# THE MOTIVATION OF STUDENTS IN USING DIGITAL MIND MAPPING FOR READING INSTRUCTION

(Digital mind mapping with augmented reality methods in reading comprehension among students with different digital literacy levels)

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## Abstract

Applying suitable instructional approaches may improve learning motivation and ease the teaching and learning process. This research was motivated by the inadequacy in the English reading abilities of fourth-semester students who are studying in the English programme at Universitas Jabal Ghafur, Aceh. The aim of the research is to investigate the learning motivation of students in the fourth-semester reading content by using the mind mapping approach. This study employs a research approach that incorporates both quantitative and qualitative methodologies. Nevertheless, the researcher in this essay explicitly highlights the use of qualitative approaches. Data is gathered by the process of observation, questionnaires, interviews, and documentation. Data analysis techniques include data reduction, data visualisation, and drawing conclusions. The poll results showed that 20% of students disagreed with the use of mind mapping, 44% agreed with it, and the remaining 36% strongly supported it. The data was obtained by the administration of a questionnaire. After interviewing 15 participants who earned the highest, average, and lowest scores, it was shown that the use of the mind mapping approach substantially enhanced their motivation throughout the learning process. The use of the mind mapping technique significantly enhanced the learning motivation of fourth-semester students in the English Study Programme at Universitas Jabal Ghafur throughout their study of reading materials.
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**Keywords –** ***Motivation, Digital Mind Mapping, Learning Reading***

## Introduction

Reading is one of the fundamental abilities that are essential in the process of learning English. However, reading extends beyond the mere capacity to read and articulate every word from diverse literary materials, such as short stories, newspapers, magazines, essays, journals, and scientific publications. It becomes even more intricate when individuals delve into comprehending the meaning behind the text. Linse (2005) defines reading as a cognitive process that encompasses the ability to comprehend and extract significance from written text.

When acquiring a foreign language, instructors want for pupils to achieve mastery in the ability of reading. They assert that reading is a crucial ability for achieving success in any educational setting. It seems logical that pupils may acquire a substantial amount of knowledge in many subjects via the act of reading. Put simply, the more one reads, the more knowledge one gains. Therefore, there is a high correlation between reading and academic accomplishment. Reading is

interconnected with other subjects in English as a Second Language. According to Brown (1994), the development of reading skills is most effective when combined with tasks including writing, listening, and speaking.

In the field of education, fostering intrinsic motivation is essential for students to achieve appropriate learning outcomes. The level of desire to learn is a critical factor that significantly influences pupils' ability to acquire a new language successfully. Every student has unique reasons for engaging in school-based learning. Variances in pupils' learning motivation might provide challenges for instructors in their instruction. Due to the varying motives of each student, they participate in learning. One factor contributing to variances in motivation is the varying demands of individual students.

Learning and motivation are interconnected phenomena that mutually influence one another. Learning motivation may be driven by internal factors, such as the desire and ambition to succeed, as well as the stimulation of learning needs. Conversely, the extrinsic factor pertains to the acknowledgment of a conducive educational setting and captivating learning opportunities. Learning activities, referred to as educational interactions, are a dynamic process that takes place between educators and students, such as instructors and students at educational institutions. Teachers have a crucial role in the learning process.

However, expectations may not always align with the actual reality that occurs. Through casual discussions with the English Lecturer at Universitas Jabal Ghafur, the researcher discovered that students in the fourth semester were confused when it came to interpreting the meaning of the text. This issue arises due to the constrained lexicon of pupils. Moreover, reading tasks are tedious for kids as they expend considerable effort in deciphering intricate vocabulary. In addition, the lecturer only employs traditional lecturing methods in their instructional approach, without any kind of change. Consequently, the student's reading comprehension is lacking.

In addition, the process of learning becomes less engaging and pupils have a tendency to be disruptive in class, particularly during daytime hours. The limited availability of time for studying hampers pupils' ability to acquire reading skills. Indeed, areas related to Reading need a significant amount of time for study. This leads to challenges for instructors in effectively allocating time to impart ideas and information to pupils, hence affecting the previously established learning goals.

According to the data obtained from preliminary observations, it is necessary to make changes in learning in order to effectively meet the learning goals and enhance students' enthusiasm to study. One effective strategy to enhance learning is to use diverse techniques, models, approaches, or media to make the learning process engaging and entertaining for pupils.

One alternative method to improve reading teaching for instructors is to use the mind mapping technique. Utilizing the mind mapping approach, which uses visual language, enhances students' understanding, progress, and retention of learned information (Deporter's). Mind mapping is a graphical instrument used to arrange and illustrate ideas, phrases, actions, and other associations associated with a central keyword. According to Buzan (2016), it typically consists of words, colours, concise statements, and visuals. Buzan asserts that mind mapping is an essential tool used to excite the brain and physically depict the ideas that are generated.

Buzan claims that mind mapping is a crucial tool used to activate the brain, unveiling the ideas generated in

connection to a significant topic and demonstrating their interrelatedness. Mind mapping is a technique for graphically structuring information in a collaborative way to improve understanding. Multiple experts (McGriff, 2000; Buzan T, 2008; Edward, 2011) have analyzed the benefits of mind mapping. They recognize that mind mapping may bring balance to the brain, aid in the organizing of thoughts, and boost creativity.

Furthermore, the researcher has pertinent prior research that is relevant to current study. This study was done by Mohammad Mahmoud Talal Mohaidat in 2018. The study aimed to examine the impact of electronic mind maps on students' ability to comprehend written text. The findings indicate that using digital mind maps into reading instruction has a limited effect. An essential suggestion is to provide training for lecturers and instructors, with a specific focus on designing electronic mind maps and integrating them into their teaching methodologies, especially in the field of English. A study named "The Impact of an E-mind Mapping Strategy on Improving Basic Stage Students' English Vocabulary" was undertaken by Samar Al Shdaifat, Fawwaz Al-Abed Al-Haq, and Dina Al-Jamal in 2019.

The research found significant differences in the average scores of the E-mind mapping group compared to the control group, indicating that students in the E-mind mapping group performed better on vocabulary tasks due to the instructional approach. Precision showed the highest rise among the sub-skills, whereas generalisation exhibited the lowest gain.

In light of this fact, researchers believe that the digital mind-mapping technique might serve as a viable alternative for learning English. Hence, the researcher aims to examine " The Motivation of Students In Using Digital Mind Mapping For Reading Instruction." The purpose of this research is to create in accordance with the research question stated above. The purpose of this study is to examine the motivation of students in the English Department at Universitas Jabal Ghafur towards using the digital mind mapping approach to enhance their reading comprehension skills.

**Methodology**

**a. Research design**

This type of research is qualitative research, which generates descriptive data in the form of written or spoken words regarding the observable person or behaviour of individuals. This is where the researcher endeavors to comprehend each event that the research subject encounters, including stroking, views, actions, etc. Subsequently, it will be described in language that is consistent with the context experience through the application of a variety of natural methods. In this instance, the researcher endeavors to comprehend and interpret each activity associated with the determination of digital mind mapping.

**b. Population and Sample of the Research**

- Population

Research necessitates the presence of a specific entity that serves as the subject of investigation, often known as the research object. The subjects of this research are all students enrolled in the English Programme for the academic year 2023/2024 who are studying Reading comprehension.

- Sample

A sample is a subset of a population consisting of individual individuals. The sample strategy used was purposive sampling, specifically targeting students in the neighbourhood who were deemed capable of facilitating the execution of the study. The study sample consists of 62 students in their fourth semester.

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**c. Data Collection technique**

Researchers imparted lecturers with a comprehensive comprehension of digital mind-mapping media. The researchers have selected the X-Mind programme as the digital tool for mind-mapping. In this study, the lecturer will be responsible for implementing the research in the classroom, while the researcher will assume the role of observer. It is essential for a professor, particularly those who are utilising this media for the first time, to engage in practice with this medium. This is done to prevent faults or potential failures while using educational resources. During the planning step, researchers organise the necessary equipment to facilitate the predetermined learning process. The equipment comprises the following: Observation, Questionnaire, Interview, Document.

**d. Data Analysis Technique**

Data analysis was performed simultaneously with data collection in this research, and it persisted after returning to the field. The results of the interim analysis will consistently be validated by data obtained from other sources that have a greater level of credibility, either by direct observation or documented evidence. The study starts with the collecting of data, followed by the reduction and presentation of the data, culminating in the formulation of a conclusion.

## Finding and Discussion

**a. Finding**

Following the completion of research, the researcher collected data on students' willingness to use digital mind mapping in the process of studying reading material at the English study programme at Universitas Jabal Ghafur, specifically in the fourth semester. The data was derived from the outcomes of a survey administered to a total of 62 students. The data was collected via a survey administered to a total of 62 students, including 30 men and 32 females. The questionnaire consists of 20 questions that pertain to the knowledge acquired in English reading comprehension via the use of the digital mind mapping technique during class. Subsequently, the researcher selected 15 students with the most exceptional, average, and worst scores to serve as interview participants. The purpose of this study was to further explore students' perspectives on learning via the use of the digital mind mapping technique.

**b. Result of Questionnaire**

The questionnaire responses provided statistics on the impact of effort on student learning motivation in each category as follows:

| Category | Score | Percentage |
|---|---|---|
| Strongly disagree | 0 | 0% |
| Disagree | 15 | 20% |
| Agree | 27 | 44% |
| Strongly agree | 20 | 36% |

Table 1. Average Score Results of Questionnaire

The data in the table shows that less than 25% of students had a poor sense of learning motivation while using the digital mind map approach. On the other hand, close to 50% of students have a favourable assessment of their drive to study, placing them in the agree group. The remaining portion, comprising over one-third of students, exhibit a strong agreement with the method, indicating high levels of learning motivation. According to the questionnaire answers, nobody has any incentive whatsoever.

Furthermore, we chose 15 students who had the greatest, middle, and lowest scores based on the questionnaire results to participate in the interviews. The purpose of this study was to further explore students' desire to learn reading via the use of the digital mind mapping technique.

| Participant | Total score |
|---|---|
| P1 | 42 |
| P2 | 53 |
| P3 | 69 |
| P4 | 74 |
| P5 | 38 |
| P6 | 51 |
| P7 | 55 |
| P8 | 60 |
| P9 | 64 |
| P10 | 77 |
| P11 | 64 |
| P12 | 65 |
| P13 | 72 |
| P14 | 68 |
| P15 | 70 |

Table 2. Total Score of the 15 Interview Participants

**c. Types of Students Motivation**

- Intrinsic motivation

By conducting interviews with the participants, it was shown that student intrinsic motivation influenced the learning process while using the digital mind mapping technique. Intrinsic motivation refers to the innate desire, inquisitiveness, and enthusiasm that a learner have when it comes to gaining information. The majority of students perceive an elevation in their learning motivation due to a heightened sense of interest in the learning process.

- Extrinsic motivation

Based on interviews with the participants, it was shown that the students' external motivation influenced the learning process while using the digital mind mapping technique. The external environment refers to the technological resources, educational facilities, and instructional methods used in the learning process.

**d. Students' opinion of the use of digital mind mapping**

Next, drawing on the interview data collected from the 15 participants, the students' perspectives on the use of digital mind mapping in classroom learning are as follows :

- Advantages

The study discovered many benefits of using digital mind mapping in reading instruction, as reported by the participants. The majority of participants said that the use of digital mind mapping had advantageous aspects for various reasons. The primary concept that has been previously elucidated is the augmentation of students' desire to study. Participants said that the process of learning became more enjoyable, which resulted in increased enthusiasm and motivation among students.

- Disadvantage

Additionally, researchers discovered the adverse effects experienced by pupils. Researchers are now seeking further information to ascertain students' perspectives on the digital mind mapping technology

**Discussion**

The questionnaire results indicate that less than 25% of students perceive learning motivation negatively when using the digital mind map method. Conversely, nearly 50% of students have a positive perception of learning motivation, while slightly over one-third of students have a highly positive perception. I concur. According to the questionnaire answers, everyone lacks motivation. Therefore, it is established that eighth-grade students in the English Study Programme have a strong inclination to engage in learning activities via the use of the digital mind map technique, specifically for enhancing reading comprehension skills.
In the context of learning, motivation plays a crucial role in facilitating the learning process. This is because a high level of

learning motivation will result in a strong inclination or eagerness in pupils to engage in the learning process. Conversely, a lack of motivation will result in a lack of interest or willingness among pupils to engage in the learning process. Learning motivation is a catalyst that arises from both internal and external sources, which may foster excitement for learning and provide direction for learning activities in order to achieve desired objectives. This aligns with Uno et al's (2017) view that learning motivation encompasses both internal and external factors that drive students to modify their behaviour, often characterised by several indications or supporting aspects.

Motivation may be seen from several perspectives, resulting in numerous different forms. However, the researcher alone examines the topic from two distinct perspectives, namely intrinsic motivation and extrinsic motivation. Researchers discovered that students' eagerness to learn English was stimulated by applying digital mind mapping, leading to intrinsic motivation. Some individuals are content with this approach, since it facilitates their learning process and does not pose any challenges for them. Nevertheless, many pupils need more time to comprehend the digital mind-mapping technique. Despite the challenges, the student perseveres in their efforts to comprehend the newly introduced teaching style. This suggests that pupils' innate drive has been developed via the use of the digital mind mapping technique. This aligns with the hypothesis put out by Morris et al (2022) that intrinsic motivation has the ability to enhance people' results. Intrinsic motivation generates a natural inclination to engage in and acquire knowledge or skills. Students that possess intrinsic drive will also produce outcomes. In addition to that, the learning process will be more pleasurable for them.
After analysing the questionnaire responses and conducting an interview with participant 1, it was determined that the score attained in completing the questionnaire was 42. According to the interview findings, it was discovered that participant 1 was employing the mind mapping technique for the first time, applying it for the first time was challenging. Respondent 1 exhibits unwavering passion and desire in acquiring proficiency in the mind-mapping technique. Participant 1's poor motivation is influenced by many variables, including frequent drowsiness during learning sessions and the teacher's uninteresting teaching techniques.

Subsequently, after analysing the questionnaire responses and conducting an interview with participant 2, a score of 53 was derived from the questionnaire. According to the interviews with participant 2, it was discovered that participant 2 was already familiar with the mind mapping technique. This prior knowledge facilitated their mastery of the material and motivated them to learn English using this method. They found the mind mapping method engaging and not tedious.

Moreover, according to the findings from the questionnaire and interviews conducted with participant 3, the score achieved in completing the questionnaire was 69. Based on the interview findings, it was determined that participant 3 often had suboptimal conditions while learning to read English. Participant 3 often experienced drowsiness throughout the learning process. Subsequently, after analysing the questionnaire responses and conducting interviews with participant 4, a score of 74 was obtained from the questionnaire. Meanwhile, the interview findings indicated that the 4th responder acknowledged having studied mind mapping, which facilitated his ability to generate mind maps throughout the class. Participant 4 exhibited a dislike for English reading courses; nevertheless, the use of the mind mapping approach provided some assistance, resulting in an

improvement in the students' learning motivation.

Additionally, researchers discovered the presence of extrinsic motivation among pupils. In this instance, the optimisation has been executed. The transition from traditional lecture-based learning to digital mind mapping approaches clearly demonstrates the advancement in learning techniques. This involves using technology to enhance pupils' extrinsic motivation. Jhantasana, released in 2021. According to a participant, this approach is enjoyable and educators should include it into their teaching. Statement P3 further corroborates this information. "Occasionally, we have the opportunity to utilise a laptop and projector, typically in conjunction with the whiteboard," the speaker said. This is also a contributing component to learning motivation, as mentioned by Slameto (2003). Conditions for students Factors that impact learning motivation are associated with both physical and psychological problems. According to interviews, some students experience drowsiness when studying due to skipping breakfast, while others feel drowsy because they remained up till late at night. Consequently, instructors play a crucial role in constructing captivating lessons to enhance students' motivation, both internally and externally. When it comes to students' perspective of digital mind mapping, there are both good and negative aspects associated with the usage of this technology. The majority of participants said that the use of digital mind mapping offered several advantages. The primary concept that has been previously elucidated is the enhancement of students' learning motivation. Subsequently, participants said that the process of learning became more captivating and less burdensome, resulting in a heightened sense of enthusiasm to acquire proficiency in reading English. According to Deporter and Henarcki (2011), the mind mapping approach has benefits, including its flexibility. In addition, mind mapping enhances understanding. Utilizing mind mapping helps enhance comprehension of the content. Mind mapping is a cognitive technique that facilitates comprehension and enhances memory retrieval by using a straightforward thought pattern. Lastly, creativity, enjoyment, and imagination are boundless when using mind mapping, making the learning process a delightful one. The integration of imagery and colour elicits a pleasant and dynamic cognitive response in the brain. While an increasing number of participants acknowledge the benefits of using digital mind mapping. Some kids may possess divergent viewpoints that might have adverse implications. One participant expressed dissatisfaction with this strategy due to its perceived difficulty. Similarly, the participant acknowledged that this was his first experience in acquiring proficiency in the digital mind mapping technique. Despite the participant's lack of sleepiness, they nevertheless attended the learning session. He lacked enthusiasm and motivation while using the digital mind mapping technique, as he preferred to comprehend the subject via meticulous reading. This is because kids are more familiar with the prior strategy, which involves reading attentively. Because to timing constraints due to restrictions, the study was not conducted for an extended duration. This also gives students the potential to lack comprehension of the digital mind-mapping technique. This is because experts acknowledge that a substantial amount of time is required to fully comprehend and effectively use the mind-mapping technique. It is well recognised that pupils vary in their capacity to engage with and comprehend learning materials. According to Deporter and Henarcki (2011), one drawback of mind mapping is that it requires significant time to master.

Regarding the learning process, based on the prior explanation, the

experience of learning to read English in courses utilising the lecture style was seen as tedious.

Nevertheless, upon adopting the digital mind mapping technique, the classroom experienced a distinct ambiance that was perceptible to the pupils. Learning goals and processes are enhanced by engaging and effective techniques of explanation. Written English content is converted into a vibrant and interconnected mind map. The use of the digital mind-mapping technique has sparked motivation among previously drowsy students, who were disengaged by the traditional lecture approach. One participant advocated for the use of this strategy in the classroom to prevent monotony and enhance students' comprehension of the given information. Increased instructor effort fosters active learning, so motivating students to engage in continuing learning actively. In order to attain the learning goals, it is necessary to meet the accomplishment targets. This aligns with Slameto's (2003) assertion that the above efforts pertain to how instructors equip themselves for instructing pupils, beginning with attaining mastery of the subject matter and learning effective teaching strategies.

Communicate the information, captivate the students' interest, assess student comprehension, and similar tasks. The results of this study align with the earlier research done by Mohammad Mahmoud Talal Mohaidat (2018), which found that the use of electronic mind maps in teaching reading texts had a moderate impact. Furthermore, according to a research conducted by Reima Al-Jarf in 2021, the students exhibited favourable views towards the use of mind mapping and reading English literature. The students found the mind-mapping programme to be beneficial and enjoyable in understanding and organising concepts in a book.

## Conclusions

Following the researcher's explanation and analysis of the study findings on the students' motivation in using the Digital Mind Mapping Method for reading comprehension material, particularly in the fourth semester. Student reactions to the adoption of the digital mind mapping approach may be categorised into two distinct groups. In this particular sort of motivation, pupils possess intrinsic motivation characterised by sentiments of joy and eagerness, hence facilitating their learning process effortlessly. In extrinsic motivation, students are driven by external factors due to the instructional techniques used by the instructor, which are novel to them. Students have both good and negative perspectives about the use of digital mind mapping. Positively, this strategy enhances motivation. Conversely, a few individuals may struggle to comprehend its use due to their lack of familiarity with it.

## Suggestion

Based on the study conducted by the researcher at Universitas Jabal Ghafur, I will now provide a number of ideas for all parties concerned, while maintaining a humble and respectful approach.

1. For students

Students are required to consistently demonstrate their engagement in the learning process. Consistently self-assured in articulating viewpoints or posing inquiries. Active engagement in questioning and voicing ideas may serve as a reliable measure of effective learning in the classroom.

2. For Lecturer

As aspiring educators, it is crucial for us to be familiar with techniques that might enhance motivation in the learning process. Using technology as a tool for learning, one example of which is the digital mind mapping technique. Not just possessing knowledge, but also having the capability to fully use the process of acquiring knowledge

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3. Other Researcher

Future researchers are expected to do research for a longer duration than the current researcher, since there are still students who lack comprehension of digital mind mapping. Consequently, there is a notable surge in motivation and improved academic achievements among students

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