

## Mediated Digital Storytelling of seniors by undergraduate students: a Vygotskian's approach

**Cheng Hsu**

Assistant Professor,  
Department of Communication,  
National Chung Cheng University,  
168 University Road, Ming-hsiung,  
Chia-yi, Taiwan, R.O.C.

[telch@ccu.edu.tw](mailto:telch@ccu.edu.tw)

+886 5 2720411 #32556

<http://radio.ccu.edu.tw>

### **Abstract:**

*This study explores Digital Storytelling was being used to mediate learning process of undergraduate students to the seniors in the community. The method of the study was dialectical that involves two Digital Storytelling productions that were done before and after radio interviews to the seniors. The purpose of doing it is to separate indirect experiences with direct experiences to seniors so we could investigate how students changed their attitude toward seniors by Mediated Digital Storytelling activities. The findings of this study, illustrating the complex process of mediation, are discussed in relation to young undergraduate students' use of digital storytelling and radio broadcasting to mediate their learning process.*

**Keywords:** Digital Storytelling, Vygotsky, Senior, Aging, Radio Broadcasting

**Sponsoring information:** This study is sponsored by the Nation Science Council of R.O.C. Project # NSC-100-2515-S-194-001-MY2

### **1. INTRODUCTION**

Taiwan is becoming an aging society. According to World Health Organization, WHO, if the total percent of population age of 65 and over is more than 7 percent in a country, it is an aging society. According to 2012 Population Data Sheet, Taiwan is qualified as an aging society by 11%. (Population Reference Bureau, 2012, p. 13) Because the construct of population is getting older as well as the increasing number of elder people over 65 year old, communicating between youths and elders is a very challenging issue in higher education. Colleges and Universities in Taiwan tried very hard to create courses and social work opportunities for college students to study and work with elder citizens. It is believed to be beneficial to those young students in terms of better preparation for living an aging society. This belief is based on that elder citizens have a lot of life experiences and memories to be shared. As young college students may not have opportunity to talk to or live with elder people, courses design can bring this opportunity to reality on campus.

In our study, we wanted to bring young college students and elders in the community together to make some meaningful conversation. Through series of meditational process by using the Digital Storytelling, radio broadcasting, and online discussion board, we could investigate how young students making meanings to elders.

## **2. LITERATURE REVIEW**

### **2.1 Mediation**

Mediation can be discussed in an opposite pair of terms, mediate and immediate. The Merriam-Webster dictionary (Mish, 1997) describes the word mediate as “act as an intermediary ... to bring about, influence, or transmit by acting as an intermediate or controlling agent or mechanism” (p. 458). The word immediate on the other hand is described as “acting directly and alone ... near to or related to the present time” (p. 371). In other words, the synonyms to the terms mediate and immediate are indirect and direct. Hegel in his book *Logic* describes the connection between idea and being by using immediate and mediate (Hegel, 1975). He mentions immediate connection is “a primary and self-evident interconnection” while mediate connection is “shown in experience” (p. 104). In Hegel’s mind, immediate is unrelated to other things while mediate is related to other things. Thus, in Hegel’s dictionary (Inwood, 1992), mediation is the action that “uniting of two terms by a third term” (p. 184). For example, if God’s miracles are onto men immediately, the working of nature by god is onto men mediately through men’s experiences. The mediator or priest in the church is the mediation of uniting the mind of God with the men’s body of experience. (p. 185)

The concept of mediation is central to Vygotsky’s theories. According to Vygotsky, mediation is the basic understanding for one to experience the world. (Mahn, 1999) The mediation process involves signs and tools. According Vygotsky, signs are the processes of internal activities to master the self. The sign “changes nothing in the object of a psychological operation.” (Vygotsky 1930/1978, p.55) The tool on the other hand, is externally oriented. The function of tool “is to serve as the conductor of human influence on the object of activity ...”(Vygotsky 1930/1978, p.55). Signs and tools are opposite yet are linked to each other in order for mediated activities to happen; therefore, we should see both at the same time dialectically.

Tools, according to Vygotsky are the external instruments to change the goal of activities. From a psychological point of view, tools are not limited to physical devices, but there are also cultural tools. They work and affect externally. Signs, on the other hand, work internally for self-operation. For example, language and symbols can be signs to regulate one self internally in order to use tools to shape the environment externally. Vygotsky used a systematic way to examine the tools and signs role in mediation. (Mahn, 1999) This understanding is an elaboration of a concept from Engels that humans use tools to change nature, but nature will come back to change humans. (Vygotsky, 1930/1978) Vygotsky later uses the term nature from Engels as environment in the concept of how humans use tools and signs to interact with the environment. (Vygotsky, 1930/1978)

### **2.2 Consciousness and meaning making**

Vygotsky tries to make links between mediation, consciousness, and creativity. (Cole, 2003) The creativity that is based on imagination is a process of development that “develop between different [psychological] functions,” and “the development of such flexible relationships between functions we will call a psychological system.” (Vygotsky, Rieber, & Wollock, 1997, p.92) Vygotsky further states:

New systems [psychological systems] are not just linked with social signs but also with ideology and the

meanings which some function acquires in the consciousness of people. (Vygotsky et al., 1997, p.98)

By using the social signs as a mediational psychological tool to create meaning, one creates the artifact by his or her own hands from the self that has differences. The creation of consciousness that is created by the differences transforms oneself in the history. Moran and John-Steiner explains, "In the midst of rapid historical and cultural change, creative individuals need to sustain their sense of integrity and determination." (Moran & John-Steiner, 2003, p.78)

Since the development of social and cultural is an ever-resting historical process, one's meaning of the world should be somewhat in between totally different and the same. As Cole (2003) thinks that life is in between extremely random and structured, one needs to be able to maintain continuity and integrity. Otherwise, one can be totally lost in the orientation or be determined without consciousness. (Cole, 2003; Lee, 1985; Vygotsky, 1925/1999) Thus, creativity, which is based on imagination, proceeds by using one's immediate knowledge to make sense of the changing surroundings. It is a cultural historical product. However, on the other hand, one can also alter the course of changing according to one's own purpose by using the artifacts that comes from the creation, the culturally and historically mediated produce. The tension from the different sources of knowledge needs to be resolved by imagination, "precondition for consciousness and active process of creating the illusion of continuity of experience." (Cole, 2003) Thus, creations of the creativity based on imagination are means for oneself to ease the uncertainty with continuity and integrity. Creativity, then, is the self-transforming and meaning making process.

Moran and John-Steiner (2003) points out that the transformation of oneself is one of the goals for creativity that Vygotsky thinks. He mentions, "creativity creates the self as well as external artifacts" (p.78). Vygotsky points out the idea:

*It is for oneself, in the mind, that poems and novels are produced, dramas and tragedies are acted out, and elegies and sonnets are composed. (Vygotsky, Rieber, & Hall, 1998, p.165)*

Vygotsky also argues:

*"Art is the social technique of emotion, a tool of society which brings the most intimate and personal aspects of our being into the circle of social life." (Vygotsky, 1971, chapter 11)*

The creation of art works are symbolic activity and "Every symbolic activity ... was at one time a social form of cooperation." (Vygotsky, 1999, p.41) The cooperation then requires communication between minds by using psychological tools; therefore, "signs, psychological tools and artifacts are the media through which mind and culture communicate." (Moran & John-Steiner, 2002, p.25)

Human uses of tools, both psychological and psychological tools, are for working to nature so one can relate to the environment more effectively, and at the same time, changing the internal function of one's mind. (John-Steiner & Souberman, 1978, p.133) Tools then are used by human beings for different purposes which thoughts and ideas are put in; therefore, "existing tools and symbols are the fossilized thought and ideas of people who have come before in history." (Moran & John-Steiner, 2003, p.79) Those once existing but no longer being used tools, on the other hand, still carry the thoughts and ideas of the inventors from the past, but because of the changed environment and human mind, they lost the needs from human beings. "When these tools and symbols do not serve current needs, new ones can be created." (Moran & John-Steiner, 2003, p.79) Those new tools that are creativities based on imaginations from human being's experiences in the world. Cole agrees that and argues "new media [tools] do not replace old media, they displace them." (Cole, 2003) The new tools, therefore, bring new ways and possibilities for human beings to experience, connect, relate, and make meaning of the world. At the same time, human beings lose the previously available ways and possibilities. Let us bring in the idea of time and place to analyze this issue.

When one uses the new tools that brings new ways of communication that could not be engaged in by using the old tools, the meaning that one created and imagined for the old tools are changed throughout the cultural and historical progress of using the old tools. At the same time, the new tools that are invented at a different (later) time and space are no longer serving the same meaning as the old tools during the past time (or another space); therefore, the meanings that were embedded with the old tools are transformed to the new tools with new meanings, and the old tools are therefore, displaced.

The transformation of the meaning of tools in fact, is a developing process of the human psychological creative function. "Creativity forms a lifelong zone of proximal development that contributes to the sustained development of a creative personality." (Moran & John-Steiner, 2003, p.78) Creativity as a process of meaning making develops the learning process in the cultural practice and social organization. Vygotsky uses giftedness as an example to point out the relationship between the personal and cultural development in the social activity.

Vygotsky argues the relationship between giftedness and cultural development. He thinks that the two are at two extreme, but interweaving relationships:

On one hand, cultural development has the tendency to level individual differences in natural giftedness, and on the other hand, it tends to increase the scale and range of various degrees of giftedness. (Vygotsky, Rieber, & Carton, 1987, p.232)

Giftedness therefore, cannot be deviant from social organization as a cultural practice. Concurrently, while the giftedness is constrained by culture, cultural actually gives the individual the opportunity to enrich the potential of giftedness in the activity process of the zone of proximal development; therefore, individuals' creativity can help them create the meaning in between extremely structured, social-cultural constraints, and extremely random, the personal novelty of imagination.

Creativity as meaning making can thus be concluded as what Moran and John-Steiner argues: These (conceptions of creativity related) topics include the development of higher mental functions in general, how tools and signs develop and acquire meaning, the role of school and formal education in developing the imagination, the importance of culture and future outlook in psychological growth, and the connections among emotion, personal experience, consciousness and creativity. (Moran & John-Steiner, 2002, p.2)

### **2.3 Digital Storytelling and radio broadcasting**

Digital Storytelling is described as a short audio-visual narrative and told in first person. (Ohler, 2006) It also provides a way for preserve and archive people's life style, thoughts, and experiences from a community. (Lambert, 2007) In other words, Digital Storytelling is focusing on story scripting and telling, but using media as for supporting reasons. It is different from photo stories or photo storytelling. Therefore, Digital Storytelling has an emphasis on digital and multimedia mediated or assisted storytelling, but not media. The process of creation is also described as "... social change they aspire to is at least partially achieved through networked identity work on and offline with both intimate and imagined publics." (Vivienne & Burgess, 2012)

Digital Storytelling is also applied to language learning. As Yang (2012) described, digital storytelling can be used for writing classes. As ESL students compose their narration in English in construction of their own digital stories, meanings are assigned through semiotic objects. It is a meaningful learning process. Digital Storytelling also have significant impact on "academic achievement, critical thinking, and learning motivation" that make writing process more interesting and meaningful. (Xu, Park, &

Baek, 2011; Y.-T. C. Yang & Wu, 2012) Students not only learn writing skills, but also self-expression and critical thinking skills. (Chun-Ming, Gwo-Jen, & Iwen, 2012; Wawro, 2012)

To sum up, Digital Storytelling in our study is a mediational process for students to mediate their thoughts by using audio-visual objects, as well as their critical thinking in the narration writing process; therefore, Digital Storytelling is mediation process for meaning making.

### **3. RESEARCH DESIGN**

#### **3.1 Contexts**

This study was conducted in an undergraduate course of department of communication that allow students to explore and practice with traditional radio broadcasting along with newer digital audio visual productions. This course was specially designed by researcher, was meant for students to run the university's radio station during the fall term of 2020 in a university in southern Taiwan, R.O.C. To develop their understanding and skills of producing meaningful content for broadcasting in a community, students were guided to produce audio-visual digital stories for Digital Storytelling in specific interest of elders in the community. This was a final part of the course for students to use Digital Storytelling to mediate thoughts and different understanding of elders from two different courses that finally synthesize in the practice of radio broadcasting. At the same time, those students were coordinating with students from the other course that was taught in the department of adult and continuing Education. Students of that class were actually sitting in classroom together with elders. However, our study was mainly focusing on students from the Department of Communication course.

#### **3.2 Participants**

In the Fall 2010 term, a total numbers of 32 students participated in the Advanced Audio-Visual Communication, an undergraduate course of the Department of Communication. There were also 23 students in the Senior Sociology course of the Department of Adult and Continuing Education, also an undergraduate course. There were also 15 seniors, who had been selected from the community around the university. Their age is from 65 to 73 with 10 males and 5 females. In our study, we focused on those 32 sophomore students of the Department of Communication, and the mediational process to the seniors.

#### **3.3 Data generation and procedures**

Data generation is in line with Vygotsky's Cultural-historical methodology. In qualitative research, researcher is the instrument. He or she uses different techniques to generate information from the field or documents as data for the research (Denzin & Lincoln, 2000; Marshall & Rossman, 1995; Marshall & Rossman, 1999). The statement also fits Vygotsky's instrumental approach for his cultural-historical theories. The researcher uses external means to stimulate the participant, and investigates the participant's response and modification to the stimuli. The design of this study is an experiment, and the data generation was a dynamic process of meaning making. When the researcher used external stimuli, such as interview questions as tools for data generation, the researcher was the one, who generating the data and become the data; therefore, the researcher, in this study had different roles: mediating and mediated, investigator and participant, and self and itself (a people tool to the study). Based on Vygotsky's analogy of tool-result (1930/1978), the instrumental tool of me, the researcher, is simultaneously the result of the study.

Our study used two courses of students as the subject of study to explore the use of Digital Storytelling to mediate young college students' learning processes to understanding seniors. Students from

the department of communication are labeled “Group A” and students from the department of adult and continuing education are labeled “Group B.” The study went through series of stages in order to bring synthesis from those students.

*Stage One: Group B students study with seniors.*

Group B students studied together with 15 seniors in the course of Senior Sociology. Students were assigned into 6 small groups with 2 to 3 seniors. During the course, seniors sharing their life stories and work on class projects with group B students. By doing class activities, students of Group B tried understand seniors from their own small groups and later put information together in words along with pictures that the seniors shared.

*Stage Two: Group A students make a digital story by using information provided by Group B students.*

Group A students were also divided into 6 small groups in conjunction with Group B small groups. By doing this, students of Group A only got to know those seniors “indirectly” from words and pictures. They could not talk with those seniors or contact with them in any form of communication. Group A students also had to make digital stories of what they know about those seniors. Those digital stories were uploaded to the university’s radio station website for sharing and commenting.

*Stage Three: Group A students did radio interviews seniors and Group B students*

Group A students invited seniors and Group B Students to the university’s radio station and did interviews for each senior in studios. The length of each senior’s interview was set to 15 minutes. Group A students had the first “direct” communication with those seniors. The radio interviews were broadcasted on air live as well as on the web afterwards.

*Stage Four: Group A students did another set of digital stories for each senior.*

During this stage, Group A students were asked to find different understands of those seniors and put those experiences, feelings, and thoughts together. We expected to see how different routs of understandings can be finally put together as synthesis. The digital stories were uploaded for students of Group A to compare the differences.

*Stage Five: Group A students were interviewed by the researcher*

After the second digital story is finished and uploaded, the researcher asked Group A students for interviews. During the interview, opened questions were asked.

### **3.4 Data Analysis**

Researcher followed a dialectical and mediational process of data analysis from different types of data that includes (1) Group A students’ digital stories, (2) radio interview recordings, (3) interviews with Group A students, (4) interviews with Group B students, and (5) the researcher’s notes.

## **4. RESULTS AND DISCUSSION**

Students were told to call those seniors “big brothers” or “big sisters because that was culturally appropriate. During the process of this study, we tried to investigate the dynamic of changes to the students’ attitude and understanding toward the seniors.

In our study, all participants believed that they had changed their attitude toward seniors. The change was actually dependents on their direct experiences with seniors who participated in this study. Some students also believed that this experience of participating in this study would be able to applied to other seniors although some others did not think in this way. Students, who thought that the experience which could be applied to other seniors, believed that living and working with seniors would be a norm in the future

in Taiwan since Taiwan is becoming an aging society. This study provided a valuable psychological preparation for them to communicate with seniors. Some others thought our study was just a special case. This experience would not be able to apply to seniors in the future.

According to interview transcriptions, Group A students:

“According to Group B student’s notes and pictures, I felt our big brothers and sisters were pretty tough and authoritative.”

“I had stereotypes on them. I thought they were like other seniors, who sit in front of their front doors and listen to hand-held radio; or like those seniors, who play traditional Chinese instruments, or play traditional Chinese chess games under a big tree.”

“I didn’t have many experiences with elders so I have no idea.”

“We could just read and see the seniors’ information and pictures. Without talking to them, we felt that we had been reading stories.”

“We read the provided information and found some interesting points that later could be our interview topics.”

Seniors’ stories were mediated several times by different mediums, such as word documents, pictures, digital stories, and radio broadcasting as well as students B. The meaning of the whole process is to examine how students A construct the meaning of those elders through different stage of consciousness. At the same time, how student B interact with elders is partially mediated by students A’s digital stories.

“I thought they (seniors) were cute and they could manage their time well. I hope I could be like them when I was in their age.”

“I found they were old in appearance, but young inside. They could do better job than young students when dealing with time management. They could schedule themselves full, but still be able to come to school to learn.”

Finally, all constructed knowledge is synthesized within the radio broadcasting interviewing process; therefore, the only direct knowledge is experienced at the last stage with all different kinds of indirect mediations.

## 5. CONCLUSION

In conclusion, we have observed the student’s change in their attitudes toward seniors through the mediational processes of using the digital storytelling productions and direct experiences in radio interviews. Students from Group A may feel that the whole process is too short. They would like to have the seniors to stay for the whole semester with them. At least, this is a sign for the students to change the meaning of senior citizens in their lives.

## 6. REFERENCE

Chun-Ming, H., Gwo-Jen, H., & Iwen, H. (2012). A Project-based Digital Storytelling Approach for Improving Students' Learning Motivation, Problem-Solving Competence and Learning Achievement. [Article]. *Journal of Educational Technology & Society*, 15(4), 368-379.

Cole, M. (2003). Mediation, Creativity, and Consciousness. The lecture was a bilingual interactive English/Russian video conference transmitted over the Internet. Retrieved March 3, 2005, from <http://earth.ucsd.edu:8080/ramgen/courses/econ113/cole111803.rm>

Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.

- Hegel, G. W. (1975). *Hegel's Logic* (W. Wallance, Trans. 3rd ed.). Oxford, UK: Oxford University Press.
- Inwood, M. J. (1992). *A Hegel dictionary*. Oxford, OX, UK ;: Cambridge, Mass. Blackwell.
- John-Steiner, V., & Souberman, E. (1978). Afterword (V. J.-S. Michael Cole, Sylvia Scribner, Ellen Souberman, Trans.). In M. Cole (Ed.), *Mind in society: the development of higher psychological processes* (pp. 121-133). London, England: Harvard University Press.
- Lambert, J. (2007). Digital Storytelling: how digital media help preserve cultures. *The futurist*, 25.
- Lee, B. (1985). Intellectual origins of Vygotsky's semiotic analysis. In J. V. Wertsch (Ed.), *Culture, communication, and cognition: Vygotskian perspectives* (pp. 66-93). Cambridge [Cambridgeshire] ; New York: Cambridge University Press.
- Mahn, H. (1999). Vygotsky's Methodological Contribution to Sociocultural Theory. *Remedial and Special Education*, 20(6), 341-350.
- Marshall, C., & Rossman, G. B. (1995). *Designing qualitative research* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.
- Marshall, C., & Rossman, G. B. (1999). *Designing qualitative research* (3rd ed.). Thousand Oaks, CA, USA: Sage Publications, Inc.
- Mish, J. M. (Ed.). (1997). *Merriam-Webster Dictionary*. Springfield, MA: Merriam-Webster, Incorporated.
- Moran, S., & John-Steiner, V. (2002). Creativity in the Making: Vygotsky's Contemporary Contribution to the Dialectic of Creativity & Development. *Creativity and development - Counterpoints* Retrieved September 10, 2005, from [http://www.unm.edu/~vygotsky/c\\_make.pdf](http://www.unm.edu/~vygotsky/c_make.pdf)
- Moran, S., & John-Steiner, V. (2003). Creativity in the Making: Vygotsky's Contemporary Contribution to the Dialectic of Creativity & Development. In R. K. Sawyer (Ed.), *Creativity and development - Counterpoints* (pp. 61-90). NY: Oxford University Press.
- Ohler, J. (2006). The World of Digital Storytelling. *Educational Leadership*, 63(4), 44.
- Population Reference Bureau. (2012). 2012 World Population Data Sheet. Washington, DC, USA: Population Reference Bureau.
- Vivienne, S., & Burgess, J. (2012). The Digital Storyteller's Stage: Queer Everyday Activists Negotiating Privacy and Publicness. [Article]. *Journal of Broadcasting & Electronic Media*, 56(3), 362-377. doi: 10.1080/08838151.2012.705194
- Vygotsky, L. S. (1925/1999). Consciousness as a problem in the psychology of behavior. [Journal]. *Undiscovered Vygotsky: Etudes on the pre-history of cultural-historical psychology* (*European Studies in the History of Science and Ideas*), 8, 251-281.
- Vygotsky, L. S. (1930/1978). *Mind in society: the development of higher psychological processes*. London, England: Harvard University Press.
- Vygotsky, L. S. (1971). The psychology of art Retrieved March 21, 2005, from <http://www.marxists.org/archive/vygotsky/works/1925/>
- Vygotsky, L. S. (Ed.). (1999). *The collected works of L.S. Vygotsky: Scientific legacy* (Vol. 6). New York: Plenum Press.
- Vygotsky, L. S., Rieber, R. W., & Carton, A. S. (Eds.). (1987). *The collected works of L.S. Vygotsky: The History of the development of the higher mental functions* (Vol. 4). New York: Plenum Press.
- Vygotsky, L. S., Rieber, R. W., & Hall, M. J. (Eds.). (1998). *The collected works of L.S. Vygotsky: Child Psychology: Cognition and language: A series in Psycholinguistics* (Vol. 5). New York: Plenum Press.
- Vygotsky, L. S., Rieber, R. W., & Wollock, J. (Eds.). (1997). *The collected works of L.S. Vygotsky: Problems of the Theory and History of Psychology* (Vol. 3). New York: Plenum Press.

- Wawro, L. (2012). Digital Storytelling. [Article]. *Children & Libraries: The Journal of the Association for Library Service to Children*, 10(1), 50-52.
- Xu, Y., Park, H., & Baek, Y. (2011). A New Approach Toward Digital Storytelling: An Activity Focused on Writing Self-efficacy in a Virtual Learning Environment. [Article]. *Journal of Educational Technology & Society*, 14(4), 181-191.
- Yang, Y.-F. (2012). Multimodal Composing in Digital Storytelling. [Article]. *Computers & Composition*, 29(3), 221-238. doi: 10.1016/j.compcom.2012.07.001
- Yang, Y.-T. C., & Wu, W.-C. I. (2012). Digital storytelling for enhancing student academic achievement, critical thinking, and learning motivation: A year-long experimental study. [Article]. *Computers & Education*, 59(2), 339-352. doi: 10.1016/j.compedu.2011.12.012