

# STUDENTS' VIEWPOINTS ON STRATEGIC NOTETAKING AND ITS IMPACT ON MATHEMATICAL PERFORMANCE, ACHIEVEMENT, AND LEARNING

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## ABSTRACT

*Taking notes is a widely used pedagogical strategy in all fields of education. Taking strategic notes benefits students because it becomes part of the way so students can learn, and it can help students show better performance in the courses studied. In higher education, there has been a strong effort to engage students in collaborative notetaking to increase their engagement with the material and inspire deeper and more meaningful learning. Take notes are strategically seen as an essential skill needed in a university environment. It involves active listening, processing information and writing. Results from several studies indicate that strategic note-taking can improve higher performance and achievement. Taking the right notes is a skill that many deficiencies by students. However, it is unclear if notetaking has a significant impact on student achievement. The objective of this research study was to determine whether strategic notetaking can increase performance, achievement and learning in mathematics subjects.*

**Keywords:** *Note taking, mathematics, performance, achievement, skills*

## Introduction

Take notes play an important role in gaining knowledge, learning and success in a course. In higher education, student notetaking is recognised as an effective approach for improving student learning (Wu, 2020). Aside from the advantages of taking notes for oneself, research has shown that sharing notes, as well as taking or reviewing notes in groups, may be advantageous. Kiewra (1989) discovered that individuals who borrowed notes from non-attending attendees fared equally on evaluation measures to those who took and read the notes themselves. Students who cooperated with a partner to modify their notes captured more unique and full material, according to Luo et al. (2016).

Boyle (2011) investigated the "effects of taking on notes recorded, a delayed recall measure, and a test" in the situation that "most students are strategic notepoor notetakers" (p. 58). According to the findings of Boyle's study, "students who utilised strategic note taking captured much more notes and fared better on success metrics than students in the control group" (p. 64).

In a study conducted by Hoong, Guan, Seng, Fwe, Luen, Toh, and Teck (2014), 25% of students identified as Normal Academic following their Year 6 examination provided information about the

academic areas that needed to be targeted when designing interventions to improve their mathematics learning. They "identified "study habits" as one domain of careful consideration," which included "doing homework on a regular basis, taking careful notes in class, being attentive when the teacher is explaining, and asking the appropriate questions, among other things" (Hoong, et al., p. 22). It is obvious that instructors must go beyond simply teaching the information; they must also make a point of emphasising these critical notetaking and study skills. According to Castello and Monereo (2005), notetaking is the main university study activity and, in many situations, the primary platform for teacher-student contact. This finding has generated a significant interest in researching students' note-taking habits and how they affect their learning. In general, three research lines have emerged in the last 40 years: the effects of note-taking and note-rewriting on some cognitive variable (attention, memory, comprehension, and so on); the relationship between note quality and learning significance; and changes in teaching methodology that may improve note-taking.

### **Taking effective notes are so important. Why?**

In school and university, taking notes is an important learning tool. Memory can only take in and keep information until it is replaced by new information. This implies that genuine, long-term learning happens outside of class, in between classes, and as you study. Carefully structured notes provide you with a permanent record of a class as well as the ability to comprehend and learn what you've heard. Do you write down every single word your instructor says in class? Do you only take notes when your instructor writes something on the board? When it comes to good note-taking habits, there is a happy medium that can pay dividends with a higher GPA. Here's how to take better notes in class and ace your next exam.

- (1) It keeps you awake. Note taking forces you to pay attention and helps you focus on class (or while reading a textbook).
- (2) It helps your understanding. According to studies on learning, actively interacting with a topic by listening and then summarising what you hear helps you grasp and recall the knowledge later.
- (3) It aids in the keeping of a record. You were in math class on Tuesday, but that doesn't guarantee you recall what happened (and what might appear on a quiz). Notes are a record of what you learnt in class—as well as what you need to go over again.
- (4) It will help you study. Review your notes regularly to get the most out of them. You can use them to make up sample test questions or even turn them into digital flashcards.

It's a skill that will pay off in university. Are you used to your instructor handing out outlines or e-mailing copies of their PowerPoint presentations? That's NOT going to be the case in university. Learn the art of note taking now to give yourself a leg up later.

### **Related work in note taking effect performance and students' grade**

This study emphasised and explained the impact of strategic notetaking as well as how to improve learners' notetaking levels for improved academic performance. Therefore, notetaking research indicates that taking notes in class and analysing those notes has a good influence on students' academic achievement. To summarise, note taking enables and greatly improves learners' recollection of lecture information, which directly helps to enhance students' academic achievement. Numerous research has been completed, and the results are now available as an essential record on strategic notetaking (Ogunmakin, 2011; Gbore, 2006, Kumar, 2002).

According to Spires (2011), note taking should be a key component of the curriculum, and Liu (2015) emphasised that notetaking is a beneficial method for students to improve their listening comprehension. Most studies, predictably, support students' capacity to recall more lecture content if they write it in their notebooks (Leyson et al., 2016). Language instructors Muraina et al. (2015) and Senkowski (2016) examined notetaking from several perspectives. Several studies have revealed that taking notes has a major impact on learning performance.

Hale & Courtney (2017) found that out of thirty-five studies on the impacts of note-taking, seventeen past studies obtained that the note takers done better than the non-note takers, sixteen studies establish no difference, two studies realised that note-taking affected performance and remaining studies specify that note-taking has no effect on the learners' performance. Furthermore, Kiewra, Benton, and Lewis (2014) reported that students who took notes scored higher on both immediate and delayed assessments than students who did not take notes. However, he stated that undergraduates who did not attend the lecture but instead gathered notes from other students performed higher than those who did not check notes. However, several reports indicate that students fail to record 40% of the central discussion as class note. due to higher rate of verbal communication than material written on the blackboard during the class lecture (Howe, 2017; Muraina et al., 2015).

The researchers claimed that strategic notetaking has a convincing relationship with students' academic performance, whereas other academics (Muraina, 2013; Owolabi, 2006) established that it was the combination of strategic note-taking and other issues that could clarify students' academic performance in any course of study. Kiewra and Benton (1988) investigated the link between lecture

note-taking activities and academic ability. They concluded that the number of words, complex propositions, and main ideas recorded in notes are related to academic achievement, and the ability to hold and manipulate propositional knowledge in working memory is related to the number of words, complex propositions, and main ideas recorded in notes.

### **Conclusion**

Concerning taking notes in lectures, in a study Dunkel and Davy (1989) concluded that understanding the views of students on note taking in lecture, and the considerable variation in how they conceptualise lectures, provides many insights into this component of academic literacy and, they would argue, is a necessary adjunct to other kinds of research in this area. According to Bakunas and Holley, students should be taught note-taking abilities in the same manner that writing or computer skills are taught (2001). Teachers should demonstrate the desired outcome, and students should have the opportunity to practise and receive feedback. The teacher should not assume that the students understand how to take good notes.

- (1) Students should be taught several note-taking techniques to improve their speed and understanding.
- (2) Use tools and strategies that help students take better notes, such as introducing brief breaks during lectures, sharing lecture notes with students, and videotaping lectures.
- (3) Be informed of new initiatives in the field of note taking and to take use of the findings of this research by incorporating them into their classroom in ways that best suit their students' requirements.

When utilised effectively, note-taking is often recognised as a valuable learning tool. Many students believe that taking notes has a positive influence on their academic performance. (Kobayashi, 2005). According to Van Meter, Yokoi, and Pressley (1994), Students believe that taking notes in class helps them pay attention in class, understand what they're learning, and remember what they've learned. Some lecturers think that simply teaching students how to take notes is sufficient. Instead, they suggest that educators coach students in a specific note-taking style or method. The Cornell Method, the Unified Note-taking System, and the Split Page Method, according to Stahl et al. (1991), are all successful. The Split Page Method is recommended by Spires and Stone (1989) and Bakunas and Holley (2001).

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