

Media Use as an Element of Self-directed Learning: The Learning Strategies and Media-Related Behaviors of Japanese University Students

Tomomi Takabayashi
International Christian University
Tokyo, Japan
g189005a@icu.ac.jp

Introduction

Self-directed learning has gained more attention especially in the 1890s by Dewey and other educators, as one of the ideal learning styles. However, self-directed learning should be reviewed since types of media have experienced a massive increase. Today, learners have a number of choices of learning media. Consequently, the forms of the education have also changed and varied. Recently, there are more people learning with smartphones while others maintain the traditional method of learning such as using books for their best choice. However, the increase in the choices of learning media means that learners need to keep choosing and directing their learning by themselves. Therefore, it is necessary to begin to think about self-directed learning in relation to learning media.

Although there are many studies for self-directed learning, these tend to be divided in some fields depending on learning contents. First, it was in pedagogical or philosophical studies, which concentrates on teaching but less about learning. However, the study of the self-directed learning became troublesome to be seized with the former limitation when people paid more attention to learning in each pedagogic field. For example, Rubin (1975) researched about self-directed learners who were named "good language learner (p.41)" in the field of language education. Knowles (1975) studied self-directed learner in the field of adult education and career development. It is meaningful to point out later researcher of psychology, Zimmerman (1986), and others in the field of educational psychology. Their study was called self-regulated learning. This emphasis on him is due to the fact that he does not strictly limit the learning contents and subjects of learning, and also see general learning behaviors of high school students. More studies have been developed in each above-mentioned field. At present, there are also studies in other fields such as remote education, citizenship education, and sports science. In this history of studies, there are some studies that focused on self-directed learning with the use of digital media or SNS (Dabbagha and Kitsantasb, 2012; Pata, 2009; etc.) and they have the limitation of contents-based disciplinary studies. However, there are some similar points in these studies on media and self-directed learning. For example, the importance of the communication skills and the learning media environment are repeated points. This shows that there is a need for research on self-directed learning not only from the view of certain field based on the learning contents, but from the interdisciplinary perspective to know more about it. Therefore, the possibility for media as another perspective is suggested in this research.

Furthermore, more arguments and practical challenges arise in self-directed learning of university students in Japan recently. According to Japanese Ministry of Education, Culture, Sports, Science and Technology (2012), Central Council of Education put importance on learning "independent-minded ability (*shutatiteki ni kangaeru chikara*, p.3)" for future higher education. This social issue led some universities and companies in the education business prepare actions in order to foster self-directed and active learning. Here, the need for particular attention to the Japanese university students' case in the study of self-directed learning is found.

This study examines the possibilities of a new viewpoint for self-directed learning in Japanese university students' contexts. This new viewpoint of media, which is not limited to the subject contents, will enable to answer the current needs of research. Thus, the research questions are that; 'Are there any relationship

between self-directed learning and media use in the case of Japanese university students?’ ‘How are media in this age treated in self-directed learning scenes?’

Research Design and Methods

Survey was carried out to investigate the relationship between self-directed learning and media use for learning of university students. The survey is composed of (1) face sheet, (2) the tendency of autonomous learning, (3) skills and attitudes for new things (innovativeness), (4) detail of their media use, (5) self-evaluation of their learning in the university. For the tendency of self-directed learning, the scale for self-regulated learning created by Fujita (2010) was adopted. This scale was made for Japanese university students based on previous studies by Zimmerman and Pintrich. Zimmerman, as aforementioned, is a researcher of self-regulated learning. In the respect of media use, two different tools were applied. Innovativeness was suggested to have a relationship to autonomous learning by pre-interview to students with self-directed learning habits as they showed characteristics of innovation diffuser defined by Rogers’s communication study (2003). For this tendency of the way of communication, the characteristics of early adopters and opinion leadership were examined in this questionnaire referring Rogers. Another tool to investigate the media use of students was the scale of media literacy created by Gotoh (2004, 2005). The author revised some items related to the new technology, which changed remarkably today. All revision passed through the member check by the professor and master students who have a profession in media literacy. In addition, self-evaluation of their learning in the university was asked because GPA and other personal information are not must-answer on the questionnaire considering research ethics. This self-evaluation has a high positive correlation ($r = 0.58, p < .05$) to GPA in the pre-survey at the subject university, although enough number of answers on GPA was collected as the result.

The participants for this survey are undergraduate students of the private University A in Tokyo in June 2014. This university is suitable for the research because it is the university of general studies located in the capital of Japan with the ease of research for the author. First, participants were distributed paper-based questionnaires, and they were asked to read its cover, which is written about attentions regarding research ethics and privacy policy. After reading the cover page, they go to the second page to show the agreement to the participation. The time required to answer was 10-15 minutes. This survey was analyzed by using SPSS for Windows of IBM. 157 questionnaires were distributed, and 116 (male: 28, female: 85, others: 1) were responded, which is 74% response rate. This sample is not well gender-balanced, but the subject university initially female weighted in 65%.

Results

The relationship between self-regulated learning strategies as self-directed learning tendency (SRL points) and other variables is shown in Table1. In respect of innovativeness, it revealed that to be open to new thoughts and technologies is related to self-directed learning. This result is understandable because being connected to new things gives more chance and choice for learning. Moreover, Rogers (2003) emphasize the role of interpersonal communication, particularly with outsiders, when he explains the diffusion of new things, and this suggests a relationship between autonomous learning and personal media. On the other hand, a moderate correlation between self-regulated learning and media literacy shows how critical students can use the media affects on self-regulated learning. This result will become a strong reason to discuss self-regulated learning not only within the context of learning contents, - on the learning media. In addition, the relationship between self-regulated learning and GPA supports previous studies in the West (Lounsbury et al., 2009; Stewart 2007). This finding is meaningful since this was supported in Japan as one of the Asian countries for research, and is independent of other variables here.

Table1. Correlation table

	SRL points	Innovativeness	Media Literacy	GPA	M	SD
SRL points	—	.34 **	.36 **	.37 **	58.88	9.40
Innovativeness		—	.22 *	.00	65.74	10.17
Media Literacy			—	.06	117.85	9.28
GPA				—	3.13	0.46

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** $p < .01$ * $p < .05$

Furthermore, the multiple regression analysis was used to test if the media-related behaviors predicted participants' autonomous learning tendency. It was found that innovativeness significantly predicted SRL points ($\beta = .285, p < .01$), as did media literacy ($\beta = .258, p < .01$). However, these two predictors explained only 16.3% of the variance, which is not a large coefficient of determination. Therefore, this shows that media use is one of the elements of autonomous learning, but other elements may also exist. In this research, other factors such as grade, gender, type of high school they came from, self-evaluation on their learning, and innovativeness could not be the significant predictors. On this point, motivation and other aptitudes may have some possibilities.

In conclusion, this study suggested the possibility that self-directed learning could be considered from the viewpoint of learning media in addition to previous research that were from the perspective of the content-based fields. The survey research showed that media-related behaviors, which tend to be overseen in previous studies, and self-directed learning has a significant relationship. However, this is a result from only one university so that biases appear in the sample. For further research, the confirmation of this result with more respondents from other national and private universities in Kanto area is ongoing. In addition, qualitative analysis of answers from open questions and an additional interview to examine the meaning of learning media in autonomous learning, are future tasks to be resolved.

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