Investigating the Relationship between Teachers’ Professional Competence in the Implementation of Descriptive Assessment and Male Primary Schoolchildren’s Academic Self-Concept and Creativity in Islamshahr County

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Abstract

The aim of the current study was to investigate the relationship between teachers’ professional competence in the implementation of descriptive assessment and male primary schoolchildren’s academic self-concept and creativity in Islamshahr County. This is a descriptive correlational study. The statistical population included all primary school teachers and students in Islamshahr County. The stepwise cluster sampling method was used to select 225 teachers and 377 students as the sample. The research tools were Teachers’ Professional Competence in the Implementation of Descriptive Assessment Inventory, Torrance Tests of Creative Thinking (TTCT) and Piers-Harris Children’s Self-Concept Scale (PHCSCS). Pearson product-moment correlation coefficient and multivariate regression tests were conducted to investigate data pertaining to the research questions. The results indicated that there was a significant relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ creativity. It was also indicated that general competence was the significant predictor of academic self-concept. Moreover, general competence and goal determination were the significant predictors of students’ creativity.

Keywords: Professional Competence, Teachers, Descriptive Assessment, Students, Academic Self-Concept, Creativity.
Introduction
Creativity and innovation are among the most important goals of education. In fact, they are among the most significant missions of educational organizations. The responsibility and mission of educational organizations, including schools, is to use committed, creative and inventive teachers and present new methods and plans so that these human characteristics and traits can be developed in students. Therefore, the dedicated environment of school can be turned into a progressive, creative, innovative, warm, friendly, effective and enjoyable environment (Hosseini, 2008).

On the other hand, several psychologists have agreed in the recent decade that human needs self-esteem. People usually have good feelings about life when they have good feeling about themselves. Such individuals can deal with problems with certainty. Individuals need to develop positive self-concept if they want to improve self-esteem. Self-concept is an image which an individual observes while thinking about his or her dispositions. However, self-concept is not just about what an individual sees regarding himself or herself. It also includes what an individual feels that others see him or her as. Therefore, self-concept is comprised of real or imagined judgments of others, especially relevant people in social environment (Nakoohi, 2012).

The role of education is important in growing positive self-concept in individuals and also growing creativity. Chu Ying et al. (2010) believed that individuals’ cognitive characteristics would be developed through the interaction among cognitive, emotional, environmental and motivational factors in people. The environmental factors are discussed in this subject when they are studied from a social psychology perspective. These factors include free (autonomous) assignments and the evaluation of feedbacks and rewards (Hennessey, 2000). In primary school, these environmental factors depend on the teacher’s perception and education in teaching and evaluating (Chu Ying et al., 2010).

Over the past years, several changes occurred in different elements of educational systems in order to achieve the best result in the cognitive, emotional, social and individual growth of students. Changing the educational assessment methods is not an exception. The assessment of students’ academic achievements is considered one of the important and fundamental elements of education systems and curricula in the world. The current trend in the world indicates thinking and speculating about the academic assessment system, the goal of which is to increase the quality of learning experiences at school in order to achieve better learning results. Therefore, assessment has an effective role in providing the desirable quality of education (Shafiee, 2010).

In the last decade of the twentieth century, the international dissatisfaction with the conventional quantitative assessment increased, and assessment approaches, resulting from the quantitative tradition, were challenged, then alternative approaches emerged (Klenowski, 2010). Descriptive assessment is a new version of continuous evaluation which tries to pay attention to the depth and quality of students’ learning through considering the criteria for educational plans and curricula in order to present a descriptive report of their statuses instead of having a quantitative approach, unlike common assessment models (Hassani, 2010).

In addition, completing the learning process in assessment is another idea which is the backbone of forming descriptive assessment. It has been taken from process-oriented teaching and learning theories. In fact, the drills and exercises, presented in this type of assessment, result in the evolution of learning in different aspects (Ghazi, 2009). They should be in proportion to students’ needs, interests and cognitive areas. The feedback should not only be in grades. It should also be accompanied by appropriate solutions to increase the quality of learning and reform teaching methods (Brokeheart, Moos & Lang, 2010).
The students who were descriptively assessed would present positive self-concept, higher creativity and better academic achievement in comparison with those who were traditionally assessed (Nazari et al., 2013). Nitko (2001) believes that the promotion of this type of academic assessment in the classroom will encourage students to think openly and do creative things.

In descriptive assessment, unique characteristics like emphasizing internal motives, involving students in the process of learning and assessing, creating an open, friendly and active environment and paying attention to students’ interests can influence the emergence of creativity in students (Hesarbani, 2005). Such actions can also increase students’ self-esteem (Mohammadi & Akhavan Tafti, 2007) and change the class atmosphere positively to achieve emotional goals (Rouhani & Maher, 2007). Descriptive assessment has high efficiency in improving the quality of teaching-learning process among students. It also influences the creativity, innovation and growth of latent talents among students to a great extent so that learning opportunities will be created, and students will be motivated and encouraged to learn more. Moreover, it affects students’ social relationships (Hassanzadeh, 2010). Descriptive assessment influences the quality of school life, creativity and exam stress among students (Shirmohammadi, 2009).

Given the fact that this assessment method is very different from quantitative methods, previously used in education, in terms of goal, structure and procedure, it is essential that teachers become familiar with the implementation methods of this type of assessment and know the details meticulously (Barzegar Bafruee & Danafar, 2012). (Codified and comprehensive) With a little tolerance, it can be stated that the efficiency of education depends on teachers’ efficiency to a great extent (Williamson, 2007), and teachers’ knowledge of descriptive assessment influences their efficiency (Azizi & Heidari, 2012).

Therefore, one of the teachers’ creativities is the competence in implementing descriptive assessment correctly because the correct and thorough implementation of descriptive assessment and the achievement of relevant goals would be highly related to teachers’ ability in this regard (Niknami & Karimi, 2009).

According to the abovementioned, the aim of this study was to investigate the relationship between teachers’ competence in the correct implementation of descriptive assessment and students’ growing academic self-concept and creativity.

**Research Methodology**

This is a descriptive-correlational applied study with quantitative data. The statistical population included all primary school teachers and students in Eslamshahr in the Academic Year 2015-2016.

Morgan’s sample size determination table and the stepwise cluster sampling method were used to select 225 teachers and 377 students. Three tools were employed to collect data: A) *Piers-Harris Children’s Self-Concept Scale (PHCSCS)*, B) *Torrance Tests of Creative Thinking (TTCT)* and C) *Teachers’ Professional Competence in the Implementation of Descriptive Assessment Inventory*. The reliability coefficient of PHCSCS was estimated between 0.89 and 0.94; moreover, its Cronbach’s alpha was 0.79. The Cronbach’s alpha of TTCT scale was 0.78 in Iran, and the reliability of *Teachers’ Professional Competence in the Implementation of Descriptive Assessment Inventory* was 0.81.

In this study, Pearson product-moment correlation coefficient and multivariate regression analysis were used to analyze data. In addition, Kolmogorov-Smirnov Test was employed to check the normality of distribution of variables in the sample.
Findings

The First Question
Is there a relationship between teachers’ professional competence in the implementation of descriptive assessment with students’ academic self-concept?
The correlation between teachers’ professional competence in the implementation of descriptive assessment and students’ self-concept is 0.09, and this relationship is not significant at P≤0.05; therefore, it can be stated that there is not a significant relationship between them.

Table 1: The Correlation between Teachers’ Professional Competence in the Implementation of Descriptive Assessment and Students’ Academic Self-Concept

<table>
<thead>
<tr>
<th>R</th>
<th>Sig.</th>
</tr>
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<tbody>
<tr>
<td>0.09</td>
<td>0.14</td>
</tr>
</tbody>
</table>

The Second Question
Is there a relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ creativity?
The correlation between teachers’ professional competence in the implementation of descriptive assessment and students’ creativity is 0.24, and this relationship is significant at P≤0.01. Therefore, it can be stated if teachers’ competence is increased in the implementation of descriptive assessment, students’ creativity will increase. In addition, 6% of variations in the grades of students’ creativity can be predicted with teachers’ competence in the implementation of descriptive assessment.

Table 2: The Correlation between Teachers’ Professional Competence in the Implementation of Descriptive Assessment and Students’ Creativity

<table>
<thead>
<tr>
<th>R</th>
<th>Sig.</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.24</td>
<td>0.0001</td>
<td>0.06</td>
</tr>
</tbody>
</table>

The Third Question
Is there a relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ academic self-concept?
It is essential to investigate the significance of the pairwise relationships between variables in order to implement the multivariate regression in the first step. Among the five dimensions of teachers’ competence in the implementation of descriptive assessment, the relationship between the dimensions of teachers’ general competence (at P≤0.01) and goal determination (at P≤0.05) is significant with students’ academic self-concept. These dimensions are inserted as the predictors of academic self-concept into the regression equation.
The correlation coefficient (R) was reported 0.19, a fact which means general competence and goal determination, working mutually, had a correlation of 0.19 with academic self-concept. The value of F was significant for this relationship at P≤0.01; therefore, the predictor variables could predict the variations in the grades of academic self-concept in interaction with each other. However, only 3% of such variations could be predicted with the interaction between two predictor variables (general competence and goal determination).
The separate analysis of values of Beta indicated general competence was merely the significant predictor of academic self-concept. The value of Beta was obtained 0.15 in general
competence, a fact which means that if teachers’ general competence is increased by 1 standard grade, academic self-concept will be increased by 0.15 standard grade.

Table 3: The Regression Coefficients of Predictors of Academic Self-Concept

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Competence</td>
<td>0.13</td>
<td>0.15</td>
<td>2.28</td>
<td>0.02</td>
</tr>
<tr>
<td>Goal Determination</td>
<td>0.09</td>
<td>0.10</td>
<td>1.49</td>
<td>0.13</td>
</tr>
</tbody>
</table>

R²=0.03  \quad R=0.19  \quad F=4.52  \quad F Sig. = 0.01

The Fourth Question
Is there a relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ creativity?
Among the five dimensions of teachers’ competence in the implementation of descriptive assessment, the relationships of teachers’ general competence, goal determination and information collection with students’ creativity were significant at P≤0.01. Therefore, these three dimensions were inserted as the predictors of creativity into the regression equation.
The correlation coefficient (R) was reported 0.34, a fact which means general competence, goal determination and information collection, interacting with each other, had a correlation of 0.34 with creativity. The value of F was significant at P≤0.01 for this relationship. In other words, the predictor variables, interacting with each other, could predict the variations in the grade of creativity. The coefficient of determination (R²) was 0.11, a value which indicated that 11% of variations in the grade of students’ creativity could be predicted with three predictor variables (general competence, goal determination and information collection).
The separate analysis of values indicated that general competence and goal determination were the significant predictors of students’ creativity, and information collection could not significantly predict the variations in the grade of creativity.
The value of Beta was 0.29 in goal determination, a fact which means if the grade of teachers’ ability in determining goals is increased by 1 standard grade, the grade of students’ creativity will increase by 0.29, a value which is significant at P≤0.01.
The value of Beta was 0.13 for general competence, a fact which means if the grade of teachers’ general competence is increased by one standard grade, the grade of students’ creativity will be increased by 0.13, a value which is significant at P≤0.05.

Table 4: The Regression Coefficients of Predictors of Creativity

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Competence</td>
<td>0.83</td>
<td>0.13</td>
<td>2.05</td>
<td>0.04</td>
</tr>
<tr>
<td>Goal Determination</td>
<td>2.10</td>
<td>0.29</td>
<td>2.99</td>
<td>0.003</td>
</tr>
<tr>
<td>Information Collection</td>
<td>0.02</td>
<td>0.003</td>
<td>0.03</td>
<td>0.97</td>
</tr>
</tbody>
</table>

R²=0.11  \quad R=0.34  \quad F=9.95  \quad F Sig. = 0.0001

Discussion and Conclusion
The evidence indicated that teachers’ support for students’ basic psychological needs in the process of learning would result in autonomy, competence and belonging, students’ autonomy, self-regulatory learning, academic performance and well-being; therefore, their cognitive development would be facilitated (Niemiec & Ryan, 2009; Amabile, 1990; Kauffman & Sternberg, 2010).
The children who have had supportive teachers providing them with freedom of action and individual progressive programs showed higher internal motivation, perceived competence and self-esteem in comparison with children with controlling teachers (Runco & Albert, 2010). In addition, presenting a correct feedback of formative assessment would significantly increase personal efficiency among students (quoted by Sharifzadeh, 2010).

Therefore, it can be concluded that teachers’ method for assessing students are among the factors influencing the education process which is able to influence students’ creativity and academic self-concept (Chu Ying et al., 2010; Hennessey, 2000).

The teachers who used student-centered teaching methods spend most of their time asking and answering questions in the class. This skill is widely and effectively used in heuristic methods and problem-solving approaches. A question which is asked at the right moment can result in deeper and more meaningful questions. Competence in asking would lead to infinite seeking and dynamism (Seifollahpour, 2012).

The appropriate application of this method can promote self-concept in the process of assessment. The knowledge of teachers’ professional competence can let them achieve different solutions by adopting appropriate methods for thinking and reasoning with students. In fact, they are the components of creativity (Seifollahpour, 2008). The assessment method based on the structural elements of curricula and the presentation of positive feedback in students’ process of learning would lead to students’ positive self-concept and grow their power of creativity (Reeve 2009; Brofi, 2004).

On the other hand, researchers believe that all subjects can grow the creative thinking if the class conditions are provided appropriately. When students work with low expectations for a long time, and their efforts are not monitored and appreciated, there is no opportunities for creativity to develop. Creativity is emerged when children produce achievements and show imagination and innovation. In fact, they should see the positive results of their actions (Craft & Jafari, 2008).

As mentioned, the main aim of this study was to investigate the relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ academic self-concept and creativity. The research findings indicated that there was a significant relationship between teachers’ professional competence in the implementation of descriptive assessment and students’ creativity. In other words, students’ creativity will increase if teachers’ competences, codified knowledge and necessary skills increase in this regard. The research results were consistent with those of Nazari et al. (2013), Zarey (2009), Maher et al. (2007) and Lotfi Kashani (2005). The development of students’ creativity can be mainly due to the heartwarming and supportive atmosphere which teachers can provide.

Kauffman and Sternberg (2010) believe that the manifestation of a creative personality depends on the conditions in which people are in. Studies, conducted on the situational factors, indicated that creativity would be strived when opportunities were available for independent discovery and research. To them, innovation should be supported and validated. The theory of creativity investment also confirms that creative people have usually more opportunities to grow in supportive environments (Amabile, 1990).

Data analysis showed that the dimensions of teachers’ general competence and goal determination had significant relationships with students’ academic self-concept. Teachers having professional competence can benefit from appropriate skills and methods to identify students’ inefficient beliefs, negative opinions and unreasonable notions. Revising them regularly, teachers can direct students’ feelings positively and constructively by correct assessments of their abilities.
Teachers are aware of the fact that intensely negative feelings can prevent students’ ability from identifying good and beneficial things in their lives. This is confirmed by studies conducted by Costner (1948) and Reeve (2009).
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