

Creativity and Social Competence of Young Children: The Mediating Role of Emotional Intelligence

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Abstract: Background/Objectives: *The purpose of this study was to investigate the effect of young children's creativity on social competence through the mediating role of emotional intelligence.*

Methods/Statistical analysis: *To do this study, Torrance's creativity figure test, emotional intelligence checklist, and social competence scale were conducted on 76 children aged 4 years old in B city of Korea. For data analysis, correlation and regression analysis was conducted with creativity as an independent variable, emotional intelligence as a mediator variable, and social competence as a dependent variable. Mediation was tested through a three-step regression according to Baron & Kenny's mediation analysis strategy.*

Findings: *The result of this study indicates that there are correlated among the creativity, emotional intelligence and social competence. Creativity mediated by emotional intelligence, positively influenced social competence. Emotional intelligence plays a mediate role when creativity affects social activity, social participation/autonomy, and leadership of social competence. On the other hand, creativity did not affect social stability, cooperativeness, and conformity to social norms.*

Improvements/Applications: *These results showed that we can promote social competence of creative young children through fostering emotional intelligence. Therefore it is necessary to develop and implement educational programs for enhancing emotional intelligence of creative young children.*

Keywords: *Young children, Creativity, Social competence, Emotional intelligence, Mediated effect, Social activeness, Social participants/autonomy, Leadership*

I. INTRODUCTION

According to the report of the World Economic Forum [1], the advancement of the Fourth Industrial Revolution predicts that the possession of Social and Emotional Learning (SEL) skills will become more important and also the need for talented people with creativity such as new and unique ideas, different perspectives, seeing problems from a new perspective has increased. Creativity in early childhood begins with an experience of thinking about new concepts through play and making actual product. These young children's creative activities will play a positive role in raising self-awareness and self-esteem, and raising interpersonal and social competence. Also, the young children's affective development will affect their social activeness, cooperation, autonomy, leadership, etc. These social competences are essential for infants to achieve social relationship as a competent member of society.

Creativity defines the creation of objects and ideas that can give value to society and culture [2]. According to the

approach of emphasizing creativity to the interaction of personal characteristics and environment-situation, creativity is regarded universally as ability and all people have creative potential [3]. In other words, creativity is seen as a daily occurrence [4,5]. Therefore, creativity can be promoted through education and training as universal abilities of all people [6].

Emotional intelligence of a child is the mental ability to grasp and control the mood of oneself and others [7]. Emotional intelligence refers to the ability to correctly perceive and express one's emotions with others and to control emotions in a positive way. Children who have emotional control ability are easy to adapt to society, while infants who lack emotional intelligence can't control their own and others' emotions efficiently and have difficulties in interpersonal adjustment and also they showed maladaptive behaviors [7,8]. The social competence of young children refers to the ability to develop in a positive direction while effectively acquiring social goals while interacting with the environment [9]. Young children whose social competence is positively developed in early childhood are independent, achievement-oriented, and have a variety of social behaviors including effective interaction with others [10]. On the other hand, children with a lack of social competence have developmental difficulties such as having a negative self-concept for themselves or being rejected by peers [11].

According to previous studies, creative people tend to be emotionally disturbed, but they tend to be self-controlling to deal with emotional confusion and tend not to give up on frustration, humiliation, discouragement, boredom, and hostility by original ideas. On the other hand, they do not like working with others, they want to make their own judgments about their own work, and they do not like to follow others' opinion. Therefore, creative infants tend to plan and decide for themselves, are dependent of their own judgment, and acknowledge their responsibility themselves. In this study, we assumed that emotional intelligence has mediating effect on the social competence of children with high creativity. In other words, if creativity is high but emotional intelligence is low, it will not be able to exert social competence.

According to previous studies about relationships among creativity, emotional intelligence, social competence, creativity has a correlation with emotional intelligence, and emotional intelligence has an effect on social competence.

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There is a study that social competence has a strong influence on personality variables and that mother emotion and teacher emotion related to personality formation affect young children's social competence [12,13]. Research results reported about the effects of social competence based on creative storytelling, and relationships between creativity and leadership [14,15]. However, there are few studies that have directly examined the relationship between creativity and social competence. Therefore, we aimed to investigate the effect of young children's creativity on social competence through the mediating role of emotional intelligence. Research problems are as follows. 1. Are there the relationship among young children's creativity, emotional intelligence, and social competence? 2. Does emotional intelligence play a mediator when young children's creativity affects overall social competence? 3. Does emotional intelligence play a mediator when young children's creativity affects sub-variables of social competence?

II. RESEARCH METHODS

2.1. Participants

This study was conducted on 76 children aged 4 years old in a kindergarten in B city of Korea. Participants included 39 boys (54%) and 37 girls (49%).

2.2. Research Instruments

2.2.1. Torrance's creativity figure test (TTCT)

To do this study, Torrance's creativity figure test (TTCT) [2], created by Torrance (2002) are divided into fluency, originality, abstraction of title, elaboration, resistance to premature closure. The TTCT consists of three activities such as a picture composition, a painting completion, and a line.

The inspection time is 30 minutes for three activities, 10 minutes for each activity. The scoring method of the TTCT was calculated according to the scoring criteria presented in the TTCT standard (Torrance, 2002). The reliability of TTCT was .76.

2.2.2. The emotional intelligence checklist

Emotional intelligence checklist, created by Salovey and Mayer [7], modified and adapted by Lee Byung-Lae [16] consists of 31 items and is divided into understanding of self-perception, self-control of emotion, understanding of other's emotion, and management of other's emotion. The reliability (Cronbach' α) was .85 in this study.

2.2.3. The social competence scale

Social competence scale, translated and adapted by Lee, Lee, & Yang [17], which is the Korean version of 'Vineland Adaptive Behavior Scales' by Sparrow, Balla & Cicchetti [18] consists of 40 items and is divided into social activeness, social stability, cooperativeness, social participation & autonomy, adaptability based on social norms, and leadership variables. The reliability (Cronbach' α) was .88 as shown in the Table 1.

Table 1. The Composition & Reliability of Social Competence Scale

Sub-variables	Definition	Items	No. of items	Reliability (Cronbach' α)
Social activeness	Activities and aggressiveness when playing with friends	1, 2, 3, 4, 5, 6, 7	7	.87
Social stability	Emotional reactions to others	8*, 9, 10*, 11*, 12*, 13*	6	.62
Cooperativeness	Adapting to others' suggestions, helping, sharing	14, 15, 16, 17*, 18, 19, 20	7	.75
Social participation & autonomy	Plan how to participate, interact, and solve problems	21, 22, 23, 24*, 25, 26*, 27*	7	.86
Adaptability based on social norms	Do not disturb others, keep social rules	28, 29, 30, 31, 32*, 33	6	.65
Leadership	Play initiative, independence, situation grasp	34, 35, 36, 37, 38, 39, 40	7	.89
Total			40	.88

* reverse items

2.3. Data Gathering & Analysis

From March 16th to March 27th, 2015, the TTCT, emotional intelligence and social competence tests were conducted.

For data analysis, correlation and regression analysis was conducted with creativity as an independent variable (IV), emotional intelligence as a mediator variable (MV), and social competence as a dependent variable (DV). Mediation

was tested through a three-step regression according to Baron & Kenny [19]'s mediation analysis strategy.

III. RESEARCH RESULTS

3.1. Results of Correlation Analysis

The mean and standard deviation are as shown in the Table 2.

Table 2. Result of Descriptive Statistics (N=76)



Variables		Min.	Max.	M	SD
Creativity		41	114	76.72	15.87
Emotional intelligence		90	135	112.29	9.22
Social competence	Social activeness	7	32	23.84	4.33
	Social stability	12	29	20.66	3.76
	Cooperativeness	19	31	25.74	2.93
	Social participation/autonomy	16	33	25.17	3.45
	Adaptability based on social norms	14	29	20.64	2.80
	Leadership	13	28	21.34	4.01
	Total	94	167	137.39	15.83

Table 3 shows correlated among the creativity, emotional intelligence and social competence. Creativity correlated with emotional intelligence ($r=.268, p<.05$) and social competence (total score) ($r=.306, p<.05$). Also emotional intelligence correlated with social competence (total score) ($r=.815, p<.05$).

Creativity correlated with social activeness ($r=.277$), social participation & autonomy ($r=.272$), and leadership ($r=.297$) of sub-variables of social competence ($p<.05$). On the other

hand, there were no correlation with social stability, cooperativeness, and adaptability based on social norms with creativity ($p>.05$).

Emotional intelligence correlated with all sub-variables of social competence ($p<.05$). The highest correlations are cooperativeness ($r=.725$), followed by adaptability based on social norms ($r=.700$), social activity ($r=.688$), social participation & autonomy ($r=.663$), leadership ($r=.551$), and social stability ($r=.356$).

Table 3. Correlation Result of Variables (N=76)

Variables	1	2	3	4	5	6	7	8	9
1 Creativity	1								
2 Emotional intelligence	.268*	1							
Social competence	3 Social activeness	.277**	.688**	1					
	4 Social stability	.224	.356**	.457**	1				
	5 Cooperativeness	.163	.725**	.535**	.256*	1			
	6 Social participation & autonomy	.272*	.663**	.550**	.270*	.675**	1		
	7 Adaptability based on social norms	.069	.700**	.346**	.083	.621**	.596**	1	
	8 Leadership	.297**	.551**	.711**	.515**	.332**	.532**	.328**	1
	9 Total	.306**	.815**	.842**	.614**	.734**	.798**	.620**	.806**

* $p<.05$,** $p<.01$

3.2. Mediating Effect of Emotional Intelligence in Relations of Creativity and Overall Social Competence

Mediation was tested through a three-step regression [19] as shown in the Table 4. Creativity affects emotional

intelligence ($\beta=.27, p<.05$). Creativity has an impact on social competence (total score) of step 2 ($\beta=.31, p<.05$). Emotional intelligence has an impact on leadership ($\beta=.79, p<.05$). When creativity affects social competence (total score), emotional intelligence was found to mediate partly in Figure 1-(a)..

Table 4. Mediating Effect of Emotional Intelligence in Relations of Creativity and Overall Social Competence (N=76)

Step	Variables	B	SE	β	t	R^2 (Adj. R^2)	F
Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
Step 2. I.V.-> D.V.	Creativity -> Social competence(total)	.31	.11	.31	2.76**	.093 (.081)	7.63**
Step 3 I.V., M.V. -> D.V.	Creativity -> Social competence(total)	.09	.07	.09	1.35	.673 (.664)	74.95**
	Emotional intelligence -> Social competence(total)	1.36	.12	.79	11.36**		

* $p<.05$,** $p<.01$

3.3. Mediating Effect of Emotional Intelligence in Relations of Creativity and Sub-variables of Social Competence

Mediation was tested through a three-step regression [19] as shown in the Table 5.

3.3.1 Social activeness

Creativity affects emotional intelligence ($\beta=.27, p<.05$). Creativity has an impact on social activeness of step 2 ($\beta=.28, p<.05$), and emotional intelligence has an impact on social activeness ($\beta=.66, p<.05$). When creativity



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affects social activeness, emotional intelligence was found to mediate partly in Figure 1-(b).

3.3.2 Social stability

Creativity affects emotional intelligence ($\beta=.27, p<.05$). But creativity does not affect social stability of step 2 ($p>.05$), and emotional intelligence has an impact on social stability ($\beta=.32, p<.05$). There was no mediating effect of emotional intelligence on the effect of creativity on social stability.

3.3.3 Cooperativeness

Creativity affects emotional intelligence ($\beta=.27, p<.05$). But creativity does not affect cooperativeness of step 2 ($p>.05$), and emotional intelligence has an impact on cooperativeness ($\beta=.73, p<.05$). There was no mediating effect of emotional intelligence on the effect of creativity on cooperativeness.

3.3.4 Social participation & autonomy

Creativity affects emotional intelligence ($\beta=.27, p<.05$). Creativity has an impact on social participation & autonomy of step 2 ($\beta=.27, p<.05$), and emotional intelligence has an

impact on social participation & autonomy ($\beta=.64, p<.05$). When creativity affects social participation & autonomy, emotional intelligence was found to mediate partly in Figure 1-(c).

3.3.5 Adaptability based on social norms

Creativity affects emotional intelligence ($\beta=.27, p<.05$). But creativity does not affect adaptability based on social norms of step 2 ($p>.05$), and emotional intelligence has an impact on adaptability based on social norms ($\beta=.73, p<.05$). There was no mediating effect of emotional intelligence on the effect of creativity on adaptability based on social norms.

3.3.6 Leadership

Creativity affects emotional intelligence ($\beta=.27, p<.05$). Creativity has an impact on leadership of step 2 ($\beta=.29, p<.05$), and emotional intelligence has an impact on leadership ($\beta=.51, p<.05$). When creativity affects leadership, emotional intelligence was found to mediate partly in Figure 1-(d).

Table 5. Mediating Effect of Emotional Intelligence in Relations of Creativity and Sub-variables of Social Competence (N=76)

Dependent variable	Step	Variables	B	SE	β	t	R ² (Adj.R ²)	F
Social activeness	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Social activeness	.08	.03	.28	2.48*	.077 (.064)	6.14*
	Step 3 I.V., M.V. -> D.V.	Creativity -> Social activeness	.03	.02	.10	1.14	.482 (.468)	34.03**
	Emotional intelligence -> Social activeness	.31	.04	.66	7.57**			
Social stability.	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Social stability	.05	.03	.22	1.97	.050 (.037)	3.89
	Step 3 I.V., M.V. -> D.V.	Creativity -> Social stability	.03	.02	.14	1.23	.144 (.121)	6.15**
	Emotional intelligence -> Social stability	.13	.05	.32	2.83**			
Cooperativeness	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Cooperativeness	.03	.02	.16	1.42	.027 (.013)	2.03
	Step 3 I.V., M.V. -> D.V.	Creativity -> Cooperativeness	-.01	.01	-.03	-.40	.53 (.51)	40.55**
	Emotional intelligence -> Cooperativeness	.23	.03	.73	8.77**			

Social participation & autonomy	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Social participation & autonomy	.06	.02	.27	2.43*	.074 (.062)	5.92*
	Step 3 I.V., M.V. -> D.V.	Creativity -> Social participation & autonomy	.02	.02	.10	1.13	.449 (.434)	29.76**
Emotional intelligence -> Social participation & autonomy		.24	.03	.64	7.05**			
Adaptability based on social norms	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Adaptability based on social norms	.01	.02	.07	.59	.005 (-.009)	.35
	Step 3 I.V., M.V. -> D.V.	Creativity -> Adaptability based on social norms	-.02	.01	-.13	-1.50	.505 (.491)	37.20**
Emotional intelligence -> Adaptability based on social norms		.22	.03	.73	8.59**			
Leadership	Step 1. I.V.-> M.V	Creativity -> Emotional intelligence	.16	.07	.27	2.39*	.072 (.059)	5.73
	Step 2. I.V.-> D.V.	Creativity -> Leadership	.07	.03	.29	2.67**	.088 (.076)	6.15**
	Step 3 I.V., M.V. -> D.V.	Creativity -> Leadership	.04	.02	.16	1.61	.328 (.309)	17.80**
Emotional intelligence -> Leadership		.22	.04	.51	5.10**			

*p<.05,**p<.01

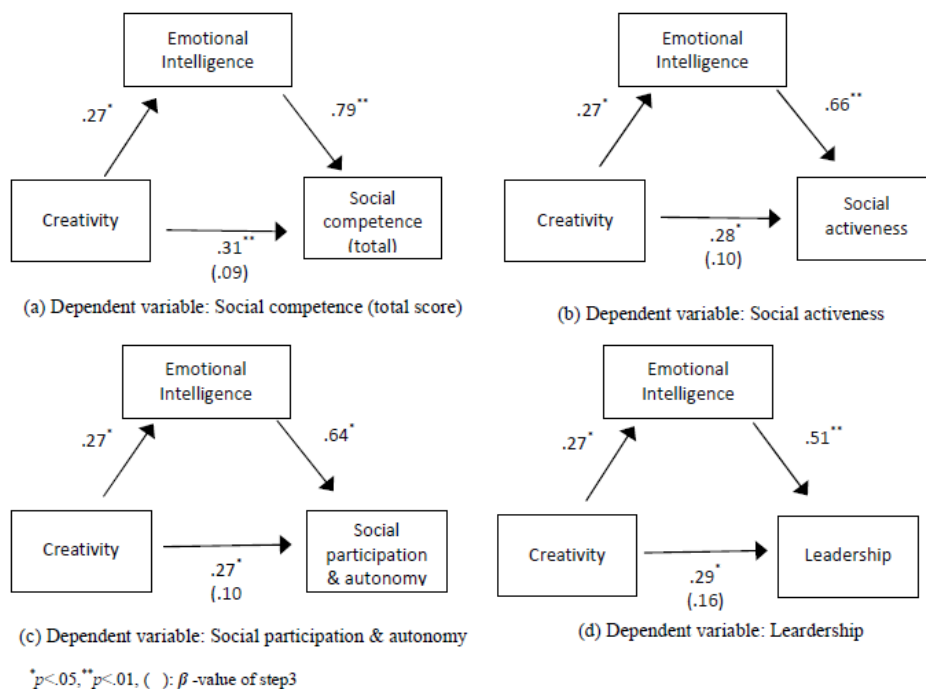


Fig 1. Mediating Effect of Emotional Intelligence in Relations of Creativity and Social Competence

IV. CONCLUSION

As the result of this study, emotional intelligence plays a mediate role when creativity affects social activity, social participation/autonomy, and leadership of social competence. On the other hand, creativity did not affect social stability, cooperativeness, and conformity to social norms, and the results showed no mediating effect of emotional intelligence. When creativity is higher and emotional intelligence is higher, social activity, social participation/autonomy, and leadership of social competence are enhanced. This means that emotional intelligence can improve social competence of creative infants by promoting the development of interpersonal understanding and emotional control. Therefore, it is necessary to develop and implement educational program for enhancing emotional intelligence of creative infants. In the future, it is necessary to carry out a study that extends the sampling of the research target for young children in various regions. In the follow up of this study, it is needed to continue to search for the relevance and mediating variables between subordinate variables of creativity, emotional intelligence, and social competence.

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