Mind Mapping and Its Influence on Learner Motivation: Perspectives from Two Presentation Classes

I-Cheng Wu and Yulin Chen

In the present study, the pedagogical application of mind maps is exercised within the context of two English presentation courses. The study aims to investigate how mind maps function as catalysts during the presentation formulation process, and their impact on learner motivation. Qualitative and quantitative data are collected through an anonymous questionnaire, which is designed in accordance with social constructivism. Results reveal that mind maps show their strength in interfacing with the multifaceted dimensions of learner motivation, both internally and externally, owing to their engaging and pragmatic nature. Moreover, mind mapping activities contribute to the cultivation of collaborative learning within the classroom, thereby engendering a pedagogical milieu that fosters learner motivation. Findings of the study further affirm the instrumental role of mind maps in facilitating the preparatory process of presentation development, establishing mind maps as a crucial instructional tool in English presentation pedagogy, specifically tailored to L2 learners.

Keywords: mind maps, learning motivation, presentation

Introduction

Mind maps are recognized as effective tools for fostering learners' critical

maps function as potent tools for visualizing thoughts and elucidating logical and causal relationships among pieces of information within a unified graphical framework.

Learning Motivation

Williams and Burden proposed a social constructivist approach to learning motivation in 1997 which incorporated the traditional cognitive approach and social interactionism in their framework. The framework shows its strength in taking into account both the internal and external factors of motivation influences. Dörnyei (2001a:19) indicates that social constructivists consider motivation to be a multi-dimensional mental force that cannot be simplified as something which is either internally or externally constructed. In order to provide an overview of the factors influencing motivation on the basis of social constructivism, Williams and Burden (1997) propose a framework of motivation factors which draws together theories from cognitive and social interactionist approaches. The influences are grouped into two categories—internal and external factors — which can be seen from the table below (see Table 1):

Internal Factors	External Factors
● Intrinsic interest of activity	● Significant others
● Perceived value of activity	● The nature of interaction with significant others
● Sense of agency	● The learning environment
● Mastery	● The broader context
● Self-concept	
● Attitudes	
● Other affective status	
● Developmental age and stage	
● Gender	

and their perceived proficiency in the subject. The second section explored participants' intrinsic interest in and perceived value of mind maps, as well as their confidence in mastering mind mapping techniques and related affective states. Additionally, participants were prompted to indicate how mind maps influence the learning environment and their interactions with peers.

Data Collection and Data Analysis

The investigator personally administered the questionnaire in her own classroom. Participants were informed at the outset that their responses would remain anonymous and that their participation would not affect their grades. The collected data were subsequently entered and analyzed using Excel. Descriptive and correlation analyses were performed to evaluate central tendencies and examine relationships among variables.

Results

Learners' Opinions on Mind Maps

As depicted in Table 1, the questionnaire included a total of 11 Likert Scale items designed to investigate learners' attitudes toward mind maps. Among these items, 10 were positively framed, while one was formulated in a negative manner. The negative question, "Mind map activities make me feel stressed," yielded a mean score of 2.70, whereas the mean scores for the positive questions ranged from 3.49 to 3.78. The findings from the Likert Scale responses indicate an overall positive attitude among learners toward mind maps. Notably, the highest mean

views on mind maps by completing the sentence, 'I think mind maps are...' in the questionnaire. Analysis of the responses revealed three recurring themes: 'perceived value of mind maps,' 'intrinsic interest in mind maps,' and 'interaction with peers.'

Categories of Learner Responses (with translated sample statements)	Frequency
Perceived value of mind maps (e.g. Mind maps can help me understand the content. / Mind maps can help me organize key points.)	**23**
Intrinsic interest of mind maps (e.g. Mind maps are interesting.)	**14**
Interaction with peers (e.g. Mind maps can increase interaction with classmates.)	**7**

Table 2. Learners' Opinions on Mind Maps: Open-Ended Responses

Among the 94 participants, 23 indicated the perceived value of mind maps, highlighting their utility in structuring key points and thoughts (16 responses) and enhancing comprehension of the material (3 responses).

> "I think mind maps are helpful for me to analyze things clearly, which is very beneficial for presentation assignments."
> *S67, open-ended responses, translated*

> "I think mind maps are helpful for me to quickly understand the content of articles."
> *S94, open-ended responses, translated*

Additionally, 14 respondents emphasized their intrinsic interest in using mind maps, describing them as engaging classroom tools.

> "I think mind maps are very interesting. It's the first time I've seen them being used in English classes."
> *S71, open-ended responses, translated*

Mind map activities promote collaborative learning among classmates.	0.24	0.28	0.23

Table 3. Pearson Correlation Analysis on Internal and External Factors of Motivation
*a negative question

The findings indicate that learners' self-concept, attitudes, and performance in English learning exhibit positive associations with their intrinsic interest in mind maps, perceived value of mind maps, sense of agency in utilizing mind maps, mastery of mind maps, and affective states concerning mind maps. Moreover, these internal factors are positively correlated with learners' perceptions of the learning environment and their interactions with peers while employing mind maps.

Of particular note are the significant positive correlations between learners' motivation in English learning and their intrinsic interest in mind maps ($r = 0.28$, $p < 0.05$), perceived value of mind maps ($r = 0.25$, $p < 0.05$), mastery of mind maps ($r = 0.29$, $p < 0.05$), affective states toward mind maps ($r = 0.25$, $p < 0.05$), and interaction with peers when using mind maps ($r = 0.28$, $p < 0.05$). These findings suggest that learners with higher motivation levels in English learning are more inclined to harbor positive attitudes toward the utilization of mind maps in educational contexts and exhibit greater confidence in mastering mind maps for English learning purposes.

Discussion

The Role of Mind Maps in the Motivational Dynamics

The findings of the study suggest that learners perceive mind maps as

with sources, and the systematization of ideas and information. Findings from Likert Scale responses indicate learners' recognition of mind maps as valuable aids in these stages of presentation formulation. These results are consistent with responses from open-ended questions, wherein learners emphasized the utility of mind maps in understanding and organizing key points from source materials, underscoring their significance in the presentation preparation process.

However, it is noteworthy that while the Likert Scale question "Mind map activities help me brainstorm ideas for my final presentation," garnered a significant mean score of 3.6, indicative of the positive impact of mind maps on idea generation, none of the 18 participants who focused on the pragmatic nature of mind maps in the open-ended questions highlighted their role in developing ideas. Rather, their responses centered on how mind maps organize the knowledge acquired from sources.

In the traditional Taiwanese educational setting, the predominant focus has been on imparting knowledge rather than fostering idea generation and creativity. This may explain why the target learners exhibit a preference for utilizing mind maps to understand and systematize input, as they have had limited opportunities in their past learning experiences to generate original ideas. These findings underscore the need to address the imbalance between input and output in traditional classrooms and emphasize the importance of promoting creativity and originality among students.

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