 2. Participants' Attendance at Lectures**

Option	Number	Percentage
Daily	31	44,30%
Weekly	22	31,40%
Monthly	8	11,40%
Rarely	9	12,90%
Never	0	0%



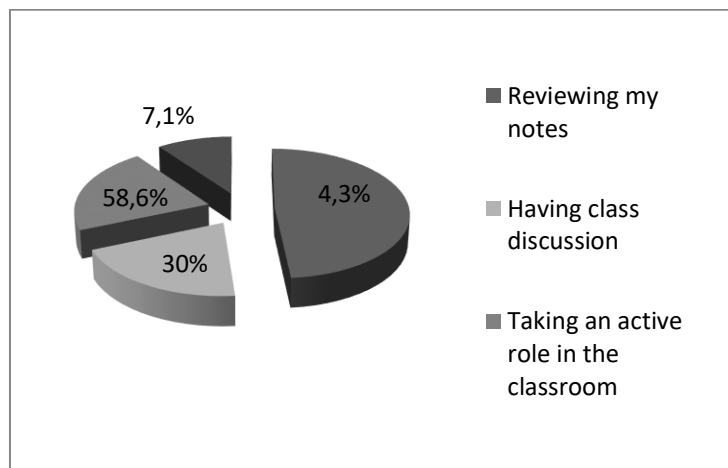
**Figure 2. Students' Attendance at Lectures**

Table 2 shows different participants' attendance at lectures; there are 44, 3% of students attend daily, 31, 4% of them choose weekly, 12, 9% of them choose rarely, and 11, 4% of the students choose monthly.

Q3: How would you rate your overall comprehension during lectures?

**Table 3. Participants' Overall Comprehension during Lectures**

Option	Number	Percentage
Weak	3	4,30%
Average	21	30%
Good	41	58,60%
Excellent	5	7,10%



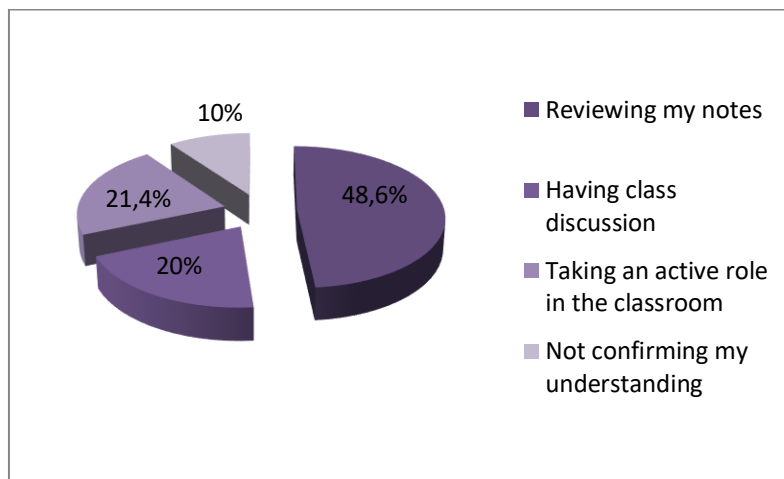
**Figure 3. Participants' Overall Comprehension during Lectures**

Table three illustrates participants' overall comprehension during lectures, 58, 6% of students consider themselves good, 30% of them chose average, 7, 1% of them chose excellent, and 4, 3% of students are weak.

Q4: How do you typically ensure you understand the lecture after class?

**Table 4. Participants' Post-Lecture Comprehension Strategies**

Option	Number	Percentage
Reviewing my notes	34	48,60%
Having class discussion	14	20%
Taking an active role in the classroom	15	21,40%
Not confirming my understanding	7	10%



**Figure 4. Participants' Post-Lecture Comprehension Strategies**

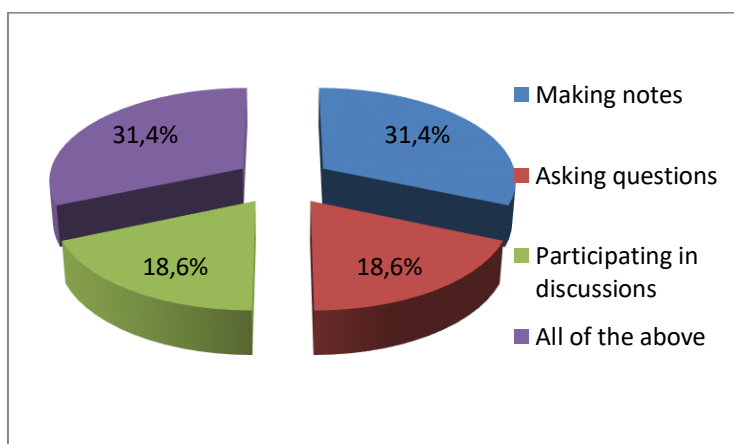
Table 4 summarizes the participants' post-lecture comprehension strategies, 48,6% of students prefer to review their notes, 21,4% of students take an active role in the classroom, 20% of them have class discussion, and 10% of them did not confirm their understanding.



Q5: How do you participate in the lecture material?

**Table 5. Participants' Participation in the Lecture Material**

Option	Number	Percentage
Making notes	22	31,40%
Asking questions	13	18,60%
Participating in discussions	13	18,60%
All of the above	22	31,40%



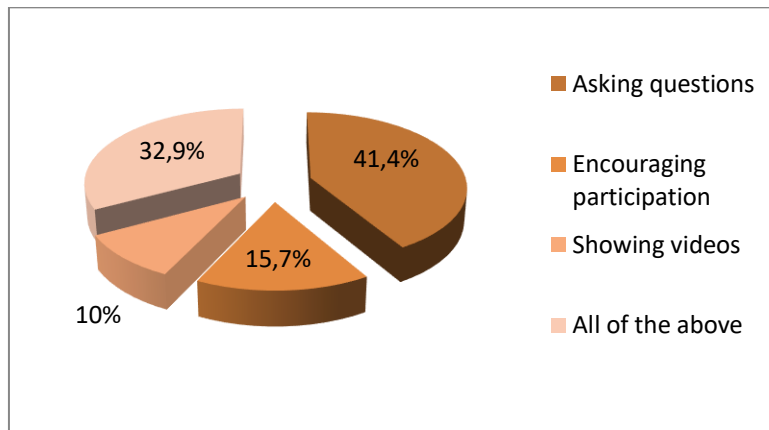
**Figure 5. Participants' Participation in the Lecture Material**

Table 5 presents the participants' participation in the lecture material, 31,4% of students make notes, 18,6% of students ask questions, 18,6% of them participate in discussion, and 31,4% of them said all the above.

Q6: How do the teachers engage you during the lecture?

**Table 6. Participants' Engagement during Lectures by Teachers**

Option	Number	Percentage
Asking questions	29	41,40%
Encouraging participation	11	15,70%
Showing videos	7	10,00%
All of the above	23	32,90%



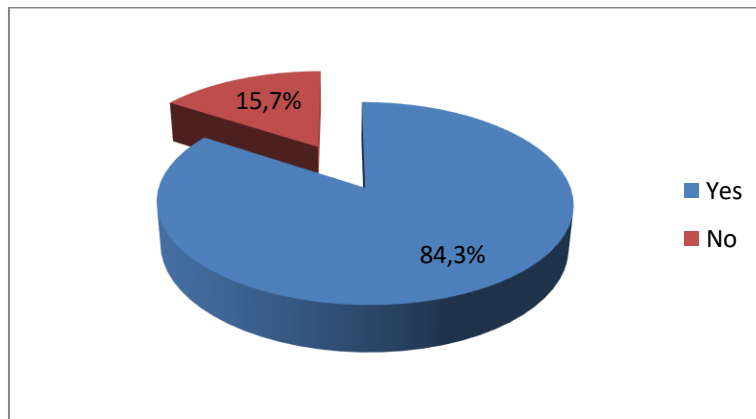
**Figure 6. Participants' Engagement during Lectures by Teachers**

Table 6 shows students' engagement during lectures by teachers, 41,4% of students said that their teachers ask questions, 15,7% of them said encouraging participation, 10% of them said showing videos, and 32,9% of them said all of the above.

Q7: Do your teachers usually provide handouts for lectures?

**Table 7. Participants' Receipt of Lecture Handouts from Teachers**

Option	Number	Percentage
Yes	59	84,30%
No	11	15,70%



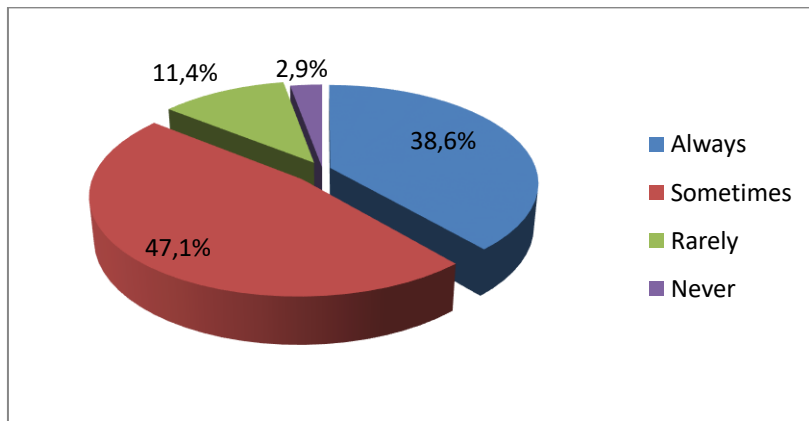
**Figure 7. Participants' Receipt of Lecture Handouts from Teachers**

Table 7 presents the number and percentages of whether students receive lecture handouts from teachers or not. The majority of students said yes (84, 3%, 59) but only (15, 7, 11) of them said no which means their teachers did not give them handouts.

Q8: During lectures, how often do you take notes?

**Table 8. Participants' Note-Taking Frequency during Lectures**

	N	%
Always	27	38,60%
Sometimes	33	47,10%
Rarely	8	11,40%
Never	2	2,90%



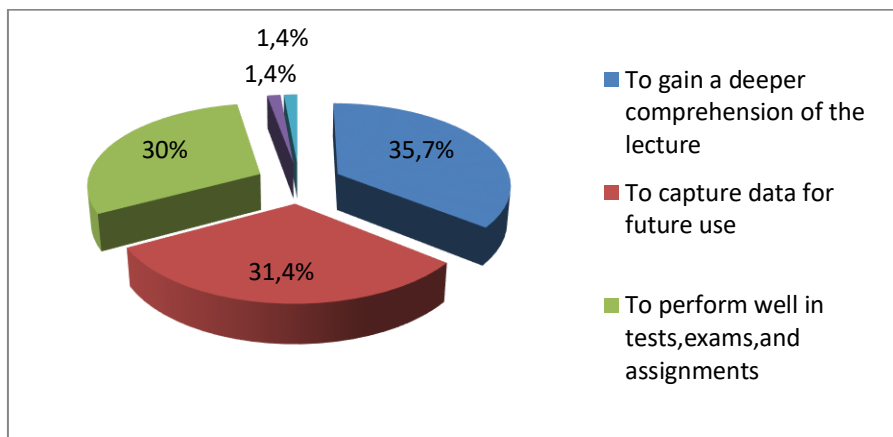
**Figure 8. Participants' Note-Taking Frequency during Lectures**

Table 8 summarizes students' note-taking frequency during lectures, 47,1% of students take notes sometimes, 38,6% always, 11,4% of them take rarely, and 2,9% of them did not take notes .

Q9: Why do you take notes?

**Table 9. Participants' Reasons for Taking Notes in Their Opinion**

Option	Number	Percentage
To gain a deeper comprehension of the lecture	25	35,70%
To capture data for future use	22	31,40%
To perform well in tests, exams, and assignments	21	30%
All of the above	1	1,40%
Others: my notes are in my mind	1	1,40%



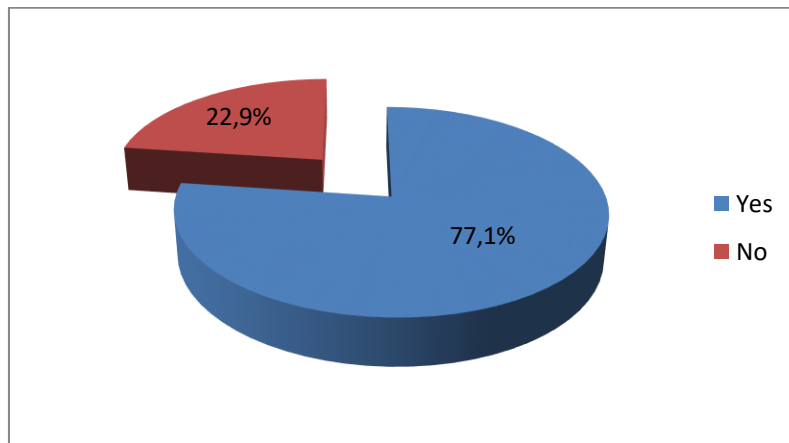
**Figure 9. Participants' Reasons for Taking Notes in Their Opinion**

Table 9 illustrates students' reasons for taking notes in their opinion; 35,7% of students take notes in order to gain a deeper comprehension of the lecture, 31,4% of them chose to capture data for future use, 30% of them select to perform well in tests , exams, and assignments, one student ( 1, 1,4%) said all of the above, and one student ( 1, 1,4%) suggest another question , he said my notes are in my mind.

Q10: Do you organize your notes using a particular strategy?

**Table 10. Participants' Note Organization Strategy**

Option	Number	Percentage
Yes	54	77,10%
No	16	22,90%



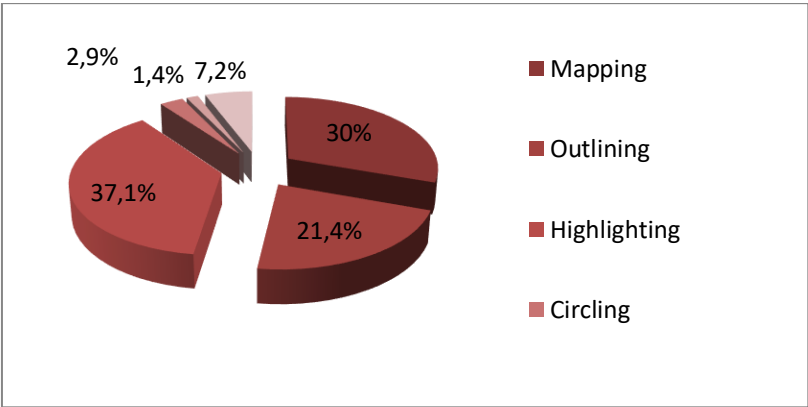
**Figure 10. Participants' Note Organization Strategy**

This table shows students' note organization strategy. The majority of them 77, 1% organize their notes, but (16, 22, 9%) of them they did not.

Q11: If yes, what is the strategy do you usually use?

**Table 11. Participants' Usual Note Organization Strategy**

Option	Number	Percentage
Mapping	21	30%
Outlining	15	21,40%
Highlighting	26	37,10%
Circling	2	2,90%
Summarizing my data into points	1	1,40%
I don't use any strategy	4	7,20%



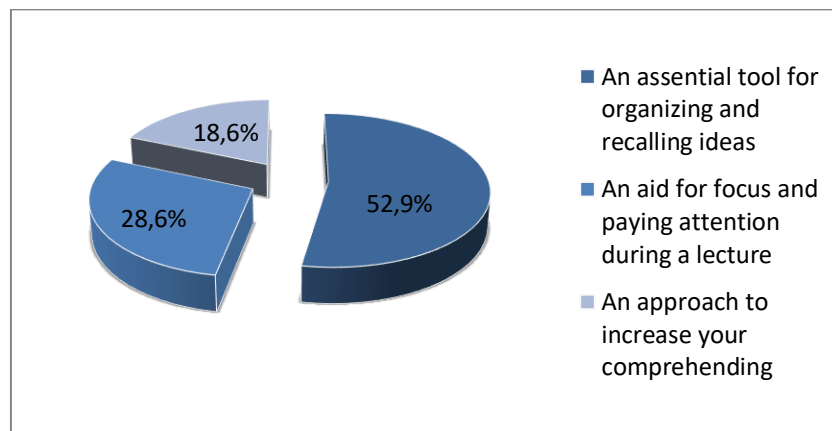
**Figure 11. Participants' Usual Note Organization Strategy**

Table 11 reveals the number of students who use note organization strategy, 37,1% of students use highlighting, 30% of them use mapping, 21,4% of them chose outlining, 2,9% of them chose circling, one student (1, 1,4%) suggest summarizing my data into points, and 7,2% of students don't use any strategy for organizing notes.

Q12: Do you think note-taking strategies are?

**Table 12. Participants' Opinions on Note-Taking Strategies**

Option	Number	Percentage
An essential tool for organizing and recalling ideas	37	52,90%
An aid for focus and paying attention during a lecture	20	28,60%
An approach to increase your comprehension	13	18,60%



**Figure12. Participants' Opinions on Note-Taking Strategies**

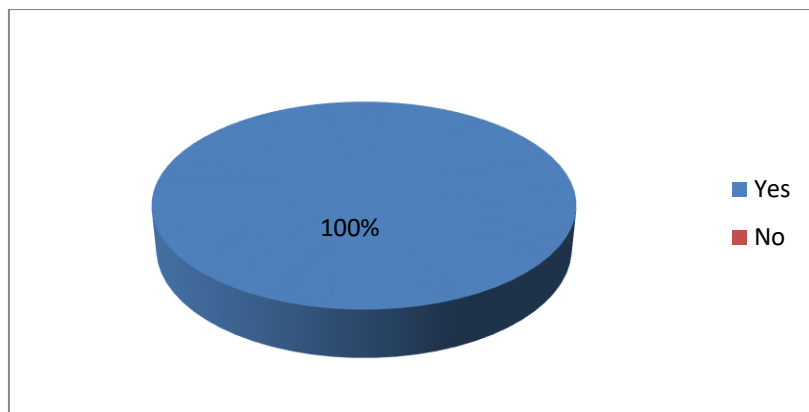
This table shows participants' opinion on note-taking strategies; 52,9% of them think that note-taking strategies is an essential tool for organizing and recalling ideas, 28,6% of them chose an aid for focus and paying attention during a lecture, and 18,6% of them select an approach to increase their comprehending.



Q13: Do you believe that taking notes is a helpful learning strategy?

**Table 13. Participants' Beliefs in Note-Taking as a Helpful Learning Strategy**

Option	Number	Percentage
Yes	70	100,00%
No	0	0,00%



**Figure 13. Participants' Beliefs in Note-Taking as a Helpful Learning Strategy**

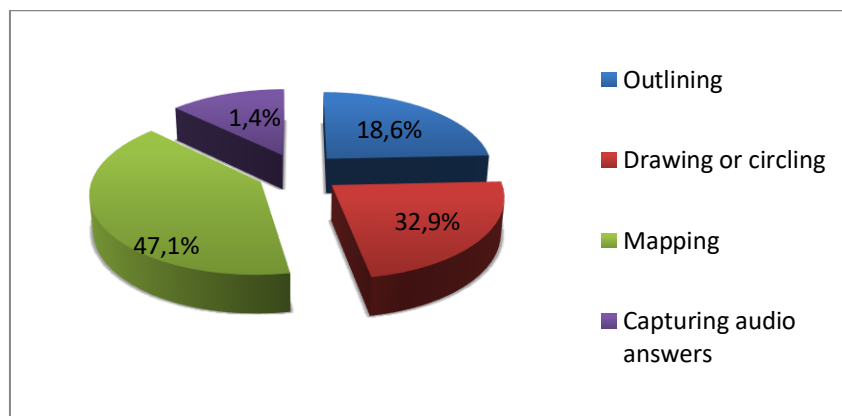
Table 13 summarizes participants' beliefs in note-taking as a helpful learning strategy. All the students (100% yes) believe that taking notes is a helpful learning strategy.

Q14: What note-taking strategies do you find most effective in enhancing your lecture comprehension?

**Table 14. Participants' Most Effective Note-Taking Strategies for Lecture**

**Comprehension**

Option	Number	Percentage
Using a laptop for note-taking	13	18,60%
Recording the lecture and transcribing the answer afterwards	23	32,90%
Making use of abbreviation	33	47,10%
Not taking any notes	1	1,40%



**Figure 14. Participants' Most Effective Note-Taking Strategies for Lecture**

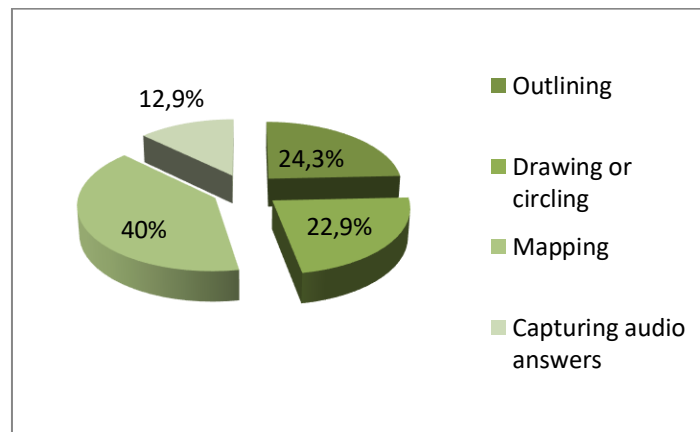
**Comprehension**

Table 14 illustrates participants' most effective note-taking strategies for lecture comprehension, 47,1% of them make abbreviation, 32,9% of them chose recording the lecture and transcribing the answer afterwards, 18,6% of participants select using a laptop for note-taking, and just one student (1, 1,4%) don't take any notes.

Q15: Which strategy of taking notes is best for lectures that place a lot of focus on visual content?

**Table 15. Participants' Note-Taking Strategy for Visually Rich Lectures**

Option	Number	Percentage
Outlining	17	24,30%
Drawing or circling	16	22,90%
Mapping	28	40%
Capturing audio answers	9	12,90%



**Figure 15. Participants' Note-Taking Strategy for Visually Rich Lectures**

Table 15 presents participants' note-taking strategy for visually rich lectures, 40% of students chose mapping strategy, 24,3% of them said outlining, 22,9% of them chose drawing and circling, and 12,9% of participants select capturing audio answers.

**Q16:** in what ways do your notes assist you in preparing for exams or assignments related to the lecture content?

All of the participants (70) made suggestions about how their notes assist them in preparing for exams or assignments related to the lecture content. The students' suggestions can be summed up as follows:

- “My notes help me remember every detail that the teacher explained it in the classroom”.
- “My notes assist me in preparing for exams or assignments related to lecture content by serving as a concise summary of key points, concepts, and details covered in class”.
- “Make the reading of handouts easier because i already had notes about the previous lectures”.
- “My notes help me study by summarizing key points from lectures, making it easier to review important information quickly”.
- “It helps me a lot during exams, by making me understand and remember what i learned”.

**Q17:** how do you adapt note-taking strategies for complex lectures?

All of the participants (70) made recommendations about the adaptation of note-taking strategies for complex lectures. The students' recommendations can be summarized as follows:

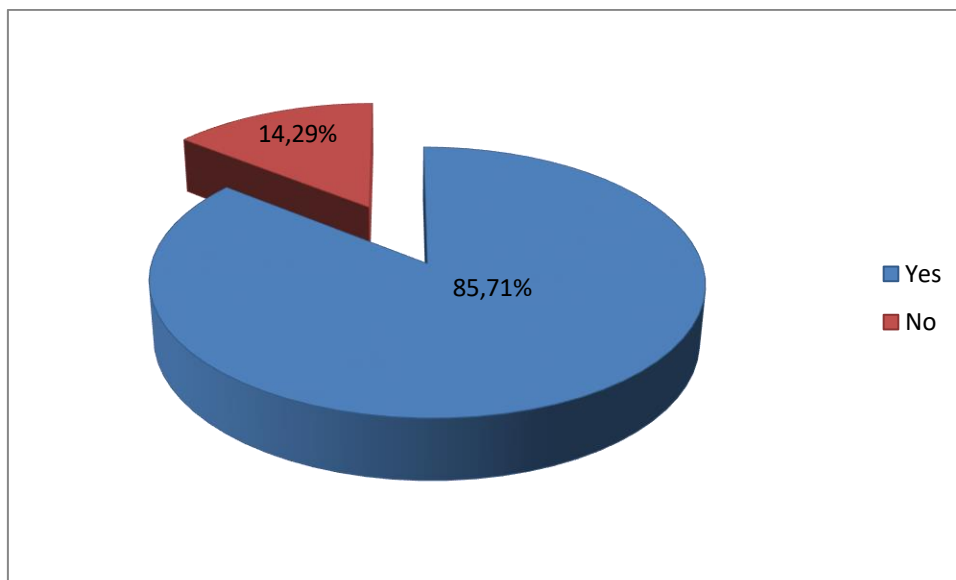
- “Outline the difficult misunderstanding words”.
- “Using abbreviation and symbols”.
- “Outline the different titles or parts and recording teacher’s voice, after class i’ll revise it again”.

- “I mix between the two strategies; outlining and mapping in complex lecture in order to comprehend it quickly”.
- “I make a mind map, than i revise the lesson easily”.

Q18: Have you ever shared your notes with classmates to see if it helps them comprehend the lecture better?

**Table 18. Participants’ Share Notes to Help Classmates Comprehend the Lecture Better**

Option	Number	Percentage
Yes	60	85,71%
No	10	14,29%



**Figure 18. Participants’ Share Notes to Help Classmates Comprehend the Lecture Better**

The majority of students (85, 71%) chose yes, they share their notes with classmates, but (14, 29%) of them select no so they don’t share them.

## **Discussion of the Findings**

The data gathered from students survey throughout the study shows that students interactions with lecture material is paramount for comprehension, by reviewing their notes , and having class discussions, and this result confirms what Hattie and Timperley (2007) stated in their research study that these activities make the teacher confirm that the students comprehend the lecture. Moreover, students who always or sometimes take notes, it makes them pay attention and focus more in the classroom as it mentioned in the question number (8).

According to Kiewra (1985), when the lecture begins, students must listen attentively to grasp the main points. In addition, students' survey showed that taking notes is a tool that helps students comprehend lectures deeply, and this can be noticed from the data collected from question number (09) students find that the objective of taking notes is to gain a deeper comprehension of lectures. According to Zohrabi & Esfandyari (2014), taking notes makes students comprehend lectures very well and facilitates revision to reinforce remembering. In order to take good notes, students should adapt some strategies for organizing, memorizing, and revising easily, as students reported in their responses in questions number (11, 17), they adapt mapping and outlining strategies. Also, making maps can help students remember and memorize important points and ideas of the lecture, and this confirms the findings gathered from the investigation of Nesbit and Adesope (2006) when examined the employment of maps improves comprehending and remembering. Also for the outlining strategy aids students in organizing notes perfectly, as Wong (2010) mentioned in his research study that this strategy helps for organizing information neatly and simplifying the process of reviewing notes later on.

Additionally, taking notes is an essential tool for organizing and recalling ideas, and it is a helpful learning strategy, and this can be observed from questions number (12, 13)

students find that taking notes is important and beneficial, and this result is related to what has been found from the study of Peper and Mayer (1986) who say that taking notes helps students be more focused and organized. It also makes it easier for them to remember the important terms (Di Vesta & Rgozinnski 1981).

Note-taking strategies have an extreme effect on the lecture comprehension, as it recognized from the data collected from questions number (14, 15, 16) students find that mapping, outlining, and highlighting from the most effective strategies in enhancing their lecture comprehension, the majority of them reported that it makes them remember, revise, organize, and summarize the key points of lectures in order to gain time and to perform well in exams, and tests. According to Mueller and Oppenheimer (2014) summarizing is better than copying word-for-word for understanding and remembering.

### **Pedagogical Implications**

The present study offers some pedagogical implications for both teachers and students.

#### **For teachers**

- ✓ It's helpful to begin the lecture with a brief review of the previous session to capture students' attention and conclude by giving a short preview of the next lecture.
- ✓ Speaking more slowly to help students follow the lecture, grasp the material, and take notes at the same time.
- ✓ Providing handouts for learners to help them organize and take good notes.
- ✓ Taking breaks during lectures and repeat important points to help students fix any mistakes in their notes.

#### **For students**

- ✓ Identifying the lecture's structure to take better notes.

- ✓ Focusing on summarizing key information and questions, not writing down every word said.
- ✓ Actively participating in lectures by asking questions and engaging in discussion to improve their comprehending of the material.
- ✓ Using strategies to organize their notes clearly, making it easy to find important information.

### **Limitations of the Study**

This research study is limited to second-year students of Abbas Laghrour University only, so results may not be generalized. The sample consists of 109 participants; however, only 70 of them answered the survey, maybe because of their disinterest.



## **Conclusion**

This chapter represented the steps of investigating the students' attitudes towards note-taking strategies in the lecture comprehension, data were gathered using quantitative research method design; students' questionnaire was used. The data acquired from the quantitative data gathering tool confirmed the findings. This instrument demonstrated that there exist significant students' attitudes towards note-taking strategies in lecture comprehension; results proved that students who take notes and use strategies to help them comprehend lectures than the students who do not.

# **General Conclusion**

## **General Conclusion**

Lecture comprehension and note-taking strategies show significant variation due to differences in individual skills, the quality of the lectures, and the use of note-taking strategies. Good comprehension was linked to picking out important key points during lectures by using the most helpful note-taking strategies. The main aim behind conducting this research work was to investigate how well students comprehend lectures, how engaged they were, and which strategies they adopted to take good notes, used by second-year students of English at University of Khenchela.

This research study was distributed into two main parts, first was the theoretical part, introduction or the research proposal, and the literature review contains of two sections, section one consists of lecture comprehension, key characteristics of academic writing, verifying student comprehending of lectures. For section two, it contained of note-taking, its significance, purpose, phases, strategies, students' attitudes towards note-taking strategies in lecture comprehension, and the advantages of using note-taking in lecture comprehension. The second part was the practical one; it consisted of, research methodology, data gathering tool, analysis of data, discussion, and the conclusion.

This research examined two main questions, the first one investigated if there was a helpful note-taking strategies used by students in order to comprehend lectures, and students' attitudes towards these strategies in lecture comprehension, and the second examined if note-taking and lecture comprehension enhanced students' academic achievement.

To carry the research study, one instrument was used to collect data, it was a students' survey, it attempted to examine students' attitudes toward lecture comprehension and note-taking strategies and students' perspective towards these strategies on the lecture comprehension, after collecting data, findings showed that students believed that lecture

comprehension and note-taking strategies are linked. Results revealed that students who took notes during lectures, and adapted strategies for organizing their notes, summarizing the key points of complex lectures, and make them remembered every detail.

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# Appendix

## Student's Questionnaire

### Questionnaire

The questionnaire aims at investigating second year students of English department of Abbes Laghrour, Khenchela attitudes towards lecture comprehension and note-taking strategies. And their opinions about these strategies in lecture comprehension.

#### First Section Introductory Questions

1. How do you consider your level in English?

Weak  average  good  excellent

#### Second Section Lecture Comprehension and Note-Taking Strategies

1. How often do you attend lectures?

Daily  weekly  monthly  rarely  never

2. How would you rate your overall comprehension during lectures?

Weak  good  average  excellent

3. How do you typically ensure you understand the lecture after class?

- Reviewing my notes
- Having class discussion
- Taking an active role in the classroom
- Note confirming my understanding

4. How do you participate in the lecture material?

- Making notes
- Asking questions
- Participating in discussions
- All of the above

5. How do the teachers engage you during the lecture?

- Asking questions
- Encouraging participation
- Showing videos
- All of the above

6. Do your teachers usually provide handouts for lectures ?

Yes  No

7. During lectures, how often do you take notes ?

Always  sometimes  rarely  never

8. Why do you take notes?

- To gain a deeper comprehension of the lecture
- To capture data for future use
- To perform well in tests, exams, assignments

Others, specify .....

9. Do you organize your notes using a particular strategy?

Yes  No

-If yes, what is the strategy do you usually use?

Mapping  Outlining  Highlighting  Circling

Others specify.....

10. Do you think note-taking strategies are?

- An essential tool for organizing and recalling ideas
- An aid for focus and paying attention during a lecture
- An approach to increase your comprehension

11. Do you believe that taking notes is a helpful learning strategy?

Yes  No

**Third Section Students' Attitudes towards Note-Taking Strategies in the Lecture Comprehension**

1. What note-taking strategies do you find most effective in enhancing your lecture comprehension?

- Using a laptop for note-taking
- Recording the lecture and transcribing the answer afterwards
- Making use of abbreviation
- Not taking any notes

2. Which strategy of taking notes is best for lectures that place a lot of focus on visual content?

Outlining  Drawing or circling  Mapping  Capturing audio answers

Others specify please:

.....  
.....  
.....

3. In what ways do your notes assist you in preparing for exams or assignments related to the lecture content?

.....

.....

.....

4. How do you adapt note-taking strategies for complex lectures?

.....

.....

.....

5. Have you ever shared your notes with classmates to see if it helps them comprehend the lecture better?

Yes

No



## **Résumé**

Cette étude examine les attitudes des étudiants envers les stratégies de prise de notes dans la compréhension des cours. L'étude a été menée à l'Université Abbes Laghrour, Faculté des Letters et des Langue Etrangères, Département d'Anglais, avec la participation de soixante-dix étudiants; les données ont été recueillies à partir de dix-huit questions posées aux étudiants. Cette étude cherche à explorer la compréhension des cours et les stratégies de prise de notes, ainsi que les opinions divergentes des apprenants sur l'impact de ces stratégies sur la compréhension des cours. L'analyse des données obtenues a montré des résultats; la compréhension des cours et les stratégies de prise de notes sont liées, car les étudiants qui utilisent ces stratégies pour comprendre les cours réussissent mieux aux examens, tests et devoirs que ceux qui ne les utilisent pas.

**Mots-clés:** compréhension des cours, stratégies de prise de notes, et attitudes des étudiants.

## ملخص

تحقق هذه الدراسة في مواقف الطلاب تجاه استراتيجيات تدوين الملاحظة في فهم المحاضرات. أجريت الدراسة في جامعة عباس لغرور، كلية الآداب و اللغات الأجنبية ، قسم اللغة الانجليزية بمشاركة سبعون طالبا ؛ حيث تم جمعها من خلال ثمنيه عشر عنصرا من الأسئلة للطلبة . تحاول هذه الدراسة التحقيق في فهم المحاضرات و استراتيجيات تدوين الملاحظات، و ما إذا كانت هناك آراء متباينة للمتعلمين تجاه هذه الاستراتيجيات في فهم المحاضرات . اظهر تحليل البيانات التي تم الحصول عليها نتائج؛ فهم المحاضرات و استراتيجيات تدوين الملاحظات مرتبطان، فالطلاب الذين يستخدمون هذه الاستراتيجيات لفهم المحاضرات يؤدون بشكل أفضل في الامتحانات و الاختبارات و الواجبات أكثر من الطلاب الذين لا يستخدمونها.

**الكلمات المفتاحية :** فهم المحاضرات ، استراتيجيات تدوين الملاحظات، و مواقف الطلاب .