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Employing Mind Maps to Foster Proactivity of Students Majoring in English in the Grammar Study

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ABSTRACT

English grammar is a crucial and essential component in acquiring the English language. The acquisition of English grammar has emerged as a significant challenge for learners of all ages. This leads to the fact that identifying an effective approach to facilitate learners' mastery of English grammar is material. Mind maps are deemed an appropriate option as they serve as a tool for articulating thoughts diversely, facilitating the effective utilization of both the left and right hemispheres of the brain to enhance activity and memory. As a result, mind maps have garnered heightened interest from educators. The study will examine the viewpoints of both instructors and students regarding the use of mind maps in the English grammar teaching and learning, grounded in the core aims and requirements of an innovative educational program. It is also designed to explore whether the implementation of mind maps in English grammar instruction can augment students' engagement, promote learning efficacy, and foster learner autonomy, or if this approach constitutes an effective pedagogical method in teaching English grammar. To achieve the research goals, a quantitative method via a questionnaire is employed to assess stakeholders' appraisal levels in educational activities. The findings indicate that both educators and learners greatly value the efficacy of utilizing mind maps in grammar instruction. Mind maps not only assist teachers in presenting lecture materials but also enable students to access and retain knowledge more effectively.

1. INTRODUCTION

The university education differs from lower ones. Tertiary students have a pivotal part in the learning process, necessitating their complete proactivity in educational activities. Particularly for theoretical disciplines, acquring reading materials and conducting independent studies to comprehend subjects, courses, and pertinent knowledge is an essential ability not only for university lectures but also for professional endeavors and furture life.

In the contemporaty day, the availability of study and research resources, including books, magazines, newspapers, and proceedings, is exceedingly plentiful. Furthermore, the swift advancement of the information technology sector has unveiled the extensive knowledge of the world to us. Consequently, the recurrent necessity to memorize, summarize, or evaluate a subject through diverse methodologies, including the creation of tables, bullet-pointing essential concepts, and constructing summary diagrams, has drawn scholars' attention worldwise.

In recent decades, there has been a growing body of research about the implementation and effects of mind mapping in English language instruction and learning activities. Numerous studies indicate that mind maps enhance cognitive potential and optimize study activities for learners, while simultaneously fosterning skills such as critical thinking, creativity, idea development, organization, collaborative learning, and efficient task allocation. Zheng et al. (2019) highlights the way mind maps

support in consolidating English word memory, fostering innovative thinking, and cultivating both independent and cooperative learning ability.

Besides, many researches have been undertaken about the utilization of mind maps in the instruction and acquisition English grammar. These researches consistently demonstrate the efficacy of mind maps. Wang (2019) shows that mind maps augument learners' engagement, effectiveness, and capacity to comprehend grammar by fostering creativity and enhancing memory retention. Setyanwan (2016) established the performance of mind mapping by revealing its positive impact of grammar acquisition among non-English major students. Ngoc (2016) indicates that mind mapping improves comprehension and recall of grammatical rules. This finding is further corroborated by Normawat's research (2016), which illustrates that mind mapping improves grammatical proficiency by rendering the learning process more interactive and engaging. Buchatska (2016) contends that, from an emotional perspective, mind maps facilitate learners to participate eagerly and elevate their interest in grammar acquisition. Chankasorn (2016) reveals that mind maps surpass conventional grammar instruction techniques in efficiency. Hien (2016) highlighted the advantages of mind maps in simplifying the organization of grammatical notions and strengthening writing proficiency. Aydoğdu (2016) characterizes mind maps as improving the comprehension of grammatical structures through visual and logical associations. Yen (2019) determined that mind maps elevate the comprehension of grammar and morphology by elicidating intricate concepts. In a different setting, Yen (2019) conducted an experimental study that exposes mind maps can markedly boost grammar learning results, as indicated by the higher scores of the experimental group in comparison with those of the control one.

Accordingly, in education, in addition to disseminating knowledge to students, it is imperative to direct them towards an active and autonomous learning methodology for knowledge acquisition, and educators must posses research skills to be abreast of global knowledge development promptly. To effectively navigate the vast expanse of information, we require ways to organize that knowledge. Constructing a 'visual representation' that delineates the interrelations among knowledge would yield merits in memory retention, cognitive advancement, critical thinking, imagination, and creativity. Although the advantages of mind maps have been demonstrated in prior researches, the author would prefer to seek to address the following two problems through study involving English major students at Hanoi Law University;

1. What is students' perspective on the utilization of mind maps?
2. Do the mind maps enhance students' autonomy in grammar acquisition?

2. LITERATURE REVIEW

Concept of Mind Mapping

Mind maps are a category of visual-association tools (VATs). This is a visual connection technique for categorizing, structuring, and retrieving information through keywords or images, with each type engaging a distinct memory and eliciting novel thoughts and concepts. Each memory branch on the mind map serves as a 'key' to access facts, concepts, and knowledge. The efficiency of a mind map is determined by its flexible and diversified structure, which is intended to encourage the brain to function swiftly, effectively, and organically.

Categories of Mind Maps

Figure 1 below illustrates numerous visual connection techniques that akin to mind maps facilitate cognitive processes, learning and memory retention such as Spider Diagrams, Bubble Diagrams, Concept Maps, Conceptual Diagrams, and Visual Metaphors. Aside from the branch design format, the distinction between mind maps and other visual connection tools is that the fundamental thought acts as the

starting points, which then expands into several branches. Moreover, mind maps are vibrant, use clusters of words and visuals to illustrate concepts rather than complete description.

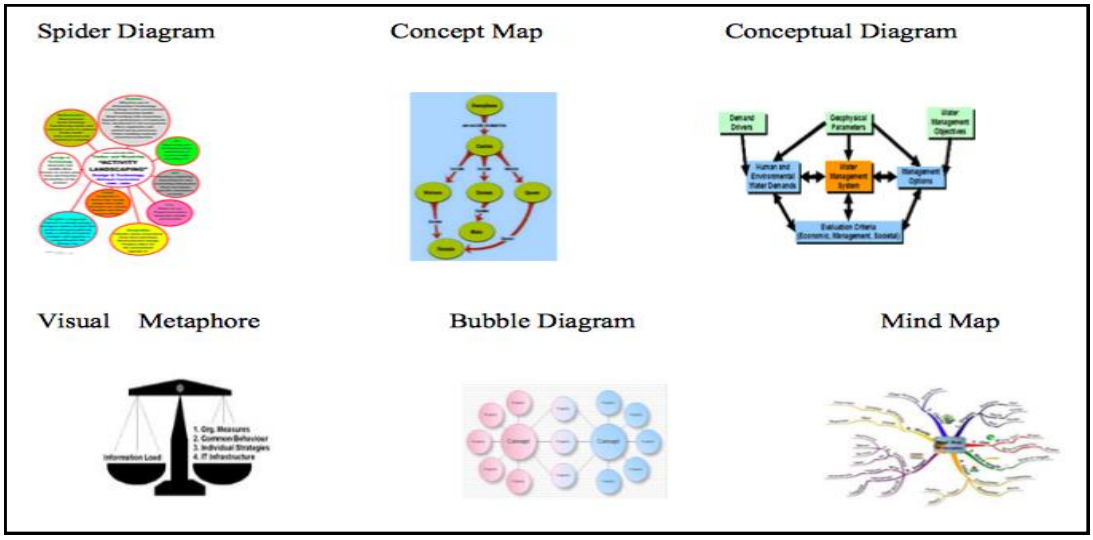

Figure 1. Visual Connection Tools (VATs)

Mind maps regarded as a method to stimulate learning activities

Scheeidecker & Freeman (1999) characterized motivation as a multifaceted concern and a considerable challenge for educators today. Motivation pertains to a fundamental part of the human psyche, and a consensus among educators and researchers indicates that it is pivotal in influencing the success or failure of learning endeavors. Schaefer & Millman (1988) asserted that motivation entails the impetus that compels learners to engage in activity. This is seem as an internal condition that directs the learner's actions. Dörnyei (2008) underscored that, in the absence of adequate motivation, even the most capable students struggle to endure long enough to achieve proficiency in any language. To enhance learners' motivation, it is essential to ascertain goals, reflecting the learners' level of interest. Consequently, mind maps play the role of an organizer and a comprehensive guide for the task completion. This fosters happiness and movitation for next efforts. Dörnyei (2008) figured out some factors contributing to establish learners' motivation; (1) the teacher's proper conduct and a positive rapport with the learners; (2) a conductive and helpful classroom environment; (3) a study group formed with suitable conduct.

Enhancing the allure of learning tasks to nurture movitation and enthusiasm among learners can result in substantial improvements in their study efficacy. The three primary elements are attractiveness, laughter, and a positive attitude towards constructing mind maps, which are crucial for encouraging motivation.

Attactiveness enables the brain to be more predisposed to retain an appealing image compared to a less appealing one. Employing imagination entails the integration of appealing and positive imagery along with associations, as a material component for building motivation (Buzan, 2006).

Laughter enhances individuals' engagement in recalling desired information, thereby facilitating the summarization of that information. Employing humor enhances the capacity to retain and retrieve knowledge.

Positive cognition assists recalling affivermative images and experiences to be more effortless and agreeable than retrieving negative ones. The brain seeks to revisit experiences that elicit happiness and positivity, while it can suppress or modify negative experiences. Optimistic thinking enbles imagination and association to acquire a constructive influence (Buzan, 2006).

Utilization of Mind Maps

Buzan (2006) stated that mind maps closely correlate with the brain's processes, applied to nearly all operations involving cognition, memory retrieval, and task organization. The brain's nature facilitiates more complex and varied associations, hence improving the learning process. The primary and beneficial application of mind maps in closely associated with educational objective, including note-taking, essay composition, exam preparation, and collaborative tasks.

Note-taking activity. A successful note-taking activity does not entail meticulously documenting every information offered. However, it is a discerning process. Note-taking is not a laborious or unproductive attempt; rather, it should offer learners tranquility, conserve time, and enhance creativity. Mind maps can effectively fulfill the aforementioned objectives by reducing word usage while enhancing information retention.

Essay writing activity. Mind maps are an efficient tool regarded as a note-taking method. Mind maps serves as an alternative to the linear notes that individuals commonly utilize to prepare for composing the final edition. The note-taking process entails documenting key concepts and fundamental components from linear information to modify a mind map. Among several attempts, note-taking for an essay is regareded as the initial task.

3. MIND MAP UTILIZING PROCEDURES IN GRAMMAR INSTRUCTION AND ACQUISITION

Attributies of English grammar teaching and learning

Students majoring in English with a focus on legal English at Hanoi Law University, similar to language majors at institutions offering English programs, acquire specialized linguistic expertise through theoretical coursework, allowing them to comprehend the fundamental principles of previously obtained knowledge. This also aids students in comprehending and applying their acquired knowledge more profoundly, efficiently, and precisely. English grammar is among those subjects.

The English grammar course is intended for instruction during the fifth semester of the comprehensive curriculum for English language students. The course has 30 lessons distributed over 5 weeks, encompassing a significant volume of content. Consequently, for students to comprehend, retain, and utilize the material, the instructors must implement more effective pedagogical strategies. To assist students in understanding and assimilating knowledge, as well as to facilitate the application of the subject in other areas, such as translation or writing.

Application of mind maps in English grammar teaching

A crucial aspect of language learning is the amalgamation of new linguistic knowledge with the learner's pre-existing knowledge base. By developing a novel schema and creating a coherent framework, the instructor, as the facilitator of this activity, might employ mind maps to augment students' capacity to convert knowledge into personal reflections through the process of articulating input language. It is because augmenting students' autonomy in their endeavors is crucial. Hence, the author has applied mind maps in grammar teaching to assist students in altering their learning strategies. Primarily establishing study groups via conversations, presentations, and various activities. Utilizing mind maps, educators can stimulate students' enthusiasm for studying, develop diverse cognitive talents, improve collaborative abilities, and concurrently bolster analytical skills and English communication proficiency.

1. Before the class session (Instructor's activities)

The instructors meticulously plan their teachings before the class. Mind maps serve as an excellent instrument for presenting a framework of information to students. They can assist educators in developing a comprehensive lecture structure and an overarching curriculum plan, so enhancing the

completeness and thoroughness of the lectures. Furthermore, educators can improve knowledge content using a mind map tailored to students' needs, facilitating their understanding of their interconnections among various concepts within the comprehensive lesson material. Figure 2 following is seen as an example.

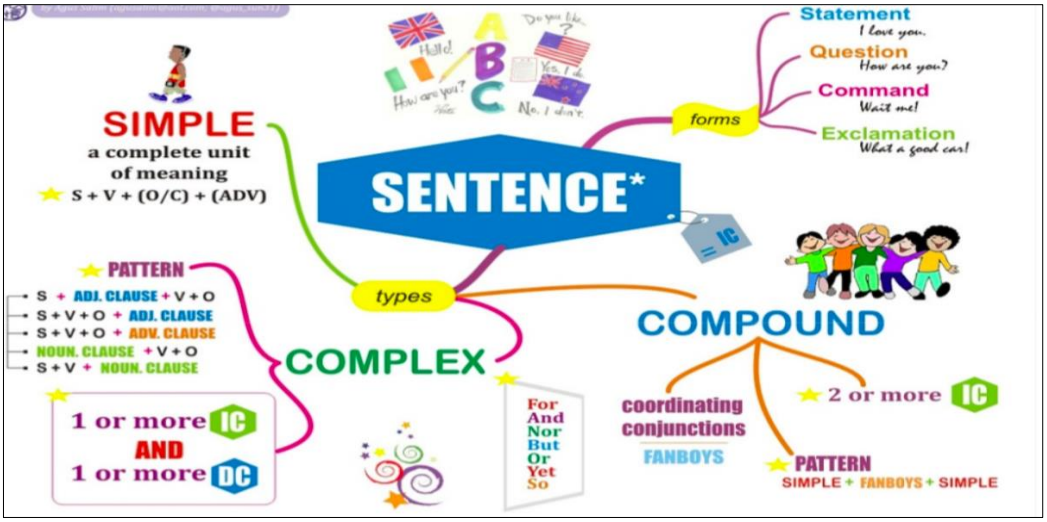

Figure 2. The mind map of sentences (designed by Agus Salim)

2. During the class session

The instructors employ mind maps to communicate the lecture to the students. Students will construe the lesson's concepts. The sentence kinds are organized at the center, with branches arranged in a clockwise manner to depict the logical framework of the lesson, encompassing sentence structures, sentence forms and sentence types. In the subsequent section, students will obtain the various sentence forms and the specifics of each type, accompanied by instructive examples for recognition. Subsequently, students will study the various sorts of sentences, the structure inherent to each type, and the specific qualities associated with each category. Furthermore, the instructor coordinates classroom activities for the students. Teachers can utilize mind maps in each class to assign work and foster collaboration among students. Moreover, mind maps assist students in allocating study duties amoung group members to collaboratively finish assignments. This exercise enables teachers to oversee the active involvement of group members and motivates students to participate earnestly in group tasks.

3. After the class session (Students' engagement)

The instuctors can improve the capacity to retain information pertaining to sentence types, encompassing sentence structures and classifications. Mind maps enable students to link their primary concepts and ancillary aspects of the lession using terminology. Simultaneously, mind maps facilitate students to autonomously examine and consolidate their knowledge, arouse their self-directed learning and profound memorization capabilities.

4. METHODS

Research design

The study predominantly applies quantitative method to evaluate the perspective of teachers and students concerning the employment of mind maps in educational activities, with a specific focus on students' perception of grammar learning.

The study was undertaken for two objectives. Initially, to assess learners' autonomy in the study of English grammar. Subsequently, advocate for the utilization of mind maps in the development of lesson

plans for the English grammar course specifically, as well as for other theoretical disciplines broadly, to enhance students' learning efficacy.

Research participants

The research includes two cohorts of participants. The first one consists of 19 lecturers teaching English full time from four different universities in which 08 lecturers are from Hanoi Law university, 03 lfrom Thuy Loi university, 03 from Labour and Social Affairs university, 03 from Phuong Dong university, and 02 from Hanoi university of Business and Technology. The second one comprises 63 third-year students majoring in legal English at Hanoi Law University who recently completed the English Grammar course.

Research instrument

Two survey questionnaires were designed to collect data from participants.

The first questionnaire was employed for educators with 31 statements categorized into 4 sub-topics including (1) Effectiveness of mind maps in English language teaching with statements from 1 to 9; (2) Influence of mind maps on English language teaching with statements from 11 to 17; (3) Tools for teaching activities aligned with the constructivist approach with statements from 18 to 23; and (4) Objectives of utilizing mind maps with statements from 24 to 31.

The second questionnaire was applied for students with 14 statements classified into 2 sub-topics namely (1) Designing learning activities with statements from 1 to 6; and (2) Skill development with statements from 7 to 14.

Data collection and analysis

The survey was administered online via the Google Form application. Upon designing and testing the questions to identify the suitable ones, they were formulated using the Google Form application and distributed to 19 English educators from various colleges in Hanoi, as well as 63 third-year students majoring in legal English.

The survey questionnaire was disseminated to participants via a Google Form. The findings were analyzed using SPSS 26.0 software to computer the average scores. The importance of the particular average scores is as follows:

1.0 – 1.79: Strongly disagree
1.80 – 2.59: Disagree
2.60 – 3.39: No comment
3.40 – 4.19: Agree
4.20 – 5.00: Strongly Agree

5. RESULTS AND DISCUSSION

Participants' attributes

There are two groups of participants in the survey.

The first group consists of 19 lecturers. Among them, there are 14 females (73.7%) and 5 males (26.3%). 3 people with over 20 years of work experience (15.8%), 4 with over 15 years (21.1%), 8 with over 10 years (42.1%), and 4 with over 5 years (21.1%). Most of the lecturers participating in the survey hold a master's degree, with 15 people (78.9%), 2 holding a doctoral degree (10.5%), and 2 with a bachelor's degree (10.5%). There are 15 lecturers teaching both majored and non-majored English students, accounting for 78.9%, and 4 only working with non-majored English group (21.1%).

The second group includes 63 third-year students majoring in Legal English at Hanoi Law university, who have just started an English grammar course. Among them, there are 43 female students (68.3%) and 20 male ones (31.7%).

Teachers' perspective on mind map applications

1. The effectiveness of mind maps in English language teaching

Table 3. Effectiveness of mind maps in English language teaching

Descriptive analysis

Mind maps are beneficial in English teaching activities because they	N	Mean	Std. Deviation	Description
1. guarantee the stability of information	19	4.32	.478	Very high
2. facilitate students' memorization	19	3.79	.419	High
3. establish the link between concept and cognition	19	3.74	.452	High
4. assist for students' educational endeavors	19	4.32	.478	Very high
5. consolidate students' engagement in the lesson	19	3.79	.419	High
6. avert students from the mechanical memorization of knowledge	19	3.74	.452	High
7. facilitate the attainment of information and the recognition of erroneous concepts	19	4.79	4.16	Very high
8. facilitate the cultivation of critical thinking skills for students	19	3.74	.452	High
9. guarantee students to optimize their time utilization	19	4.79	.416	Very high
Valid N (listwise)	19			

Table 3 indicates that the majority of surveyed educators concur or strongly concur regarding the efficacy of utilizing mind maps in teaching English as a foreign language, as mind maps facilitate information retention (item 1, M=4.32; SD=.478), enhance students' learning activities (item 4, M=4.32; SD=.478), and promote the acquisition of new knowledge while identifying misconception (item7, M=4.79; SD=.416). Moreover, mind maps can aid students in knowledge retention (item 2, M=3.79; SD=.419); provide the linkage between concepts and cognitive processes (item 3, M=3.74; SD=.452) which could be viewed in Martha & Gideon's (2014); improve students' engagement in the class (item 5, M=3.79; SD=.419) conciding with Zvezdan et al.'s (2019); minimize rote memorization (item 6, M=3.74; SD=.452); and foster the development of students' critical thinking skills (item 8, M=3.74; SD=.452), which used to be proved in Karim & Mustapha's (2020).

In brief, educators share rather positive thoughts to application of mind maps on English teaching which harmonize with Parikh's (2016) as they not just assist teachers to deliver their lectures vividly, scientifically and logically but equip students essential critical thinking skills and make the best use of their class time and self-study time at the same time.

2. The influence of mind maps on English language teaching

The results from Table 4 display that teachers largely advocate the beneficial effects of mind maps in English language instruction as they support a conducive classroom environment for students (item 10, M=3.74; SD=.452); capture students' attention and enhance their motivation (item 11, M=4.32; SD=.478); sustain the continuity of learning activities (item 12, M=3.79; SD=.419); and facilitate comprehension of the subject matter (item 14, M=3.74; SD=.452) and interconnection among concepts (item 15, M=3.74; SD=.452). More interestingly, concepts and knowledge are depicted vividly and logically (item 16, M=4.43; SD=.698) matching with Reima's (2009), which optimize students' capacity of reviewing and memorizing

their taught knowledge (item 13, M=3.74; SD=.452). Incidentally, the amount of students' obtained concepts and knowledge is illustrated by mind maps (item 17, M=3.74; SD=.452).

Table 4. Influence of mind maps on English language teaching

Descriptive analysis

Mind maps impact on English language teaching activities	N	Mean	Std. Deviation	Description
10. to create a pleasant learning environment for students	19	3.74	.452	Very high
11. to draw students' attention and motivate them	19	4.32	.478	High
12. to maintain the stability of students' activities	19	3.79	.419	High
13. to support students' review and retention	19	3.74	.452	Very high
14. to enable students to comprehend topics	19	3.74	.452	High
15. to ensure the link among concepts	19	3.74	.452	High
16. to ensure concepts to be described systematically and vividly	19	4.43	.698	Very high
17. to demonstrate the amount of students' acquired concepts and knowledge	19	3.74	.452	High
Valid N (listwise)	19			

All in all, it can not be denied the advantages of employing mind maps in English language teaching. The surveyed teachers' concurrence through the collected data is the best convinced proof the befenits of applying mind maps in English language teaching in particular, and in linguistics or other theorietical subjects in general.

3. Mind maps are appropriate tools for the constructivist approach

Table 5. Tools for teaching activities aligned with the constructivist approach

Descriptive analysis

Mind maps are a tool that corresponds with the contructive methodology since they	N	Mean	Std. Deviation	Description
18. assist students in enhancing their study practices	19	3.79	.419	High
19. facilitate the integration of knowledge	19	3.74	.452	Very high
20. facilitate active student engagement and optimize the efficacy of instructional initiatives	19	4.32	.478	Very high
21. assist in identifying and rectifying erroneous conceptions and gaps in knowledge	19	3.79	.419	High
22. prioritize inventiveness	19	4.32	.478	Very high
23. Facilitate students' self-expression	19	3.74	.452	High
Valid N (listwise)	19			

It can be witnessed from Table 5 that all participating teachers regard mind maps as an effective instrument for constructivist teaching, as evidenced by improving students' capacity of practicing (item 18, M=3.79; SD=.419), and boosting students' creativity (item 22, M=4.32; SD=.478) and confidence (item 23, M=3.74; SD=.452) in learning. In addition, this paradigm is accepted widely among respondents that it advances active student participation in class and maximizes the efficacy of teaching activities (item 20, M=4.32; SD=.478). Furthermore, the mind maps intensify the connectivity of knowledge (item 19, M=3.74; SD=.452) and guarantee the comprehensiveness and precision of information (item 21, M=3.79; SD=.419).

In a nutshell, functioning as tools for teaching activities in accordance with the contructivist approach, mind maps fulfill their missions perfectly due to their mentioned benefits in the table above.

4. Objectives of employing mind maps in English language teaching

Table 6. Objectives of utilizing mind maps

Descriptive analysis

Mind maps are utilized in educational activities	N	Mean	Std. Deviation	Description
24. to evaluate and discern students' understanding and fallacies	19	3.74	.452	High
25. to facilitate students' engagement in the session and enhance their interest	19	4.32	.478	Very high
26. to facilitate students' learning in a more efficient and effective manner	19	3.79	.419	Very high
27. to establish a link between the topic and practical application	19	4.32	.478	High
28. to facilitate the retention and retrieval of knowledge for the long term	19	3.79	.419	High
29. to assist students in predicting the course material	19	3.74	.452	Very high
30. to enhance creavitity	19	4.32	.478	High
31. to present the lecture in an organized manner	19	3.79	.419	Very high
Valid N (listwise)	19			

The findings from Table 6 demonstrate that all participants go along with the utility of employing mind maps in English language instructional activities. Mind maps are exploited to assess and pintpoint learners' misconceptions (item 24, M=3.74; SD=.452), promote active student engagement and arouse their interest (item 25, M=4.32; SD=.478). Likewise, exercising mind maps in English grammar teaching make possible for learning to be smoother and more effective (item 26, M=3.79; SD=.419) while heightening learners' knowledge retention (item 28, M=3.79; SD=.419) which is aligned with Heidari & Karimi's (2015), Wibowo's (2020). Additionally, mind mapping method is appled with the aim to equip students with capacity to establish a link between academic content and real-world context (item 27, M=4.32; SD=.478). Specifically, the teacher participating in the survey all agree that mind maps enable them to present their lectures in a more orderly fashion (item 31, M=3.79; SD=.419), which could be viewed in Elizabeth & Steven (2018). Simultaneously, their students can also foresee the coure material more easily (item 29, M=3.74; SD=.452), and most significantly, mind mapping paradigm fosters the students' creativity (item 30, M=4.32; SD=.478).

To sum things up, all surveyed educators shared the same objectives in applying ming maps in English grammar teaching at high and very high level of approval.

Students' perspective on mind map applications

1. Enhancing learning activities

The survey results in Table 7 indicate the utilization of mind maps in instruction has positively influenced students. The minimum resut is M=3.37 and the maximum is M=4.60 with all SDs are smaller than 1.0 meaning that all respondents' answers are quite centered, which partially corroborates that most participating students has favorable experiences with the lessons applying mind mappings. Students concur that mind maps facilitate coginitve development (item 3, M=3.37; SD=.595) which is similar to Annemarie's (2015), they also aissts in the efficient review of courses (item 5, M=3.79; SD=.419), and aid in distilling textbook content into a more succinct format (item 6, M=3.81; SD=.503). Concurrently, mind maps have emerged as an efficient instrument for supporting students in conserving time during their study endeavors (item 1, M=4.05; SD=.682). Add to this, two items (2 and 4) reveiced the highest approval

from respondents, in which mind maps are stated to facilitate a more rapid and profound comprehension of lessons (item 2, M=4.60; SD=.493) and enable students to autonomously retrieve the knowledge and information they have acquired (item 4, M=4.32; SD=.478).

Table 7. Designing learning activities

Descriptive analysis

Mind maps facilitate the creation of educational activities for students because they	N	Mean	Std. Deviation	Description
1. allow students to complete activities in a shorter time	63	4.05	.682	High
2. enable students to understand the lecture and the material more deeply by pictures	63	4.60	.493	Very high
3. facilitate students to generate the ideas for the lesson	63	3.37	.595	Medium
4. convey intricate information pertinent to the course material	63	4.32	.478	Very high
5. facilitate efficient lesson review	63	3.79	.419	High
6. assist students in distilling extensive textbook concepts into the most succinct yet comprehensive format achievable	63	3.81	.503	High
Valid N (listwise)	63			

In summary, collected data from above table prove that students feel like their teachers' employing mind maps in delivering lectures. That is because students earn many benefits from this method.

2. Developing skills

Table 8. Skill development

Descriptive analysis

Mind maps facilitate skill improvement for learners because they	N	Mean	Std. Deviation	Description
7. assist learners in structuring and elaborating on concepts	63	4.05	.682	High
8. augment the engagement of learners in the classroom	63	4.05	.682	High
9. assist learners in concentrating on the development of ideas for the lesson	63	3.81	.503	High
10. enhance learners'creativity	63	4.60	.493	Very high
11. assist learners with collaborative communication tasks, whether in groups or pairs	63	4.05	.682	High
12. can help me enhance my problem-solving skills	63	3.97	.595	High
13. facilitate the clear and logical presentation of learners' ideas to others	63	3.97	.595	High
14. enhance learners' interpersonal relationships within the group	63	3.81	.503	High
Valid N (listwise)	63			

Table 8 partially depicts the use of mind maps in skill development for students. Utilizing mind maps in courses enbles students to enhance their organizational and idea development skills (item 7; M=4.05; SD=.682) and considerately boost their creativity (item 10, M=4.60; SD=.493). Furthermore, mind maps assist learners in cultivating ideas for the lessons (item 9, M=3.81; SD=.503) and advancing their classroom activities (item 8, M=4.05; SD=.682). What's more, additional competencies, including teamwork and communication, have qualified (item 11, M=4.05; SD=.682). More importantly, mind

mapping paradigm permits students to form their problem-solving skills effectively (item 12, M=3.97; SD=.595). Survyed students also make sure that mind maps help them to present their ideas confidently in front of others with a clearer and more logical manner (item 13, M=3.97; SD=.595), and strengthen the interpersonal relationships with the group members (item 14, M-3.81; SD=.503).

Briefly, surveyed students in classes applied mind maps largely agree with the strong points of mind maps in developing their essential academic skills, which could be proved in Lin's (2019), Karim et al. (2023).

6. CONCLUSION AND PEDAGOGY RECOMMENDATION

Mind mapping is a technique that enhances cognitive processes and facilitates the synthesis of ideas and information. It enables learners to cultivate diverse thoughts and accompanying skills including imagination, logical reasoning, and linguistic structure, while systematically connecting ideas in a hierarchical manner. This stimulates students' enthusiasm for learning English and cultivates confidence and independence in their educational pursuits. Teaching activities have demonstrated that mind maps significantly enhance the effectiveness of English language teaching and encourage learners' initiatives.

Instructing tertiary level courses, especially in English, necessitates that students possess significant self-discipline and autonomy to assimilate extensive knowledge and cultivate the requisite abilities for the 4.0 technology ara. A mind map is a valuable tool that can significantly aid both teachers and learners in teaching activities, especially in the instruction of theoretical subjects for students majoring in legal English at Hanoi Law university.

Educators must allocate additional time to identify the instructional appropriate content and effectively employ diverse mind map models to present information in a brief, comprehensible, and thorough manner. The utilization of mind maps necessitates that educators cultivate logical reasoning, assess the primary material, and evaluate extra information.

Students must be proactive and demonstrate initiative in their educational pursuits. Following each lesson, it is essential to reconstruct the acquired knowledge using diagrams and to adeptly and innovatively utilize mind maps for evaluation and retention of the information.

7. RESEARCH LIMITATION AND SUGGESTION FOR FUTURE RESEARCHES

The primary object of this research, as indicated in the title, is to determine the perspectives of both teachers and students, who have experience in using mind maps, on the effectiveness of using mind maps in teaching grammar modules to enhance learners' self-study abilities through a quantitative method using survey questions.

Therefore, the limitation of the study is that the results may not ensure true objectivity because in-depth information has not yet been gathered from the survey participants. A result will be truly objective when the research findings are derived from various tools to minimize the limitations of each research tool. In addition, the study only aims to identify the perceptions of teachers and learners regarding the application of mind maps, and therefore cannot provide specific mind map models applicable to effective grammar teaching activities. The author hopes that with the superiority of mind maps proven through this study as well as previous researches, a future study will provide specific mind map models for teaching grammar lessons to be widely applied, benefiting both teachers and learners.

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