EMPATHETIC FUNCTIONS OF SOCIAL LEARNING IN THE FOURTH INDUSTRIAL REVOLUTION ERA

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Abstract: This study has been conducted utilizing the paradigm of social learning that connects people in the fourth industrial revolution era and the 'space' of social networking system as an 'educational' platform. 'Introspection' of learners of the classes comprised of the 'courses of practice' and contents of the entire course of the 'classes' were shared on Social Networking System (SNS)analyzing the 'communication and sharing' between learners and also between instructors and learners. According to the results of analysis in this course, it was found that the development of 'capacity' of learners in the cognitive perspective and 'emotions and interactions' shared with each member involved the empathetic functions. Mechanism of interaction formed by the social learning constituted empathy among human beings and also provided 'empathetic' interactions for cooperation and mutual respect to overcome the fourth industrial revolution era.

Keywords: Fourth industrial revolution, social learning, empathy, learner-based, interaction

I. INTRODUCTION

The fourth industrial revolution era has already been diversely influencing on our lives. Above all, the term, 'revolution,' amplifies anxiety in the era of uncertainty. Such drastic changes in these times tend to influence overall aspects of human lives. From the improvement of convenience of daily lives by utilizing artificial intelligence, educational mechanism has been changing as well. There are various methods for educational activities and instructions to overcome the fourth industrial revolution era. However, how do educational activities in the fourth industrial revolution change, and what methods are appropriate for adapting a new era? The goal is to focus on the virtue of humans needed for the fourth industrial revolution era. The human virtue that is important to possess in the fourth industrial revolution is to return to the ultimate human nature. The greatest capacity to achieve this goal might be 'empathy.' Artificial intelligence is unable to perfectly understand the vast, complex, and complicated nature of human emotions. Only the empathetic power of human emotion that connects to others from the heart has the ability to derive mutual human interchange.What are educational activities that can cultivate empathy? In this study, social learning is suggested as an educational mechanism to produce and develop empathy. Social learning can be seen as the process by which learning activities are achieved with interactions and cooperative activities among learners based on social media. The most generally used platforms among the functions of social media have already been systemized to respond to the text prepared by others. Functions for writing comments in the representative social media including Twitter or Facebook make it feasible to express empathy and personal opinions on the text or information. This study is intended to draw reactions by utilizing functional elements of social media and suggest the feasibility of utilizing functions as empathy. The objective of this study is to analyze the discussion that social media is equipped with a convenient system for deriving empathy, how learners sympathize when utilizing aforementioned functions in education, and how the effects of empathetic functions impact learners. As for the research methods, cases where interactions have been provided through social learning comprising 60 students in the first semester in 2016 were analyzed. In this regard, in-depth research methods were used including the participatory observation of researchers and the analysis of self-reflection diaries of learners.

II. THEORETICAL BACKGROUND

2.1. Fourth Industrial Revolution and Education

In the beginning of 2016, Klaus Schwab, the founder and president of the Swiss Global Economic Forum, introduced the theme of the 'fourth industrial revolution' for the first time and suggested the return to the ultimate human nature. That is, the development of the holistic human being for the fourth industrial revolution was suggested to create an environment in which blessings and prosperity, rather than destructive innovation, were provided to humans [1].

- Situational and contextual intelligence(spirit) Ability to well understand and apply what is recognized
- Emotional intelligence (mind) Ability to organize and integrate thoughts and emotions and create relationships with the self or other people
- Inspirational intelligence(soul) Ability to lead changes and utilize personal or common goals,

reliability, and various virtues for common interest
- Physical intelligence (body) Ability to pursue and maintain the health and happiness of the self and other people around him/her to gain the motivation needed to promote both individual and structural changes

These four aforementioned abilities seem to be based on various psychological and educational theory performances. For example, cooperative work through the personal network is productive (spirit), and harmonization of rationality and emotional perspective is idealistic (emotion). Continuous exploration on the meaning and purpose (spirit), as well as the physical, emotional, spiritual, and social harmonization (body) is the essential human ability required in innovative society in the future. As for the core assignments to prepare for the future, it is necessary to establish a cooperative and flexible structure and avoid making decisions from a compartmentalized perspective or mode of thinking. In addition, it is recommended to develop a positive and comprehensive joint discourse and re-organize the social, economic, and political system that is appropriate for them [1].

2.2. Social Learning

Social learning is based on the social learning theory by Albert Bandura (1977). The concept indicates that 'humans tend to learn by observing and imitating behaviors of others in social circumstances.' The term, 'social,' as a concept of learning through the interactions such as knowledge sharing and opinion exchange with others based on social media, is combined with information communication technology. Furthermore, "social" becomes the comprehensive concept that includes the participation, sharing, and open and collaborative work utilized in the field of education [2] (resources searched on the homepage of the Department of Education, March 27, 2017). L. Safko & D.K. Brake (2009) introduced how it was feasible to approach and use it from four aspects including communication, collaboration, education, and entertainment through social media. Therefore, social learning makes it feasible to establish social media as an educational platform with respect to the remaining aspects; communication, collaborative work, entertainment elements, and developing educational activities.

Social media is referred to as the "application based on Internet to realize web 2.0 information environment to produce and exchange contents by users [3]." It is used as a comprehensive concept that refers to activities for exchanging and sharing knowledge, information, and opinions by using the application online by people grouped in the community. Characteristics of web 2.0 have been explained that, even if society is developed in a highly technology-intensive manner, fundamental and relational human values will not change. This view is in light of their increasing preference to enhance communication and exchange with others by creating their own communities through advanced technologies and tools [4]. Social learning indicates learning 'with others' and 'from others' and also to learn through and with others from community participation. This is in contrast to merely obtaining information and absorbing knowledge. In the social network learning environment, social media is regarded as a learning medium with the educational potential to reinforce the social relationship and interaction among learners and to enhance activities for communicating with others and sharing knowledge to learn.

In summary, social learning includes seven characteristics of SNS; identity, presence, relationship, sharing, conversation, reputation, and community. Utilizing the aforementioned characteristics, social learning emphasizes the activeness of individuals and formation of relationship with others. Due to active enthusiastic participation of all learners, the social boundaries between instructors and learners are removed. This dynamic makes it feasible to freely access and use various learning contents and participate in active interactions between instructors and learners or between learners. In addition, community is created among participants with common learning goals. This type of environment makes it feasible to conveniently connect and expand information and knowledge possessed by instructors and learners without limitation as an advantage. Instructors and learners produce, modify, and share learning contents by actively utilizing social media tools and cooperating with others, and freely communicate with them. Beyond the simple communication, learners are able to re-structuralize knowledge obtained from the aforementioned courses by themselves, share the re-structuralized outcome with peers, expand the knowledge through conversation and discussion, jointly prepare for documents though collaborative work, and solve given issues together. Students are able to exchange with and learn from experts in each field without temporal and spatial restrictions.

Moreover, instructors are able to review the response and understanding of learners though polls and quizzes in real time and provide immediate feedback on and results of the learning courses. Immediate interactions between instructors and learners, between contents and learners, and among learners are available in a real time basis in integration through the connection of personal devices of learners [5].

What makes 'social learning,' which educates through the use of social media, different from traditional education methods is how the contents are produced and received. In the traditional education method, contents were generally prepared by

instructors in advance and unilaterally delivered to learners. In contrast, social learning provides contents through social media outlets such as Facebook. Changes occur in learner cognition and behavior through activities for sharing information and knowledge and exchanging opinions among learners connected in social networks [6].

Resources saved and accumulated in SNS contribute to the future learning of learners, are used as class materials and tools by instructors, and are also available for use as assessment data and tools for conducting research.

2.3 Empathy

Empathy is the compound word of the Greek language. Em means 'towards' and patheos refers to 'pain and passion.' Hence, the etymology of "empathy" is derived from the meaning, 'towards the pain.' Empathy requires an active mindset to engage in others' emotions through active compassion and understanding unlike sympathy which merely emulates the anxiousness of others in difficult situations.Empathy is a means of communication with society that is inevitable for those who pursue human relationships as a sincere connecting link of "me" with others. However, empathy is a general capacity that normal people tend to have and is regarded as an innate ability that is close to instinctive in certain aspects. Therefore, empathy is a unique human ability that has existed through the history of mankind, and has served to lead mankind to a better direction [7].

III. . RESEARCH METHODS

3.1. Research Methods

In the spring semester in 2016 at University K, the elective course titled, 'Life and Career Planning and Self-Development', was offered to 60 students. During University K's first semester in 2017, the class was offered to 74 students. This study was comprised of interactions among students in the spring semester in 2016. The goal was to advance the objective in practice-related research to enhance instruction-learning of instructors as well as learners through the participatory observation, reflection, and introspection with classes.

3.2 Participatory Observation

Participatory observation is a method to identify the cultural phenomena of certain research groups in a narrow but thorough scale and hence is an approach for understanding one particular phenomenon occurring in a group from subjects of the research. This is regarded as a methodology to judge the core of research subjects in the most appropriate manner with express interest in the meaning of behaviors or experiences of research subjects. A method [8] for participating in the lives of research subjects and collecting resources from them is to identify behaviors of research subjects in their ordinary and natural environment making it feasible to create raw data. It is to observe the types of situations research subjects confront, how they understand and behave in such situations, or how they communicate with participants [9]. That is, researchers participate in the lives of research subjects while identifying their behaviors, words, and thoughts. Furthermore, what researchers feel and experience in person or during informal or spontaneous conversations can be used as resources. What is not expressed in language or words can be re-interpreted through the observation of researchers. It is therefore possible to understand behaviors of research subjects in-depth. Participatory observation is accomplished when "researchers become a tool of research." [10].

3.2. Empathetic Functions of Social Learning

3.2.1 Sharing

In the class, the 'group' function of Facebook has been utilized and performed. This indicates that it was possible to conveniently manage learners from the perspective of education. The platform was not only available for use as a space for collaborative activities of learners but also to post notifications in a real time basis for learners in the class and to repetitively confirm the current activities. By sharing the outcomes of learners or their teams, as well as those of other learners or other teams, it was possible to share more knowledge and information. It was also available to identify whether learners acknowledged or responded to the posted articles.

People tend to view the world from their own perspectives. Therefore, it is difficult for them to be interested in the issues that are not of personal concern. However, I have realized that there was much more to be understood than what I could see from my own perspective. I also recognized how there were many more meanings behind them while participating in this class. In addition, I had the opportunity to create a video image from a new perspective. It was a rewarding time for me to create a world that was seen by others.

- From a Facebook feedback comment by the student M about the class on April 14, 2016.

3.2.2. Cooperation and Community

What most of the participants cited as the program's most profitable and beneficial aspects, including that from which they learned most, comprised collaborative learning such as 'cooperation,' 'collaboration,' 'together,' 'with many others,' 'community,''relationship,'' communication,' 'consideration,' and 'taking care of.' Assigned seats were arranged in a way that facilitated the flow of and participation in team activities, and most of the suggested problems were given to teams. They were provided ample time so that they could actively participate in activities and sharing. When preparing

for the activity log, materials were provided so that subjects could work together while actively giving presentations and using the social network to share all the outcomes.

When I first took the Life and Career Planning and Self-Development course, I was not interested in self-development but only led a leisurely life. It was sometimes difficult for me to follow the class which required group participation and problem-solving. Sometimes, I had conflicts with others in the activities. However, I ended up understanding my limits and realizing how important it was to divide the roles in relationships. In the beginning, self-development was difficult for me to understand. However, as I continued to receive lectures from many experts including the author, Seong-jun Gi, and took classes from other instructors, and reflected on my past and today as the last class, I realized how much I had grown.
- From the 'Brief statement of what changes you or what you realize through the class' in the last question from assessment statement of the student G.

3.2.3. Performance of Sharing and Collaborative Spirit

With empathetic activities, learners were able to practice and perform activities of mutual benefit, symbiosis, and a collaborative spirit of sharing through instruction-learning.

As I listened to the opinions of others instead of my own thoughts, I was happy to be able to expand my horizon of thinking and learned how it was possible to achieve the goal of working together as I saw one paper created by team cooperation.
- From a Facebook feedback comment by the student J about the class on April 28, 2016

CONCLUSIONS

Educational performance in the use of social learning in the fourth industrial era performs the following empathetic functions.

1. Commenting functions constituted by the social learning system generally provide accessible conditions to facilitate empathetic functions. Activities in the social network promote active empathetic responses.
2. Recognizing that 'empathy' is a critical human core capacity in the fourth industrial revolution, the students' empathetic language was continuously developed in the class, further demonstrating the application of social learning.
3. Empathetic functions are the responses of the human existence and also regarded as the first step to solve problems. Empathetic interactions among students include counseling implications.
4. Profound educational activities in empathy reinforce the ties among learners or between instructors and learners providing learning motivation and an opportunity of internal reward.

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