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Examination of Components in the Document of Fundamental Transformation (critical thinking; creative thinking; research orientation; problem solving; spiritual intelligence) in ‘’Thinking and Research’’ Course Book of the Six Grade

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Abstract

The present study was conducted with the aim of examination of components in the document of fundamental transformation (critical thinking; creative thinking; research orientation; problem solving; spiritual intelligence) in ‘’thinking and research’’ course book of the six grade in elementary period from perspectives of teachers in Isfahan city in academic year 2013-14. The study design is survey-descriptive, and the statistical population consisted all teachers of the sixth grade at male and female elementary schools in Isfahan city in academic year 2013-14 (N=2535). Cochran’s formula was used to determine the sample volume and finally, 334 teachers were selected by cluster random sampling method to form the sample. Data was gathered via a researcher-made questionnaire which had 69 items and 5 components on critical thinking, creative thinking, problem solving, research orientation, and spiritual intelligence; the external as well as content validity of this questionnaire was confirmed by expert professors of this major and its reliability was calculated 94% by Chronbach’s alpha. Data analysis was performed in two descriptive and inferential levels via SPSS software. The results indicated that the realization mean of mentioned components in thinking and research course book of the six grade in elementary period were as the follow: critical thinking (3/93), creative thinking (3/90), problem solving (3/89), research orientation (3/97), spiritual intelligence (3/80; p=0/005)

Keywords: document of fundamental transformation, Critical thinking, Creative thinking, problem solving, research orientation, spiritual intelligence

Introduction

Changes occurred in educational systems in recent years, has also transformed learners’ education needs, in a way that they are eager to explore and reconstruct. Therefore, presenting concepts in an abstract and logical way through plays and communicational tools in a various, multimedia and exciting, guide them, especially young ones, into creative thinking and logical thoughts, and will be very effective for promoting thought and independence mentality (Saberi Nagaf Abadi, 2013). Hence, it is necessary to change contents of educational course books and other materials presented to students and make them different from the previous ones. Along with alterations in Iran educational system and its turn into 3.3.6 method, as well as being influenced by the document of fundamental transformation of the educational system, new

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course books entered the country curriculum. Among these new books in elementary period, thinking and research, work and technology, and thinking and life style can be mentioned. This study examine thinking and research course book of the sixth grade and the extent of its success in meeting components such as critical thinking, creative thinking, problem solving, research orientation, and spiritual intelligence, based on the document of fundamental transformation. According to the document of fundamental transformation and the document of national curriculum, components like critical thinking, creative thinking, problem solving, research orientation, and spiritual intelligence were extracted and the extent of their realization in thinking and research course book of the sixth grade in elementary period was examined.

Background

Parirokh and Hosseini (2011) studied sufficiency of course books in responding to research-oriented questions in guidance period. The results showed that 98% of research questions were answered by 822 non-educational books, that among them, 165 books were selected by the council based on the bibliography of years between 1998-2002.

Hashemi (2009) in a study titled "Investigation of the extent of using critical thinking in social sciences course books from teachers' perspectives'' examined the extent of using reasoning skills, making questions, evaluating evidence and statements, sociability, interpreting, and judging in social sciences course books. It was revealed that teachers of social sciences evaluated skills of evidence and statements evaluation, analysis and evaluation in an undesirable level. However, they assessed other skills in a relatively favorable level.

Hashemian (2001) conducted a research on presenting a theoretical framework for curriculum based on critical thinking in elementary period with emphasis on course planning of social studies. In this study, eight skills including making question, analyzing, evaluating, relating, reasoning, organizing related scientific concepts, applying critical words, and metacognitive for critical thinking were considered.

Tnjita Nont (2011) studied the effectiveness of an improvisation technique on creative English writing in Thailand. The aim of this study was to compare skills of English writing before and after applying the improvisation technique in university of Rajamangala. Beliero and Yang (2004) in a research on the effect of spiritual intelligence on ethic behaviors found that participants with high scores on faith, peace meaning and purpose in life, spiritual experiences, patience and tolerance, and forgiveness component of spiritual intelligence, experienced higher levels of ethics, too.

Outcomes of studies on thinking skills indicate that in most schools, students are not confronted with critical challenges in relation to education topics and these courses do not enforce their mental reasoning abilities which is needed for living in this modern and complicated world.

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This study intends to answer the following questions:
1: is critical thinking component met in ‘’thinking and research’’ course of the sixth grade from teachers’ views?
2: is creative thinking component met in ‘’thinking and research’’ course of the sixth grade from teachers’ views?
3: is problem solving component met in thinking and research course of the sixth grade from teachers’ views?
4: is research-orientation component met in thinking and research course of the sixth grade from teachers’ views?
5: is spiritual intelligence component met in thinking and research course of the sixth grade from teachers’ views?

Materials and methods

The research method of the present study is descriptive, survey. The statistical population consisted all teachers of the sixth grade in male and female elementary schools in Isfahan city in academic year 2013-14 (N=2535). Cochran’s formula was used to determine the sample volume and finally, 334 teachers were selected by cluster random sampling method to form the sample. Data was gathered via a researcher-made questionnaire which 69 items and 5 components; this questionnaire was distributed among students and its return rate was 95%.

Validity and reliability of the questionnaire

Since the used questionnaires was researcher-made, both external and content validity were applied. Its reliability was determined by Cronbach’s alpha formula and its value was computed 94% by SPSS software.

Statistical analysis

Data of the present study was analyzed using SPSS software in two descriptive and inferential levels. In the descriptive level, statistical features like frequency, percentage, mean, standard deviation and the minimum and maximum of ages, studies, tilt and stretching, and in the inferential level, means, standard deviation, and standard error via test (one-sample t-test) were calculated.

Results

Thus this study intends to answer the following questions:

Question 1: is critical thinking component met in ‘’thinking and research’’ course of the sixth grade from teachers’ views?

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Table of critical thinking mean

Index	Number	Mean	Standard deviation	Mean standard error
Critical thinking	317	3/93	0/47	0/02

Table of t-test with supposed mean 3:

t value	fd	Sig.	Mean difference
35/36	316	0/001	0/93

Question 2: is creative thinking component met in ‘’thinking and research’’ course of the sixth grade from teachers’ views?

Index	Number	Mean	Standard deviation	Mean standard error
Creative thinking	317	3/90	0/59	0/033

Table of t-test with supposed mean of 3

t value	fd	Sig.	Mean difference
27/12	316	0/001	0/89

Question 3: is problem solving component met in thinking and research course of the sixth grade from teachers’ views?

Index	Number	Mean	Standard deviation	Mean standard error
Problem solving	317	3/89	0/53	0/029

Table of t-test with supposed mean of 3:

t value	fd	Sig.	Mean difference
29/72	316	0/001	0/89

Question 4: is research-orientation component met in thinking and research course of the sixth grade from teachers’ views?

Index	Number	Mean	Standard deviation	Mean standard error

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Research orientation	317	3/97	0/53	0/03

Table of t-test with supposed mean of 3:

t value	fd	Sig.	Mean difference
32/35	316	0/001	0/97

Question 5: is spiritual intelligence component met in thinking and research course of the sixth grade from teachers' views?

Index	Number	Mean	Standard deviation	Mean standard error
Spiritual intelligence	317	3/97	0/53	0/03

Table of t-test with supposed mean of 3:

t value	fd	Sig.	Mean difference
23/59	316	0/001	0/80

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Conclusion

Results of the sample responses show that component in the document of fundamental transformation of elementary system examined in this study including critical thinking, creative thinking, problem solving, research orientation, and spiritual intelligence in thinking and research course of the sixth grade in elementary period, were met from views of teachers of the sixth grade in Isfahan city. Research orientation and spiritual intelligence components with a mean of 3/97 and 3/80, respectively, were met in thinking and research course of sixth grade.
There were no significant differences among teachers' views based on gender, age, teaching history, and academic degree.

Suggestions

1. Designing a new tool for training problem solving method to teachers and students, efficiently assessing the tool and method of thinking, and assessing thinking skills in teachers and students.
2. Standardization not only in a dimension that include the book name, but in all complementary fields.
3. Making more activities in thinking and research course to promote spiritual aspect proper with students' understanding abilities.
4. Examining and analyzing thinking and research course of the sixth grade in elementary period from students' perspectives.
5. Examining the quality of thinking and research course contents.
6. Examining thinking and research course of the seven grade and comparing it with that of the sixth grade.
7. Given the highest and lowest mean percentage of each of the components in the present study, it is possible to design a standard questionnaire for each item separately and performed a deeper content analysis on thinking and research course book based on only one component.

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