1. Introduction

This research develops creativity improvement program which utilize Pixar’s short animation and the aim is to get validated suitable for preschooler. The subjects of this research are 10 preschoolers at age 5 who are in K kindergarten located in Busan. For developing program using short animation, first, to set up basic direction of creativity improvement program and field and activity of the program, then choose the short animation by the musicality, quality of image, artistry. Second, after selecting 10 of Pixar’s short animations according to musicality, quality of image, artistry, we design the creativity improvement program. Third, we verify the validity of overall contents, composition and method of developed creativity improvement program from 6 experts.

Recently, our society wants us to get and understand new information and knowledge rather than to demand knowledge more. And the society focuses on developing creative idea. At the preschooler age, they don’t have necessary knowledge enough, but it is the right time for creativity education as the important moment to develop creative disposition which recognize thing actively. Thus, there need to be various approaches of applied education for creativity development of preschoolers. And that time is proper time to develop creativity.

Reference said animation as the elements like picture, is the most familiar with preschoolers and it is one genre as the synthetic art that has image and printed media.
characteristic. So we call it mass media which is effective in information delivery in information age. They said these animations as the media which transmit knowledge or information have not only amusement function but also education function. So it is effective education resources to promote free idea for preschooler's invention extension by associative activity.

The purposes of research are to develop creativity improvement program which utilizes Pixar's short animation and get validity about which is suitable for preschooler.

Therefore the research raises program development research and concurrently the efficiency of teacher's media. And it provides preparation of teaching plans which develop creativity and creative problem-solving ability to preschoolers. A subject for inquiry of this research is as in the following:

Research problem 1. What is the creativity improvement program which utilizes short animation?

2. Research Method

2.1 Research Subjects
In the research, we randomly sample targets as the subject of application. The targets are 5 preschooler at ages 5 that are in K kindergarten in Busan. It is right time to develop creativity and the best period through education.

2.2 Research Procedure

2.2.1 Program Developing Procedure
The model of this research is creativity improvement problem solution program model which utilizes video based on picture book of reference. As the procedure of creativity improvement program development research, first, we set the basic direction of the creativity improvement program which uses short animation. Second, we set up the activity field like physical, language, art, music activity for preschooler's holistic development. Third, we choose 10 Pixar's short animation. We choose the short animation of 50 animations until 2015. The running time is not more than 10 minutes and it is chosen by standards of musicality, quality of image, artistry. Fourth, on the basis of short animation which is chosen, we invent the program. Finally, we request program validation verification of the research to 6 experts. The experts are made up 4 people who have the doctor's degree and 2 teachers who have 5 or more years of experience. The process of creativity improvement program development is shown in Figure 1.

![Development of creativity improvement program](image)

Figure 1. Development procedure of creativity improvement program.

2.2.2 Selection of Short Animation
In the research, we choose the 10 Pixar's short animations which are under 10 minutes, based on the musicality, quality of image, artistry. The short animations which are chosen by basis of selection are 'Boundin', 'Partly Cloudy', 'Day and Night', 'The Blue Umbrella', 'Luxo Jr.', 'For the Birds', 'Burn-E', 'One Man Band', 'Presto', 'Lifted'. The content of first week 'Boundin' is about animals like the bouncy rubber ball. Second week's content 'Partly Cloudy' is about friendship between cloud and bird. Third week's content 'Day and Night' is about personification of day and night. Fourth week's content 'The Blue Umbrella' is about love story of red and blue umbrella. Fifth week's content 'Luxo Jr.' is about Luxo Jr. which is the mascot of Pixar. Sixth week's content 'For the Birds' is about the big bird which is slow-witted. Seventh week's content 'Burn-E' is about repair robot. Eighth week's content 'One Man Band' is about the story of street musician and one
girl. Ninth week’s content ‘Presto’ is about the story of magician and rabbit. Tenth week’s content ‘Lifted’ is about alien who take a exam. 10 animations which are chosen are as in the Table 1.

Table 1. Short animation which are selected

| Week | Short animation | Production Year | Running time |
|------|-----------------|-----------------|--------------|
| 1    | Boundin         | 2004            | 4' 43"       |
| 2    | Partly Cloudy   | 2009            | 5' 46"       |
| 3    | Day and Night   | 2010            | 5' 22"       |
| 4    | The Blue Umbrella | 2013      | 5' 46"       |
| 5    | Luxo Jr.        | 1986            | 2' 05"       |
| 6    | For The Birds   | 2000            | 3' 24"       |
| 7    | Burn-E          | 2008            | 7' 35"       |
| 8    | One Man Band    | 2005            | 4' 33"       |
| 9    | Presto          | 2008            | 5' 15"       |
| 10   | Lifted          | 2006            | 5' 02"       |

All short animations which are selected have the introduction, development, turn and conclusion storyline include crisis situation. When applied to preschoolers, we stop the video at the time of crisis. And it is composed of problem-solving activities through various questions.

3. Research Result

‘Partly Cloudy’ of the program of this research has a running time of 5 minutes 46 seconds. We set activity goals like these: Knowing about the friendship, speaking one’s mind to someone, developing attitude which thinks other people. The activity theme designed art activity. Also, the step is composed of introduction-development-consolidation. Introduction designed for talking with preschoolers about the title of story that the main content includes imagining content about the title. Development designed for watching the video, setting up the scene of the problem, analyzing the scene and progressing the activity. Arranging the activity, it finished talking about like “Did you receive the gift from someone?”, “How was the feeling when you receive the gift?” The example of developed creativity improvement program is as in the Table 2.

Table 2. The example of developed creativity improvement program

| Animation | Partly Cloudy | Running time | 5 minutes 46 seconds | Field | Art |
|-----------|---------------|--------------|----------------------|-------|-----|
| Activity goal | ● Know about the friendship<br>● Speak one’s mind to someone.<br>● Develop attitude which thinks other people. |
| Activity theme | ● Deliver the present which friend wants |
| Related elements of education course | ● Communication > Speaking > Speaking feeling, thinking, experience > Telling about own feeling, thinking, experience.<br>● Art experience > Doing artistic presentation > Expressing with art activity > Using and feeling interest the necessary material and tool on art activity<br>● Art experience > Doing artistic presentation > Expressing with moving and dancing > Expressing own thinking and feeling with moving and dancing |
| Step (time) | Main contents | Teaching- learning activity |
| Introduction (5) | Imagine content about the title | ● Suggest the title ‘(partly cloudy)’ to preschoolers and talk about.<br>T: What’s the story about the animation ‘Partly Cloudy’?<br>T: Let’s look at the content that you imagine, shall we? |

4. Discussion and Conclusion

This research develops creativity improvement program which utilize Pixar’s short animation, and the aim is to get validity about which is suitable for preschooler.

So the proposal by discussion and conclusion is as follows:

First, after applying group size targeting between 3-year-old and 5-year-old in real situation, it is required like development of creativity improvement program which uses short animation targeting 5 preschoolers later.

Second, the research progress just one activity in one video, it can be applied to expand various integrated activities.
| Development (35) | <First stage> Watch the video (4 min.) | • Watch the video 'Partly Cloudy' - Watch the video for 5'46“ |
| | | ![Partly Cloudy video frame](image1) ![Partly Cloudy video frame](image2) ![Partly Cloudy video frame](image3) ![Partly Cloudy video frame](image4) |
| | <Second stage> Set up the scene of the problem (3 min.) | • Stop the video in the crisis situation of the playing video and talk with preschoolers. |
| | | ![Partly Cloudy scene](image5) ![Partly Cloudy scene](image6) |
| | T: Why the dark cloud is sad? T: Is the bird gone? T: What will become of dark cloud? T: Let's check the story which is right with your friends. |
| | <Third stage> Analyze the scene (5 min.) | • After watching the animation, talk with preschoolers. T: How did the bird do to dark cloud? T: How was the content which you imagine? T: Is the content similar with that you imagined at first? T: What kind of things did the bird deliver? T: Do you want to get something like this? T: Or do you want to give present to your friends? |
| | Introduction and progression of activity method (13 min.) | • Explain the activity and hand out activity paper. T: As you talk about before, You will draw the present which you want to give to friend, mother, farther, people you like or etc. T: Let's draw to use any kind of tools! T: Draw the present which you give to friend in the pack to use highlighters and colored pencils. • After drawing the present on the paper, then sit together with friends and talk about the present which they draw, finally fold the drawing. T: After finishing drawing, cut your pack. (Material : activity paper, colored pencils, highlighters, scissors, glue, colored paper, etc.) |
| | Use body expression (10 min.) | • Express the gift delivered like the bird with body. T: How did the bird deliver the pack? T: Do we deliver the package for friends? T: How will we deliver? T: Who wants to be cloud? • Make a pair of someone who wants to be cloud and to be bird each other. • Preschoolers who play role as the cloud make cloud by using hands and tell the friends who play role as the bird the present which they draw. And the bird receives the present which delivers from the cloud, then give the present to another friend. • Friends who receive the gift confirm it, then bird comes back to cloud again. • Change the role and act again. (Material : headband, video, music, activity paper like package) |
| Consolida-tion (5) | Summary | • Preschoolers talk about the package which they receive. T: Did you receive the gift from someone? T: What did you get something? T: How was the feeling when you receive the gift? T: How was the feeling when you give the present directly to your friends? • Confirm the gift from friends again and express the gratitude to each other. |
5. References

1. Park MR, Lee KH. The effects of comic and animation based creativity program on the creativity and creative problem solving ability of young children. The Journal of Creativity Education. 2009; 9(1):49–73.

2. Park SH, Shin DE. Theoretical approach for application of contextual learning based moving image materials to cultivate child creativity. Children's Media Research. 2013; 12(2):193–212.

3. Lee SH. The development and effect of magnetic teaching tools for improving young children's creativity-focusing on a creativity program. Major in Fine Arts Education, The Graduate School of Education, Ewha Womans University; 2012.

4. Park MR. The effects of comic and animation based creativity fostering programs on the creativity and creative problem solving skills of children. Major in Early Childhood Education, Graduate School of Education, Soongsil University; 2009.

5. Youn JJ, Im JH. The effect of a creativity problem solving program for young children using picture books based video. The Korean Journal of Human Development. 2001; 18(1):109–32.

6. Kim HJ, Lee HS, Youn JJ, Eom SJ, Lee JK. A study on college students’ demands for creativity and personality education as part of the general education curriculum. Indian Journal of Science and Technology. 2015 Apr; 8(8S):29–36.