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Creativity Research Trends in Korea

Kyung-hwa Lee[1] and Kyoung-hoon Lew[2*]

[1]*Department of Lifelong Education, SoongSil University, 511 Sangdo-dong, Dongjak-Gu, Seoul, 156-743, Republic of Korea*
[2*]*Graduate School of Education, SoongSil Univ, 511 Sangdo-dong, Dongjak-Gu, Seoul, 156-743, Republic of Korea*
[2*]*lewkh@ssu.ac.kr*

Abstract

The purpose of this study is to review and analyze trends of creativity research in Korea, to present the direction of future research areas, and to find implications for creativity research. For this, creativity research in Korea in the recent 5 years (2011-2015) has been analyzed to identify methodology and research subjects. The purpose of this study is to find a frame that can be analyzed according to the current situation of creativity education in Korea. In accordance with the purpose of the study, creativity research was found through domestic thesis search engines to identify the main tendency of research method and the main object. This study suggests a framework for the effective analysis of these studies and suggests implications for future research on creativity.

Keywords: *Creativity research, Recent trends, Direction for future creativity research*

1. Introduction

Creativity is gaining attention as one of the most important competencies required in future society. In order for individuals to adapt and perform their jobs in an informed and specialized future society, creative ability to solve problems with flexible and creative thinking in response to rapidly changing social conditions is of the utmost importance. Creativity is the most advanced and productive intellectual ability of human beings. It is understood not only by simple intelligence but also by personality characteristics. It is commonly believed that it can be developed through education. Therefore, in the recently revised education curriculum, creativity is being emphasized as one of the important values

Korea recognized the importance of creativity education and established the goal of creativity from the seventh curriculum revised in 1997. Especially, in 2009 revised curriculum, the main goal was focused on cultivating creative talent with harmonious personality. As the demand for creativity education in society has increased, studies have been carried out focusing on the nature of creativity, development of curriculum and education programs for creativity. But in order to be applied theoretically and practically, the need for research on creativity has become more prominent.

Since Guilford [1] referred to creativity as a divergent thinking in his keynote speech at the American Psychological Association, many researchers have conducted

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research on the development of test instruments that measure creativity, and as a result, the research trend in the psychometric aspect has increased. Although it is a creative thinking test developed by Torrance that is the most representative creativity test, it is pointed out that this test has many problems [2]. This approach can measure creativity and assumes that creativity is high or low depending on the individual [3]. Therefore, the correlation coefficient between these characteristics and creativity score was calculated to find other psychological characteristics that affect creativity. After the development of computers and the theory of information processing, there has been a great change in terms of creativity. Meanwhile, Finke, Ward & Smith [4] have the view of creativity as a human personality and disposition or subconscious process has weakened the view of creativity as a conscious process has emerged.

For example, Sternberg and Lubart [5][6] point out that creativity research is not complete because it does not comprehensively understand the complexity of creativity but only some of the phenomena. In their investment theory, therefore, they incorporate six factors: intelligence, knowledge, thinking style, personality, motivation, and environment that lead to creativity. Indeed, the approach to comprehensively understand encompassing all elements that help cause creativity is named as confluence approaches and has a complex and multi-faceted feature. Csikszentmihalyi [7], Gruber & Wallace [8] emphasized that an integrative conceptualization to understand creativity is presented by various scholars and that creativity is understood as 'the result of complex interaction of various factors' and creativity appears in problem-solving process.

In Korea, research on creativity has emerged since the late 1960s. There were not many types of research until 1990 on the subject of creativity. In recent decades, the number of creativity researches has increased rapidly, and the quality of creativity has increased but the number is still insufficient. Nonetheless, Park & Kang [9] have a clear view on the trends and characteristics of creativity research through rigorous analysis of the contents of creativity research conducted in Korea. In particular, the research analyzes the topics and contents in depth and presents them in a systematic manner. In addition, Kim [10] also reports on the subject and contents covered in Korea's creativity study in depth based on US creativity classification and presents them in a well-organized way.

All of the theories about creativity that are being discussed are based on studies abroad, and there is a significant lack of theories and research based in Korea. Based on the analysis of creativity research in Korea, a framework and analysis method by Korean scholars are needed, and understanding the analysis of creativity research and finding ways to change it to Korean are also necessary. Therefore, in order to understand the characteristics of the trend of creativity research in Korea, it is required to first find a framework for analyzing trends in creativity research.

The recent discourses in the society positively included the words like ‘convergence,’ ‘consilience,’ and ‘group intelligence. ’The reason why the concept of convergence is becoming an important theme in the society as we observed above could be said that it is viewed as an alternative approach to resolve the problems in the society or natural phenomena, which could not be solved easily with the achievements of the fragmented academic disciplines, through novel attempts. For this, Lee developed the SMASCH 6-6-6 model, as a framework for the development of programs by levels and providing the goals and direction for the DHA programs, which could be applied to the earlier school-aged children to the adults. This included the six factors of creative abilities, which are

the important factors of creativity (fluency, precision, imagination, flexibility, sensitivity in thinking, and originality), and the six elements of the creative characters (curiosity, sensitivity, adherence to the tasks, humor, independence/adventurousness, and leadership in problem solving), as well as the six key future competencies (self-control, sense of community, communication, creativity/convergent thinking, information processing, and aesthetic sensitivity) Also, the programs which could enhance such competencies in a convergent manner in the six academic domains of science, math, art, society, confluence, and humanity, were developed.

2. Method

2.1. Collecting data

In order to understand trends in Korean creativity research, to analyze research methods and research subjects, and to provide implications for creativity research in the future, all papers containing the title of creativity should be included in addition to the articles published in major academic journals related to education and psychology. In order to investigate the domestic academic papers on creativity published in the recent 5 years, the journal search function (www.riss.kr) provided by the Korean Educational and Scientific Information Service (RISS) was used. 'Creativity' or 'creative' were typed as a keyword and searched for five years from 2011 to 2015.

Table 1. Subject classification table in RISS

Classification	
Year(n)	2015 (186) / 2014 (157) / 2013 (146) / 2012 (126) / 2011 (103)
Thematic(n)	Social Science (385) / Arts (57) / Philosophy (30)/ General Studies (14)/ Science / Technology (10)/ Language (8) / Literature (8)/ Natural Science (6)/ History (2)
Journal(n)	The Journal of creativity education(125)/ The Journal of the Korean Society for the Gifted and Talented(24)/ Journal of Gifted/Talented Education(21)/ The Journal of Learner-Centered Curriculum and Instruction(20)/ The Journal of Korea Open Association for Early Childhood Education(19)/ The Journal of The Korean Journal of Thinking & Problem Solving(18)/ Journal of Human Resource Management Research(18)/ Korea Journal of Tourism Reseach(15)/ The Korea Journal Child Education(15)/ Journal of Research in Curriculum Instruction(14)/ Korean Journal of General Education(14)/ Korea Journal of Children's Media(14)/ Korea Journal of Early Childhood Education(13)/ Early Childhood Education Reserch & Review(12)/ Journal of Future Early Childhood Education(12)/ Korea Science & Art Forum(11)/Journal of Korea Design Forum(11)/ Journal of Korean Practical Arts Education(10)/ Korean journal of educational research(10)

2.2. Subjects

The articles to be analyzed were limited only to the articles published in the journals of the Korean Research Foundation. As a result, a total of 869 journals were searched. The abstracts of these papers were analyzed, and if there was not enough information in the abstract, the whole papers were reviewed and analyzed. The research on creativity education accounted the most followed by giftedness and gifted education (24), gifted education research (21), learner-centered curriculum education (20), and open early

childhood education research (19) However, the results of the research on education psychology (10) and pedagogy (2) were not as many as Kim [10] reported.

3. Frame of analysis of research trends

In order to develop a creativity program for manpower of creative convergence, Lee [11] developed the 'SMASCH 6-6-6 Model' to guide the development of programs for each stage or level. This model considered creativity, key competences, and fields of philosophies. Creativity includes creative skills and creative characters; creative skills contained six sub factors—fluency, precision, imagination, flexibility, sensitivity of thinking, and originality—and creative characters also contained six sub factors—curiosity, sensitivity, immersion in assignments, humor, independence/adventure, and problem-solving leadership. Also, six key competences of future education included self-management, community awareness, and communication, creative convergent thinking, information processing, and aesthetic sensibility, while the model was configured to nurture six areas of philosophy: Science, Math, Art, Society, Confluence, and Humanities [12].

Lee & Lew [12] insist that this model has diversified product improvement creative technique, permitting the in-depth analysis of products or processes of our creativity education. Each program involves applying a set of subject field, some items of creativity and some components of core competency another program set of this model is competencies. Normally, one set of model including creative ability such as influence and originality, and creative personality such as curiosity and openness. Self-control and communication in the future core competency also involved in that program in one field with creativity factors. Another way is that possible one set of model would be components of the product of other level group students. This model set of factors would be alternative for every program making solutions [13]

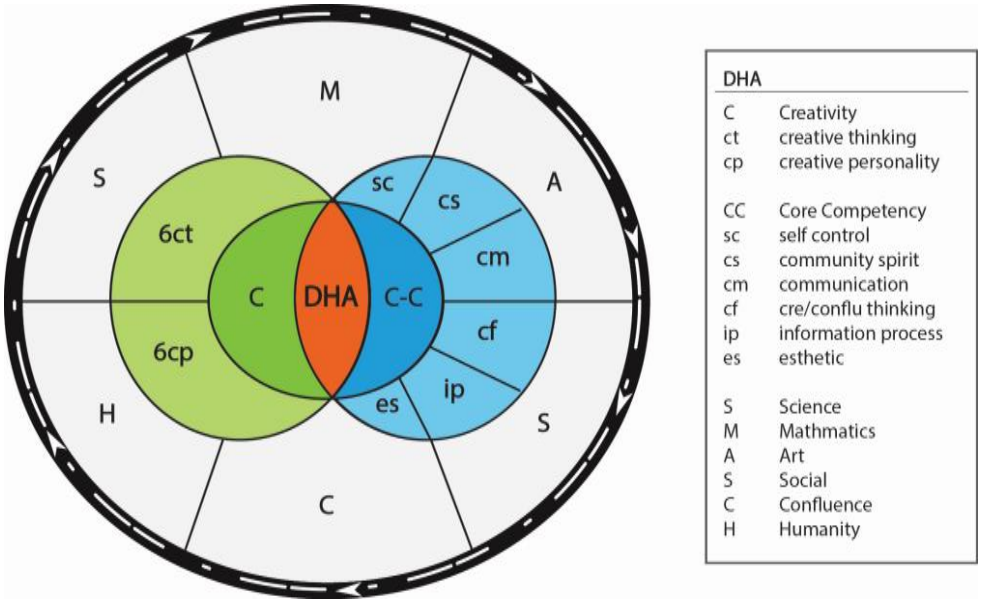

Figure 1. SMASCH 6-6-6 model for DHA

4. Results

The overall methodologies and research subjects of the papers are as follows. The theoretical research was the highest at 42.4%, followed by experimental research and related research. The research subjects were 18.1% of elementary school students and others were not specified. The use of model to support analyzing creative research is a more complicate process. It is necessary to introduce appropriate model into a suitable type of organization that would preferably be one employing multidisciplinary school of participants.

Convergent thinking is crucial in today's age of creation and invention, and creativity is a very important concept at the moment when success and loss are determined by creativity. Although the awareness of the importance of creativity is prevalent, the recognition of 'creativity' in Korea is dominated by the study of creative individuals that correspond to an individual flexibility and fluency. It is necessary to develop an advanced research that includes openness along with divergent thinking in 'creative problem solving', and it can be said that it is time to further research on creativity that can provide implications to the field. Kim [10] insisted that the analysis of creativity should be carried out not based on the existing theoretical framework but according to the analysis framework composed of the competencies necessary for the age of convergence.

Creativity is generally influenced by individual's emotions and intuition, as well as social support, rather than being influenced by individual intellectual ability (cognitive thinking) Creativity research should be done to make a creative society that generates the essential value of human life in each field. However, these areas will also require the convergent capacity to realize that they are closely related.

In addition, the analysis of creativity research that examines the relevance of the competence emphasized in the educational field in order to educate creative individuals will play a role on the basis of creativity education that requires a cooperative creativity with convergent thinking. It can be said that there is a need for research for convergent creativity that integrates the diversity of life that contains holistic and integrated experiences of human body and mind.

Table 2. Subject classification table

Papers total	Method			
	Theoretical Research	Relationship Research	Experiment Research	Others
358	152 (42.4%)	83 (23.1%)	121 (33.7%)	2 (0.5%)
Participants				
Early childhood children	Elementary school students	Adolescents (junior school)	Adults	Others
44 (12.2%)	65 (18.1%)	57 (15.9%)	54 (15.0%)	138 (38.5%)

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