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THE IMPACT OF CRITICAL THINKING TASKS ON PARAGRAPH WRITING ABILITY OF IRANIAN EFL LEARNERS

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ABSTRACT

The present study has made an attempt to investigate the impact of critical thinking tasks on paragraph writing ability of Iranian EFL learners. The participants of the study were selected based on their performance in an OPT test, a Cornell Critical Thinking Test form X and a pre-test of writing. In the next step 60 EFL learners whose score fell between $1SD \pm \text{Mean}$ were chosen to conduct the study. The participants were divided in two classes of 30. Both classes were taught academic paragraph writing, however, unlike the control group, the participants in the experimental one received special treatment with critical thinking tasks. By the end of the term, a post-test of writing was conducted and the results were analyzed through an ANCOVA test. The results showed significant difference between the control and experimental group. The findings of the study indicated that using critical thinking tasks can improve the paragraph writing ability of EFL learners.

KeyWords: *EFL Writing, Paragraph Writing, Critical Thinking Tasks, EFL*

INTRODUCTION

Writing has always been considered a complicated and multifaceted task (Tsai and Lin, 2012), especially when it comes to writing in a second or foreign language. Yet for English as foreign language (EFL) learners, writing is an essential language reinforcing skill. Writing puts languages in chains; it freezes it, so that it becomes a thing to be reflected on. Hence it changes the way that language is used for meaning (Halliday, 2003). As a result, research on second/foreign language writing has grown exponentially over the last 40 years and during the late 1980s and the early 1990s, second language writing began to evolve into an interdisciplinary field of inquiry (Matsuda, 2001).

Through the years searching for the best method of teaching writing to EFL learners has been a matter of interest to many different scholars, many different methods have shown up and many different investigations have been conducted, but as Gorjian *et al.*, (2012) mention, the main question still remains: “what are the best ways instructors can motivate and encourage students to discover ideas rather than simply learn them?” (p.114). And this is where the idea of using critical thinking skills to promote EFL learning comes to existence, because as Elbow puts it (1981), writing calls on criticizing which is the ability to criticize words and ideas in order to decide which ones to use.

The term critical thinking has been defined in many different ways. However, there are not certain differences among these definitions. One of the earliest definitions of critical thinking is the one given by Lipman (1988) who defines critical thinking as skillful, responsible thinking that facilitates good judgment because it relies upon criteria, is self-correcting, and is sensitive to context. He also argues that we as teachers must begin with the raw subject matter of communication and inquiry and cultivate all the skills that the mastery in such processes entails. As Elder and Paul (1994) state, critical thinking refers to the ability of individuals to take charge of their own thinking and develop appropriate criteria and standards for analyzing their own thinking (cited in Shirkhani and Fahim, 2011). Moon (2008) calls it a central point in education and indicates that critical thinking is now considered the goal of learning in many western educational systems. Various English language arts programs in the U.S. have been implemented to facilitate language learning and cognitive development in a complimentary manner and research findings have shown that many aspects of reading and writing are pertinent to important thinking

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skills (Moffett and Wagner, 1983; Pearson and Tierney, 1984; Stanford and Roark, 1974; Staton, 1984; cited in Liaw, 2007).

Asian learners of English, however, are often criticized by constructs which claim that they lack individual voice and critical thinking skills (Stapleton, 2002). In 2007, Alagozlu stated that Turkish EFL learners suffer from weaknesses in expressing their original thoughts in writing in a foreign language, she then associates this problem to critical thinking and mentions that integrating these skills into language learning programs can significantly help EFL learners improve in writing abilities. In Iran, likewise, it seems like the educational system has not paid enough attention on improving the student's critical thinking skills and only in recent years the scholars in the field of EFL teaching have started using the so called skills in their classroom techniques.

Therefore, to shed light on the concept of critical thinking and EFL learning, the present study aims at investigating the effectiveness of using critical thinking tasks on improving paragraph writing abilities in Iranian EFL learners.

Literature Review

Critical Thinking

The term critical thinking has been defined by many different scholars throughout the years. It has had its roots in psychology and philosophy since the time of Socrates but only in recent years, scholars in the field of education have noticed the benefits of using critical thinking skills in an educational context.

Some of the earliest definitions of critical thinking were given by scholars such as Paul (1985) who defines critical thinking as "learning how to ask and answer questions of analysis, synthesis and evaluation". Similarly, Brookfield (1987) maintains that critical thinking involves two interrelated processes: "identifying and challenging assumptions, and imagining and exploring other's". More definitions have been given by philosophers such as Pithers and Soden (2000) who concur that critical thinking encompasses a number of abilities such as identifying a problem and the assumptions on which it is based, focusing the problem, analyzing, understanding and making use of inferences, inductive and deductive logic, and judging the validity and reliability of assumptions and sources of data (cited in Lai, 2011).

What can be deduced from all the definitions given above is that they all emphasize the role of the receiver of information in that he/she should analyze the received information and comment on them. Perhaps a very good definition to sum up most definitions above can be the one by Paul and Elder (2008) who define critical thinking as "the process of analyzing and assessing thinking with a view to improving it".

Critical Thinking and Language Education

The close relationship between thinking skills and language has long been recognized by many great scholars such as Piaget (1971) and Vygotsky (1962). The development of these skills which can help learners to reflect on their own learning process is considered a key factor in learning. As a result "Efforts have been made by English language arts, English as a second language (ESL), English as a foreign language (EFL), and modern foreign language educators to integrate the promotion of thinking skills into language curricula" (Liaw, 2007).

The effectiveness of integrating critical thinking methods as a manifestation of higher ordered thinking skills in language learning process has been investigated over the recent years, "learners are expected to question the validity of ideas in texts or judge the ideas of other people" (Alagozlu, 2007). Halvorsen (2005) believes that using critical thinking tasks can actually make ESL/EFL classes better by making the activities more interesting for the learners and also giving the class a more meaningful and cohesive environment.

Birjandi and Bagherkazemi (2010), by changing the perspective and turning to EFL teachers, revealed that there is a significant positive relationship between Iranian EFL teacher's critical thinking ability and their pedagogical success.

In 2007 Alagozlu investigated the elements of critical thinking in the writing of Turkish EFL learners and found out that they are usually hesitant of showing their own view in their essays, she then calls this a

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problem in Turkish education system and believes that integrating critical thinking skills can help learners to improve more and to be able to compete with their western peers.

More recently, researchers have tried to use critical thinking instructions for enhancing language learning abilities in EFL/ESL learners. For instance, Gorjian *et al.*, in 2012 in a case of gender study, tried to investigate the effectiveness of so called instructions on Iranian EFL learners. Their study indicated that the instruction of the critical thinking strategies can affect the intermediate male and female language learner's descriptive writing skill.

However, the amount of research which has been done on the relationship between critical thinking and language learning does not seem to be sufficient especially in the eastern countries.

Research Question

The present study aimed at answering the following question:

Do using critical thinking tasks improve paragraph writing ability of Iranian EFL learners?

Research Hypothesis

The following null hypothesis was formulated:

Using critical thinking tasks does not improve paragraph writing ability of Iranian EFL learners.

MATERIALS AND METHODS

Participants of the Study

The present study was conducted with two intact classes of adult Intermediate students with 30 learners in each class studying English as a foreign language in Kish language school in Tehran, Iran. The participants of this study were all female native speakers of Farsi, who met five times a week, and each class period lasted for an hour and thirty minutes. Classes were held five days a week from 9.45 to 11.15 in the morning. The course consisted of 20 sessions, and students received 30 hours of general instruction.

All participants were 16 to 30-year-olds, who had studied English in junior-high and high school. However, the English they had studied at school had hardly been of any use to them since before enrolling classes at Kish Language Institute they had not been able to use what they had studied. The participants have had some instructions in the field of writing before but were not familiar with different elements of academic paragraph writing.

To make sure of the homogeneity of participants in terms of English proficiency, paragraph writing ability and critical thinking, three different tests were conducted prior to randomization and dividing the participants into control and experimental groups. The steps to choose the participants of this study are as follows:

Step 1: First of all an OPT test was conducted on 200 intermediate students. Having calculated the mean and the SD, participants with the score of 1 SD above and below the mean ($1SD \pm \text{mean}$) were selected to conduct the study.

Step 2: A Cornell Critical Thinking Test, form X, was given to the selected participants from step one and the same procedure was followed.

Step 3: A pre-test of paragraph writing was conducted to make sure of the homogeneity of participants in terms of paragraph writing ability. On this test, the participants were asked to write a paragraph on a specific topic. The procedure of scoring will be explained later on in this article.

Step 4: Selected participants were randomly divided into two groups of control and experimental ($n_e = n_c = 30$).

As this course was a general English course, Communicative Language Teaching was used in both classes and all methods except for writing instruction in the experimental group and control group were the same.

On sessions 2, 4, 6, 8, 10, 12, 14, 16, 18 and 20 the teacher/ researcher gave about 30 minutes of writing instruction to both groups. The instruction was mainly about paragraph writing and in order to facilitate

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the process a handout on “how to write a paragraph” was given to students. The handout was a simplified copy of the first section of the book “a practical writer with readings” (Bailey & Powell, 2007).

The control group received instructions only based on this book and were asked to do the exercises at the end of each unit which were checked the following session.

In the experimental group, however, paragraph writing was thought through some critical thinking writing tasks designed based on the guidelines given by Bean (2002).

The approach used in the experimental group instruction was the mixed approach to teaching critical thinking in which general critical thinking principles are paired with application of critical thinking skills in the context of specific subject matter (Ennis, 1989). In this approach critical thinking skills are taught explicitly along with tasks which integrate critical thinking with the subject matter (in here paragraph writing).

On the first session students of the experimental group were taught about critical thinking explicitly. They were given the definition of this term and also were given some problem-solving tasks which contextualized critical thinking in their daily lives.

In other sessions the experimental groups were taught paragraph writing through the tasks designed based on the elements mentioned above.

Materials

The materials used in this study were:

1. An Oxford Placement Test) Oxford Placement Test (OPT) which is a standardized Cambridge exam so reliability of the test is not needed to be tested.
2. The Cornell Critical thinking test, forms X. As this test is a standard there is no need in testing the reliability.
3. A pre-test of writing which was conducted prior to the course. Participants were asked to write a paragraph of about 100 words on a specific topic in class.
4. A paragraph writing handout which was a simplified version of section one of the books “The practical writer with readings” by Bailey and Powell (2007).
5. A post-test of writing which was conducted on the 21st session. In this test the participants were asked to write a paragraph of about 100 words on a specific topic in class.

RESULTS AND DISCUSSION

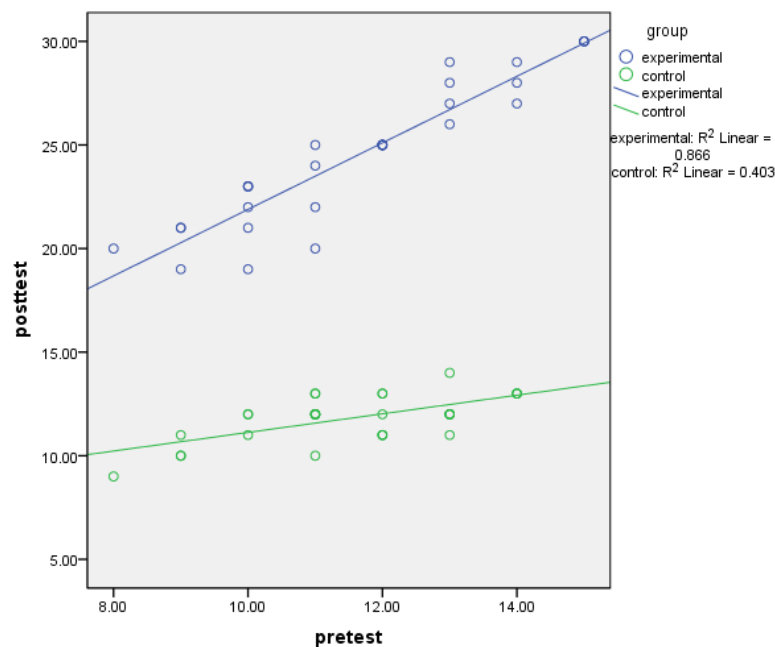
As it was mentioned before the aim of this study was to investigate the impact of using critical thinking tasks on paragraph writing ability of Iranian EFL learners. To fulfill this purpose a pre-test, post-test design was used. The data collected from the participant’s pretest and posttest were analyzed quantitatively to answer the questions addressed in the study. This section of the article is dedicated to answering the research questions and testing the related hypotheses. To do so the results of quantitative data have been analyzed through descriptive statistical methods (mean and standard deviation), inferential statistics (t-test) and analysis of covariance (ANCOVA).

Before conducting an ANCOVA, its assumptions were examined.

1. Linear relationship between the dependant variable and the random variable which can be examined through the distribution graph between each pair of variables (Multicollinearity).
2. The homogeneity of variance assumption.
3. The homogeneity of regression slopes assumption.

The relationship between random independent variables and dependent variables is illustrated in graph 1.

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Graph 1: Paragraph writing ability of control and experimental groups

As seen in the graph there is a linear relationship between random independent variables (pre-test) of paragraph writing ability and dependant variables (post-test) of paragraph writing ability since the regression lines are almost parallel which means the relationship between the variables in both groups is similar.

The correlation coefficient between the dependant variables is illustrated in table 1.

Table 1: The correlation coefficient between the random variables of paragraph writing ability (pre-test) and the independent variables

variable	Paragraph writing ability	p
Paragraph writing ability (pre-test)	.337**	0/009

$p^* < .05$

The correlation results show that there is a significant and acceptable relationship between writing random independent variable (pretest) and writing dependant variable (posttest), therefore ANCOVA can be applied. Statistical index of writing random independent variables (pretest) and writing dependant variables (posttest) and the results of the T-test in both experimental and control group are presented in tables 2 and 3.

Table 2: Statistical characteristics of the dependant variable (post-test) of paragraph writing ability in the control and experimental groups

group	Mean	Std. Deviation
exp	24.57	3.370
cont	11.80	1.126

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The figures shown in the table above indicate that there is a difference between the average mean of the control group and the experimental group in the dependant variable (post-test).

Table 3: Paired T-test to compare the mean difference between pre-test and post-test experimental and control groups

group			Mean	Std. Deviation	Std. Mean	Error _T	Sig. (2-tailed)
experimental	Pair 1	posttest	24.56	3.370	.615	41.344	.000
		pretest	11.66	1.953	.356		
control	Pair 1	posttest	11.80	1.126	.206	1.329	.194
		pretest	11.50	1.592	.291		

The figures in table 4.3 show there is a significant difference between the averages of experimental group in the dependant variable (post-test). In other words, since there has been no instruction in the control group, no change has been evident; but in both control groups there is a difference between pre-test and post-test.

Table 4: Mean and the rounded mean of paragraph writing ability dependant variable

source	M	Post-test	Rounded mean	
		SD	M	SE
experimental	24.57	3.370	24.471 ^a	.271
control	11.80	1.126	11.895 ^a	.271

The rounded means of paragraph writing dependent variable are presented in the above table which means the effect of random variables is statistically removed. The means show that the mean of experimental group is higher than the mean of the control group.

Table 5: The correlation coefficient of paragraph writing ability in the experimental and control groups

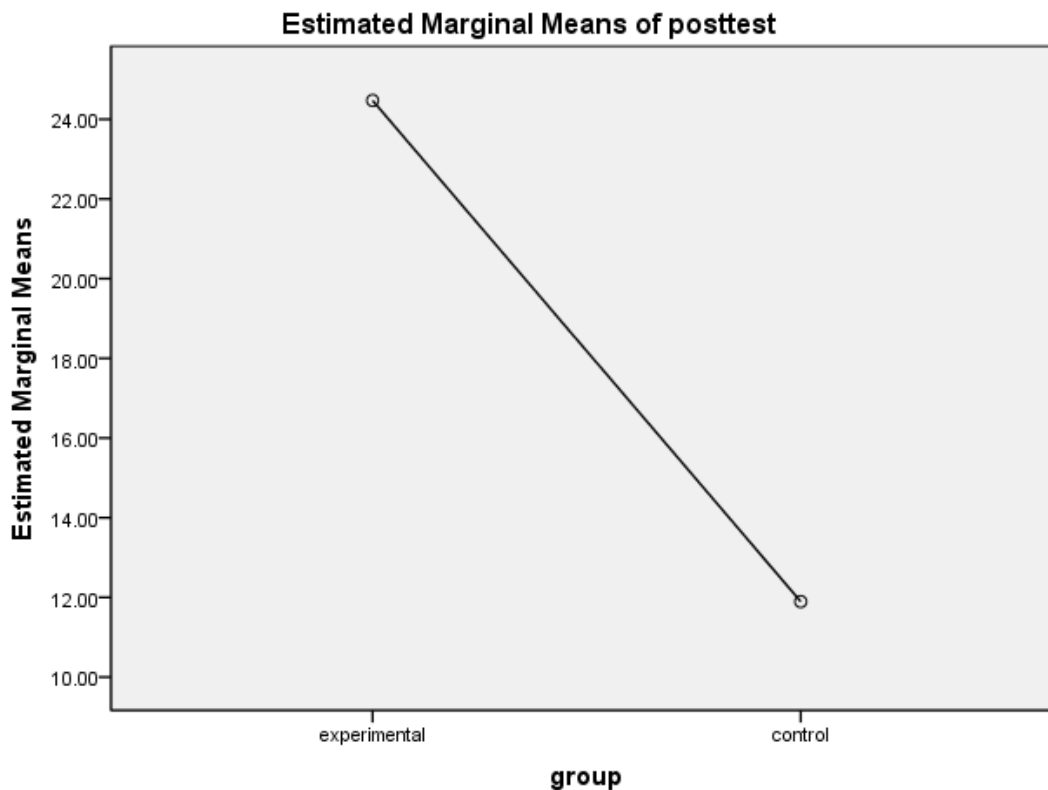
variable	source	df	Sum of squares	Mean Squares	F	p	Eta
Paragraph writing ability	contrast	1	2366.988	2366.988	1077.735	.000	.950
	Error	57	125.187	2.196			

As it can be seen the effectiveness of F ratio is statistically significant (Eta = 0.950, p= .000, F (1.77) 1077.735) which shows there is a significant difference between the paragraph writing abilities of the experimental and control group.

Therefore, it can be concluded that using critical thinking tasks has a positive impact on paragraph writing ability of Iranian EFL learners.

In order to clarify the above points, the information is presented in graph 2-4. In this graph experimental and control variables are presented in the horizontal axis and the writing dependant variable posttest is presented in the vertical axis.

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Covariates appearing in the model are evaluated at the following values: pretest = 11.5833

Graph 2: The post-test means of paragraph writing ability in the experimental and control groups

The graph above shows that there is a significant difference between the paragraph writing ability of experimental and control groups. The graph clearly indicates that the participants who have been treated with the critical thinking tasks have a higher paragraph writing ability compared to the control group.

Conclusion

The results of the ANCOVA test which was used to analyze the data driven from the participants clearly showed the nullification of the hypothesis and the experimental group outperformed the control group in terms of paragraph writing ability. Therefore, it can be concluded that the participants who were given the chance to familiarize with the techniques of critical thinking showed a greater improvement in their writing abilities.

The results mentioned above could be due to the critical thinking techniques and their effect on the learner's way of thinking and analyzing the input given. For instance, at the beginning of the course when the participants were told about the concept of critical thinking explicitly, they found it really interesting and soon started to expand the idea to their daily lives and lifestyle. Especially in this case, as the participants of this particular study were Iranian female learners, they immediately stated that they had never been asked to think critically in their academic studies and had always been expected to accept the rules as they were and use them as they had been told to. Consequently they were enthusiastic to learn more about the subject, a concept which were later on used to design writing tasks.

During the term which took about five weeks, the participants were always asked to ask questions and the questions or even criticisms were answered and welcomed warmly by the teacher/researcher. This could have brought about more confidence to the learners which could have been later on shown in their way of expressing themselves in their writings. In the following sessions, before writing their paragraphs they

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were always asked to think about the topic in groups and in some cases complete some open ended sentences. These kinds of tasks could have made the learner show their own voice and opinion. In some other cases where the participants were asked to teach a writing point to their partners and answer their peers questions on the topic, they had to fully understand it themselves and look at the topic from different perspectives.

The learners were asked to discuss the problem solving tasks with their peers, this could have helped them to analyze the information and look at the same topic from different aspects and finally incorporate these views in their writing.

Finally, as Halvorsen (2005) mentions, using issues that encourage critical thinking helps to give the classroom a more meaningful and cohesive environment. Students who feel that they are working together will be more likely to attend classes and will be more involved while they are there. In this experience, the atmosphere of the experimental group's class was more positive and the student's roles had changed from passive learners to active ones who always tried to participate in class discussions and take part in their own process of learning.

Pedagogical Implications

In the light of the above mentioned findings, the following recommendations in terms of EFL teaching are given to teachers and practitioners in the so called field:

1. The positive answer to the research questions addressed in this study implies that using critical thinking techniques in an EFL classroom does improve the writing ability of the language learners. Therefore, improving the learner's thinking ability should be considered in designing courses and also in the techniques used by EFL teachers since critical thinking techniques are teachable and learnable.
2. The teachers working in the field of EFL should specify more time and effort in teaching writing skills to their learners. EFL teachers would also need to change their attitude to teaching English in general and writing in particular and change the perspective from focusing on making their learners produce correct grammatical and vocabulary forms to incorporating thinking skills in their teaching procedures since enhancing the learner's critical thinking can have a great impact on their not only language learning but also their whole academic success. Writing in particular should be regarded not only as a way of checking if the learners are able to use the right grammatical and vocabulary forms but also as a way of helping the students analyze the problems they face, and showing their point of view. Writing classes should not be passive ones in which students copy a previously prepared pattern and are never asked to try to improve the models given based on their own ideas. Instead they should always be asked to be active and comment on the process. They should be asked to think and write critically on the topics they are given. This can help them not only in their writing but also in the way they think and live their lives.
3. Since using critical thinking skills by the teachers depends on how much the teacher herself knows about these skills, it seems essential to incorporate teaching thinking skills in the teacher training curricula. Trained teachers who have learned to be critical thinkers can both instruct these techniques in their methodology and encourage and model thinking skills throughout the process of instruction to improve the critical thinking skills as well as the writing skills.
4. In all different learning situations in general and EFL learning in particular, effort should be made to create a positive and stress-free atmosphere in which learners can easily express themselves and talk to their teacher and peers.

Suggestions for Future Research

Though some positive findings were identified in this study about the impact of using critical thinking tasks on paragraph writing ability of Iranian EFL learners, more research is recommended to further investigate this area. These include participant's gender and age groups, different critical thinking instruction approaches and other language skills.

1. Since the participants were selected with the same gender and similar years exposed to learning EFL, the results might not be generalizable to other categories. In this study female participants were under

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investigation, therefore, further research needs to be done with groups of male participants or mixed gender classes.

2. Moreover, the participants of this study were all adult EFL learners; further studies can be done with participants of other age groups for instance young children or teenagers to analyze the impact of using critical thinking tasks on their language learning.

3. In this particular study the impact of using critical thinking tasks on paragraph writing ability was under investigation due to the limited period of time of the course and the limited English level of the participants, however, further research is needed to investigate the impact of using so called tasks on other forms of writing for example essay writing or other types of academic writing.

4. Another point which can be investigated in further research is the approach used regarding critical thinking instruction. In this very study the mixed approach to critical thinking was used which consists of teaching critical thinking both explicit and implicitly, however, the focus was not on the explicit teaching of critical thinking. So, other investigations can be done to use critical thinking only explicitly or implicitly and compare the results it can have on EFL learners writing ability. Other approaches which can be investigated will be the general and infusion or immersion approaches (Ennis, 1989).

5. The last point to mention in this part would be the suggestion for further research on the impact of using critical thinking tasks on other skills rather than writing. The researchers can also investigate the impact of using different approaches of different skills.

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