The Effect of Story Mapping on Writing Performance
of Iranian EFL Learners

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Abstract

Although story mapping strategy has been shown to be beneficial in many reading comprehension classes, the benefits of this technique have not been thoroughly investigated in L2 writing research. The small number of previous studies (e.g., Li, 2007; Brunner, 2010) have found the potential benefits of using story mapping strategy on students' writing performance, but they did not focus on different aspects of students' writing. Therefore, this study aimed at investigating the effect of story mapping strategy on writing performance of EFL learners in terms of writing components (i.e., organization, content, grammar, mechanics, and style). After administering a standard proficiency test (OPT), 30 out of a pile of 82 Iranian EFL learners all majoring English teaching were selected and assigned to two groups: one experimental group and one control group. Both experimental and control groups completed two thirty-minute composition writing tests, one as a pre-test and the other one as a post-test. The experimental group received four sessions of instruction on how to use story mapping strategy in writing personal narratives. The results of One-way ANOVA and post-hoc Scheffé test indicated that the experimental group, which used story mapping strategy, made more progress in their personal narrative writings. Also, the results revealed that L2 learners made more progress in all writing aspects. The study contributes to teaching pedagogy by encouraging teachers to use story mapping strategy in L2 writing classes.

Keywords: Story mapping; L2 writing; personal narratives; writing components; metacognitive strategies

Perhaps the most controversial issue in the field of second/foreign language writing in recent years has been the notion of genre. Genre means different things to different scholars; however, it is generally considered as "abstract, socially recognized ways of using language", (Hyland, 2007, p. 149). There are different genres in one language. One of the most important genres to be learned in the process of language learning is narrative discourse (Kang, 2005).

Narratives are considered as the most universal genres. According to McCabe & Bliss (2003), narrative is one of the most basic discourse forms, which one acquires early in all cultures and is integral to all ages. The universally shared nature of narrative discourse makes it a valuable instructional genre for teaching writing to L2 learners. That is because narrative provides important information about the narrator's linguistic competence and pragmatic sensitivity in the target language, as ''a narrative is a naturally bounded unit of discourse with a regular internal structure and is found in all cultures'' (McClure, Mir, &Cadierno, 1993, p.

209). Therefore, reinforcing narrative genre in L2 writing classrooms can be of crucial importance.

One of the important issues, regarding L2 writing pedagogy, is implementing strategies that can foster meaningful learning and make learners autonomous. Among other strategies, metacognitive strategies have been proved to have positive effects on learning process in every subject matter and in every situation. In other words, metacognitive strategies are considered as the most essential strategies in developing learners' skills (Anderson, 1991, Negretti&Kuteeva, 2011). Metacognition refers to the knowledge, awareness and control of one's own learning (Baird, 1990, cited in Çubukçu, 2008). In metacognitive strategies, learners develop their metacognition by planning, monitoring, and evaluating their learning process (Hamzah& Abdullah, 2009). By doing this, learners are actively involved in the learning process, and hence, metacognitive strategies can establish meaningful learning in students.

One important metacognitive strategy that can be helpful for developing narrative writing performance of students is *story mapping* (Li, 2007). Story mapping, also called story grammar,is a visual representation of the story by writing the important elements (e.g., character, setting, goal, etc.) on a graphic organizer, i.e., story mapping form (Swanson & De La Paz, 1998, cited in Taylor, Alber, & Walker, 2002).According to Foley (2000), story mapping is a metacognitive strategy, since it gives the learners the opportunity to distinguish different parts of a story, and focus on how these parts are combined together to make a story. This task challenges students' critical thinking and makes them involved actively in their own learning process. Therefore, it can change students' cognitive structure, and can be considered as a metacognitive strategy.

However, despite its importance, to the researchers' best knowledge, no study has been conducted to examine the effect of such strategy on EFL learners' narrative writing performance. Therefore, this study aims to investigate the effect of story mapping on writing performance of Iranian EFL learners.

Background of the Study

Theoretical Foundations of Story Mapping

Story mapping strategy is theoretically rooted in the schema building approach to writing instruction. This approach is based on Rumelhurt's(1980) schema theory, and Piaget's developmental theory. Carroll (2008) has also defined schema as "a structure in semantic memory that specifies the general or expected arrangement of a body of information", (p. 176). A person may have schemas for everyday objects or events. S/he may also have schemas for things that are not tangible, such as a story. Mandler and Johnson (1977) define a story schema as a set of expectations about the structure of stories that make both comprehension and recall more efficient.

Everyone has his or her own specific schemas. However, members of a discourse community have to share similarities or have things in common. Otherwise, people would not comprehend each other. It is true also for one's story schemata. Every person has his or her own sense of story structures in his or her mind. This mind structure can help one in comprehending stories.

The story structure is also important in writing. Writers write their narratives based on their existing schemata. Therefore, writers should develop appropriate schemas for story structures, in order to be able to write well. Since L2 learners are not familiar with the targeted language story structures, building story schemata is of crucial importance for second/foreign language learners. In fact, without a well-developed story schema, a student is less likely to produce a well-developed story at full length, consisting of all the necessary

parts that a story requires (Li, 2007). In order to improve learners' writing performance, it is necessary to look for ways to incorporate schema-building strategies in writing instructions.

The story mapping technique is based on a logical organization of events and ideas of a story and the interrelationship of the events and ideas. As a result, it is one strategy that can help learners develop appropriate story schemata in the process of second language learning.

Story Mapping and Writing

In a study conducted in Texas, Li (2007), investigated the effect of story mapping and story map questions on story writing performance of students with learning disabilities, regarding fluency and diversity of word usage. The participants of the study were four students with learning disabilities in the 4th and 5th grades. The students received explicit instruction on the use of story mapping for writing stories. Measures of fluency was based on counting the number of T-units contained in each story, and diversity of word usage was determined by calculating the type/token ratio. The results of the study showed that three of the four students improved writing fluency, while the fourth student, who was more fluent than the others prior to the study, did not demonstrate improvement in fluency. Regarding the diversity of word usage, this study did not show significant changes in the students' writing performance.

In another study, Zipprich (1995) taught a group of intermediate-level students with learning disabilities and poor writing skills to use a pre-structured story web in order to improve their narrative story writing ability. Her study showed that this intervention resulted in an increase of students' planning time and holistic score. However, the students also showed inconsistent gains in terms of the number of words and the number of thought units. In addition, there was no improvement in mechanics and sentence types.

Yet in another study, Brunner (2010), examined the effects of story mapping plus incentives on 16 students' writing proficiency. The participants of the study received direct instruction in story mapping. Incentives were used as reinforces for students who wrote 30 percent more words during intervention than they did during baseline. Total written words, words spelled correctly, correct punctuation marks, correct word sequences, percentage of words spelled correctly, percentage of correct word sequences, and correct minus incorrect word sequences, were used to assess written expression skills. Results revealed that all students made progress in total written words, words spelled correctly, and correct word sequences measures of writing. However, in other measure, there were no significant differences in students' writing performance from baseline to the treatment.

All the above-mentioned studies have been conducted in first language. However, to the researchers' best knowledge, no study has been conducted in a second/foreign language learning environment to examine the effect of story mapping technique on L2 learners' writing performance.

Statement of the Problem

Since L2 learners have difficulties in commencing, maintaining, and ending their compositions, and also in organizing and developing their ideas, and because the traditional methods used by teachers, which put emphasis merely on final product, do not make significant changes in L2 learners' writing performance, new techniques for teaching writing to L2 learners are required.

Story mapping is one technique that seems to be beneficial for L2 learners' writing development. Although its positive effect on students' L1 writing has been proved, few studies have been conducted to examine their effect on L2 learners' writing performance. Therefore, an attempt has been made in this study to investigate the effect of this technique on Iranian EFL learners' writing performance. Serving this purpose, once the effect of it

would be examined on the overall writing development of L2 learners, and then its effect on aspects of writing will be examined to see which writing aspect will benefit more from applying this technique in writing classrooms.

Research Questions

Based on the problems and objectives stated above, this study has made an attempt to seek appropriate answers to the following questions:

1. Does story mapping have any significant effect on intermediate L2 learners' overall writing performance?
2. Does story mapping have any significant effect on intermediate L2 learners' writing performance in terms of writing components?

Research Hypotheses

The above-mentioned questions have been reformulated in the form of the following hypotheses:

1. Story mapping does not have any significant effect on intermediate L2 learners' overall writing performance.
2. Story mapping does not have any significant effect on intermediate L2 learners' writing performance in terms of writing components.

Methodology

Participants

Primarily, 82 L2 learners participated in this study. They were B.A. L2 learners, all English teaching majors at Islamic Azad University, Najafabad Branch, Iran. None of the participants reported any experience of being exposed to story mapping strategy as a pre-writing activity. The major participants of this study were selected according to two criteria. The first criterion was L2 learners' scores on Oxford Placement Test (OPT) to homogenize L2 learners in terms of general language proficiency level. The second criterion was L2 learners' participation in all stages of study. Since some students were absent during some stages of the study, they were excluded, and therefore, at the end 30 L2 learners were selected as the major participants of the study.

Instruments

Oxford Placement Test (OPT). The OPT (Allan, 2004) consists of 200 items including 100 listening items and 100 grammar items. For the purpose of this study, only the grammar part was used. This test took students about 45 minutes to complete. After administering it and based on the results obtained, the mean score of the results was estimated. Then one SD below and one SD above the mean score were considered as intermediate students.

The composition/essay writing tests. In order to check L2 learners' writing development, two composition writing tests, one as a pre-test and the other one as a post-test, were administered. Each test took almost 45 minutes to be completed. The topics for the composition writing tests were taken from Jupp& Milne (1971). The compositions were then rated by two competent raters based on specific rating criteria in order to ensure inter-rater reliability. The inter-rater reliability for pre-tests was 0.89, and for post-tests 0.92, which show a high inter-rater reliability between raters.

The story (narrative texts) samples. For the story mapping experimental groups, and for sessions two and three of the instruction, two sample stories were given to the students. The

first story (which was delivered in session two) was taken from Lee &Gundersen (2001) entitled "A Long Walk Home", and the second story (delivered in session three) was taken from Canfield, et al. (2004) entitled "Connected in Spirit". In order to be sure that these two stories were appropriate for the intermediate L2 learners, by using Microsoft Office Word 2007, and checking report readability statistics option in word options proofing section, their readability was estimatedxThe readability value for "A Long Walk Home" was 81.1 and for "Connected in Spirit" was 78.4 and so they could be considered appropriate for intermediate students.

Story mapping forms. Story mapping is a visual representation of the story by writing the important elements (for example, character, setting, goal, etc.) on a graphic organizer, i.e. story mapping form (Swanson & De La Paz, 1998 cited in Taylor, et al., 2002). This form is not a fixed one; rather it is a flexible form that can be drawn in different shapes. The only important point in drawing the story map form is that it should contain the main elements of a story. In this study, two story mapping forms taken from Li (2007) were used, because they seemed to be the complete ones. The first story map form (form 1, see Appendix A), used in the second session of story mapping instruction, consisted of story elements followed by some questions for helping students use the form easily. The second story map form (form 2, see Appendix B), on the other hand, only consisted of the main story elements without questions. It was delivered in session three of story mapping instruction, and students were supposed to use it to write a narrative composition.

Brown and bailey's rating scale. Brown and Bailey's scale (Brown & Bailey, 1984, cited in Brown, 2004, see Appendix C) was used to rate compositions both holistically and analytically. This scale is divided into five sections, each consisting of one writing aspect (organization, content, grammar, punctuation, and style). Each of these aspects is rated out of 20, and the total score for each composition is computed out of 100.

Procedure

To carry out this study, these procedures were followed: First, after administering a standard general language proficiency test (Allan, 2004), 30 intermediate L2 learners out of a pile of 82 L2 learners all majoring in TEFL at Islamic Azad University, Najafabad Branch were selected and assigned to two groups randomly: one experimental group who received instruction on how to use story mapping technique as a pre-writing activity, and one control group who followed the traditional and conventional class activities.

Story mapping experimental group. This group consisted of 15 intermediate L2 learners and received four sessions of instruction (each session about 45 minutes) on how to use story mapping technique, as a pre-writing activity, for writing personal narrative compositions. Before starting the instruction, a composition writing pre-test was administered in order to ensure about the current level of L2 learners' narrative writing ability. This test took L2 learners about 45 minutes to complete.

In the first session of the instruction, a brief review of the principles and layouts of writing personal narrative compositions were presented to the L2 learners, in order to be sure that they were all familiar with characteristics and layouts of this genre of writing. In the second session, story mapping form 1 was shown to the students and different parts of it (which are the main parts of a story, as well), such as character, setting, goal, events, etc. were discussed in the class. Then a set of pictures were shown to the students and they were asked to discuss the pictures and complete the story map form. Afterwards, the actual story of the pictures was given to the L2 learners and the instructor, who was one of the researchers as well. She

explained how the story map was changed to a personal narrative text by the writer. In the third session, another story (narrative text) along with story map form 2 were given to the L2 learners and they were asked to read it and draw its story map. In the last session of instruction, a topic was introduced to the L2 learners, and they were supposed to discuss the topic and possible events of a story and then complete the story map form. Next, this story map was converted to a personal narrative text.

After the instruction, a composition writing post-test was administered to see whether story mapping technique was useful for the learners or not. Students were asked to draw a story map and then based on this map write a narrative text. Then, each composition was rated by two independent and competent raters to guarantee inter-rater reliability.

Control group. This group also, like the experimental group, consisted of 15 L2 learners. In this group there was no specific instruction, and L2 learners followed the traditional classroom procedures. They just took part in pre and post-tests.

Results

Analysis of the Effect of Story Mapping on L2 Learners' Overall Writing Performance
The first research question aimed to examine the effect of story mapping strategy on overall writing performance of Iranian EFL learners. To answer this question, in the first place, the descriptive statistics of the participants' performance on post-test were calculated and shown in Table1.

Table1. *Results of Descriptive Statistics of Total Scores on Post-test for SMEG and SMCG*

Total 2

	N	Mean	Std. Deviation	Std. Error	95% Confidant Interval Mean Lower Bound	Upper Bound	Minimum	Maximum
Experimental story mapping	15	70.5000	13.37864	3.45435	63.7578	78.5755	45.00	90.00
Control story mapping	15	52.7667	12.5582	3.24252	48.8426	54.3574	42.00	60.00

As Table 1 shows, the overall writing mean score for story mapping experimental group is 70.5000 and SD is 13.3786. The mean score for the control group is 52.7667 and SD is 12.55825, respectively. Therefore, the descriptive statistics show that story mapping experimental group has outperformed the control group in total post-test. Then, in order to find out whether or not there is a significant difference between the mean scores of the story mapping experimental and control groups on the post-test a One-way ANOVA was run. Table 2 shows the results of On-way ANOVA between total post-test of SMEG and SMCG.

Table 2. *Results of One-Way ANOVA between Total Post-tests of SMEG and SMCG*

ANOVA

total2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6106.083	3	2035.361	25.569	.000
Within Groups	4457.767	56	79.603		
Total	0563.850	59			

As table 2 shows, the *p* value (i.e., .000) is smaller than the alpha level (.05), and hence, the difference between groups is significant, $F(3,56)= 25.569$, p=.000. In the last step, the two groups have been compared with each other by using a post hoc Scheffe test. Table 3 represents the results of this analysis.

Table 3. *Results of Multiple Comparisons between Groups*

Dependent variable: total2
Scheffe

(l) group	(J)group	Mean different (I-J)	Std.Error	Sig.	95% Confidant Interval	
					Lower Bound	Upper Bound
Experimental story mapping	Control story mapping	19.56667*	3.25787	.000	10.1761	28.9572
Control story mapping	Experimental story mapping	-19.56667*	3.25787	.000	-28.9572	-10.1761

As Table 3 displays, SMEG have a significant difference with SMCG, whose *p* value is .000 respectively, in total post-test. So, it can be discerned that, in total post-test, the participants who received story mapping treatment outperformed those who received no treatment. Thus, the inferential statistics also confirmed the descriptive findings mentioned previously, and so the first null hypothesis is rejected.

Analyses of the Effect of Story Mapping on L2 Learners' Writing Performance in Terms of Writing Components

The purpose of the second research question was to see whether story mapping strategy has any significant effect on L2 learners' writing performance in terms of writing components (i.e., organization, content, grammar, mechanics, and style) or not. To answer this question, first the descriptive statistics of writing component in post-test for all groups were tabulated. The results of such analysis are presented in Table 4.

Table 4. *Results of Descriptive Statistics of Writing Components for SMEG and SMCG.*

		N	Mean	Std.Deviation	Std.Error	95% Confidant Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Organization posttest	Experimental story mapping	15	13.7667	3.06982	.79262	12.0667	15.4667	7.50	18.00
	control story mapping	15	8.9000	1.89171	.48844	7.8524	9.9476	4.00	12.00
Content posttest	Experimental story mapping	15	14.2333	2.92689	.75572	12.6125	15.8542	9.00	18.50
	control story mapping	15	9.3667	2.30269	.59455	8.0915	10.6419	6.00	14.00
Grammar posttest	Experimental story mapping	15	14.1000	2.68.62	.69213	12.6155	15.5845	8.50	18.50
	control story mapping	15	9.8000	1.68819	.43598	8.8651	10.7349	6.00	13.00
Punctuation posttest	Experimental story Mapping	15	14.4333	3.12174	.80603	12.7046	16.1621	6.50	18.50
	control story mapping	15	11.0667	2.85899	.73819	9.4834	12.6499	5.50	15.00
Style posttest	Experimental story mapping	15	14.6333	2.73513	.70621	13.1187	16.1480	10.00	18.00
		15	12.4667	1.65256	.42669	11.5515	13.3818	10.00	17.00

control story mapping									

As this table shows, in all writing components, SMEG have got higher mean scores in total post-test than SMCG. Therefore, the descriptive statistics shows that SMEG have outperformed SMCG in all writing components.

In the next place, in order to compare L2 learners' performance in post-test in terms of writing components a One-way ANOVA was run. The results of such analysis is displayed in Table 5.

Table 5. *Results of One-Way ANOVA between Writing Components' Post-tests of SMEG and SMCG*

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
organization posttes	Between Groups	366.183	3	122.061	24.430	.000
	Within Groups	279.800	56	4.996		
	Total	645.983	59			
content posttest	Between Groups	336.546	3	112.182	22.549	.000
	Within Groups	278.600	56	4.975		
	Total	615.146	59			
grammar posttest	Between Groups	340.350	3	113.450	30.866	.000
	Within Groups	205.833	56	3.676		
	Total	546.183	59			
punctuation posttes	Between Groups	180.246	3	60.082	9.287	.000
	Within Groups	362.300	56	6.470		
	Total	542.546	59			
style posttest	Between Groups	96.367	3	32.122	7.746	.000
	Within Groups	232.233	56	4.147		
	Total	328.600	59			

Table 5 shows that in all writing components *F*-ratios are significant. As a result, a post hoc test (Scheffe) was performed for all groups in writing components post-test to show which group performed differently. The results are presented in Table 6.

Table 6. *Results of Post hoc Scheffe for Post-test Writing Components Scores between SMEG and SMCG*

Scheffe

Dependent variable	(l) group	(J)group	Mean different (I-J)	Std.Error	Sig.	95% Confidant Interval	
						Lower Bound	Upper Bound
Organization posttest	Experimental story mapping	Control story Mapping	4.86667*	.81620	.000	2.5140	7.2193
	Control story mapping	Experimental story Mapping	-4.86667*	.81620	.000	-7.2193	-2.5140
Content posttest	Experimental story mapping	Control story Mapping	4.86667*	.81445	.000	2.5191	7.2143
	Control story mapping	Experimental story Mapping	-4.86667*	.81445	.000	-7.2143	-2.5191
Grammar posttest	Experimental story mapping	Control story Mapping	4.30000*	.70006	.000	2.2821	6.3179
	Control story mapping	Experimental story Mapping	-4.30000*	.70006	.000	-6.3179	-2.2821
Punctuation posttest	Experimental story mapping	Control story Mapping	3.36667*	.92877	.008	.6896	6.0438
	Control story mapping	Experimental story Mapping	-3.36667*	.92877	.008	-6.0438	.6896
Style posttest	Experimental story mapping	Control story Mapping	2.16667*	.74360	.047	.0233	4.3100
	Control story mapping	Experimental story Mapping	-2.16667*	.74360	.047	-4.3100	-.0233

*.The mean difference is significant at the .05 level.

As this table shows, the level of significance for SMEG, compared with SMCG, in all writing components has been lower than .05, meaning that SMEG who received story

mapping instruction have had a better performance in all writing components than SMCG who did not receive such treatment.

Therefore, the results of descriptive and inferential statistics indicate that SMEG have made more progress in writing components of organization, content, grammar, punctuation, and style, from pre-test to post-test, than SMCG. Thus, the second null hypothesis was also rejected.

Discussion

The results of data analyses revealed that story mapping strategy has a positive effect on L2 students' writing performance (both on overall and writing components). The results of this study can be interpreted in the light of three ideas from Ausubel's (1968) Assimilation Theory. These three ideas are as follows:

1. "Ausubel sees the development of new meanings as building on prior relevant concepts and propositions" (Novak &Cañas, 2006, p. 4). The first step in developing story mapping is brainstorming. In brainstorming, L2 learners start with their prior knowledge by writing relevant characters, events, setting, etc. Then, by using their imagination and creativity, and developing new relationships among those events and characters, they reach to new meanings. In other words, in the brainstorming phase of developing a story map, L2 learners become aware of their current level of knowledge, and then they try to advance themselves to a higher level, by building appropriate schemata in their minds. This is also in accordance with Vygotsky's (1978) ZPD Theory and Rumelhurt's (1980) schema theory. Vygotsky also believes that by knowing the current level of knowledge, students try to advance to higher ZPD, and little by little this will lead to learner autonomy.

2. "Ausubel sees cognitive structure as organized hierarchically, with more general, more exclusive concepts occupying higher levels in the hierarchy, and more specific, less inclusive concepts subsumed under the more general concepts" (Novak&Cañas, 2006, p. 4). In the techniques of story mapping, L2 learners use such an order to draw one.

3. "When meaningful learning occurs, relationships between concepts become more explicit, more precise, and better integrated with other concepts and propositions" (Novak &Cañas, 2006, p. 4). By drawing story maps, the relationships between characters, events, setting, etc. become more explicit, and so meaningful learning can occur.

4. Regarding the two research questions, there is almost lack of literature to be compared with the present findings. Among very few studies, and considering the first research question, the results of this study, is also in accordance with those studies conducted in first language settings (Brunner, 2010; Li, 2007; Zipprich, 1995). The possible reason for this may be, according to Rumelhurt (1980), lack of story schemata in students before introducing story mapping technique, and the creation of such schemata after being introduced to story mapping technique, and being acquainted with story structures in students' minds.

However, the results obtained in the second research question, are partly in contrast with the results of the first language studies (Brunner, 2010; Li, 2007; Zipprich, 1995). In all the studies conducted in first language settings, examining the effect of story mapping on students' writing performance, the results indicated a progress in students' writing performance in terms of fluency and organization of writing, and not in formal accuracy. Since the participants of the first language studies were in elementary levels, the possible reason for such contradictory in the results may lie in students' level of proficiency. According to Rahimpour and Nariman-Jahan(2011), students in higher proficiency levels, pay more attention to formal accuracy than students in lower proficiency levels.

Conclusion

The basic concern underlying the present study is the extent to which story metacognitive strategy can help L2 learners become autonomous ones regarding writing performance. According to Ausubel (1968, cited in Novak &Cañas, 2006), effective language learning environment is one that makes learners autonomous. However, without applying appropriate writing strategies, L2 learners cannot reach to such high level of understanding and learning.

The findings of this study revealed that intermediate L2 learners enjoy using story mapping to develop their writing proficiency (both in overall and components of writing). Therefore, it can be concluded that story mapping have the criteria of fostering meaningful learning (i.e., clarity of materials, their relevance to learners' prior knowledge, and increasing students' motivation to learn) in L2 learners.

However, since the data in this study have been taken from a small sample of learners at one university in Iran, it is important not to overgeneralize the results of the study. But replicational studies elsewhere can help in building a rich body of knowledge.

Implications of the Study

The findings obtained from this study have theoretical as well as pedagogical implications. Regarding theoretical implications, the present research, providing some data on the effect of story mapping on narrative writings of EFL learners, has tried to enrich the literature behind it.

The findings also have pedagogical implications for foreign language teachers and learners. By being aware that story mapping techniques can help L2 learners develop their writing performance in almost all writing aspects, teachers become motivated to use such technique in their L2 writing classes. Findings of this study can also encourage students to use such metacognitive strategies in completing writing tasks.

Syllabus designers, curriculum developers, and course book designers can also benefit from the findings of the present study. They can include story mapping in foreign language course books and curricula.

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