Pre-Service Teachers’ Manga Digital Storytelling

Title: Japanese Pre-Service Teachers’ Manga Digital Storytelling

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Abstract

Manga (Anime, Comic) is one of media circumstances in Japan. Japanese have been seeing, drawing and learning Manga since “Choju Giga” was drawn in 12th century. Manga is one of art’s course studies of National Curriculum in secondary school. There are many Manga in textbook: Japanese language, computer science, arts and so forth. We have learned informally history, literature and athletics through Manga: Hadashi no Gen (The atomic bombing of Hiroshima), Asaki Yumemishi (Genji Story); Tenisu no Oujisama (網球王, the prince of tennis. Kei Nishikori, the most famous tennis player in Japan, had seen it.). We have drawn Draemon on notebook with a drawing song. There are main learning methods of media literacy of Manga: design, production and critique. Fuse et al. (2010) showed that students wrote a line on Manga and understood institution’s intentions. Digital storytelling (DS) improves an ability of media literacy (Susono, 2013). Taken together, the preceding evidence suggests that Manga DS develops an ability of media literacy. DS is a process that blends media to enrich and enhance the written or spoken word (Frazel, 2010). DS are known for seven components. They are: self-revelatory, personal of first person voice, a lived experience, photos, soundtrack, length and design, and intention (Lambert, 2013). The present study investigated the effects of Manga DS on media literacy. Of 40 pre-service teachers, 12 teachers made four Manga DS in class; Weekly Shonen Sunday (comic’s magazine), Armored Trooper Votoms (science fictions and robot Manga), manga of TV Asahi on Sunday morning and three minutes’ history of classical music. They showed their DS and viewers commented on DS in BBS (Bulletin Board System). After the lesson, the teachers completed an essay in which they described their DS. We analyzed 119 comments and 36 essays. The teachers looked buck on their exposure’s experience of Manga. 10 teachers sympathized with their DSs because they had seen the same Manga in their childhood. Some teachers recognized effects of Manga in their life, but did not describe media violence, advertising and gender stereotype. The teachers made Manga DS and got abilities for productions but did not criticize manga. The teacher selected their favorite Manga; therefore, they did not criticize Manga. DS have developed in USA. People are required their self-appealing in their daily lives. “Intention” is one of components of DS and privileges self-expression and self-awareness (Lambert, 2014). DS contains no critique and has some possibility to express narcissism. The results from this study contribute to the education of production of media literacy. Several limitations require consideration.
Concerning this study. One limitation of the study was its reliance on production. DS was not for critique, but for production in media literacy. Despite these limitations, the study provides support for the notion that DS is an education tool of media literacy. One question worthy of future research is how Manga DS relates to critique of media literacy. This study has demonstrated that DS is particularly valuable to research on media literacy education.

Many studies have examined media literacies in Manga (Anime, Comic) in Japan, because Japanese have been seeing, drawing and learning Manga since “Choju Giga” was drawn in 12th century. National Treasure Choju Giga, Flocking Animals, is perhaps Japan’s most famous set of illustrated scrolls (Tokyo National Museum, 2015). Japanese had waited to see Choju Giga for four hours in Tokyo National Museum on July 2015.

Japanese content is $13.8 billion in the world market and 24.1% ($1.5 billion) of the content is Manga (Ministry of Economy, Trade and Industry, 2015). The sales of book are $4 billion and Manga’s are $1.8 billion in 2013 (Press Science Institute, 2015). The sales of digital comic are $0.5 billion in Japan 2014 (Impress, 2015). The sales of printed Manga have been decreasing and digital comic have been increasing every year.

In Japanese National Curriculum, the art of secondary school has been used this picture. The textbook of the art explains that Choju Giga is an origin of modern Manga expression: a speed expression for Nodame Cantabile, Iji Dozu Gaho (a composition method used to show successive events within a united background) for Meitantei (Detective) Konan and voice expression for Jungle Emperor Leo (Figure 1).

Most of all students have drawn many kinds of manga on their notebook.
Everybody could draw *Doraemon* with *Draemon’s* drawing song. Children have drawn *Pokemon, Meitantei Konan, Sasuke, Heart Catch Pre Cure* and *Yokai-Watch*. It is important for children to draw Manga very well. Undergraduate students have learned natural science by Manga books: theory of relativity, molecular biology, organic chemistry.

Japanese has read many kinds of learning Manga books. There are 1500 kinds of Manga books in Amazon. We can buy 10 kinds of learning Manga books for Chinese language. We can buy two kinds of Manga books for Le Capital au XXIᵉ siècle by Thomas Piketty, too. Manga has used on formal and informal education.

Speaking by Smart phones is forbidden in a train and people see Manga or play a game on smart phone in it.

**Manga on formal education**

There are many Manga on textbook for elementary and secondary school. The textbooks are published by private company but Japanese Ministry of Education censors the textbooks. Teachers do not hesitate to use Manga in their classrooms. Students draw a manga with Tezuka’s manga: Atomic Boy and Phoenix, in the arts textbook. Students make a story with manga in Japanese Language’s textbook to increase composition ability. Manga characters, uniformed high school students, explain contents of textbook: mathematics, Japanese language, science, history, geography in secondary school.

**Manga on informal education**

Students have learned informally many things through *Manga*. We learned history by *Hadashi no Gen* (The atomic bombing of Hiroshima) and Japanese history and literature by *Asaki Yumemishi* (Genji Story), Chinese history and literature by *Sango Zhi* (三国志, *Sangoku-shi*) and *Qin Shi Huang* (Kingdom) and *Sūn Wǔkōng* (孫悟空). Many athlete had seen a manga and had a high motivation: Kei Nishikori, the most famous tennis player had seen *Tenisu no Oujisama* (網球王, the prince of tennis). Baseball players and football players had seen many kinds of manga: *Rising Star* (巨人の星), *Touch*, *Captain Tsubasa*, *Inazuma Eleven*. Children had learned how to live in their childhood through Manga: *Doraemon, Pokemon, Meitantei* (Detective) *Konan* and *Youkai* (Specter) *Watch*.

**Study of Manga and education**

Many studies have examined effects of Manga on education (Iejima & Tamada, 2013; Matsumoto & Iesjima, 2013; Yamada & Sugaya, 2013; Kubota et al., 2013). Iejima & Tamada (2013) reported teaching with Manga. A growing body of evidence suggested Manga’s effects on teaching from 1980. Many studies examined effects of Manga, as teaching materials. In one study, Manga effects only on a certain area. There are some researches: A correlation between Manga exposure and some abilities, content analyses on TV manga and teaching Manga’s copyright on information ethics. Matsumoto & Iesjima
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(2013) reported career education using Manga. They insist that it is very important for career education to use Manga, because Manga supply models for people. The character and story of Manga are very attractive. Manga reports a reality to young people and gives them active learnings. It is important that we supply well established evidence that Manga is effective materials for teaching contents and objectives. They pay attention to us that teacher use Manga for teaching, but students see Manga for fun and resist to learn Manga. Yamada & Sugaya (2013) reported a usage of Manga for art education. Art teachers use Manga instrumentally for an expression in National Curriculum. They taught 100 lower secondary school’s students to draw Four-Frame Manga. The students have never drawn Four-Frame Manga and some students stopped drawing Manga for character design, story board and drawing pictures. They finished the Manga and had such positive attitudes as draw other Manga. Kubota et al. (2013) examined an improvement of lesson plans using Manga-based teaching simulation and effects of the improvement process in pre-service teacher training. Students’ activity of reviewing Manga which they created themselves helped to seize the class lesson in the Manga comprehensively as well as offered the opportunity to examine the conventional way of teacher-centered lessons as students’ opinions began to be accepted so that the teaching plan would be improved. Creating Manga was a fundamental activity to improve the teaching plan since they heard free voices from teachers and students. In order for student teachers to improve their teaching plans, it was necessary to conduct Manga-based teaching simulation and review it.

Some researcher studied an effect of digitalized Manga on education (Takeuchi, 2010; Kojima & Sugaya, 2010; Shumura & Yanagisawa, 2010; Funai & Suzuki, 2010). Takeuchi (2010) has developed software of using Manga digital textbook. Scanned Manga divides frames by the software. He compared paper Manga and digital Manga. Manga textbook was a history of film. Undergraduate student in the paper’s manga reading group (N=20) and the students in the digital Manga reading group (N=20) read the Manga and answered the question of the film history. He reported that students who read digital Manga read more slow, more knowledge than students who read paper Manga. There were no significant differences between digital Manga group and paper Manga group on a memory Manga’s character. Kojima & Sugaya (2010) researched digital Manga. 82 undergraduate students answer the questionnaire: an experiment of, media of, usage style of, images for, attitudes for digital Manga. 63% of students had read digital Manga and they read it on computers and mobile phone and by book style. They thought digital Manga was difficult to read, read everywhere, easy to try to read, a charging is troublesome, my eyes get tired, not bulky. They answered that they would read free digital Manga. Two undergraduate students participated in an experiment. They read paper Manga and digital Manga on iPad. There were no significant differences between digital Manga and paper Manga on understanding the contents of Manga. Shumura & Yanagisawa (2010) assessed Manga
textbooks in university. 146 undergraduate student learned statistics with Manga textbook, Manga statistics, and they answered a questionnaire of attitudes for Manga textbook. They were frightened that they learn statistics by Manga textbook at first lesson, but they never showed displeasure the Manga textbook. There no different of attitudes between High grade group (N=32) and low grade group (N=41), but low grade group used Manga textbook for preparations more than high grade groups. There were no gender differences for the attitudes, but male liked text textbook more than female. Funai & Suzuki (2010) examined effects of Manga design on presentation. Six undergraduate students draw Manga of issues on the relocation of Marine Corps Air Station Futenma. They used the Manga for designs of their presentations. And they made PowerPoint (PPT) presentations of those issues. Two students put new contents (50% of Manga) in PPT. Three students lost feeling in PPT. Two students lost logical coherence in PPT. They found that Manga design for presentation caused some problems.

**Manga, advertising, violence and stereotypes**

In 1997, 3.45 millions of Japanese children saw Pokemon TV program, *Dennō Senshi Porygon*. 750 children had photosensitive epilepsy (PSE) and 135 of the children were hospitalized. Ministry of Health and Welfare (1998) researched 9209 children and 4026 of the children saw that program and 417 children had PSE. This incident referred to as the "Pokémon Shock" by the Japanese press. After the incident, TV stations have run a telop, “Please turn the light and watch at a distance” on animation program.

Many studies have examined that Manga is associated with violence, stereotypes and advertising for children (Buckingham, 2011; Linn, 2010; Bandura, 1965; Sado et al., 2004; Sasaki, 1996; Fujita, 1996). Buckingham (2011) explained Pokémon in the contemporary children’s market as follows:

At its peak in 2000, Pokémon was undoubtedly the most profitable children’s “craze” all time: in that year, it reputedly generated over $7 billion worldwide. Beginning as a computer game, quickly followed by a TV series, a trading card game, feature films, books, magazines, toys and a plethora of other merchandise, Pokémon is the paradigm example of contemporary “integrated marketing”. …Different types of products were also targeted at different age groups – soft toys for younger children, TV cartoons for 6- to 8-year olds, computer games for older children – allowing children to “graduate” from one to the next. (Buckingham, 2011, p.92)

Linn (2010) criticized the commercialism in children’s lives. A product placement (advertisings put into products) and a brand licensing (product with Manga character) has been increasing. A character’s marketing was $16 billion in Japan in 2014 and $ 9.6 billion were for children. She explains how advertising hurts the kid as follows:

Marketing to children in unfair
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- It undermines parents
- It glamorizes greed
- It encourages unhealthy eating
- It glorifies violence
- It sexualizes kids
- It stifles imagination
- It distorts body image
- It’s inescapable it’s getting worse

And she suggested 10 things that we can do to reclaim childhood from corporate marketers as follows:

1. Carve out commercial-free time
2. Limit screen times
3. Reclaim your school
4. Call out the worse
5. Lean More
6. Speak up
7. Choose commercial-free
8. Work for local, state
9. Celebrate Screen-Free week
10. Join the Campaign for a Commercial-Free Childhood

(ccfc, 2015.commercialfreechildhood.org)

TOYOTA Draemon car commercial has been broadcasting from 2011. Juan Reno plays the role of Draemon in “after twenty years Draemon”. This commercial is for Draemon generation. We have had a brand loyalty of Draemon and TOYOTA caught our loyalties.

There is consistent evidence that certain Manga effects on violence behavior (Bandura, 1965; Sasaki, 1996; Sado et al., 2004). In early classical study, groups of children observed an aggressive film-mediated model either rewarded, punished, or left without consequences. A postexposure test reveals that response consequences to the model had produced differential amounts of imitative behavior. Children in the model-punished condition performed significantly fewer matching responses than children in both the model-rewarded and the no-consequences groups. Children in all 3 treatment conditions were then offered attractive reinforces contingent on their reproducing the model’s aggressive responses. The introduction of positive incentives completely wiped out the previously observed performance differences, revealing and equivalent amount of learning among children in the model-rewarded, model-punished, and the no-consequences conditions (Bandura, 1965). Sasaki (1996) reported random violence: There are many outburst violence in Manga, people die and revive soon, it is luckying reality and characters are personified animals and goods. He examined a relationship between random violence and TV violence.
program exposure. 473 secondary school students answered a questionnaire and positive relationship was observed between random violence TV program exposure and violence behavior ($r=.29, p<.01$). Sado et al. (2004) studied content analysis of prosocial and antisocial behavior in Japanese TV programs. They analyzed violence and prosocial behavior of TV programs of 280 hours in one week, using analysis levels that based on National Television Violence Study (1996-1998). 15 of 18 Manga TV programs contained violence. Violence behaviors contained about 5.8 times in one Manga program. Six of 18 Manga TV programs contained prosocial behavior. Prosocial behaviors contained about 1.1 times in one Manga program.

Prior research has suggested that a character of Manga gender is a stereotype. Fujita (1996) analyzed description of women and men in TV Manga programs and to examine a broader gender issue in mass media in relation to child. She chose thirteen TV Manga programs that pre-school and elementary school children seemed to like. Nine of the programs were televised in the 1990's and two in the 1980's and two in the 1980's. An analysis was as follows. The proportion of male and female characters and their occupation s are examined. The characteristics of child characters are analyzed. An analysis of gender as a "relationship" in the story is conducted. In this analysis, comparison of the program televised in the 1990's was conducted with those of previous period for reference. The findings were as follows: Male characters appeared more than female ones in most programs. most of all the adult male characters had an occupation. Many adult female characters were housewives or mothers. 1990's female characters' occupations were diversity more than 1980's and 1990's. Female child characters were Kawaii (pretty), but some 1990's female children were strong. Male child characters were two types: handsome and tender, and ordinary boys who often made mistakes. Boys were stronger than girls and some 1990's girls are stronger than boys. The strong girls behaved Kawaii in front of her boyfriend.

There are many video movies shows the difference between Japanese Manga and USA's. We can see Japanese One Piece and USA's in YouTube (rikuku5, 2013). Japanese One Piece contains many violence, sexuality, alcohol and Tabaco, but USA One Piece got rid of those situations. One Piece is a good text to learn representations on media literacy.

Critique of media literacy and Digital Storytelling

There are main learning methods of media literacy of Manga: design, production and critique. Media researchers and teachers have conducted a very large number of studies and implementations on plans and productions of Manga, and systematically addressed media literacy of Manga (Chadle-Olcott & Mahar, 2003; Marsh, 2006; Banister et al.,2010; Toyoda & Nishimura, 2004; Sano, 2012; Fuse et al., 2010) .

Chadle-Olcott & Mahar (2003) examined a case study that fanfiction writing as a literacy practice in the context of multiliteracies. Data were obtained from two adolescent
students who wrote fanfiction, described as the raiding of mass culture by fans who use media texts as the starting point for writing, that was inspired by Japanese Manga, *The Shrine for Vegeta in Dragon Ball Z*. Results, derived from the use of a multiliteracies framework, showed that the students' fanfictions were texts that were influenced by cultural artifacts and social discourses. Results showed that the fanfictions were multimodal on a number of levels, demonstrated intertextuality, and were of a hybrid nature in that they combined various discourses and genres. Implications of the results for teachers are presented.

Marsh (2006) outlines a research project in which three- and four-year-old children in one nursery engaged with editing software to create short animated films. Research questions were related to the knowledge and understanding of multimodal texts that the children developed in the activity, the skills they demonstrated in undertaking the animation work and the implications for curriculum development. Qualitative data were collected over the period of an academic year as children were observed (using field notes and video camera) planning and producing the films. He analyzed some of the knowledge and understanding of multimodal texts developed throughout the project and suggested that early childhood educators needed to understand the nature of new authorial practices if they were to provide appropriate scaffolding for children's learning in the new media age.

Banister et al. (2010) explained that effective educators had incorporated media (images, diagrams, animations, simulations, audio, video, etc.) into their classroom instruction for many years, recognizing that these elements supported student learning in powerful ways. Twenty first century teaching and learning emphasizes media literacy as an integral skill and this type of literacy is multifaceted. Teachers and students must be able to interpret and understand media messages, as well as design their own media messages in order to be relevant communicators in our media-rich world. The study documented the positive growth in media production skills gained by teachers who participated in a two-week intensive experience in designing virtual field trips for their specific classrooms. Data indicated that significant gains in media production skills were achieved in a short amount of time.


Sano (2012) investigated an instruction is effective for teaching animation production in media literacy education. To address this, she had attempted to demonstrate the effect of this form of media literacy education by creating educational strategies and a
learning environment that would motivate students to produce animation, and posited the experimental quality of their work as an index to measure their motivation levels. For verifying this hypothesis, she described the learning environment for teaching animation production. Specifically, 1) identified the equipment, 2) identified the educational strategies, and 3) identified a diverse range of styles. She provided a detailed analysis of the work produced by the students, assessing each piece for its experimental quality. Nine pieces of student’s work that were produced during a two-year period were analyzed. Rather than examining the technical skills that were used, the analysis focused on the forms of experimental expression that the students were able to achieve and identifies how motivated they were to transmit information. The majority of students reported that they enjoyed being able to express themselves freely, without any restrictions on how they should produce their work. She could therefore infer from these results that the established educational strategies and learning environment were systematically structured for effectively teaching animation production. The study aimed to discover what type of instruction is effective for teaching animation production in media literacy education. She believed that it enabled students to give concrete forms, as expression experimentally, to all kinds of personal experiences. This included things and events around them, or images inside their head that were not constricted by reality. Students spend their days in the educational arena of the university. One of the reasons for attending classes was to gain the credits they needed to graduate; however, being able to express experimentally unites the self— as a student and as an individual— and immersed one in the play, which went beyond the simple requirement for credits. By producing pieces that creatively present the self, students allowed themselves to be evaluated by their friends as well as people from all over the world via YouTube. This was where she saw the real effect of animation production in media literacy education. She would like to conduct further research to investigate the results and issues surrounding the learning experience with a goal of demonstrating the usefulness of teaching animation production as part of media literacy education. It showed that undergraduate students produced animations and developed information transmission skills in media literacy.

Fuse et al. (2010) examined an effect of drawing One-Frame Manga on media literacy in university. One of researchers, Manga artist, made One-Frame Manga, “information society”, and he deleted words from the Manga. 89 undergraduate students estimated Manga artist’s intentions on the Manga and wrote words on the Manga. Students analyzed other student’s words. The students understood diversity of audiences. And they deeply understood characteristics of information that massage’s comprehension depended on a situation that audience put in and a theme of lesson. To date, few empirical analyses evaluating implementation a critique of manga are available. Thus, additional research is needed to clarify whether a critique of manga contributes to media literacy.

Digital Storytelling (DS) seems one method of media literacy. Frazel (2010)
Pre-Service Teachers’ Manga Digital Storytelling explains DS as follows;

Digital Storytelling is a process that blends media to enrich and enhance the written or spoken word. Leaders in the field have called digital storytelling a new twist to storytelling- multimedia tales are the modern expression of an ancient art. Digital Storytelling can encompass many topics beyond the classic story, take many forms, and employ an ever-expanding array of software applications. A digital story may have a narration overlay and sometimes a music background; it may combine, in any number of ways, images, audio, and video to tell a story of to make a factual presentation. In many cases, sound, music, and images surround the written or narrated content. (Frazel, 2010, p.9)

Susono and his colleagues made many kinds of Digital Storytelling (DS) to children of elementary school, secondary school and pre-service teachers. Those DS are letter to myself (Susono et al., 2010; Ikawa et al., 2010a, 2010b, Kagami et al., 2011), Mottainai (Susono et al., 2008), book(Susono et al., 2009), and blue eye’s doll (Nisimura et al., 2012). They have developed systems of DS (Susono, 2010; Suono, 2012a; Susono et al, 2006; Susono et al., 2011). And they made DS to pre-service teachers and found that many effects of creating DS on pre-service teachers: self-cognition, expression of multiple intelligences, media literacy, presentation, collaborating learning and humanity (Susono, 2012b; Susono et al., 2013). Importantly, reflection on Digital Storytelling (DS) has provided some of the most convincing evidence for critique on media literacy (Susono et al., 2013).

Taken together, the preceding evidence suggests that Manga’s DS develops an ability of media literacy. DS are known for seven components (Lambert, 2013). They are: 1. self-revelatory, 2. personal of first person voice, 3. a lived experience, 4. photos, 5. soundtrack, 6. length and design, 7. intention. 1. self-revelatory and 7. intention apply to media literacy. Lambert explains 1. and 7. as follows:

1. Self-Revelatory – The stories feel as if the author is aware of a new insight that is being shared in the story, giving the story a sense of immediacy and discovery.
7. Intention – And this is less about form than function, but it can be said that the CDs (Center of Digital Storytelling)s workshop privileges self-expression and self-awareness over concerns of publication and audience. Process over product. The products may achieve a larger impact or audience, but the honoring of each individual’s process of authorship, and resulting control over the context of the story being shown, is critical. The storyteller ideally owns the stories, in every sense. This perspective informs all choices about participation, ethics –in- process, as well as distribution. (Lambert, 2013, pp.37-38)

The self-awareness of DS leads to the prediction that students’ Manga DS will make a reflection of students’ Manga exposures and students will learn media literacy, too. The
goal of this article was to investigate the effects of Manga’s DS on media literacy.

Method

Learner
Forty four pre-service teachers, computer science major, second years at Tokyo Gakugei university, made mass media DS in the information course unit. Their age ranged from 19 to 20. 28 of the teachers were male. All teachers had laptop computers and smart phone (iPhone). They had never been learned media literacy in elementary, secondary and higher education. They had never been learned media literacy in elementary, secondary and higher education.

Learning materials and tasks
The teacher’s task was to make mass media DS in collaboration work. DS was 2 or 3 minutes and mp4 made by Movie Maker/iMovie or PowerPoint. They were asked short report of the DS as an assignment of the unit. Teachers took four lectures and two workshops for DS on the classroom in University. They learned UNESCO’s “media and Information literacy curriculum for teachers” (Wilson et al., 2011) and understood media representations and languages in the first and the second lectures. They saw many kinds of DS in the 3rd lecture: last year’s teachers’ DS, ABC Open, “How to make DS” and “DS process”. They saw some internet DS videos (Susono, 2010; B & H, 2013; Okahashi, 2012) in the fourth lectures. Teachers made groups and decided the theme of DS in workshop 1. In workshop 2, they made a plan for DS. They made DS for one month in year-end and new-year’s holidays.

Teachers made 15 kinds of mass media DS (table.1) and five of 15 DS were Manga. 18 of 44 teachers made five Manga’s DS. Five teachers made 3 minutes DS of Weekly Shonen Sunday (comic’s magazine) from in elementary to lower and upper secondary school. They picked up 8 Manga such as Konan. Shonen Sunday was a one of three major comic’s magazines and that was published in 1959 by Shogakukan. The price of the Manga is 270 Japanese Yen and an elementary school’s children can buy it every week. Three teachers made one minute and thirty seconds’ DS of top one movie from 1992 to 2010. This DS contained 20 movies and 10 of 20 movies were Manga that Studio Ghibi made: Kurenai no Buta (Porco Rosso), Heisei Tanuki Gassen Pon-Poko (PONPOKO), Mimi wo Sumaseba, Mononoke Hime (Princess Mononoke), Sen to Chihiro no Kamikakushi (Spirited Away), Neko no Ongaeshi (Cat Returns), Hawl no Ugoku shiro (Hawls’ Moving Castle), Gedo senki (Tales from Earthsea), Gake no ue no Ponyo (Ponyo on the Cliff by the Sea), Kari-gurashi no Arrietty (The Borrower Arrietty). Two teachers made three minutes’ DS of Manga, Armored Trooper Votoms, from 1983 to 2011. This Manga was a science fictions and robot Manga. Teachers picked up eight kinds of Manga of Votoms. Two teachers made three minutes’ Superhero TV show on Sunday morning in TV Asahi station from 2004 to 2014.
They picked up 12 programs that they had seen from 4 years in elementary school. Four of 12 programs are Manga: *Heart Catch Pre Cure*. Two teachers made three minutes’ animation of a guide for classical music. It was DS that teachers drew animation of classical music’s history with photo and made it a three minutes’ film. Teachers showed their DSs in the class and commented on DSs in BBS (Bulletin Board System). After the lesson, the teachers completed an essay in which they described their DS. We analyzed 119 comments from manga DS on BBC and 36 essays that comments on manga DS.

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<th>Table 1</th>
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<td>Kinds of DS that teacher made</td>
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| Manga  
| Weekly *Shonen Sunday* |
| Top one movie from 1992 to 2010  
*Armored Trooper Votoms*  
Superhero TV show  
Animation for classical music |
| video game  
*Pokemon*  
NINTENDO CM  
Smash brothers  
Game boy  
Game console |
| movie/drama (no manga)  
Harry Potter  
My favorite drama & movie since elementary school |
| idol  
Young girl’s idol |
| iPhone |

*Note.* N=44. a: Manga contains magazine, drama and movie.

**Results and Discussion**

**Analysis of comments and essays**
The findings of comments and essays showed that teachers looked buck on their Manga’s exposure. Most of all teaches enjoyed making DS. There were very strong nostalgias for them. A teacher wrote it as follows:

Reflecting my experience of media exposer, I felt nostalgic about some Manga. I
reminded many Manga that I had read in my childhood. I enjoyed making Manga DS that reminded me my good days.

Another teacher wrote about Manga Movie DS that he made.

I enjoyed making DS. Our group made DS, the top movie from 1992 to 2010. 15 of 18 movies are Manga and I was frightened that 10 of 15 movies were *Gibli*'s. I understood that *Gibli* movie had been popular and felt nostalgic. I surprised that *Howl’s Moving Castle* was the top movie for two years. I was very happy that I made this DS.

There were very strong nostalgias for them. Many teachers sympathized with their DSs because they had seen the same Manga in their childhood. A teacher wrote report as follows:

- Every manga DS is very nostalgia for me because I have grew up with the manga. We searched a degree of popularity of *Gibli*’s movie and surprised a high popularity of *Gibli*’s. I had seen every *Gibli*’s movies and these movies were very nostalgic for me.
- DS of Superhero TV show was a very strong nostalgia for me, because I had seen the Manga every Sunday morning. I had seen “*Heart Catch Pre Cure!*” since 2004. I saw changes of that manga and remembered my childhood.

A teacher recognized sympathy and an effect of Manga in his life.

Sympathy was a effects of DS. We were raised in different environment and we took it for granted that teaches had different media exposure. There was no obscure DS and all teachers sympathized with all DSs. I felt big effects of media on our life. Popular cultures as Manga, TV and video game have an intimate relationship with and essentials for our lives. We feel nostalgic for media because we have exposure the media and jumped on the bandwagon. We had fanned the same media everywhere in Japan. Media had carried out their intentions. We recognized that media had a big power.

A teacher had a complex attitude for media.

We have lived with many kinds of media from our childhood and remembered those media. I knew that every teacher had enjoyed media individually. I am happy to know that all my media exposures were not as the same as others. My parents and adults had criticized a media exposure that effected on children. I do not agree that all media exposure give evil influence to children. I’m proud of the mass media that had extended my possibility, teach various view point and bring me up.

A teacher thought how to teach mass media to children in a classroom.

Media has taken root in our lives because images and sounds of mass media were still vivid in our memories, and media had impacts on our lives. Information and media exists together. We learned from this lesson that we have to think more
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deeply effects of media when we teach information in computer science in classroom. How we should teach media to children responsible for the next generation? How we teach children the way they generate media. We should teach Media and Information education as we focus on effects of media.

Teachers saw Manga DS and look back on their exposures of Manga, but they did not criticize a specific Manga. Some teachers recognized effects of media on their lives and thought how to teach children media. The teachers did not describe media violence, advertising and gender stereotype.

Discussion
The teachers selected their favorite Manga; therefore, they did not criticize Manga. DS have developed in USA. People are required their self-appealing in their daily lives. “Intention” is one of components of DS and privileges self-expression and self-awareness (Lambert, 2014). DS contains no critique and has some possibility to express narcissism. Teachers did not describe media violence, advertising and gender stereotype. They live in Japan for 20 years and they have never been to foreign country. There are 120 foreign students in teacher's university but foreign students are graduate students and teachers had no communication with them. Teachers lives in one small culture. Japan National Curriculum has not contained media literacy, but computer literacy. The teacher had no chance to learn to criticize violence, advertising and gender stereotype in media literacy. The results from this study contribute to the education of production of media literacy. Several limitations require consideration concerning this study. One limitation of the study was its reliance on production. DS was not for critique, but for production in media literacy. Despite these limitations, the study provides support for the notion that DS is an education tool of media literacy. One question worthy of future research is how Manga DS relates to critique of media literacy. This study has demonstrated that DS is particularly valuable to research on media literacy education.

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