

Language Education for the Children with Mild Intellectual Disabilities By Utilizing Digital Storytelling

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Abstract: The purpose of this research is to present the example of digital storytelling course design suitable to the children with mild intellectual disabilities by studying the educational implication of digital storytelling via the analysis of the precedent researches for digital storytelling, and exploring digital storytelling tools, considering the characteristic and linguistic ability of the children with mild intellectual disabilities. Via multi-media components, digital storytelling makes the students face various experiences that traditional storytelling does not give. Applying digital storytelling for the children with mild intellectual disabilities, it can offer the knowledge and experience, applying several digital components, can help to effectively use the interaction among the students, and help to reinforce their own capacity of self-directed learning by utilizing several digital media. In addition, via the interaction among the students, communication skill can be enhanced.

Introduction

Human grows as the member of the society by being born, making the relationship with surrounding people and interacting with other people. It starts with the relationship with parents, and develops as the relationship with sibling, surrounding people or same age group. At this time, language has a great role to interact with other people. However, the children with mild intellectual disabilities show the flaw of linguistic ability. They are not able to actively participate in the conversation with other people, they have a passive role in the conversation, and the accuracy of their speech is reduced(Kim Chang-Hee, 2004). It is because they feel difficult to express their own emotion, thought or feeling with proper language, and they cannot grasp other's intention or thought(Jung Chung-Hee, 1992). In addition, it is because their knowledge experienced in daily life is improper or their information processing ability falls short(Baek Sun-Mi, 2009). With these reasons, the children with mild intellectual disabilities present many flaws of natural conversation with the same age group.

To overcome the linguistic flaw of the children with mild intellectual disabilities, several teaching method or instructional media attempted, and language intervention program for the children with mild intellectual program has been continuously developed(Lim Chae-Jung, 2003). However, traditional language intervention program is mostly based on operational behavior shaping, and it has promoted the children's verbal development by structured development steps. With this educational method and language intervention program, it is hard to acquire the language utilized in daily life and many people are skeptical about the generalization in the life(Hart & Risley, 1980). Complementing these points, storytelling is presented as the method of enhancing the communication skill with other people and of emotional and social sharing via story(Moon Da-Seong, 2015). However, it is criticized that this storytelling could become carried by teacher-central method and learner could make passive story receiver(Kwon Hyuk-II, 2008), and that storytelling has the shortcoming that the content is unilaterally conveyed from teacher to learner(Park Se-Jung, 2006). Digital Storytelling is considered as the alternative, which can overcome the limitation of traditional storytelling and can make learner-central educational environment. It means that the existing storytelling, which would proceed in uniform and straight structure, can be promoted for the dynamic and learner-central storytelling with the interactivity of multi-media(Barrett, 2005). Like this, digital technology makes it possible to pass the bound of oral storytelling within language, and to make various and creative storytelling by utilizing the multi-media such as graphic, audio or video. However, in spite of several discussion about the educational value of digital storytelling, the research of digital storytelling for the children with mild intellectual disabilities is just a few.

This research studies the educational implication via the analysis of digital story telling research, and tries to present the example of digital storytelling course design suitable to the children with mild intellectual disabilities via exploring digital storytelling tools, considering the characteristic and linguistic ability of the children with mild intellectual disabilities.

The Study

Digital storytelling is a concept which was first used in Digital Storytelling Festival held in Colorado, the United States in 1995, and it means a story creation skill for the content production based on digital media (Choi Hye-Sil, 2003). In addition, digital storytelling is a compound word combined with digital technology and storytelling, and it is created by utilizing multi-media expression instrument in technological environment as digital (Kim Seong-Jong, Kim Hyeon-Jin, 2012). It is operated by digital media in computer environment, and the story is developed by using digital software with digital story constructed with multi-media material edited in the computer by using image, voice, video, music, sound and animation in order to communicate with other people. As storytelling becomes literature expressed on paper media and becomes movie expressed on image media, when it is expressed on digital media, it becomes digital storytelling(Choi Hye-Sil, 2003).

As the advantage of digital storytelling, message delivery with sense of reality, the opportunity of communication beyond time and space, easy information editing function, interaction function between reader and story, and the possibility of change, development, and positive creation by reader are presented(Lambert & Mullen, 2002). Digital storytelling with the advantage has the flexibility, universality and interactivity of media as its characteristic(Choi Hye-Sil, 2003). When using media, students are able to nonlinearly write and to take a role of various people. Namely, it is possible for students to actively participate in the activity. In addition, with the technological development anybody can easily produce his/her own thinking or emotion as digital content by making multi-media environment as means of expression. Unlike existing literature, drama or movie, digital storytelling exists on the web, so the border between creator and reader is destroyed and everybody can participate in the production. Therefore, people can change the existing contents, and can easily share their own material with other people. It will be not only the opportunity to cultivate thought, but also to cultivate communicate skill.

Recently, considering the educational utilization of digital storytelling, several researches are attempted. Seeing the precedent research utilizing digital storytelling on learning subject, we can draw the something in common below.

First, digital storytelling also utilizes story for learning. The story utilized for learning should be the material related to the purpose of learning, and it is mainly used to introduce the contents of learning or presented as the part of learning process. It makes the learner recognize the circumstance in story as one in his/her real life, and makes the interaction among learners more active with positive participation in the learning. In addition, since digital storytelling has an advantage that learner can construct the content of learning as his/her own necessary and proper knowledge, it can be common platform for communication. Considering the educational value of the story, the contents and process of subject education course should be generally applied in the flow of story.

Second, seeing the learning activity, the learner created the story about given task and made it various digital products. Escaping from the activity with teacher-central digital story content, whose main purpose is to enhance the efficiency and effectiveness of story delivery via the application of multi-media technology by transferring oral storytelling to multi-media form, digital storytelling access with reinforced interactivity, which focuses on making and sharing story by learner, comes into highlight (Kwon Hyuk-II, 2008).

In digital storytelling, the learning environment for the production of digital product is differently shown depending on the research. In the precedent research, the offline one-man producing multi-media software was mainly used, such as Paint, PowerPoint or Moviemaker. Recently, according to technological development and the supply of smart devices, the research of utilizing the web space – possible to open, share and cooperate - to digital storytelling is being conducted. The lists of the precedent research utilizing digital story telling for educational purpose are the following.

Researcher	Object/ Course	Learning Activity	Multi-media Authoring
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			Tool
Park Byong-En (2007)	Elementary 6 th grade/ Korean	<ul style="list-style-type: none"> • Seeing sample of digital story • Writing story • Preparing material • Practicing software • Producing • Sharing 	<ul style="list-style-type: none"> ★ Window Moviemaker ★ Paint Shop Pro V7.0 ★ Recorder
Kwon Hyuk-II (2008)	Elementary 5 th grade/ Mathematics	<ul style="list-style-type: none"> • Listening to story and Causing motivation • Listening to fairy tale with mathematical principle • Finding mathematical principle • Listening to the explanation of mathematical principle and calculation process, and Seeing the demonstration • Practicing and Applying it to real life • Making a plan of digital story telling 	<ul style="list-style-type: none"> ★ Power Point ★ Photo Story 3
Lee Keun-Su (2013)	Elementary 4 th grade/ Cross curricular learning	<ul style="list-style-type: none"> • Understanding the problem • Exploring the method of solution • Composing the story • Producing and Editing • Presentation and Sharing opinions 	<ul style="list-style-type: none"> ★ Digital Camera ★ Moviemaker ★ Smartphone and APP ★ scratch
Kim Dong-Hyun (2014)	Elementary 6 th grade/ Mathematics	<ul style="list-style-type: none"> • Seeing story • Grasping task • Examining and Solving • Story telling for the process of solution • Sharing and Feedback • Solving the task • Completing the solution of story 	<ul style="list-style-type: none"> ★ GSP Program ★ Smart Phone, ★ N Drive ★ Prezi

Table 1: The Precedent Research Utilizing Digital Storytelling.

In the research of Park Byong-En(2007), the course utilizing digital storytelling enhanced self-expression ability, comparing digital storytelling, storytelling and general course. In the research of Kwon Hyuk-II(2008), math study achievement of the elementary student in the class applying digital story telling was higher than comparative class, and in the emotional aspect, the score of attitude was meaningfully higher. In the research of Lee Keun-Su(2013), digital story telling had an effect on developing the creativity – especially, fluency and accuracy - of elementary school student, and also on the children with average and under average creativity index. Kim Dong-Hyun(2014) researched how web-based co-operative digital storytelling affects study achievement and interest in class.

With several researches above, digital storytelling makes us experience several things that we cannot experience in traditional storytelling. Digital storytelling makes it possible to do several field activities, and it has the possibility of leading reader-central story making, not author-central(Kim Seong-Jong, Kim Hyeon-Jin, 2012). In this context, digital storytelling can naturally develop communication skill in the process of expression and sharing by making story with given material and utilizing several digital materials.

Findings

It was hard to find the research about digital storytelling for the children with mild intellectual disabilities. Therefore, based on the precedent research, the example of digital storytelling course design, applicable to the children with mild intellectual disabilities, can be presented as below.

Based on description of personal photo, speaking of given picture in order, creating story from given words, I composed digital storytelling program, considering the characteristic of the students with mild intellectual disabilities. Therefore, in this research, I included the task of photo description for telling personal experience. It is difficult for the students with mild intellectual disabilities to composing the story immediately.

So, I tried to make the task of the event that they already experienced in order to easily learn it. On next step, with the task of speaking picture order, the students describe the story by seeing the consecutive pictures. Last step is story creation. Seeing the main activity in each instruction number, 1st ~ 6th instruction is about digital storytelling focusing on 'story', and 7th ~ 10th instruction is composed as the activity of making story with given tasks and making the digital product from the story. In 1st~6th instruction, Eliis & Brewster(1991)'s storytelling teaching-learning model is applied to three steps – Before storytelling, in the middle of storytelling and after storytelling -. And, in 7th ~ 10th instruction, Park Byong-En(2007)'s procedure of teaching and learning was applied, such as 'presenting the topic', 'recording story', 'preparing material', 'practicing software', 'producing', 'sharing'. Main activity of digital storytelling and its relevant multi-media and authoring tool are the following.

Period	Task of Digital Story Telling	Content of Main Activity	Multi-media, Authoring Tool
1~2	Listening to story, and Speaking the story	Listening to fairy tale in multi-media, and speaking the story of fairy tale and doing the story telling of student's experience	● Animation
3~4	Speaking of personal picture	Bringing our own picture, and doing the story telling of our experience, and asking the relevant question.	● PowerPoint
5~6	Speaking pictures in order	Listening to the story related to the picture, and doing the story telling in picture order.	● PowerPoint ● Paint
7~8	Writing story board	Writing story board depending on the topic of each circumstance.	● PowerPoint
9~10	Making a story by utilizing multi-media	With the content of story board in last time, producing the story by utilizing digital tools, such as Power Point, Gom Recorder, Scanner, Microphone or Digital Camera.	● PowerPoint ● GomPlayer ● Scanner ● Microphone ● DigitalCamera

Table 2: The Content of Main Activity in Each Digital Storytelling Instruction Period.

Conclusions

This research designed the course applicable to the children with mild intellectual disabilities via the analysis of the precedent research of digital storytelling. It aims to present the teaching strategy of storytelling by effectively utilizing digital media to the children with mild intellectual disabilities in education field. When the digital storytelling course designed in this research is applied to the children with mild intellectual disabilities, we can expect the following positive implications.

First, digital storytelling can offer the knowledge and experience, applying several digital components. For the children with mild intellectual disabilities, digital technology was unilaterally offered by teacher, and the children simply and passively learned by following the given procedure. However, via digital storytelling, the children are able to actively learn by making story and produce digital product.

Second, digital storytelling can help to effectively use the interaction among the students, and also helps to reinforce their own capacity of self-directed learning by utilizing several digital media. Also it can enhance the communication skill via the interaction among the students.

Third, digital storytelling can be offered to special education teachers in the field as a meaningful teaching material. In the educational field, the teaching or guideline of digital storytelling for the children with mild intellectual disabilities falls short. Through this research, digital storytelling can be presented to the special education teachers who want to do storytelling by utilizing digital media as a design model.

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