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The Content Analysis of Reading Comprehension Texts in English Proficiency Test: A Critical Thinking Perspective

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Abstract

This study aimed at uncovering the extent to which the content of reading section of English Proficiency Test (EPT) engages the critical thinking. The corpus of this research included 16 reading comprehension texts among 24 recent tests, and totally 600 cases were randomly selected and analyzed based on Rummy's content analysis method in terms of critical thinking. The content of the reading comprehension texts was examined in four general dimensions. Using William Rummy's content analysis method, the reading comprehension texts, pictures, questions, and activities were scrutinized through a comprehensive quantitative analysis. Frequencies and percentages were calculated for each category and the data were analyzed by using Rummy's formula. The findings revealed that the reading comprehension content, questions, and activities of the EPT did not enhance critical thinking in respondents. Since Rummy's model includes picture categories benefited from criteria of critical thinking, the texts were also studied to see if the pictures benefited from the criteria of critical thinking based on Rummy's content analysis method. It was cleared that there was no picture in the reading sections of the EPT.

***Keywords*:** Content analysis, critical thinking, EPT, reading comprehension text

Introduction

Although critical thinking (CT) is almost a new concept in second language education, it is considered one of the main concerns of researchers in second language acquisition. Researchers (e.g. Akyuz, & Samsa, 2009; Gelder, 2005; Halpern, 1999; Willingham, 2007) believe that critical thinking is one of the main goals of education, so it should receive more attention and all of its possible effects on language learning should be investigated. They indicate that learners who think more critically are more successful in language learning; furthermore, some others (Mokhtari, & Sheorey, 2002; Oxford, 1990; Shang, 2011; Singhal, 2001) that successful readers use more effective and a wider range of strategies rather than unsuccessful readers. Hashemi (2011) investigated the use of critical thinking in high school social science textbooks based on Fars Province teachers' attitudes in order to present a model for textbook development. To achieve this goal, the use of the following skills in the social science textbooks was analyzed: reasoning, questioning, assessment of examples and statements, group work, interpretation, true judgment about issues, analysis and evaluation, logicality, and explicitness. The result showed that the teachers of the social studies textbook were unsatisfied with the evaluation of examples, statements, analysis and evaluation skills. They evaluated the other skills as fairly satisfactory. Similarly, Kerr (2006) analyzed four art textbooks in terms of critical thinking perspective. Analysis focused on the creative process, synthesis and higher level thinking processes, multiple representations of knowledge, and the aesthetic features of the textbooks. The researcher presented a sample chapter and showed a design for a high school art textbook that was highly imaginative and offered many choices to the student and teacher. Regarding the evaluation of textbook based on critical thinking, Vakili and Mansouri (2016) conducted a research. They analyzed the content of

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social studies book at sixth grade of elementary school based on Roman technique. Conducting analysis on social studies book at sixth grade of elementary school indicated that the content of book in terms of text, picture, question and proposed activities have been provided actively.

Besides, Ghareaghaji (2014) believed that taking into account the content of educational books, it is necessary for students to understand the books. In addition, they should be strong in utilizing essential logical tools. For this reason, it is better to include problems in educational books which are taken from environment and be related to real life so that students consider them as real problems and try to solve them. In other words, due to the role of educational books content in motivating, promoting appropriate activities and facilitating students' learning and also determination of teaching method, content analysis helps to scientific investigation of concepts, principles, views, beliefs and all parts of educational books.

There have been some researches that have investigated the relationship between critical thinking and language learning strategies (Fahim, Bagherkazemi, & Alemi, 2010; Nikoopour, Farsani, & Nasiri, 2011) but research concerning the relationship between critical thinking and each specific group of skills (listening, speaking, reading and writing) is limited. Three major groups of reading strategies are cognitive, meta-cognitive, and compensatory strategies. The researchers believe the reason for selecting these three groups of strategies is that they are the most important learning strategies resulting in successful reading (Shang, 2011). In other words, it can be said that CT is a cognitive skill that requires a framework to be mastered and monitored from time to time (Barnett, 1997). Moreover, just as any other skills, CT may be possessed by an individual to a higher or lower degree (Paul, 1993). Moreover, huge responsibility is placed on the learner for knowing CT (Nosich, 2012). Hammer and Green, (2011) noted that the disposition of the student/thinker is as important as that of the teacher in developing attention to CT skills.

Similarly, Paul and Elder (2002) explained CT as self-directed, self-disciplined, self-monitored and self-corrective thinking. CT is the ability to engage in an activity, process or procedure. Moreover, CT is considered to be a transferable skill across the curriculum and real-life context. Therefore, being skilled at CT involves knowing, perhaps implicitly or without the ability to articulate this knowledge, both a set of procedures and when to apply those procedures (Vardi, 2015). People who have developed these affective dispositions are much more likely to apply their CT skills appropriately in both their personal life and their civic life than are those who have mastered the skills but are not disposed to use them.

Vaughn (2008) believed that critical thinking can be defined as "the systematic evaluation or formulation of beliefs, or statements by rational standards". Given the immense rate at which massive amounts of information, arguments and counter-arguments, beliefs and interpretations are put forth, the development and utilization of such rational standards seem to be the only path to achieving a hardcore around which to shape one's own thinking and reasoning. As such, critical thinking is an indispensable ability for successful performance in educational contexts, materials evaluation and, development, etc. (Moon, 2008). Moon (2008) asserted that critical thinking has a significant role in higher education and the professions. It can be considered as the main base of higher education and as a fundamental goal of learning. She believes that if critical thinking is clearly expressed in higher education, then students who are achieving those levels of qualification will be critical thinkers. According to Ennis (1996), critical thinking can be considered as a means to activate or construct a schema. Taking into account the importance of the content of reading comprehension texts, it is necessary to consider whether critical thinking has been emphasized or not. CT can be involved in language proficiency tests, whether placement tests or tests which administered for a particular grade or enter an academic setting. Using the findings of this study can improve the condition and status of language testing in the context of Iran. The findings may encourage test developers, who still believe in their own traditional techniques in designing tests to shift their attitudes and follow more practical techniques. Since CA is a research tool focused on the actual content and internal features of media. It can be used to determine the presence of certain words, concepts, themes, phrases, characters, or sentences within texts or sets of texts and to quantify this presence in an objective manner. Therefore, texts can be defined broadly as books, book chapters, essays, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theater, informal conversation, or really any occurrence of communicative language. To conduct a CA on a text, the text is broken down, into manageable categories on a variety of levels word, word sense, phrase, sentence, or theme and then examined using one of content analysis' basic methods: conceptual analysis or relational analysis. The results are then used to make inferences about the messages within the text(s), the writer(s), the audience, and even the culture and time of which these are a part.

Since EPT is a test which examines language proficiency level of Ph. D. candidates in the educational system of Islamic Azad University, many strategies may be utilized in reading comprehension texts. Regarding this test, it should be mentioned that it is held late of each month by the Islamic Azad University for Ph.D. candidates. This test consists of 100 multiple choice questions which are divided into four parts: vocabulary, structure, reading comprehension and cloze passages. Generally, in EPT, there are 2 to 4 reading comprehension texts consisting of 1 to 5 paragraphs, followed by 5 to 10 questions. Now this question arises whether reading comprehension test developers consider critical thinking in developing reading comprehension texts?

This research aimed to examine the content of reading comprehension texts in EPT in terms of critical thinking based on Rummy's technique. This study will therefore address the following research questions:

RQ1: To what extent do EPT reading comprehension texts involve critical thinking?

RQ2: Is there any statistically significant difference between the activeness of text content and reading comprehension questions and activities?

Based on the above questions, the following null hypothesis was formulated:

There is no statistically significant difference between the activeness of text content and questions and activities.

Method

In this study, a corpus-based methodology was used.

Corpus

The corpus of this study included the entire reading comprehension section of the EPT test (i.e., reading text, pictures, questions, and activities) that was selected randomly. Unless the researcher wanted to look at very fine distinctions, it doesn't need a huge sample. Most of the time, a sample between 100 and 2000 items is enough as long as it is fully representative (Hsieh, & Shannon, 2005). In this research, 16 reading comprehension and totally 600 cases were randomly selected and analyzed based on Rummy's content analysis method. Therefore, by analyzing the aforementioned sample, we will be able to generalize the findings to a broader context (such as all the EPT tests). In other words, the selected tests are the representative of EPT tests. The criteria included texts, questions, and pictures. They were evaluated and coded by the researcher.

Instruments

Using William Rummy' s content analysis method, the reading comprehension texts, pictures, questions, and activities were examined through a comprehensive quantitative analysis. According to William Rummy' s view, it is an active content in which the learner is asked to answer questions whose answer isn't directly found in the text and he should contemplate on given information and assumptions and analyze them to find the questions/ answers. Therefore, active content is growing and reinforcing logical thinking. Moreover, that content is active which attract the student by means of questions and answers and causes the students focus on the given issue which has been discussed in the text, so active content is content which attracts the student's attention. Besides, the content is active in which the student has been asked to do and experiment and analyze its results. It can be said that active content is enriching and reinforcing the individual independence. Breeds the students' discovery spirit, in other words, ask the student to express the results who has acquired about the subject. In addition, it asks the student to solve the issues discussed in the text and asks the student to face with opposed and contradictory views and be able to evaluate them and finally provides a solution. In other words, active content causes growth and reinforcement of critical thinking. The student selects the subjects, decides about solving problems and avoids from undue and troublous information and finally evaluates the solution and selects the best method for success (Eslaminejad & Saeid, 2017). In this study, the contents of the reading comprehension texts were analyzed in four general dimensions. The categories are as follows:

Table 1.
Categories of William Rummy's CA Method for Text

Item	Category subject
1	sentences and concepts which express reality, i.e. providing information without change and interpretation
2	sentences which indicate results of general principles about the relationship between different subjects and assumptions
3	sentences which define a special phenomenon or concept
4	questions which have been posed in the text and their answer is immediately given by the author
5	questions which are posed in the text and the student should analyze the given assumptions and information for answering them
6	the student is asked to analyze the results which he himself has obtained
7	the students are asked to do a test and analyze the obtained results or solve the problems posed
8	questions which have been posed for attracting the students' attention and the author hasn't answered them
9	sentences which don't include in any of the above categories or the reader asks to consider test stages or looks a picture
10	simple recitative sentences

Table 2.
Categories of William Rummy's CA Technique for Questions and Activities CA

Item	Category subject
1	questions whose answer directly exists in the text
2	questions relating to definitions
3	questions that for answering them the respondent should use what have learned in the text for concluding about new problems
4	questions which ask the respondent to solve a specific problem

Procedure

For the analysis of reading comprehension texts in EPT, Rummy's content analysis technique was applied. The analysis consisted of texts, questions, and pictures. In this section, 16 texts were selected and each category was classified regarding table 3 and numbered and then according to the formula, the rate of content activeness was specified. Generally, categories 1st to 4th were in the inactive category and 5th to the 8th category, active provision method and 9th and 10th category neutral category.

Table 3.
Categories of Content Analysis

Item	Category subject	Frequency
1	sentences and concepts which express reality, i.e. providing information without change and interpretation	222
2	sentences which indicate results of general principles about the relationship between different subjects and assumptions	100
3	sentences which define a special phenomenon or concept	15
4	questions which have been posed in the text and their answer is immediately given by the author	3
5	questions which are posed in the text and the student should analyze the given assumptions and information for answering them	3
6	the student is asked to analyze the results which he himself has obtained	0
7	the students are asked to do a test and analyze the obtained results or solve the problems posed	0
8	questions which have been posed for attracting the students; attention and the author hasn't answered them	4
9	sentences which don't include in any of the above categories or the reader asks to consider test stages or looks a picture	1
10	simple recitative sentences	0

Pictures and Diagrams Evaluation

There is no diagram or picture in EPT' s reading comprehension texts.

Questions and Activities Evaluation

In this section, questions were studied and classified according to the categories of table 4. The first and

second categories are inactive and the third and fourth ones active.

Table 4.
Categories of Questions and Activities

Item	Category subject	Frequency
1	questions whose answer directly exists in the text	78
2	questions relating to definitions	3
3	questions that for answering them the respondent should use what have learned in the text for concluding about new problems	72
4	questions which ask the respondent to solve a specific problem	72

Results

The frequencies of each category related to the reading comprehension text were gathered and then the respondents' involvement index with different dimensions of the reading texts was measured through the Rummy's formula. Moreover, Rummy's guidelines were used for interpreting the results of the content analysis that are given in Table 5.

Table 5.
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Involvement ratio	Text quality
0	lack of respondents' involvement in educational activities through the content of the text
1	The respondents' involvement is possible in half time.
< .4	The text just asks the respondents to memorize the scientific contents
> 1.5	The text does not have scientific information, and only asks the respondents to do an activity (improperness of the text)
0.4< Involvement coefficient < 1.5	The text is active and good provides a minimum of 30% and a maximum of 70% scientific contents

Descriptive Analysis of the Data

Primarily, the descriptive analysis of the data was run to answer the first research question and identify the involvement ratio of the EPT. This was done separately for the text content, pictures, and questions and activities.

RQ1. To what extent do EPT reading comprehension texts involve critical thinking?

Text Content Evaluation

The involvement degree of the text content for the EPT was determined through the presentation of the content in terms of active and inactive texts. The results are in the following sections:

Table 6.
The Frequency and Percentages of Active, Inactive, and Neutral Texts

Various categories	Classes	Frequency	Percentage
Inactive text	A	222	63.97%
	B	100	28.81%
	C	15	4.32%
	D	3	.86%
Active text	E	3	.86%
	F	0	0%
	G	0	0%
	H	4	1.15%
Neutral text	I	0	0%
	J	0	0%
Total	10	347	100%

The text content of the whole reading comprehension sections had 347 units out of which 340 units were placed in the inactive category, seven units were classified in active category, and none of them sat in neutral text category. The respondents' involvement index in the text was calculated by the following formula:

Involvement index = (E + F + G + H) / (A + B + C + D)

Therefore, considering Table 7, the respondent involvement index with texts was:

I= (3 + 0 + 0 + 4) / (222 + 100 + 15 + 3) = .020

Consequently, as the overall involvement indicator of the respondent with the text came to (I= .020) which was lower than 0.4 and thus, critical thinking in texts of EPT has not been active. As a result, the EPT contents have been designed and presented in ways that simply ask the respondents to memorize the scientific contents.

The involvement ratio was also computed for the texts separately. The findings are in the following section:

Table 7.

The Involvement Ratio for the Texts

	Category	A	B	C	D	E	F	G	H	I	J	Involvement ratio
96/11	Text 1	18	9		1							.0000
	Text 2	9	7	1								.0000
	Text 3	11	7									.0000
	Text 4	25	18	1	1							.0000
96/10	Text 1	6	3			1			1	1		.2222
	Text 2	12	9	2								.0000
	Text 3	20	5	2								.0000
	Text 4	7	6	2		2			2			.2667
96/09	Text 1	17	5		1							.0000
	Text 2	20	6	2								.0000
	Text 3	8	2						1			.1000
	Text 4	16	7	2								.0000
96/08	Text 1	18	6									.0000
	Text 2	11	2	1								.0000
	Text 3	23	5	2								.0000
	Text 4	10	3									.0000
	total	222	100	15	3	3			4	1		.0200

As it was shown in Table 7, for all of the reading samples, the number of inactive categories was more than active ones. Based on the formula of involvement coefficient in Rummy's technique, the sum of active categories was divided by the sum of inactive categories and the involvement coefficient for the EPT reading texts was obtained for the 16 texts. For the four reading samples of 96/11, all the categories in the reading sections of the EPT were inactive. In addition, for the second and third reading samples of 96/10, all the categories in the reading sections of the EPT were inactive (I < .4). For the first reading sample of 96/10, the number of inactive categories was almost four times more than active categories. In addition, for the fourth reading sample of 96/10, the number of inactive categories was nearly eight times more than active categories. For the first, second and fourth reading samples of 96/09, all the categories in the reading sections of the EPT were inactive (I < .4). However, for the third reading sample of 96/10, the number of inactive categories was ten times more than active categories. Finally, all of the reading samples of 96/08 were inactive (I < .4).

Given that, the respondents' involvement coefficients with the content of the reading comprehension sections were all lower than .4; this indicated that active learning in respondents was not established. In other words, 100% of the categories of EPT text content were inactive (I < .4). Therefore, based on William Rummy's content analysis model, the contents of reading texts did not enhance critical thinking in respondents and the content of the reading comprehension texts of the EPT did not benefit from criteria of critical thinking based on William Rummy's technique.

Pictures and Diagrams Evaluation

The EPT was also examined to see if the pictures benefited from the criteria of critical thinking based on Rummy's CA method. The investigation of the test revealed that there was no picture in the reading

sections of the EPT. Therefore, there were no images related to the content of the reading comprehension texts to enhance the critical thinking in respondents.

Questions and Activities Evaluation

In this section, questions and activities from each reading sample were evaluated and then were classified with respect to their nature according to four categories. Categories 1 and 2 were inactive and categories 3 and 4 were active. First, the frequencies and percentages of each level category was analyzed and calculated for obtaining the respondents' involvement ratio with questions and activities for each category. Next, Rummy's formula was used to compute the rate of content activeness for the questions and activities

Table 8

The Frequency and Percentages of Active, Inactive, and Neutral Questions and Activities

Various categories	Classes	Frequency	Percentage
Inactive text	A	78	34.66
	B	3	1.33
Active text	C	72	32
	D	72	32

The whole reading comprehension sections has 225 question units from which 81 units were inactive units while 144 units were placed in the active category. The respondents' involvement index with questions was computed by the following formula:

I = (C + D) / (A + B)

Consequently, with respect to data presented in Table 8, the respondent involvement ratio with questions came to:

I= (72+72)/ (78+3) =1.77

Therefore, as the respondent involvement ratio with the EPT questions and activities was 1.77, that was higher than 1.5, it could be concluded that critical thinking in questions and activities of the EPT was not actively considered. As a result, the EPT questions have been designed and developed in ways that do not actively reinforce critical thinking in respondents. In other words, the questions and activities of EPT do not benefit from criteria of critical thinking based on Rummy's technique.

The involvement ratio was also computed for the questions and activities of the reading samples separately. The findings are shown in Table 9:

Table 9.

The Involvement Ratio for the Questions and Activities

	Category	A	B	C	D	Involvement ratio
96/11	Text 1	5	1	4	4	1.33
	Text 2	5	1	5	4	1.50
	Text 3	5		5	5	2.00
	Text 4	5		5	5	2.00
96/10	Text 1	4		4	4	2.00
	Text 2	4	1	4	4	1.60
	Text 3	5		5	5	2.00
	Text 4	5		5	5	2.00
96/09	Text 1	5		5	5	2.00
	Text 2	5		4	4	1.60
	Text 3	5		4	4	1.60
	Text 4	5		5	5	2.00
96/08	Text 1	5		4	4	1.60
	Text 2	5		5	5	2.00
	Text 3	5		5	5	2.00
	Text 4	5		4	4	1.60
total		78	3	72	72	1.77

Similar to the content evaluation, Rummy's formula was used and the sum of active categories were divided by the sum of inactive categories and the involvement coefficient for the questions and activities of the EPT reading texts was obtained for the 16 texts. As it was shown in Table 9 simply for the questions and activities in the first and second texts 96/11, the involvement ratio was within the range of .4 to 1.5 meaning that these texts were active and good and provided a minimum of 30% and a maximum of 70% scientific contents. However, for the rest of the questions and activities in the selected reading samples, the number of inactive categories was lower than active ones. For all reading samples, the number of active units for the questions and activities in the reading sections of the EPT were higher than inactive units. In other words, 87.5% of the categories of EPT questions and activities were highly active (I > 1.5).

Since most of the respondents' involvement indices with the questions and activities of the reading comprehension sections were higher than 1.5, it was revealed that the questions and activities were improper. Consequently, based on Rummy's content analysis model, the first research question was answered and it was found that the reading comprehension content, questions, and activities of the EPT did not enhance critical thinking in respondents.

Inferential Analysis of the Data

The respondents' involvement indices for the whole EPT in terms of text content, questions, and activities regarding Rummy's content analysis method were in the range of 0.02 to 1.77 which do not involve the respondent in critical thinking. In order to examine if the involvement coefficient for the text content and question and activities were statistically significant, chi- square test was computed.

RQ2: Is there any statistically significant difference between the activeness of text content and reading comprehension questions and activities?

The following null hypothesis was suggested:

H0: There is no statistically significant difference between activeness of text content and questions and activities.

In order to provide answer to the second research question, first, the frequencies of active, inactive, and neutral units were calculated for the text content and reading comprehension questions and activities. Next, the frequency reported in each category was compared and the results of the frequency tables were analyzed using a Chi- Square test.

Table 10.
Chi-Square Test for Text Content, Questions and Activities

	Observed N	Expected N	Residual
inactive (content evaluation)	345	144.3	200.8
active (content evaluation)	7	144.3	-137.3
inactive (evaluation of questions and activities)	81	144.3	-63.3
active (evaluation of questions and activities)	144	144.3	-.3
Total	577		

Inactive units were utilized more often than expected in content evaluation. Nevertheless, the frequency of active units in content evaluation and evaluation of questions and activities as well as the inactive units in evaluation of questions and activities were less than expected.

Table 11.
Test Statistics for the Activeness of the Content Units and Units of Questions and Activities

Chi-Square	437.704
Df	3

With respect to the second research question, the results revealed that in general, EPT used inactive units in text content more frequently than inactive units in questions did and activities.in contrast, EPT used active units in questions and activities more frequently than active units in content.

The results of the Chi- Square test presented in Table 11 rejected the null hypothesis and implied that there was statistically significant difference between activeness of text content and questions and activities. ($X^2 = 437.704$, $p \leq .05$).

The findings showed that based on Rummy's content analysis model, the reading comprehension content, questions, and activities of the EPT did not enhance critical thinking in respondents. Besides, the results of the Chi- Square test rejected the null hypothesis and implied that that there was statistically significant difference between activeness of text content and questions and activities.

Discussion and Conclusion

The content plays a crucial role in the test. However, there has been no research in this area and its role in comprehension and activating critical thinking in tests. Due to the administration of EPT for Ph.D. candidates, these students, certainly, have been familiar with critical thinking and problem-solving skills at the university settings. Therefore, this study sought to discover the answer of following research questions:

RQ1: To what extent do EPT reading comprehension texts involve critical thinking?

RQ2: Is there any statistically significant differences between activeness of text content and reading comprehension questions and activities?

As for the purpose of the research, a corpus based approach was employed. A corpus is a method in order to survey the language structure and use. It has five major steps which including question, build, annotate, retrieve and interpret. Among reading comprehension texts in EPT, 16 texts were selected randomly and analyzed by using of quantitative Rummy's model. As it was mentioned in previous section, 340 out of 347 items of text content were located in the inactive and 7 units were classified in active and none of them placed in neutral categories. In other words, CT in the texts of EPT has not been active and general involvement of respondents with the text is lower than 0.4 (I=0.020). Thus, according to Rummy's content analysis model, the contents of reading texts did not enhance critical thinking in respondents and the content of EPT's reading comprehension texts did not benefit from criteria of critical thinking.

In addition, Rummy's model includes picture categories benefited from criteria of critical thinking. The results showed that no picture existed in EPT. So, EPT did not use the criteria of CT. However, numerous of studies showed that pictures have a positive effect in activating CT and better comprehension. According to Jenkins and Pany (1981, p. 171), "Since pictures in text activate readers' background knowledge, they have a positive effect on text comprehension". Furthermore, some researchers (e.g. Bernhardt, 1991; Gyselinck, & Tardieu, 1987; Hibbing, & Rankin-Erickson, 2003) believed that the supplementation of text with visuals provides readers with two sources of information from which to draw upon when reading the material. When the readers cannot comprehend a particular passage, they may shift their attention from the text to the accompanying visual images. In return, the visuals, which they do comprehend, might lead them to notice the text's linguistic input and thus enable them to comprehend the text through matching and mapping among factors such as word recognition, syntax, intertextual perceptions, and background knowledge. The interaction between the text and visuals will accordingly facilitate a reader's comprehension. However, the analysis of EPT tests revealed that there were no images related to the content of the reading comprehension texts to enhance the critical thinking in respondents.

In addition, the analysis of EPT reading comprehension texts showed that none of the texts included title while scholars such as Brown, (1995), Folse (2004), and Praskova (2009) emphasized that title has a significant impact on better comprehension and CT. They believe that title is often the only thing that readers read in a text or at least, it is the first thing that everyone notices in a text. It serves a guide for the reader that helps decide whether to continue on reading the whole report or to skip onto another one. It also affects the ability to extract explicit and implicit information from text and integrate the text-based information in reading comprehension.

The current study focused on the correlation between the content of reading part in EPT and CT by employing Rummy's CA method. Several limitations and delimitations were in the present study. Among areas of learning and teaching English, because of the special impact of testing on both learning and teaching, the researcher tended to study on tests. Also, not all EPTs' reading comprehension texts were examined. The results of this study may not extend to other reading comprehension texts. Additionally, William Rummy's CA is the most well-known quantitative techniques in analyzing texts. Therefore, this model may not extent to other part of language. So, this study is limited to reading comprehension part in EPT. Furthermore, due to the fact that the EPT is the test which is administered for Ph. D. applicants, therefore this research is limited to these applicants. Overall, such potential limitations which presented in previous section do not negate or reduce the importance of the findings obtained in this study. Such limitations only highlight the fact that much work still lies ahead. Future research, therefore, needs to examine the other the content national or international standardized tests in terms of CT. Additionally, future research could be done within the same domain but in other language. Also, further research would be conducted by using other CA models. Furthermore, other researchers can apply other CA techniques to analyze the other part of EPT in terms of CT. In conclusion, since language testing plays an important role in the teaching/learning process, preparing and codifying test content can be one of main stages in learning/teaching process. If content is provided and

adjusted based on principles derived from scientific achievements and new educational technologies, it increases the power of attracting learner's attention and results in participation and involvement of learner in learning process.

The findings cleared that based on Rummy's content analysis model, the reading comprehension content, questions, and activities of the EPT did not enhance critical thinking in respondents. Therefore, different stakeholders in the field of language learning and teaching such as curriculum and material developers, course and syllabus designers, test takers, learners, teachers and teacher trainers can gain positive advantages of the obtained results. CT can be involved in language proficiency tests, whether placement tests or tests which administered for a particular grade or entering an academic setting. Using the findings of this study can improve the condition and status of language testing in the context of Iran.

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