

# Mind Mapping as an Individual Preparation Task for Promoting Meaningful Discussions

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## ABSTRACT

Freshmen enrolled at Rikkyo University in Tokyo often excel at using target language during their mandatory English discussion classes, but the content they use in conjunction with their target language often lacks depth, despite students completing pre-task planning activities individually and in pairs. However, having students individually complete mind map stems may encourage students to more deeply consider their own experiences and knowledge about topics. Mind maps can quickly enhance information recall and provide an opportunity to apply personal learning strategies to target language or to consider vocabulary necessary for sharing their own ideas. Because of this opportunity to use their own ideas, students may more readily tap into intrinsic sources of motivation for using target language. Thus, mind mapping may subsequently help students have more meaningful and focused performances during discussions.

## INTRODUCTION

Freshmen at Rikkyo University in Tokyo are required to take a two-semester discussion course managed by the university's Center for English Discussion Class (EDC). This course is designed to improve fluent and accurate use of various functional language skills (e.g., asking for and giving different viewpoints or sources of information) and communication repair skills (e.g., asking for repetition or paraphrasing) (Hurling, 2012).

EDC Discussion classes follow a strongly unified curriculum. Each class has between seven and nine students, and each lesson follows a similar structure. The first half of the lesson contains a quiz, fluency activity, and presentation and practice of the lesson's target language. Then, there are two extended small group discussions. Each discussion contains three phases: individual pre-task planning, pair pre-task planning, and a small group discussion. The individual pre-task planning phase usually takes one or two minutes for students to complete. In this phase, the textbook presents a short list of ideas for students to consider, and the students are asked to choose, agree or disagree with, rank, or make some value judgment for each idea (see Appendices A and B). In the pair pre-task planning phase, students continue to consider their ideas while discussing them with a partner for roughly five minutes. Finally, students are placed into small groups with new partners, where they complete a roughly sixteen-minute discussion.

The goal of the individual pre-task planning phase is to assist students with quickly developing ideas that they can use with the target language. The textbook's activities typically excel at "feeding" students ideas that they can quickly and meaningfully apply to the target language. However, students' discussions often become limited to those ideas presented in the textbook. I posited that the learning facilitated by these ideas could be *more* meaningful if the ideas were generated by each individual student and thus more relatable to their own experiences. Brown (2007) describes the principle of meaningful learning:

Meaningful learning 'subsumes' new information into existing structures and memory systems, and the resulting associative links create stronger retention. Rote learning—taking in isolated bits and pieces of information that are not connected with one's existing cognitive structures—has little chance of creating long-term retention... Capitalize on the power of meaningful learning by appealing to students' interests, academic goals, and career goals... Whenever a new topic or concept is introduced, attempt to anchor it in

students' existing knowledge and background so that it becomes associated with something they already know (pp. 56-57).

Because the Discussion class is targeted toward students that are culturally similar (largely Japanese freshmen), the textbook attempts to provide students with ideas that are likely to mirror their beliefs and experiences. However, students often neglect to explore or share their own experiences or even their own knowledge of the topic, and they thus fail to consider topics in depth during discussions. As a result, I implemented mind maps as an individual discussion preparation activity in an attempt to improve the meaningfulness of their discussions.

## **DISCUSSION**

### **Pre-Task Planning to Improve Intrinsic Motivation and Strategic Investment**

A classroom which promotes effective language learning is interactive (Brown, 2007), which may seem at odds with the inclusion of an individual preparation activity. However, tangential to meaningful learning thus reside at least two other language learning principles to consider: intrinsic motivation and strategic investment.

Pre-task planning, such as an individual mind mapping activity, gives students an opportunity to consider which ideas they are interested in using in conjunction with target language rather than only adhering to "safe" textbook-provided ideas. Brown (2007) describes this principle of intrinsic motivation:

The most powerful rewards are those that are intrinsically motivated within the learner. Because the behavior stems from needs, wants, or desires within oneself, the behavior itself is self-rewarding... learners perform the task because it is fun, interesting, useful, or challenging (p. 59).

That is, learning may be enhanced if students discuss ideas that they are interested in or invested in discussing rather than producing or repeating ideas solely as a requisite for a good grade (EDC rubrics only account for appropriate target language use, not for using the target language in interesting or meaningful ways).

The process of generating and using self-generated content may also improve students' use of target language. Brown (2007) describes this principle of strategic investment:

Successful mastery of the second language will be due to a large extent to a learners' own personal "investment" of time, effort, and attention to the second language in the form of an individualized battery of strategies for comprehending and producing the language (p. 60).

Students complete both individual and pair pre-task planning, so they have two different kinds of opportunities to consider what ideas to use, vocabulary, or personal strategies for using their ideas with the target language. As Brown (2007) notes, using a variety of techniques is important for appealing to varied individual learning styles. Additionally, each discussion course lesson contains two discussions (each with its own pre-task planning phases). In my lessons, I used mind mapping to prepare for only one of these discussions, thus ensuring that students had a variety of ways to consider which ideas to use and how to use these ideas with the target language.

Furthermore, Ellis (2009), via a meta-analysis of a number of studies, found much support for the notion of pre-task planning enhancing subsequent performance. Ellis conceptualizes pre-task planning as either strategic or rehearsal; that is, either considering ideas or practicing using ideas in conjunction with target language, respectively.

In the EDC context, these pre-task planning phases are largely delineated. Strategic planning mostly occurs individually; in my classes, mind maps can fulfill this purpose. In terms of speed and efficacy, Ellis (2009) notes that "learners' orientation to the planning is a potentially crucial learner variable" (p.7), which is why I modeled mind maps and closely monitored students

the first few times they completed their own mind maps. In addition, mind map stems are a type of guided planning. Ellis cites a number of studies in which suggest that guided planning tasks improve fluency during task performance (Foster & Skehan, 1996; Wendel, 1997; Kawauchi, 2005; Sangarun, 2005).

After students have completed their individual mind maps, the pair pre-task planning phase can act as both strategic planning and rehearsal planning, as students rehearse their ideas but are free to continue generating new ideas. Thus, by using mind maps, students should be able to more fluently produce their own ideas using target language, and therefore, they should be more able and motivated to have meaningful discussions.

### **Mind Mapping to Improve Meaningful Learning by Improving Recall**

Buzan (1983), credited as the creator of mind maps, describes mind maps as a way for people to quickly recall and connect ideas using key words. He reasons that key words on a mind map can be helpful for rapid idea recall because, compared to creating longer language chunks such as full sentences, mind mapped key words allow ideas to be connected more easily and quickly. Because mind maps are open-ended, they may demonstrate to students the possibility of using their own experiences as they relate to the discussion topic in a way that closed-ended preparation activities may not. Students can also use the time to think about what vocabulary they require to share these experiences without simultaneously contending with target language.

In addition, mind maps may help students remember topical information from their textbook readings. In one study, Farrand, Hussain, and Hennessy (2002) had medical students study a text before asking them to answer questions about the text. They found that mind maps “improve memory for written information” (p. 429), with a 10% increase in recall compared to students who use self-selected study techniques. Because mind maps inherently inquire about topical knowledge in an open-ended manner, they may encourage EDC students to reference ideas from their readings in their discussions.

Mind maps may thus improve the meaningfulness of learning in the discussion class by improving recall of knowledge, experiences, and vocabulary. However, I was not the first instructor to use mind maps as a preparation activity in the EDC context, and at least a few past attempts attained only limited success (Kirkwood 2018, 2019). Mind maps are a versatile tool, and the best procedures for using them vary depending on context. Based on Kirkwood’s (2018, 2019) experiences, I had two aims when adapting mind maps for the discussion class context: minimize individual preparation time and ensure that mind maps contribute to meaningful, focused interactions.

### **Minimizing Individual Preparation Time to Maximize Quality of Interaction Time**

Group discussions are a key element of the EDC class, so I wanted to minimize the amount of time students might spend performing individual activities. In the context of writing an essay, it might be appropriate for students to spend a substantial amount of time developing and organizing ideas using mind maps, but for speaking activities, idea generation and organization needs to be swift rather than extensive or organized.

Without proper time management during pre-discussion preparation activities, students may be left waiting for their peers to finish their preparation activities or discussion time may be decreased. Indeed, another discussion class instructor, Kirkwood (2018), used mind maps for a whole class pre-task collaborative metalinguistic reflection activity and found that students sometimes took far too much class time to generate ideas; with only the central node pre-filled, “the maximum time for a group to generate at least one idea per person was about 15 minutes” (p. 120). As a result, my mind maps have a number of pre-filled nodes containing the ideas from the

standard textbook preparation activities. These nodes quickly feed students ideas that they can consider and use in their discussions. However, the open-ended nature of the mind map allows students to expand on these ideas as their motivation and ability allows.

Kirkwood (2018) made a second attempt at using mind maps, this time providing students with open-ended mind map stems (see Appendix C). These mind map stems were completed as a class (instead of individually, as in my case), and then the ideas featured in the mind map were discussed in pairs as a pre-task preparation activity. Kirkwood's goal was to encourage *collaborative* idea generation (which differs from my goal of encouraging *individual* idea generation). Kirkwood notes that this activity's "focus on generating ideas for discussion, not [my original goal of] metalinguistic reflection" made the activity smoother, as it was possible to "observe students repeating or adapting ideas from the board" (p. 121). However, there are at least three potential downsides of this process. One is that it could take longer than individual mind mapping, as an entire class must be given the opportunity to contribute ideas to the map. Another is that this implementation might not allow students to recall their own ideas and experiences since they must volunteer ideas to the class rather than jotting them down privately. Finally, because all of students' ideas are shared in the pre-task phase, the extended discussion may lack novelty, potentially decreasing students' interest or motivation.

### **Promoting Meaningful, Focused Interaction with Individual Mind Mapping Tasks**

Later, Kirkwood (2019) also attempted to use mind maps to promote collaboration using the L2. Groups of students generated ideas simultaneously on the same mind map. However, in discussing the output of a group of four and a group of seven, Kirkwood notes that "most of the observable interactions were not related to the activity's goal of preparing students for a discussion through the collaborative generation of ideas... In one case the activity also led to collaborative efforts that disrupted a participant's ability to generate ideas" (p. 229). Kirkwood thus concludes that mind maps may be useful for assisting with L2 vocabulary, but "if there is a need to focus on ideas alone, there is limited evidence from this study that mind mapping will be useful" (p. 229). Although mind-mapping may be inappropriate as a *collaborative* idea-generation planning task, I used it as an *individual* planning task, thus eliminating many of the disruptions Kirkwood's students contended with.

Appropriate individual pre-task planning improves the quality of subsequent interactions. In terms of my mind maps, because they contain pre-filled nodes, topics are constrained and focused. Additionally, the open-ended nature of the mind map could encourage students to generate more honest and original ideas and interests to share with each other during the subsequent pair preparation phase; this may improve meaningfulness of their discussion as well as affective variables relating to rapport with classmates.

### **PROCEDURE**

In the first lesson, prior to students' first discussion, I introduced the concept of mind mapping by drawing an example mind map on the board. I then demonstrated how mind maps worked by creating content in new nodes and making connections between various nodes. In doing so, I provided students with four simple rules:

1. Work quickly to write many ideas
2. Messy is OK (spelling and grammar are not important)
3. Japanese is OK
4. Connect ideas

Students were then given roughly two minutes to complete individual mind maps. I had adapted the textbook's preparation activities or other official EDC preparation activities into mind map

stems with several pre-filled central nodes (see Appendix D for the first mind map stem my students completed). These were printed on A4 paper and handed to each student. Thus, students were given ready-to-use ideas, but the mind map format encouraged them to expand on these ideas with their own content, as the pre-filled nodes were surrounded by empty white space. Compared to making mind maps from scratch, these map stems helped to constrain and clarify the topics, as well as save class time, since students did not need to write in the parts of the map that were common to everyone or generate ideas completely from scratch.

Afterwards, students were asked to share their ideas with a partner for roughly five minutes. This provided students with an opportunity to shift their focus from generating content to collaborative idea sharing and form rehearsal.

Finally, students were assigned to new partners in groups of three to five, where they used their ideas to complete a roughly sixteen-minute discussion. Most students often referred to their mind maps throughout discussions. However, their focus always remained on the discussions rather than extensively reviewing their mind maps, likely because the barebones language on a mind map (usually just words or short phrases) serves only as an aid to recall ideas.

When introducing or modifying any activity in a class as rigidly structured as the EDC class, it is useful to do so in the least disruptive way possible. When considering which of the textbook's individual preparation activities to substitute with mind maps stems, I chose to enhance rather than entirely replace existing preparation activities. The textbook's individual preparation tasks vary between a few different categories. For tasks which present somewhat nuanced opinions to agree or disagree with or which present charts with information to assign value judgments to, I felt that it would be difficult to easily substitute a mind map stem in a way that clearly promoted greater depth of discussion. For tasks which ask students to choose a limited number of superlative items from a list, rank items on a list, or assign value judgments to ideas related to the topic, I substituted mind map stems (compare Appendix A to Appendix E or Appendix B to Appendix F). For these latter types of tasks, the textbook's content more cleanly transferred into mind map stems than with the former types of tasks.

However, for some topics, such as considering "the most serious risks of social media," I hybridized the textbook and mind map approaches, asking students to both assign value judgments to various "risks of social media" and expand their mind maps with their own ideas (see Appendices E and F). With little additional explanation, the vast majority of students had no difficulties completing both tasks within the mind map.

In practice, the procedure of completing individual mind maps from stems took slightly longer than completing the textbook's individual preparation activities. Whereas the textbook's individual preparation activities typically take about a minute to complete, I gave students a strict two-minute time limit for the mind mapping activity. In most cases, this time limit interrupted students' writing, and they likely would have continued writing well past the time limit. Mind mapping can become quite time-consuming without enforcing time limits, but student engagement in the task demonstrated at least some, albeit interrupted, consideration of the topic before attempting to apply target language to their ideas.

## **CONCLUSION**

In the most basic sense, this mind mapping preparation activity was successful because, with few exceptions, students generated enough content to complete their sixteen-minute discussions. Although I did not take extensive measurements of content generated, I informally noted that most students typically generated roughly five additional nodes of content, but the amount of content students generated varied depending on the student and topic. I also noticed that students often recalled and used content from their readings in their mind maps. However, without further

research, I cannot know whether these generated ideas would have occurred without the mind mapping activity or were a direct result of the mind mapping activity.

The intention of the mind mapping preparation activity was to improve the meaningfulness of students' learning. I did not objectively measure whether learning was more meaningful, but I believe the activity provided students with a greater *opportunity* for more meaningful learning. Some students wrote many ideas on their mind maps and referred to these ideas throughout discussions; in contrast, I had previously attempted to encourage students to write original ideas in the textbook without success. However, other students did not write many ideas during the activity, and a few students told me that they did not enjoy the activity. Some groups discussed topics with great depth and enthusiasm, while other groups maintained somewhat superficial discussions of topics. Again, without further research, I cannot definitively say whether the mind mapping technique improved the ratio of "more meaningful" and "less meaningful" discussions.

Although mind mapping may not be vastly superior to other forms of individual pre-task planning activities, my implementation of mind map stems for individual pre-task planning provides a clear, efficient, and effective way to help students prepare for discussions. When combined with other types of pre-task planning, mind map stems are a valuable tool for motivating students to invest their time and energy toward meaningful uses of target language goals.

## REFERENCES

- Brown, H.D. (2007). *Teaching by principles: An interactive approach to language pedagogy*. White Plains, NY: Longman.
- Buzan, T. (1983). *Use both sides of your brain*. New York: E.P. Dutton, Inc.
- Ellis, R. (2009). The differential effects of three types of task planning on the fluency, complexity, and accuracy in L2 oral production. *Applied Linguistics*, 30(4), 474-509.
- Farrand, P., Hussain, F., & Hennessy, E. (2002). The efficacy of the 'mind map' study technique. *Medical Education*, 36(5) 426-431.
- Fearn-Wannan, J., Kita, S, Sturges, J. G., Young, D. (2019). *What do you think?: Interactive skills for effective discussion 2, Book II*. (10th ed.) Tokyo: DTP Publishing.
- Foster, P. & Skehan, P. (1996). The influence of planning on performance in task-based learning. *Studies in Second Language Acquisition* 18(3), 299-324.
- Hurling, S. (2012). Introduction to EDC. *New Directions in Teaching and Learning English Discussion*, 1(1), 1.2-1.10.
- Kawauchi, C. (2005). The effects of strategic planning on the oral narratives of learners with low and high intermediate proficiency. In R. Ellis (Ed.): *Planning and Task-Performance in a Second Language* (pp. 143–164). John Benjamins.
- Kirkwood, H. (2018). Brainstorming for a focus on form. *New Directions in Teaching and Learning English Discussion*, 6, 114-123.
- Kirkwood, H. (2019). Conversation analysis of a mind mapping discussion preparation activity. *New Directions in Teaching and Learning English Discussion*, 7, 223-230.
- Sangarun, J. (2005). The effects of focusing on meaning and form in strategic planning. In R. Ellis (Ed.): *Planning and Task-Performance in a Second Language* (pp. 111–141). John Benjamins.
- Wendel, J. (1997). *Planning and second language narrative production*. Unpublished Doctoral Dissertation, Temple University, Tokyo, Japan.

**APPENDIX A - Textbook Individual Preparation Task for Topic “Media” and Target Language “Sources of Information” (Fearn-Wannan et al., 2019, p. 48)**

**Preparation**

✦ *Below are four types of famous people. For each type, decide if they are mostly good or mostly bad role models.*

- |                        |                                   |
|------------------------|-----------------------------------|
| 1. Sports players      | <i>(mostly good / mostly bad)</i> |
| 2. Actors and TV stars | <i>(mostly good / mostly bad)</i> |
| 3. Politicians         | <i>(mostly good / mostly bad)</i> |
| 4. Musicians           | <i>(mostly good / mostly bad)</i> |

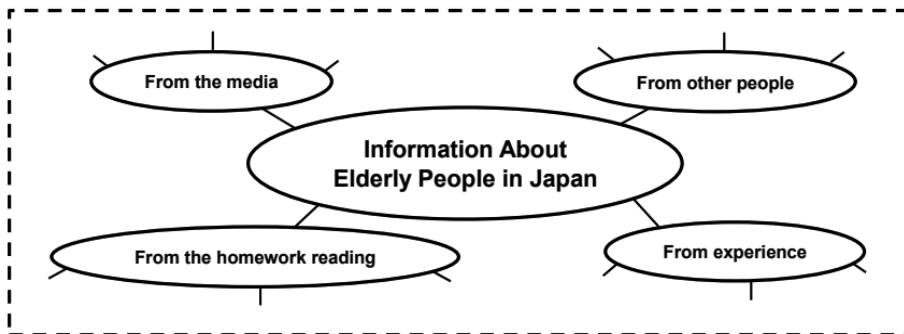
**APPENDIX B – Textbook Individual Preparation Task for Topic “Media” and Target Language “Different Viewpoints” (Fearn-Wannan et al., 2019, p. 41)**

**Preparation**

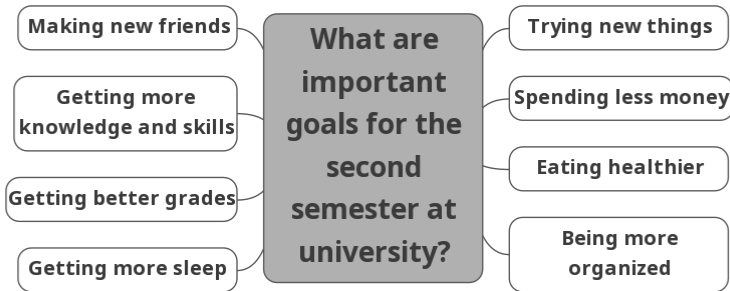
✦ *What are the most serious risks of social media? Rank the following risks from 1 (the most serious risk) to 5 (the least serious risk).*

| Risks            | Ranking |
|------------------|---------|
| Personal privacy |         |
| Physical health  |         |
| Mental health    |         |
| Fake news        |         |
| Online bullying  |         |

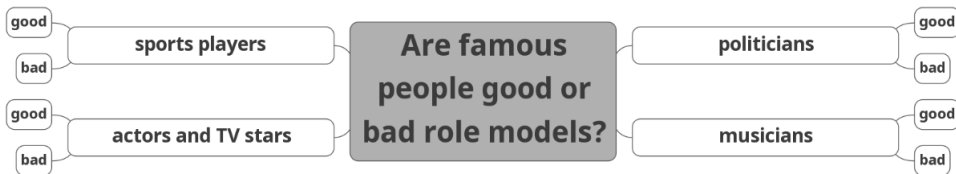
**APPENDIX C – Kirkwood (2018) Mind Map Stem for Topic “Social Concerns” and Target Language “Sources of Information”**



**APPENDIX D - Mind Map Stem for Topic “University Life”**



**APPENDIX E - Mind Map Stem for Topic “Media” and Target Language “Sources of Information”**



**APPENDIX F - Mind Map Stem for Topic “Media” and Target Language “Different Viewpoints”**

