

# A Study on Image Selection for the Development of Educational Contents Enhancing Undergraduates' Creativity and Personality

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## Abstract

**Background/Objectives:** Targeting undergraduates familiar with visual media, as a basic study to develop educational contents enhancing creativity personality, it aims to select educational images suitable for the enhancement of creativity-personality. **Methods/Statistical Analysis:** For this, experts in image and education classified images in accordance with self-identity, creativity, elements of personality, education, artistry, emotionality, and expansiveness. Regarding the responses of each item in the questionnaire, the average, standard deviation, and coefficient of variation were calculated. Also, to verify the contents validity, the content validity rate was calculated. **Findings:** First, total 59 films, 58 animations, 65 documentaries, 56 cartoons, and 65 advertisements were selected. Second, through the Delphi method with experts to secure the contents validity and social validity of the 59 films, 58 animations, 65 documentaries, 56 cartoons, and 65 advertisements finally selected on the basis of the selection standards and contents analysis, total 40 images representing each medium were selected. The significance of this study was like following. First, it is significant that the education-film convergence education using the strengths of visual media was sought for to develop educational contents enhancing undergraduates' creativity-personality. Second, it is also significant to suggest the new standards of image selection to develop educational contents enhancing creativity-personality. **Improvements/Applications:** It is urgently needed to have researches to develop/use the actual educational contents enhancing creativity-personality based on the results of this study and the results of undergraduates' demand survey.

**Keywords:** Animation, Cartoon, Creativity-personality, Documentary, Film, Undergraduate

## 1. Introduction

The creativity and personality are emphasized as essential core competences in the future education of the 21st century. The creativity and personality education is an education not only for cultivating creative and high-level personality required for global leaders or world citizens of the future society through every curriculum or various creative experience activities, but also for training 'creative talent equipped with morality', rather than simply combining creativity education with personality educa-

tion. Based on the organic combination between those two educations of creativity and personality, recently there are active integrated discussions on the mutual effect that personality development is directly leading to creativity development. Moreover, the task mostly needed to the current education paradigm is to develop the teaching-learning methods and teaching media suitable for the creativity-personality education.

While the education paradigm in the industrial society was the traditional education method, the education paradigm in the information society is the composi-

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tion of educational environment focusing on creativity, diversity, and student based on differences in learners' abilities. It means that the teacher-centered teaching method is changing to the learner-centered one. The basic structure of the learner-centered teaching method means the system helpful for learning, abundant learning materials, physical environment, and various technology environments when learners play the main roles in classes. The effect of learning is rising when learners encounter such well-prepared and qualified learning data.

Meanwhile, visual media is the teaching media that learners can easily learn new visual and auditory data by using this tool delivering messages using sight and hearing. The visual media has appeal, participation, entertainment, and persuasion<sup>1</sup>, and also makes information be absorbed quicker than print media by appealing to recipients' multi-senses with powerful appeal<sup>2</sup>. In the results, through the artistic genre, learners can develop creativity and imagination in the learning process, and also have expressiveness through linguistic and visual thinking. It can be also helpful to the personality cultivation like consideration, respect, and communication by understanding other learning in its activity process. Such images effective for the cultivation of creativity personality can provide learners with diverse opportunities promoting creativity, and also cultivate personality desirable for learners who become dehumanized and individualized. The representative visual media includes film, animation, documentary, cartoon, and advertisement<sup>3,4</sup>. Films can contain the educational practice by including abstract educational phenomenon and issues in the story frame while also giving a chance to view and criticize issues more objectively. Also, films can become an effective education method and teaching media that can integrate artistic activities with study activities. Animation has effects on the improvement of linguistic creativity, formative creativity, and creative problem-solving ability<sup>5</sup>. As documentary has high similarity with the reality compared to other film dramas, it shows the cultivation effect that viewers easily remind of the reality presented by images based on the memory of the reality exposure in images when judging the actual reality<sup>6</sup>. Especially, the Knowledge Channel e is short, but maximizes lingering imagery, emotionality, and cultivation effect, so that this study aims to actively use the Knowledge Channel e. Cartoons can be divided into webtoon and published cartoon familiar with the learner group comprised of

undergraduates. Cartoons replace the absence of temporality with the flexibility of spatiality as a genre with the widest range of imagination<sup>7</sup>. As convergent contents reflecting changes in contents ecosystem recently getting popular with young people, the webtoon can easily connect learners' appreciation to experience activities. As the most industrial images using various mechanisms of human psychology and social phenomenon including public service & commercial advertisements, advertisements frankly show the issues like rationality, sensitivity, creative expression, and morality. As a genre actively using the montage technique that appositively connects scenes in parallel compared to other visual contents<sup>8</sup>, its multi-layered meanings and the structure of description based on metaphorical expressions can induce diverse elements related to creativity-personality. Thus, this study aims to use visual media including film, animation, documentary, cartoon, and advertisement as teaching media for the creativity-personality education. Especially, starting from undergraduates' taste and interest in visual media, it is expected to help their understanding of production methods in diverse meanings and having balanced judgement. Targeting undergraduates familiar with visual media, as a basic study to develop educational contents enhancing creativity-personality, it aims to select educational images suitable for the enhancement of creativity-personality.

Research Question 1. How are the image selection and contents analysis for the development of educational contents enhancing undergraduates' creativity-personality?

Research Question 2. How are the contents/social validity of the images selected for the development of educational contents enhancing undergraduates' creativity-personality?

## 2. Method

### 2.1 The Image Selection and Contents Analysis for the Development of Educational Contents Enhancing Undergraduates' Creativity-Personality

For the image selection and contents analysis for the development of educational contents enhancing undergraduates' creativity-personality, this study conducted procedures like following. First, the researchers of this study selected images in accordance with the selection standards such as sub-elements of undergraduate' self-identity(occupation, religion, politics, philosophical

lifestyle, friendship, dating, gender role, and leisure activity), elements of creativity (cognitive element, dispositional element, and motivational element), and elements of personality (interpersonal relation and personality judgement) suggested by the study on film selection<sup>3</sup>. In the 2nd step, after explaining the purpose of this study, five experts (persons with master in image and persons with career experience in the relevant area for more than ten years) in image were provided with the images selected in the 1st step and also summary. In accordance with the standards of educational contents enhancing undergraduates' creativity-personality such as education, artistry, emotionality, and expansiveness, they were selected through four times of expert meetings.

## 2.2 The Contents/Social Validity of the Films Selected for the Development of Educational Contents Enhancing Undergraduates' Creativity-Personality

### 2.2.1 Research Target

In order to examine the social validity of the image list selected in accordance with the image selection & contents analysis for the development of educational contents enhancing, this study conducted Delphi method targeting 12 educationists such as professors providing lectures or conducting researches related to multimedia or publishing theses or books related to creativity and personality, with their previous consents.

### 2.2.2 Survey Procedure

This study conducted three times of Delphi method targeting 12 experts. Their previous consents were obtained after individually explaining the purpose of the study. To the individual panel participating in the survey, the final image list, the summary of each image, and questionnaire including the operational definition of terms were distributed/collected through email. In case when panels had questions about the survey, they were solved by talking on the phone or having individual interview.

### 2.2.3 Data Analysis

Regarding the responses of each item in the questionnaire, the average, standard deviation, and coefficient of variation were calculated. Also, to verify the contents validity, the Content Validity Rate (CVR) was calculated. The SPSS 18.0 was used for the statistical data process

## 3. Results

### 3.1 The Image Selection and Contents Analysis for the Development of Educational Contents Enhancing Undergraduates' Creativity-Personality

For the image selection and contents analysis for the development of educational contents enhancing undergraduates' creativity-personality, in the 1st step, this study selected images in accordance with the selection standards of creativity-personality and self-identity presented in<sup>3</sup>. First, total 59 films (8 occupation, 7 religion, 6 politics, 7 philosophical lifestyle, 8 friendship, 8 dating, 7 gender role, and 8 leisure activity) suggested<sup>3</sup> were used.

Regarding animation, total 63 animated films were selected such as nine occupation like *Ratatouille* (US, 2007), eight religion including *Saint Young Men* (Japan, 2013), nine politics like *The Window* (Korea, 2012), ten philosophical lifestyle including *Leafie, A Hen into the Wild* (Korea, 2011), nine friendship like *Monster Inc* (US, 2001), 6 dating including *The Girl who Leapt through Time* (Japan, 2014), six gender role like *Marie's Story* (Korea, 2001), and six leisure activity including *UP* (US, 2009).

In case of documentary (Knowledge Channel e), total 70 documentary films were selected such as 11 occupation like *Popular Jobs* (2012), nine religion including *Hello, the Pope* (2014), seven politics like *A Mouse's Speech* (2015), 12 philosophical lifestyle including *Elisz* (2014), seven friendship including *A Boy's Night* (2013), six dating like *Questions* (2008), ten gender role like *The Most Creative Job in the World* (2008), and eight leisure activity including *My Trip* (2012).

In regard of cartoon, total 65 cartoon works were selected such as eight occupation like *The Sound of Employment* (NAVER, 2008), seven religion including *Possession* (NAVER, 2014), seven politics like *After-School War Activity* (DAUM, 2012), eight philosophical lifestyle including *About Death* (NAVER, 2012), nine friendship like *The Prince on a Cultivator* (NAVER, 2011), eight dating including *Green Boy* (NAVER, 2010), eight gender role like *Sweet Life* (NAVER, 2011), and ten leisure activity including *Good Person* (DAUM, 2010).

Regarding advertisement, total 75 advertisements were selected such as eight occupation like *Bacchus* (Korea, 2014), seven religion including *CHARTER FOR COMPASSION* (US, 2009), eight politics like *Roh, Moo-*

hyun, a Presidential Candidate of 2002 (Korea, 2002), 13 philosophical lifestyle including Father's Love (Thailand, 2015), nine friendship like Maxwell House: Respond 1994 (Korea, 2013), 13 dating including Abuse in Relationship: Would you Stop Yourself? (US, 2010), seven gender role like Pampers: Moms' 1st Birthday, and ten leisure activity including Better for it: Inner Thoughts (UK, 2015).

In the 2nd step, after providing the images selected in the 1st step and their summary to five experts (persons with master in image and persons with career experience in the relevant area for more than ten years) in image, they were asked to make selections based on the standards of educational contents enhancing undergraduates' creativity-personality such as education, artistry, emotionality, and expansiveness through four times of expert meetings. In the results, total 59 films, 58 animations, 65 documentaries, 56 cartoons, and 65 advertisements were selected.

### 3.2 The Contents/Social Validity of the Films Selected for the Development of Educational Contents Enhancing Undergraduates' Creativity-personality

In order to secure the contents/social validity of 59 films, 58 animations, 65 documentaries, 56 cartoons, and 65 advertisements finally selected in accordance with the selection standards and contents analysis for the development of educational contents enhancing creativity-personality, this study conducted Delphi method. It is reported that generally around three times of repetitive research would be suitable to induce stable responses and agreement from panels<sup>9</sup>. This study also conducted three times targeting 12 experts in education and site. In the results of data analysis, in case when the average value of question is lower than the one of the relevant area or the coefficient of variation is higher than 0.8, the question was deleted. In the results of calculating the content validity rate (CVR) to verify the contents validity, the items showing the minimum value suggested by Lawshe (1975) higher than .56 would have the contents validity<sup>10</sup>, so that items lower than .56 were deleted.

In the results of the final Delphi of the image list, regarding occupation, the average range of questions was between 4.11 and 4.27 while the range of standard deviation was between .55 and .73. The average of religion was between 3.97 and 4.02 while the range of standard deviation was between .45 and .83. The average of politics was

between 4.17 and 4.33 while the standard deviation was between .51 and .83. The average of philosophical lifestyle was between 4.01 and 4.25 while the range of standard deviation was between .65 and .85. The average of friendship was between 4.08 and 4.42 while the range of standard deviation was between .45 and .82. The average of dating was between 4.22 and 4.36 while the range of standard deviation was between .51 and .66. The average of gender role was between 4.00 and 4.44 while the range of standard deviation was between .35 and .43. The average of leisure activity was between 4.17 and 4.32 while the standard deviation was between .55 and .76.

Total 40 visual works showing the highest scores in the Delphi result were selected. The films finally selected include 3 Idiots(Hi Rani Raj Kumar, 2006), Life of Pi(Ian, 2005), Gwanghae(Choo Chang-min, 2012), The Bucket List(Rob Reiner, 1996), The Untouchables: friendships of 1%(Olivier Nakache, Eric Toledano, 2009), When Harry Met Sally(Rob Reiner, 2004), Mona Lisa Smile(Mike Newell, 1996), and Bravo My Life(Park Yeong-hun, 2007). In case of animation, they are like Marco Macaco(Jan Rahbek, 2013), The Fake(Yeon Sang-ho, 2013), The Lion King(Roger Allers, Rob MinKoff, 1994), Leafie, A Hen into the Wild(Oh Seong Yun, 2011), Wolf Children(Hosoda Mamoru, 2012), Corpse Bride(Tim Burton, Mike Johnson, 2005), Frozen(Chris Buck, Jennifer Lee, 2013), and The Illusionist(Sylvain Chormet, 2011). Such documentaries selected include You Know What?(Dec. 19th 2013), Hello, The Pope.(Apr. 8th 2014), Two President(Oct. 29th 2007), 38 Witnesses(Feb. 12th 2007), Education Series - Friend(Apr. 10th 2013), Attitude to cope with the breakup of the brain(Oct. 10th 2011), Sorry(Nov. 6th 2012), and We Just Paly!(Apr. 22nd 2014). Regarding cartoons, they are Kwang-soo Thinking(Kwang soo Park, 2012), Saint Young Men(Hikaru Nakamura, 2008), Meng Cong, as per(Yun seung eun, 2005), Gomangae(Kim Kyung Ho, 2011), Hunt(Togashi Yoshihiro, 1998), Orange Marmalade(Seok woo, 2013), Story about living nam(Seo na rae, 2010), and A far country A neighboring country(Lee Won bok, 2013). Lastly, the advertisements selected include 'Life of a job'(The United States, FEMA, 2009), 'Indian festival kumveurella' Material(India, Vodafone, 2012), 'The man un prison' Advertising(Sweden, Amnesty International, 2012), 'Whale pictures' Material(japan, Children's Fund, 2007), 'Friendship between man and horse' Material(The United States, Budweiser, 2013), 'Contraception' Material(France, Durex, 2001), 'Women's enlistment' Material(Korea, Tong Yang Life, 2000), and 'Hobby of

baseball' Material(Korea, SKtelecom, 2008). Figure 1, the final 40 visual works showing the highest scores in the Delphi result were selected.

## 4. Discussions and Conclusion

As a basic research to develop educational contents enhancing undergraduates' creativity-personality, this study aimed to select educational images suitable for the enhancement of undergraduates' creativity-personality. Selecting images based on the standards of image selection following preceding researches, this study aimed to verify the contents/social validity of the selected images by using Delphi method collecting intuitions and opinions of experts in education and image<sup>3,4</sup>. The summary of the results focusing on the research questions are like following.

First, in the results of the image selection and contents analysis for the development of educational contents enhancing undergraduates' creativity-personality, the images classified in accordance with education, artistry, emotionality, expansiveness, elements of creativity/personality, and sub-elements of undergraduates' self-identity were 59 films, 58 animations, 65 documentaries, 56 cartoons, and 65 advertisements. By presenting self-identity, elements of creativity-personality education, education, artistry, emotionality, and expansiveness as standards to select images for the development of educational contents enhancing creativity-personality, the logical and social basis of the selected images was secured. First, The undergraduates' main development task is the development of self-identity. Therefore, this study systematically classified self-identity into 'occupation' that could be defined as work continuously engaging in for a certain period of time to earn a living depending on individual's aptitude and ability, 'religion' as a cultural system solving agonies of human

life and also pursuing the eternal meaning of life through the belief in God or supernatural absolute/power, 'politics' that could be defined as roles in acquiring/maintaining/exercising the state power, helping people for human life, adjusting mutual interests, and correcting social orders, 'philosophical lifestyle' which is the lifestyle following the view of life/world and creed obtained from own experiences, 'friendship' sharing feelings and heart with close friends, 'dating' taking essential roles in the selection of spouse as a man and woman stay close together, 'gender role' meaning various characteristics(behavioral pattern, attitude, values, and personality) of men and women of a society, and 'leisure activity' meaning relaxing or playing during free times when work or study does not have to be done. Thus, the images selected for educational contents enhancing creativity-personality are expected to be helpful to undergraduates' successful performance of self-identity in the future.

Moreover, by selecting education, artistry, emotionality, and expansiveness as the standards to develop educational contents enhancing creativity-personality, the education as the educational purpose to enhance creativity and personality could be satisfied<sup>10</sup>. As images have narrative aspects of art composed with theme and story, the artistic satisfaction like aesthetics evaluating the visual completion of images, and entertainment evaluating the interest of images can be increased. Furthermore, through images, undergraduates can understand the sentiment and directors' or producers' intentions, and also get much help in the emotional aspect such as reflective thinking<sup>11</sup>. Lastly, the educational contents enhancing creativity-personality selected in this study acquire the expansiveness for the exposure/distribution to diverse people in the future. Therefore, it is very reasonable to select images for the development of educational contents enhancing creativity-personality based on sub-elements of self-identity, creativity-personality, education, artistry, emotionality, and expansiveness.

Second this study conducted Delphi research to secure the contents/social validity of the image list finally selected based on the selection standards and contents analysis for the development of educational contents enhancing creativity-personality. As a method to find the middle ground by collecting experts' opinions about expectable issues or issues with unestablished concept socially, the Delphi method can verify the evidence of contents/social validity<sup>11</sup>. Since there are no preceding researches or literature studies for the development of educational

	Occupation	Religion	Politics	Philosophical Lifestyle	Friendship	Dating	Gender Role	Leisure Activity
Film								
Animation								
Documentary								
Cartoon								
Advertisement								

**Figure 1.** The Finally Selected List of Educational Contents Image Enhancing creativity-personality.

contents enhancing creativity-personality, if the image selection process is wrong, the objectivity can be lost by researchers' dogmatic judgement or prejudices. In order to select educational images suitable for the enhancement of undergraduates' creativity-personality, images were selected by experts in image and education. By simultaneously collecting opinions of experts in diverse relevant areas through Delphi method using another expert group (12 experts), it was effective to increase the validity of this study.

Based on the conclusion above, the significance of this study is like following. First, it is significant that the education-film convergence education using the strengths of visual media was sought for to develop educational contents enhancing undergraduates' creativity-personality. Second, it is also significant to suggest the new standards of image selection to develop educational contents enhancing creativity-personality.

Lastly, several suggestions for the following researches can be made like below. First, as a basic research for the development of educational contents enhancing creativity-personality, it is a basic study setting up the selection standards, selecting images meeting such standards, and also analyzing the contents of the selected images. However, it has a limitation that undergraduates' interest or demand was not reflected. Thus, it is urgently needed to have researches to develop/use the actual educational contents enhancing creativity-personality based on the results of this study and the results of undergraduates' demand survey.

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