1. Introduction

This research is an attempt to demonstrate that EFL learners can develop writing skills in the foreign language through webbing maps. A webbing map is an associational map which presents learner’s experiences and knowledge in the form of a network of ideas. The webbing map method is a technique adopted in Whole Language Approach, a theme-oriented approach in learning language developed by Kenneth Goodman in the 1980s (Goodman, 1986). The conceptual bases of this approach include Vigotsky’s philosophy and schema theory of human cognition. Whole Language Approach places considerable emphasis on spontaneous interest and concerns of learners. Teaching based on Whole Language Approach, such as the webbing-map method, respect learners’ individuality and fosters their creativity in L2.

The Curriculum Council of the former Japanese Ministry of Education announced guidelines for teaching. These guidelines stipulate that one of the important goals of writing in English in junior high school is to express learners’ thoughts using basic words’. Here the purpose of writing in English is considered as self-expression. On the other hand, learners with a very limited vocabulary are supposed to learn to express themselves in their EFL living environment. Given this situation, it is necessary to take a fresh look at EFL writing and adopt a new learning method. We will discuss the potential of the webbing maps as a means to address this issue. Most Japanese learners are not familiar with the concept of a webbing map or an actual webbing map. Yet, as we will demonstrate later in this paper, the webbing map is able to improve EFL writing even when only a limited choice of words is used.

We will look at the results of actual teaching experiments in a Japanese junior high school to examine the effectiveness of the webbing map. The advantage of using webbing maps is not merely to facilitate writing, but also helps learners to understand their own network of knowledge and use this network as constant scaffolding for writing by themselves. Teachers can also obtain useful information
for instruction from learners’ maps.

In the following argument, first we introduce the webbing map technique both in theory and practice; next, we describe the specific procedures of our teaching experiments. Finally, we briefly look at some of the qualitative improvement in the learners’ writing in light of metonymy and metaphor.

2. The webbing map

Section 2 discusses the webbing map technique in detail. We look at this technique in relation to Whole Language Approach; in particular, we will focus on the two Whole Language derived characteristics of this method, schema-theory and the function of learner scaffolding.

2-1. Defining the map

First we define what the webbing map is. It is an association map that presents students’ experience and knowledge in the form of a network of ideas. Before writing an English sentence or text, writers draw a network of freely associated ideas on sheets of paper, hence the term, map. Writers are assigned by the teacher a stimulus word, which serves as a provisional topic for their writing. From the stimulus word they expand their associations in the form of response words around the stimulus word. When the central stimulus word is unfamiliar to learners, in which case they try to conceive a new set of ideas in writing, the webbing map can support the writers in making sense of new ideas within the framework of their existing knowledge. In short, learners can understand new knowledge in terms of the existing knowledge. In expanding their webbing maps, learners revise their cognitive structure in an attempt to understand new information. According to Taylor (1989: 248), ‘given the role of domain-based knowledge in the characterization of meanings, it is clear that the child’s grasp of the semantic import of a category distinction is necessarily dependent on a prior understanding of the domain against which the semantic distinction is to be drawn.’ Learners adapt their way of thinking to a new experience.

In building a network of ideas on a webbing map the instructor must help the learner build their psychological schema and make connections between ideas. Since prior knowledge is essential for the comprehension of new information, the instructor needs to help learners be aware of their preexisting knowledge, i.e., remind them of what they already know. The schema grows and changes as new information is acquired. Learners may feel internal conflict when they are trying to assimilate this revised schema, which contradicts their previous suppositions.
2-2. Schema theory

As we have discussed above, the webbing map technique relates to the cognitive schema. We, therefore, need to discuss schema theory briefly. Schema theory describes the process by which learners assimilate into their own background knowledge incoming information. All learners carry different schemata and background information, and these are also often culture-specific. This is an important concept in EFL teaching to build or activate the learner’s schema. Schema theory is based on the pedagogical concept that an elaborate network of abstract mental structures, when organized, represents one understanding of the world. This theory propounds that everyone, regardless of age, race, culture or level of intelligence, has his or her own schema. The schema refers to our background knowledge of the world in general.

A schema is organized meaningfully, can be added to, and, as an individual gains experience, develops to include more variables and more specificity. A person can have more than one schema; the central schema can contain sub schemata and it can also be a part of a larger schema when the persons mind develops. A schema can also be reorganized when incoming data reveals a need to restructure the mind-set. The cognitive elements used during perception and comprehension, which evolve as a result of these processes, combine to form a whole that is greater than the sum of its parts. Understanding the schema is necessary to build and interpret webbing maps better.

2-3. Scaffolding

Webbing maps work as a scaffolding for learners. Scaffolding is a process of guiding the learner from what is already known to what is to be known. Scaffolding allows learners to perform tasks that would normally be slightly beyond their ability. The instructor can support learners appropriately in their individual development.

For learners, besides the limits of their linguistic abilities, their problems in writing can be those of insufficient background knowledge. To make up for this insufficiency, the webbing map must be used more extensively as a means of scaffolding.

Encouraging learners to write for pleasure leads to motivated learning. Learners can be motivated to write extensively by being allowed to choose their own words based on their own interests written on their webbing map. It is vital for non-native learners to try to accomplish as much writing as possible. In a broad perspective, webbing maps that include authentic materials and real-world environments are associated with and also assist the Whole Language Approach, one of the methodologies in constructivist learning and teaching.
2-4. Whole Language Approach

In this section, we discuss the Whole Language Approach, where webbing map technique belongs. In particular, we consider the 'beliefs' of this approach. These beliefs can be classified into three main groups. The first is a positive acceptance of learners by teachers. The second is holistic, from whole to part learning and teaching, in which learning can be joyous and fulfilling through authentic and natural materials. The third is empowerment of learners, teachers, and learning communities and environments.

From these beliefs, it is clear that the Whole Language Approach is fundamentally learner-centered, its methodology being based on a learner's interests and concerns. The Whole Language classroom, however, is not unplanned or unprepared. Only when it is supplied with a specialized setting for learning can learners pursue tasks on their own and take responsibility for their own learning.

3. Application of the webbing map to EFL writing

This section demonstrates the effectiveness of the webbing map in practice with reference to specific writing projects conducted by the author. The comments from the participants are attached below to support our discussion.

3-1. Participants

The participants in the research experiments consisted of second-grade learners of junior high school aged thirteen to fourteen. They were native speakers of Japanese studying English as a foreign language. Those junior high school learners had studied the language for at least one year and were mostly at beginners' level when the research was conducted. In addition to these main experiments, ten graduate students who have studied English as a foreign language participated in the pilot survey, which was performed before the experiments.

3-2. Procedure

As the first activity in a lesson period, participants wrote an English composition on the topic 'T'. The second activity in another lesson typically a week after the first, they drew a webbing map from the stimulus word 'T' to various response words. They were allowed to draw their map in their mother tongue. Then, another English composition was written after completing the webbing map.
Finally, participants filled out a questionnaire. They were permitted to use dictionaries at any of these stages. The instructor took care to bring out the best of each participant while respecting his or her interests. The instructor also examined each webbing map, discussed it with the writer, and gave necessary advice.

3-3. Comments from questionnaires

Before going into discussion of each experiment, we look at the results of the questionnaires. The following are some of the participants’ comments translated into English by the author:

(1) I thought English writing lessons were to translate Japanese to English.
(2) I thought writing in English or in another foreign language was the same as a translation test.
(3) When I was wondering what I should write, I saw my webbing map. Then I could keep writing on.
(4) I enjoyed writing in English very much. Because all I wrote here was what I really wanted to express from my heart. Thanks to the webbing map, I could know myself and I actively tried to understand myself further.
(5) When I saw my webbing map, I could know what I really wanted to write.
(6) Because I enjoyed drawing my webbing map so much, I could not take enough time for writing.
(7) I’m sorry for forgetting to bring in my dictionary. I could not consult it at all.
(8) I could write smoothly after I drew my webbing map.
(9) The links on my webbing map taught me about writing procedure.
(10) I associated from the stimulus word ‘I’ to various response words.

It is clear from these comments that the webbing map encouraged and gave confidence to writers. These results confirm that the mapping technique provides a psychologically positive function. In order to evaluate this method objectively, we will attempt a qualitative analysis.
4. Qualitative analysis

It has been discussed in Section 2 that webbing maps are helpful for writing. Writers can use their imagination through their maps; the more they extend associational links on their maps, the more they can be ready to express themselves in text. Writing through the webbing map facilitates the expression by learners of everyday situations in text, whether private, psychological or social. We have to consider qualitative change in the production of text. This we discuss in the present sections. In the following discussion, we analyze both individual webbing maps and written text.

4-1. Case studies

In this section, we focus on the way the webbing map plays a productive role in fostering learners’ understanding through writing. It can be inferred that mental associations are produced by the webbing map and reflected in writing as scaffolding for the writer. In order to illustrate this, we have to look at individual cases: 4.1.1, 4.1.2, 4.1.3, and 4.1.4.

4-1-1 The case of K. A.

K. A., a second-grade pupil in junior high school, wrote 16 words on his first attempt:

K. A. 1: My name is K. A. I like baseball. I have two brothers. I have one sister.

In the second attempt of writing after drawing a webbing map shown below (Fig. 1), his word count increased to 33:

K. A. 2: My name is K. A. I live in Mino. I am a junior high school learner. I belong to baseball club. I like baseball. I don’t play soccer. I don’t like soccer. Good-bye.

On his webbing map, he linked the stimulus word ‘T’ to baseball as one of his favorite things. This association is metonymical because baseball is contiguous to him. Then he associated from ‘baseball’ to ‘ball’ and to ‘the spring time of life’. As he belongs to the school baseball club, and always plays with balls, baseballs are always contiguous to him. This association is therefore metonymical. The linkage of ‘baseball’ with ‘the spring time of life’ can be regard as metaphorical.
It can be inferred that ‘spring’ shares such images as ‘vividness’, ‘activeness’, and ‘energy’ with ‘baseball’ in K. A.’s mind. Then he associated ‘the spring time of life’ with ‘teenage’. When he produced his second version of writing, he wrote, ‘I belong to baseball club. I like baseball. I don’t play soccer. I don’t like soccer’. This presumably means that when he extended links around the ‘baseball’ node, he might have noticed that he really loves ‘baseball’ instead of soccer. His metaphorical and metonymical thinking prompted him to realize his love of baseball. He was foregrounding the most important information for him and backgrounding the rest.

K. A. associated many words on his map and while drawing it, he must have foregrounded one of the most familiar daily activities for him, ‘baseball’. This process is reflected presumably in K. A.’s second writing.

4-1-2 The case of G. T.

G. T. wrote 23 words at first. After drawing his webbing map below, he wrote 53 words, more than twice as many as on his first attempt.

G. T. 1: My name is G. T. I like tennis very much. I have a brother. My brother’s name is Konjo.

I play tennis everyday.

G. T. 2: My name is G. T. I live in Mino. I am a junior high school learner. I belong to tennis club.

I play tennis every day. I like tennis very much. But I don’t play tennis. Because I am
not good at tennis. I hope to be a good tennis player. Goodbye.

On his webbing map, he extended a link from ‘I’ to ‘tennis’, because he loves ‘tennis very much’ (G. T. 1, 2). From tennis, he associated ‘racket’, ‘ball’ and two of his friends’ names. One of them, the captain of their tennis club, is supposed to be a good tennis player. In contrast, G. T. is ‘not’ a good tennis player. We can see that tennis is his favorite sport from his first version. In the second version written after drawing his webbing map, we can further understand his true love of tennis and his dream to become a good tennis player.

![Webbing map of G. T.](image_url)

**Fig. 2. Webbing map of G. T.**

**4-1-3 The case of S. S.**

S. S., a second-grade pupil in junior high school, wrote 23 words on his first attempt:

**S. S. 1:** My name is S. S. I like fishing very much. I don’t like study. I am a boy. I am not a girl.

After drawing a webbing map below, he wrote 14 words more to produce a 37-word writing:

**S. S. 2:** My name is S. S. I like fishing. I don’t like English. I was not Like English. I want money.

I don’t want homework. I was a boy. I am a boy. I am not a girl.

His webbing map is characterized by the predominance of words related to ‘I’. From the six words directly related to ‘I’ on his map, we assume that he has strong focus on himself. From the stimulus word ‘Maro’, meaning ‘I’ in traditional Japanese, he associated the English word ‘I’ on the
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principle of contiguity, then similarly 'Atashi', the female first person singular in Japanese, and 'nihon' or Japan. 'Nihon' has a whole-part relation with 'maro'. From 'I' he associated 'my', the possessive case of 'I', contiguously. 'My' has its own contiguous link to 'me', the objective case of 'I'. S.S. has a feminine appearance. It can be assumed that this outside feature lay heavy on his mind. His first version, 'I am a boy. I am not a girl' and his second version, 'I was a boy. I am a boy. I am not a girl' support this assumption. His second version does not seem to have changed dramatically at a glance; however, according to his webbing map, we can understand clearly why he wrote those sentences and how he felt about himself. It is because his association consists of ideas concerning himself, which are linked metonymically. From the examples we have examined so far, metaphorical associations rarely appear on the maps drawn by EFL learners, there is only a vague hint of metaphorical thinking in S.S.'s reference to his feminine appearance in 'I'm not a girl'. He might be comparing himself with a girl.

Fig. 3. Webbing map of S.S.

4.1.4 The case of B. B

B. B, a second-grade pupil in junior high school, wrote ten words on his first attempt:

B. B. 1: I am B. B. I like basketball. I have a sister.

After drawing the webbing map shown below (Fig. 4), his word count increased to thirteen:

B. B. 2: A’s nature is very beautiful. When it is fall, maple is very beautiful.
On his webbing map, he linked the stimulus word ‘I’ to ‘basketball’, ‘blue’, ‘green’, and ‘silver’ metonymically as some of his favorite things. These associations are based on contiguity. Then he associated from ‘green’ to ‘forest’, ‘blue’ to ‘ocean’ and ‘sky’, and ‘silver’ to ‘shining’. These latter linkages can be regarded as metonymical, for it can be inferred that the colors mentioned there, ‘green’, ‘blue’ and ‘silver’, have a whole-part relation with their next extensions in B. B.’s mind. Simultaneously, these linkages can be also regarded as metaphorical, for it can be inferred that ‘green’, ‘blue’ and ‘silver’ share such concepts as ‘healing’, ‘natural beauty’ and ‘freshness’ with ‘forest’, ‘ocean’ and ‘sky’ , and ‘shining’ respectively in B. B.’s mind.

When B. B. was drawing his map, the instructor noticed that his characteristic tendency was to expand his associational links from the words of his favorite colors to words concerning nature. Therefore, the instructor gave B. B. some advice such as, ‘These color words are very beautiful. You might elaborate on them further.’ After taking the instructor’s advice, B. B. was motivated to link these color words to other concepts metaphorically and metonymically on his map.

Then he associated from the two words, ‘blue’ and ‘green’, to the word ‘nature’. When he produced his second version of his writing, he wrote, ‘A’ s nature is very beautiful’. This means that when he extended links from the color words, he might have noticed that he loved ‘nature’, especially the ‘nature’ of his hometown ‘A’. His metaphorical and metonymical thinking from the color words prompted him to realize his love of ‘nature’. As stated, this extension from ‘favorite colors’ to ‘natural beauty’ is characteristic of B. B. ‘When it is fall, maple is very beautiful’, he wrote in his second version of writing, presumably making use of further relational links around ‘nature’ and ‘shining’ expanding metaphorically and metonymically in his mind. We assume that he has a strong focus on color and nature from his foregrounding of these particular pieces of information on his map.

Fig. 4. Webbing map of B. B.
4-2 Summary

Considering the usefulness of the webbing map as scaffolding for writing learners’ thinking in educational situations, the functions of the map can be thought to extend the capacity of active memory and the ability to perceive relationships in the perceptual domain as well as to conceive relationships in the conceptual domain. We present evidence that suggests metaphorical or metonymical extensions of a word or phrase on a map include ‘favorite-things’ extensions, that is, associations of favorite things from a given word or phrase. Our evidence also indicates ‘human relation’ extensions, the relation that also links word or phrase metonymically and metaphorically. Since words placed on maps are considered a part of the learners’ voice, the study indicates that far more of individual learners’ voice can be reflected in their second version of writing produced after their map than in the first version.

5. Conclusion

In this research we have argued that the webbing map serves as a means to cope with the increase in the number of words to be learned and the goal of self-expression in writing in the Japanese junior high school curriculum. It is concerned with educational methodology to help learners develop their ability to write. The webbing map technique emphasizes the development of learners’ ability not only to write but also to think and judge independently. Writing with the webbing maps as experimented in this research provided learners the opportunity to brainstorm to try out ideas and to get feedback while receiving teachers’ assistance.

The analysis of EFL writing in this research indicated that each learner had a distinct personality, different presentational style, and an individual perspective. These findings support the suggestions which this research has made that learners’ individuality should be fully respected in the classroom. In the background of this learner-centeredness is the broader concept of human-centeredness. EFL research should be reformulated to better understand the process of learning from the viewpoint of human-centeredness.

Learners’ written text displayed expansions of vocabulary by choosing appropriate words from their webbing map. The text also revealed that the learners were able to negotiate successfully the multiple contexts around them through their association-map. Their living environment was reflected on the map in the form of an associative schema. They drew mainly on their personal experiences to unite diverse elements on the map. Their writing contains stories that they had sketched on their association-map. Events and stories that they had experienced, heard, and read became the source of
their ideas. The most frequent associations from 'I' were to 'family', 'school life', and 'favorite things'. By using the map learners could visualize their personal standpoint objectively and decide which words to use to express their intentions in their personal contexts. The learners were able to express their ideas, give reasons, and joke in writing in a foreign language. Each written text evoked an image of the learner’s personality. This finding provided the researcher-instructor with a richer understanding of learners in the process of language learning.

We explored the relationship of learners’ thinking, the webbing map, and written texts. This relationship should give us a more holistic account of the process of language learning. This research recognizes what learners want to express as the pulse of language learning, and especially the way in which learners comprehend, express and negotiate their own meanings when they interact with their webbing map. From this perspective, language learning is a cultural practice to become aware of and then express learners’ individual thinking.

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