

The Relationship between Critical Thinking Ability of Iranian English Translation Students and Their Translation Ability

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Abstract—The purpose of the present study was to examine the relationship between critical thinking and translation ability of Iranian English translation students. Moreover, the difference between critical thinking skills of males and females was explored. The participants of this study were 86 Iranian senior English translation students of Islamic Azad University, Islamshahr branch. For gathering data two kinds of instruments were used: a critical thinking questionnaire (The Persian version of CCTST- form B) and English to Persian translation test. The findings revealed no significant difference between critical thinking abilities of females and males. Thus it can be concluded that gender has no role in critical thinking abilities of the Iranian EFL learners. Furthermore, the results of this study indicated that learners with more critical abilities were more successful in translation performance. These findings highlight the importance of teaching thinking skills to our learners and Integrating problem solving activities that need critical thinking in our teaching and learning process.

Index Terms—critical thinking, translation ability, Iranian English translation students

I. INTRODUCTION

All aspects of our private and social life are affected by the way we think, and education is not an exception. Recent movements in the educational system underline the significance of critical thinking skills for academic studies and life. It is highly recognized that learning to think is one of the most important objectives of educational setting. Dewey (1933) confirmed that the essential aim of education is learning to think. Likewise, Moon (2008) asserts that critical thinking can be regarded as a central aim of learning and a core of higher education, and learners who reach those levels of requirements can be considered as critical thinkers.

Ennis (2011) characterized critical thinking as the ability to think logically and make good decisions in doing something or believing something. Carr (1990) highlights the importance of teaching higher order thinking skills and states that learners should be qualified to think rationally, analyze, compare and evaluate questions. It entails special skills as to detect a problem, analyze it, and make inferences to solve it.

Michael Scriven & Richard Paul at the 8th Annual International Conference on Critical Thinking and Education Reform, summer 1987 stated that, "Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action."

The idea of critical thinking is not new, it returns to the teaching routine of Socrates 2500 years ago. Socrates was the one who acknowledged a technique of questioning and examining for the verification of facts. Plato, Aristotle, and the Greek doubters followed Socrates' performance. Descartes' thinking has also had implications for contemporary education. His systematic doubt initiated empiricism and the western scientific method. During the Renaissance, various scholars in Europe raised critical thinking for questioning certain issues (Paul, Elder, and Bartell, 1997). In the late 20th century, logical and analytical thinking has regained the importance. The 'Thinking Skills' and the associated 'Philosophy for Children' movements attempted to integrate logic and critical thinking into the school programs (Lipman et al. 1980).

Translation, being a very challenging and complex process, calls for different skills and knowledge areas. Translation associates with various cognitive and critical thinking abilities.

As specified by Newmark (1998), demonstrating the learner's knowledge of the foreign language, translation from L1 to L2 and L2 to L1 in the advance phase of foreign language teaching is recognized as the fifth skill. Translation needs exploring abilities, as Machida (2011) states "When learners are translating, they can see what makes sense and what doesn't. When their comprehension or production in SL/FL doesn't make sense to them, they can go into details of the language. For example, they may explore not only words, but sub-word level such as morphology, or beyond words and sentences, and their inquiry may extend to non-linguistic, cultural issues" (p.742).

Alves et al. (2003) believe that translation, similar to many other qualified capacities, requires not only innate abilities but also theoretical learning and practical training. Shahvali (1997) goes further and claims that, theoretical knowledge and practical skills alone are not enough to prepare students for developments in the field. It is necessary to focus on students' self-updating ability and to improve their related mental, planning, and communicative skills.

Gonzalez Davies (2004) confirms the above arguments and concludes that translation studies has a complex and multilayered quality which still needs exploration.

A. *Statement of the Problem*

One of the important abilities English translation students are expected to master at the end of their university education is the ability to translate competently. While so many classes are presented for EFL translation students at universities, the output is usually less than satisfactory. It can be seen that even senior or graduated students of translation are not able to translate appropriately because they lack necessary grammatical and vocabulary knowledge, which in turn leads to comprehension problems. Using ineffective and unproductive strategies can be considered as another source of this inefficiency.

B. *Significance of the Study*

Training capable translators is a basic goal in translators' training program in Iran and should be given a high priority. It can be seen that most translating problems have remained unsolved because translation is a challenging and difficult area for Iranian students. Considering this fact, the key questions are: what skills and strategies are required to develop translating skills? And how can we train a good translator? According to National Network for Translation, a competent translator must have various skills as: professionalism, networking skills, attention to detail, flexibility/adaptability, organizational skills, writing skills, general knowledge, analytical skills, subject knowledge, curiosity, excellent knowledge of the foreign language, IT skills, picking up new ideas quickly, good cultural awareness, love of reading and research skills. Most of these characteristics such as: flexibility/adaptability, organizational skills, attention to detail, analytical skills, research skills and curiosity require deep understanding and thinking skills. According to Huit (1998), thinking has an essential role in one's achievement and success especially in the information era. A critical thinker asks right questions, collects related data, and reaches dependable conclusions and as a result live more efficiently (Center for Critical Thinking, 1996).

A critical thinker is honest, flexible, unbiased, well-informed, skilled in search of related information, concentrated on analysis, and careful in making judgments (Diestler, 2001; Halpern, 2003; Petress, 2004).

For training critical thinkers meaningful instruction is required to prevent learners from superficial and unreflective learning and offer them the necessary tools for understanding the world around them (Chaffee, 1985).

In this manner, how to think instead of what to think should be stressed and learners should be urged to participate in class activities enthusiastically.

Thus the results of this study can be taken into consideration in the pedagogical process by university instructors.

C. *Research Questions*

In this study, it was tried to identify how much Iranian English translation students think critically and how much this ability relates to their performance on a translation test. Moreover, the possible difference between critical thinking ability of male and female learners was investigated.

Having these aims in mind, the following questions were formulated:

1. Is there any significant relationship between the critical thinking ability of Iranian translation students and their translation performance?
2. Do male and female Iranian translation students show any significant difference considering their critical ability?

II. REVIEW OF RELATED LITERATURE

According to Atkinson (1997), critical thinking is one of the major issues in educational setting nowadays. Numerous studies highlight its effect on various aspects of foreign /second language learning, including language proficiency, reading and listening comprehension, using learning strategies, vocabulary learning, and translation. Some of them are as follow:

Rashid and Hashim (2008) tried to examine the relationship between critical thinking and language proficiency. For this purpose 280 undergraduate students of University Utara Malaysia took the Cornell Critical Thinking Test (CCTT) and English language proficiency test. The findings revealed a significant correlation between English language proficiency of Malaysian students and their critical thinking ability.

Fahim et al. (2010) investigated the relationship between Iranian EFL test takers' critical thinking ability and their performance on the reading section of TOEFL. The results showed advantage of those with greater critical thinking abilities. It was concluded that critical thinking has significant role in answering reading comprehension questions.

In another similar study Kamali and Fahim (2011) studied the relationship between resilience, reading comprehension of texts containing unknown vocabulary items and critical thinking skill of Iranian EFL intermediate

students. The findings illustrated that levels of critical thinking had significant effect on the learners' reading ability which in line with the results of the aforementioned study.

In a different study, Nour Mohammadi et al. (2012) focusing on reading strategies and their relationship with critical thinking ability of Iranian EFL Learners found that meta-cognitive strategy was the most used reading strategy among learners. Besides a low positive significant correlation between learners' critical thinking ability and their general use of reading strategies was detected. Their finding further showed that males' critical thinking ability was higher than females.

In another study on reading comprehension, Sheikhi (2009) found that the students' critical thinking correlated with their reading comprehension, and the autonomy and critical thinking are significantly related to each other. Moreover, strong relationship between reading comprehension and autonomy was detected.

In another research, relationship between critical thinking ability, L2 vocabulary learning strategies, and L2 vocabulary knowledge of Iranian EFL learners was detected. The findings demonstrated that vocabulary knowledge of Iranian EFL learners was significantly related to their critical thinking skill. Moreover, subjects' critical thinking ability was correlated positively with memorization, determination, meta-cognitive, and cognitive strategies of L2 vocabulary learning but not with social ones.

A different but related study was conducted by Rahimi and Soryani (2014), to discover the possible relationship between critical thinking abilities of Iranian EFL teachers and their instructing vocabulary learning strategy. The findings disclosed that strategy teaching inversely and significantly correlated with inductive reasoning, inferencing, and analysis; however, the correlation of deductive reasoning skills and evaluation was not significant.

Moreover, Mirzai (2008) in his research found that high critical thinking Iranian EFL students performed better than the low critical thinking ones concerning lexical inferencing.

Nikoopour et al. (2011) conducted another study to examine the relationship between critical thinking of Iranian EFL learners and their use of indirect and direct language learning strategies. The results revealed a significant relationship between critical thinking and the use of particular indirect and direct language learning strategies, such as meta-cognitive, cognitive, and social, but the findings did not show any significant relationship with memory, compensation, and affective strategies.

The effect of learners' learning style on critical thinking ability was investigated by Myers and Dyer (2006) as well. They found that critical thinking skills of female and male are not significantly different. But, learners who prefer theoretical chronological learning styles gained noticeably upper critical thinking scores. Moreover, there was not seen any significant difference in critical thinking ability of learners who favored other learning styles.

Nour Mohammadi et al. (2014) conducted a further study on critical thinking to explore its relationship with listening comprehension ability of Iranian EFL learners. The results indicated a strong positive correlation between listening comprehension ability and critical thinking skills. Besides, the findings suggested a significant dissimilarity between high and low critical thinkers concerning their listening comprehension ability.

In another research, Magno (2010) tried to investigate the effect of meta-cognitive skills on growing critical thinking skills of 240 Freshmen College students in Philippines. Using the Pearson Product Moment correlation, it was found that the features of critical thinking abilities are significantly related to the aspects of meta-cognition.

To close, Bolori and Naghipoor (2013), explored the relationship between 100 Iranian EFL learners' critical thinking skills with their translation performance. The participants divided into two groups of high and low groups of critical thinking. The results presented a difference between high and low group and their score on translation M/C test. It means that the higher the learners' skill of critical thinking, the better their score on the M/C translation tests.

Considering the above literature, the role of critical thinking in education is recognized; those learners who are more critical seems to be more successful in learning particularly foreign language learning.

III. METHOD

A. Participants

The participants of this study were 86 Iranian senior English translation students of Islamic Azad University, Islamshahr branch. The sample was selected based on their availability. The subjects consisted of 62 (72.1%) female and 24 (27.9%) male. Their average age range was 26.7. (See Table 2)

B. Instruments

Two kinds of instruments were used in this study:

1. California Critical Thinking Skill Test -Form B (CCTST)

The Persian version of CCTST- form B including 34 items was administered to measure students' critical thinking skills. The overall score of this test is 34. According to Facione (1990), for testing critical thinking of adults at levels above high school, form B of CCTST is appropriate. The CCTST reveals the test-takers' critical thinking skills necessary to succeed in professional and educational settings where making decisions, reasoning, identifying and resolving problems are essential.

Five components for measuring critical thinking ability are: analysis, evaluation, inference, deductive reasoning, and inductive reasoning. The reliability of CCTST after applying KR20 as stated by Facione (1990) was equal to .78 to .80. For the Persian version of CCTST, applied in this study, Mahboobi et al. (2012) have reported the reliability of .87.

2. English to Persian translation test

The translation test consists of ten English quotations from brilliant figures. One point was given for each appropriate translation. The overall scoring of translation part is 10. Quotation is defined as “something that a person says or writes that is repeated or used by someone else in another piece of writing or a speech” (Merriam- Webster Dictionary). A good quote can be the heart of a motivating article. Good quotes help to tell a story and boost the believability of a speech. Words that are crafted well can leave a long-term impression on the world.

Since translating these well-crafted words needs deep understanding and analyzing, the researchers of the present study chose quotes for translation test. Rendering these quotes appropriately can show the complexities and depth of translating. Translators should be able to analyze the text to see what makes sense and what doesn't; they need advanced analytical skills and awareness.

In the present study, unlike Boloori and Naghipoor (2013) who explored the relationship between learners' critical thinking skills with their translation ability by using multiple choice as a translation test, the production test was used.

A multiple choice translation test measures competence or comprehension, while a translation production test measures performance. They assess two different but connected constructs (Birjandi and Farahzad, 1997).

C. Data Collection Procedure

In one session, both critical thinking questionnaire and translation test were administered to the participants. The allocated time for answering CCTST was about 50 minutes, and for translation test 40 minutes.

After collecting the answer sheets, SPSS program was applied to estimate the correlation between critical thinking and translation ability. For this purpose Pearson Product- Moment Correlation was employed. Furthermore, for identifying the probable difference between male and female critical thinking skill a t-test was applied.

IV. RESULTS

The results of the study are reported in two sections of descriptive and inferential statistics.

First, descriptive analysis of the data consisting of the mean, standard deviation, skewness, kurtosis, maximum and minimum scores is demonstrated.

Then, for examining if there is a significant difference among scores of different groups, one sample T-test, independent sample T-test and multiple regression analysis were applied.

A. Descriptive Statistics

TABLE 1
SAMPLE DISTRIBUTION BASED ON GENDER

Gender	Frequency	Percentage
Female	62	72.1
Male	24	27.9
Total	86	100

As table 1 shows, females formed %72.1, and male %27.9 of the sample population.

TABLE 2
SAMPLE DISTRIBUTION BASED ON AGE

Age	Frequency	Valid Percentage
20-25	47	61
26-30	13	16.9
31-35	7	9.1
36 and above	10	13
Total	77	100

Table 2 represents age distribution of the sample. As it can be seen, the maximum population related to the age range of 20-25 which is 61%, and the minimum related to the age range of 31-35 which is 9.1%.

TABLE 3
DESCRIPTIVE STATISTICS OF TRANSLATION TEST

Variable	Mean	SD	Min. Score	Max. score	Kurtosis	Skewness
Translation	3.02	1.76	0	6	-1.06	-0.31

The maximum obtainable score from translation test was 10. However, as illustrated in table 3, the range of translation scores is within 0 to 6, and the mean score is equal to 3.02. Moreover, considering skewness and kurtosis of the scores, the distribution is normal.

TABLE 4
SAMPLE DISTRIBUTION BASED ON CRITICAL THINKING ABILITY

Scores	Frequency	Percentage	Cumulative percentage
0-10	63	73.3	73.3
11-20	23	26.7	100
21-34	0	0	100
Total	86	100	

As table 4 illustrates, critical thinking ability is divided in to three levels based on the acquired scores. At the first level, the score range is 0-10; at the second level it is 11-20, and at the third level the distribution is 21-34. As it can be seen, most of the subjects (73.3%) are located in the first group which is below the cutoff point, signifying that they are under desirable level of critical ability. There is no subjects in level three which is related to desirable level of critical ability.

In table 5 descriptive statistics of critical thinking ability is depicted.

TABLE 5
DESCRIPTIVE STATISTICS OF CRITICAL THINKING

Variable	Mean	SD	Min.	Max.	Kurtosis	Skweness
Critical thinking	9.07	3.45	2	20	0.572	0.767

As it can be seen the mean score is equal to 9.07. The minimum score is 2 and the maximum one is 20. The overall score of this questionnaire is 34.

Considering skewness and kurtosis of the score variables, the distribution is considered normal.

In the following table, descriptive statistics of the components of critical thinking skills is reported.

TABLE 6
DESCRIPTIVE STATISTICS OF CRITICAL THINKING ABILITIES' CATEGORIES

Components	Mean	SD	Min.	Max.	Kurtosis	Skweness
Evaluation	3.32	2.03	0	9	0.51	0.73
Analysis	2.67	1.53	0	8	0.87	0.61
Inference	3.07	1.44	0	7	0.44	0.35
Inductive reasoning	3.05	2.11	0	8	-0.17	0.69
Deductive reasoning	3.5	1.48	1	8	0.22	0.61

Considering *evaluation component*, this subscale is scored on a scale ranging between 0 and 14. The minimum obtained score here is 0 and the maximum is 9, and the achieved mean is 3.32. In *analysis component*, the subscale is scored on a scale ranging between 0 and 9. The achieved mean is 2.67; the minimum obtained score is 0 and the maximum is 8. In *inference component*, the subscale is scored on a scale ranging between 0 and 11. The achieved mean is 3.07; the minimum score is 0 and the maximum is 7. In *inductive reasoning* the subscale is scored on a scale ranging between 0 and 14. The achieved mean is 3.05; the minimum score is 0 and the maximum is 8. Finally, in *deductive reasoning section*, the subscale is scored on a scale ranging between 0 and 16. The achieved mean is 3.5; the minimum score is 1 and the maximum is 8. Moreover, all components show normal distribution, regarding their skewness and kurtosis.

B. Inferential Statistics

1. Research Question 1: Is there any significant relationship between the critical thinking ability of Iranian translation students and their translation performance?

For answering this question, Pearson and Spearman correlation formula were applied.

TABLE 7
COEFFICIENT OF CORRELATION BETWEEN CRITICAL THINKING AND TRANSLATION ABILITY

Variable	Significance level	Coefficient of Correlation	Scale
Translation ability	0.034	0.232	Interval(Pearson)

As illustrated in the table, the obtained coefficient of correlation between critical ability and translation ability is 0.232 which is considered significant at $p \leq 0.05$ level. It means as critical abilities of students increase, their translation scores raise as well. Thus, our answer to the first research question is positive; there is a significant relationship between the critical thinking ability of Iranian translation students and their translation ability.

TABLE 8
CORRELATION BETWEEN COMPONENTS OF CRITICAL THINKING AND TRANSLATION SCORE

		Evaluation	Analysis	Inference	Inductive reasoning	Deductive reasoning
Translation score	Coefficient of Correlation	0.233	0.309	-0.116	0.093	0.254
	Significance level	0.033	0.004	0.292	0.398	0.020

Studying critical thinking components, it was found that analysis and deductive reasoning components have significant relationship with translation score at $p \leq 0.01$ level of significance, besides evaluation category showed

significant relationship at $p \leq 0.05$. Consequently, it can be concluded that evaluation, analysis, and deductive reasoning abilities are related to translation performance in our students. The higher the learners' skills in evaluation, analysis and deductive reasoning, the better their translation scores would be. However, inference and inductive reasoning abilities haven't shown any significant relationship with translation ability.

2. Research Question 2: 2. Do male and female Iranian translation students show any significant difference considering their critical ability?

For finding any possible difference among male and female skills, independent sample T-test was utilized.

TABLE 9
MALE AND FEMALE DIFFERENCE ON CRITICAL THINKING ABILITIES

	Groups	Mean	Levene's Test		t Test			
			F Value	Sig.	Mean difference	t Value	df	Sig.
Critical Thinking	Male	9.33	1.628	0.206	0.366	0.405	36.152	0.688
	Female	8.97						

The figures in table 9 signify that the difference between males' and females' critical thinking is not significant.

TABLE 10
MALE AND FEMALE DIFFERENCE ON CRITICAL THINKING COMPONENTS

Variable	Groups	Mean	T Test				Levene's Test	
			Sig.	df	T value	Mean difference	Sig.	F value
Evaluation	Female	3.13	0.197	34.817	-1.315	0.704	0.16	2.009
	Male	3.83						
Analysis	Female	2.6	0.481	37.828	0.712	-0.278	0.483	0.496
	Male	2.9						
Inference	Female	3.2	0.065	46.536	1.89	0.616	593	0.288
	Male	2.6						
Inductive Reasoning	Female	3.5	0.99	36.47	0.012	0.007	0.095	2.849
	Male	3.4						
Deductive Reasoning	Female	3.39	0.484	34.896	-0.781	0.279	0.368	0.818
	Male	3.7						

Table 10 shows the difference between males' and females' critical thinking subscales of English translation students at Islamshahr Islamic Azad University.

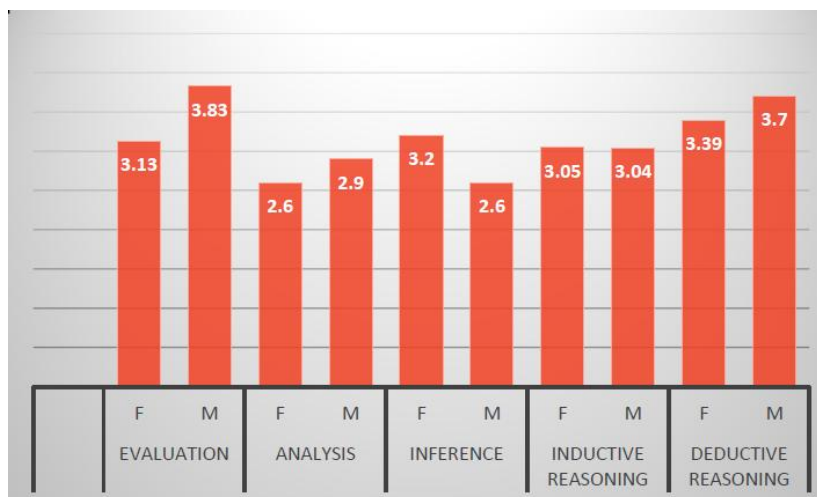


Figure 1. Comparison of males' and females' critical thinking components

As figures in Table 9 and 10 signify, not only critical thinking skills in general but also the critical thinking components of male and female does not show any significant difference.

Discussion and implication for pedagogy

The purpose of the present study was to investigate if there was any significant relationship between critical thinking abilities of Iranian English translation students and their translation ability. Moreover, the difference between critical thinking skills of males and females was explored.

Contrary to Nour Mohammadi et al. (2012) findings, no significant difference between critical thinking abilities of females and males was detected in this study. Thus it can be concluded that gender has no role in critical thinking abilities of the Iranian English translation students, and it is not an effective factor in thinking abilities and the way one thinks.

Furthermore, the results of this study indicated that learners with superior level of critical thinking had better translation performance. The obtained result suggests that the higher level critical thinkers not only analyze the message

of source language text better, but also synthesize it more effectively in comparison to lower level ones. This positive relationship between critical thinking and translation ability is in line with the results of copious previous research papers that confirmed the significant role of critical thinking on various aspects of language teaching and learning (Fahim et al., 2010; Niko pour et al., 2011; Rashid & Hashim, 2008; Kamali & Fahim, 2011; Myers & Dyer, 2006; Mango, 2010).

One of the basic skills that students should gain for academic success is critical thinking and critical thinkers achieve more in their academic tasks; besides, by developing these skills they become more capable to integrate with their society (Fahim and Komijani, 2010). Huit (1998) marks, "The movement to the information age has focused attention on good thinking as an important element of life success". In this way, as Chalesworth (2004) states, one learns to think for oneself and develop his mind to its fullest potential. Intellectually involved students value questions more than answers, strive for comprehension over rote memorization, and then as a basic element of these processes, students learn how to learn.

Human beings have the ability to be logical and reasonable. But this ability must be developed. According to Barnes (2005), our students deemed the "teacher as God syndrome..... and if instructor-centered approaches to college teaching continue, students will neither learn the content of our disciplines nor learn to think critically about them". She further adds that "thought must be taught!" In line with Barnes, Halpern (1999) indicates that "there are identifiable critical thinking skills that can be taught and learned, and when students learn these skills and apply them appropriately, they become better thinkers" (p. 70). She recommends that university students should receive explicit instruction in how to think.

Unfortunately, according to Paul, Elder, and Bartell, (1997) studies reveal three worrying facts: (1) most college faculty at all levels lack a substantive concept of critical thinking; (2) most faculty don't realize they lack a substantive concept and instead believe they understand critical thinking sufficiently and are already successfully teaching it within their discipline; (3) despite *reform* efforts, lecture, rote memorization, and (largely ineffective) short-term study strategies are still the norm in college instruction and learning today."

These facts highlight the importance of Integrating problem solving activities that need critical thinking in our teaching and learning process. Accordingly, special attention should be given to designing syllabus, developing materials and training teachers to enhance learners' critical thinking.

For improving critical thinking, teachers themselves are key elements. According to Meyers, "Students will learn to think critically when faculty challenge learners about what they think they believe" (Chet Meyers, personal communication, Sept. 2004). For this purpose, Elder (2005) suggests a professional development model based on critical thinking for training teachers. She believes critical thinking is not one of many potential "*angles*" for professional development, rather it is the leading force for it. Barnes (2005) asserts in her article that "Personally and professionally, participation in the critical thinking 'movement' has changed me and many of my colleagues forever." (p.12)

Finally, it should be mentioned that only through well-designed, long-term planning such a significant notion of critical thinking can be developed in our educational system. Short-term strategies are needed, undeniably. But without long-term planning nothing important happens. Deep learning cannot be achieved.

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