Effects of Learner Characteristics on Learning Outcomes in the Learning Situation Incorporating SNS

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Abstract

This study is conducted to know how the learner characteristics such as the goal-orientation, the self-efficacy, self-regulated learning (SRL) strategies and motivations of using social network sites (SNS) affect the learning satisfaction and academic achievement in the learning situation incorporating SNS. For the purpose of the study, we conducted a SNS-integrated Chinese language course for six weeks on 33 undergraduate students, and then we distributed and retrieved questionnaires in offline circumstances. After excluding three insincere survey papers, 30 survey papers were analyzed. We used SPSS 19.0 Statistics Solution for the correlation analysis and the multiple regression analysis. The results are as follows: first, there is a significant correlation between the learners' SRL strategy and the learning satisfaction; however, the goal-orientation, the self-efficacy and motivations of using SNS do not affect the learning satisfaction in the learning situation incorporating SNS. Second, learners' self-efficacy shows effects on the academic achievement in the SNS learning situation; however, learners' goal-orientation, SRL strategies and motivations of using SNS do not affect the academic achievement. The result hints the need for considering learners' SRL strategies in order to raise the learning satisfaction and it also inspires the need for teaching strategies for enhancing self-efficacy in order to raise the academic achievement.

Keywords: SNS Learning Environment, Learner Characteristic, Academic Satisfaction, Academic Achievement

1. Introduction

1.1. Necessities and Purposes of the Study

Technological advancement of the information and telecommunication field has changed our way of life and the surroundings of our life. The learners that we encounter in educational field have been using high-technological devices including computers and cell phones since young, and they are leading a dual life, both in the real world and in the artificial one. Especially, numerous efforts in the teaching and learning process have tried to utilize these media in promoting the effective expression of knowledge and in promoting meaningful interactions between peers, teachers, or specialists [1]. As the era of Web 2.0 advents, it becomes possible to make use of the new media such as Social Network Services (SNS),

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Wiki and blogs so that a new dimension of teaching-learning situation can be constructed by connecting the learners as a single community.

SNS has brought many changes in aspects of the social communications, the way of interpersonal networking, and the lifestyle [2]. Due to the propagation of the smart phones, the communication and the values of SNS sites such as Facebook and Twitter have been in the rising mood internationally. The strength of utilizing SNS in learning process is that learners can participate in learning the material through cooperative interactions with others, when they want to and where they want to. Also, learners can participate in the observational learning situation, in which they watch others' learning activities, and the imitative learning situation, which is in accordance with the valued expectations [3]. In these regards, SNS has higher potential than the existing web-based education in the general educational areas as it can promote aspects of Web 2.0 such as openness, share and participation [4]. The English writing exercises integrating Twitter was more effective than traditional book-oriented learning [5] and Facebook had positive effects on undergraduate students' self-esteem, in-campus satisfaction and performance improvements [6]. The learners who used SNS as a learning aid showed a higher extemporaneity and satisfaction than those with the existing internet learning program [7]; and the utility and attitude of SNS perceived by the learners, self-efficacy, social acceptance, socialization and SNS participation have effect on the learning outcomes [3].

Even though the variables can affect in a different way regarding the differences among the learning situations, the existing researches have yet come short of investigating the variables that have effects in the learning situation incorporating SNS. For this reason, this study aims to reveal the effects of learner characteristics as the core variables in explaining the learning outcomes. The earlier researches on the variables from the learner's side have focused on characteristics such as the intelligence, the scores, the prior knowledge; however, modern studies are more on investigating the influences of the variables, such as goal-oriented motivation, self-efficacy and SRL strategies, on the learning outcomes.

Therefore, the goal of this study is to provide basic materials for constructing a teaching strategy in learning situation incorporating SNS, by investigating the effects of learner characteristics such as the goal-orientation, the self-efficacy, SRL strategies and motivations of using SNS on the learning outcomes in the learning situation incorporating SNS.

1.2. Study Subjects

The study subjects projected for the sake of the purposes of the study are as follows:

First, what relationships exist in the learning situation incorporating SNS, between learner characteristics of goal-orientation, self-efficacy, SRL strategies and motivations of using SNS, and the learning satisfaction and academic achievement?

Second, how are the relative influences of learner characteristics of goal-orientation, self-efficacy, SRL strategies and motivations of using SNS on the learning satisfaction and academic achievement in SNS learning situation?

2. Theoretical Backgrounds

2.1. The educational Application of SNS

An SNS means an interpersonal network building service centered by a one-person media or a community, whose website has a form of community that shares information through the internet and helps communication; that is, a service that supports relationship formation among the users with the common interest on the internet, and helps the user to take part in

various activities on the basis of this accumulated relationships, including human networking, sharing information and contents[3, 4]. In this study, the SNS served as a community-typed educational tool for connecting teacher-learner, learner-material and learner-learner, which enables sharing information, such as words, images, video clips and documents; exchanging opinions on learned contents or other interests; giving and taking feedbacks on the assignments

Due to the recent popularity that new types or social networking services including Facebook and Twitter show, a rising tendency exists on the number of researches about educational applications of SNS [8]. The performance of the college or the corporate education has a firm relationship with the application of the social media.

One-way delivery of the instructor's specific opinion was a dominant way of teaching-learning activities in the educational environment incorporating the cyber space in the past; however, an SNS-based education situation provides a favorable educational environment for interactive teaching-learning activities between the instructor and the learner, and for proceeding teaching-learning activities in the many-to-many relationships among the participants. Moreover, SNS sites such as Facebook enables the free communication among peer learners and thus enlarges the opportunities for searching information and sharing the materials; in other words, provides an educational environment that allows new educational activities by forming a new participatory space that fuses learners' individual and collective activities[2].

Most of the previous studies on applying SNS into language education show positive results in learning outcomes. Kim & Lim [9] tells us that learners used Twitter to frequently involve in communication and various patterns of cultural educational contents that the instructor had shared through twitter became the core subject of the conversation on Twitter, making it possible for the learners to naturally practice writing. Also, Twitter's trait of restricting the length of the messages encouraged learners to engage in deep reflections, thus played a role as a major educational tool which not only promotes communication but also leads cultural understanding and English writing activities at the same time. Jang [10] shows effects of the learning incorporating SNS on increasing English writing skills among undergraduate students and the learners' recognition of SNS as an effective educational medium.

In this study, we decided Facebook is the most suitable educational tool among the various SNS services, regarding many factors including the function, the layout and usability. Facebook is the most popular and the most globally used SNS site. It has overtaken MySpace in 2008 as the biggest SNS and became the market leader in the field. Facebook is very similar to the traditional online cafes in regards that the users can upload images and video clips, and write some long passages. However, the concept is more inclined to sharing than visiting, allowing other people's posts from my Timeline even though not visiting other people's Facebook pages. Various Facebook-based applications have been developed to make use of the rapid feedback and the networking of 800 million people of the SNS [4]. Moreover, Facebook can be used in the learning activities because it does not have the restriction on the length of postings and have 'Group' function.

2.2. Studies on the Variables on Learners' Side in SNS Learning Situation

Generally, Learners' goal-orientation, self-efficacy, SRL strategies and motivations of using SNS are the variables on the learners' side that affect learning outcomes in the learning situation incorporating SNS. The literature review on those factors shows the following:

First, the goal-orientation does not only include objectives or reasons for an accomplishment but also acts as a criterion to decide the successfulness of reaching the

intended actions or objectives [11]. Church, Elliot & Gable [12] points out that learners' attitudes and performances vary regarding to their aimed goal, and the goal-orientation is an important determinant in an accomplishment situation. Numerous research materials support the fact that the goal-orientation has an important effect on educational achievement [13]. Elliot & Church [14] introduces three sub-factors that motivate achievements: mastery, performance-approach, and performance-avoidance goals. A mastery is a goal that intends to develop their competence and task mastery; a performance-approach is a goal with eagerness to attain favorable judgments for their competence; and performance-avoidance is regarded as avoiding unfavorable judgements of the competence. In this study, mastery goal is defined as the goal with interests in learning itself and with eagerness to master the skills; performance-approach goal is defined as the goal with eagerness to show that they perform better than others; and performance-avoidance goal is the goal to avoid exposing their inferiority to others in learning.

Second, in this study, self-efficacy is defined as the belief or conviction in one's capabilities and it includes sub-factors of academic efficacy and self-control efficacy. Academic efficacy is regarded as self-belief on how well one can perform an academic assignment, while self-control efficacy is regarded as the perception of how well one is performing the learning plan. The higher self-efficacy one has, the more increased are the amount and durability of one's effort, and when faced difficulties, the ones with stronger self-efficacy invest in more efforts while the ones with anxiety over their abilities lessen their efforts or completely give up [15]. Especially, academic self-efficacy has been defined as the personal judgment on one's ability to self-organize and self-execute the process of activities in the educational assignment. Various researches [16, 17] argue that self-efficacy has effect on the academic performances.

Third, self-regulated learning (SRL) strategies suggested by Zimmerman & Pons[18] refers to the numerous actions for promoting learners' knowledge, skills and attitude toward SRL, and learners with SRL strategies can make plans for various factors, set objectives, organize, self-check and self-evaluate in the course of attaining knowledge. Moreover, they can select and organize the optimal learning environment [19]. Previous studies including Pintrich & De Groot[15] and Zimmerman[19] argues that the learners that manipulates their learning show better achievements in academic performances. Moreover, Cho & Lim[20] studied the factors that affect learners' learning outcomes in the corporate e-learning that incorporates the models constructed from Goal-Based Scenario, and concluded that strategic variables of time management and effort regulation affected learning outcomes, while systematic operating factors and learners' prior experience in the assignment had effects in the assignment-general learning outcomes. It is known that the affecting factors of academic satisfaction are feasibility of the assignment and the dynamic ones among SRL variables. These results hint that instructors should consider SRL strategies when they design instructional strategies because of the close relationship between SRL strategies and the learning outcomes.

Lastly, it is necessary to consider the motivation of using the internet, as it is mentioned in numerous recent researches. James, Worting and Forrest [21] says the main motivation for using the internet is acquiring information. Including acquiring information, pursuing the pleasure of socialization, such as personal pleasure, escape, socialization, economic reasons and desire for entertainment, is also indicated in some studies as the reason for using the internet; other studies differentiate the motivation as purposeless and impulsive one and the practical one like searching for the information. Cho [22], based on previous researches, points out that there are two kinds of motivations for involving in SNS, which are internal variables (SNS participation, SNS attitude, perceived SNS usability, perceived SNS enjoyment) and external variables (personal innovativeness, SNS-oriented usage motivation,

SNS information quality, SNS subjective knowledge). In this study, four factors of SNS enjoyment, interactive motivation, networking motivation and expressive motivation which of the last three are SNS-oriented usage motivations.

As indicated above, goal-orientation, self-efficacy and SRL strategies are important factors that affect learning outcomes, and motivations of using SNS affect the learning satisfaction and academic achievement. However, few studies have conducted in regards of variables of learner characteristics and their effects on learning outcomes in the learning situation integrating SNS; for this reason, this study aims to investigate the relationship between the two.

3. Research Method

3.1. Objects of the Study

The research was conducted on 33 first-year students majoring in Marketing Management at C University in Daejeon Metropolitan City, who took a Mandarin course as one of liberal arts courses in the second semester of 2012. Researchers used SNS as an educational aid in six weeks of classes and then conducted a survey. The questionnaire was distributed and retrieved in an off-line atmosphere. Out of the 33 survey papers, three were excluded because of the non-response, and 30 were analyzed. Gender distribution of the objects are 5 male students (16.7%) and 25 female students (83.3%).

3.2. Procedure

This study used Facebook for the sake of the research and was conducted through six weeks from August 23 to September 27, 2012. For the students without any experience of participating in performing academic assignments based on SNS, the researchers conducted orientation of how to use Facebook and to install Chinese IME, and uploaded the instruction on the webpage.

The class was proceeded in a way that students upload the assignment results on the Facebook, the instructor and tutors (the researchers) give feedback, and then students comment and answer voluntarily after watching uploaded video clips. Also, we provided self-induced learning atmosphere and promoted students' learning by sharing educational materials and reference links regarding Chinese language. After the six weeks of educational activities based on SNS, we collected data from the students.

Table 1. Weekly Educational Activities on Facebook

WeeK	Assignment
1	Take care when you pronounce Shengmu (consonants) and upload the audio recording or video file of your own pronunciation. ※ Please refer to the following link if you find difficulties. http://app.baidu.com/widget?appid=173892&keyword=%E6%B1%89%E8%AF%AD%E6%8B%BC%E9%9F%B3%E5%AD%97%E6%AF%8D%E8%A1%A8
2	Take care when you pronounce Yunmu (vowels) and upload the audio recording of your own pronunciation just like the last time.

3	Find the assigned line in the attached 'Hanyu Pinyin Chart' and upload the audio recording of your own voice like the last time.
4	1. Speak in Chinese from 0 to 10, and upload the video file of your speaking (refer to the uploaded video clip of Chinese language). 2. Please leave a comment on the assignment no. 1 if you have difficult Pinyin or Tone during pronunciation.
5	1. Express your current thought of condition in a simple Chinese words or sentences. (Search on the internet, ask Facebook friends or acquaintances or do whatever you can do!). Please upload both the video file and the text. 2. When you record the video for the assignment no.1, please record also the passage of Conversation 02 on page 33 of the textbook.
6	1. This week's assignment is 'to 介绍 your best 朋友.' Please refer to the dialogue in Part 6 of your textbook, and upload a passage of 介绍 around word count of 五十. Do refer to the internet and other materials! 2. Please comment in Chinese how you think about the following video (China's got Talent).

3.3. Test Tools and Data Analysis

This study looks through test tools gauging the goal-orientation, the self-efficacy, SRL strategies, motivations of using SNS, the learning satisfaction and academic achievement, in order to investigate the effects of learner characteristics on learning outcomes in the circumstances incorporating SNS. Each can be specified as follows:

For the test for goal-orientation, we referred to the tool used in Lee [23] and modified and supplemented it for our purposes. The tool is divided into three sub-factors of mastery, performance-approach, and performance-avoidance goals, and is constructed as fourteen questions of Likert-type five-point scale. Reliability of the test tool was Cronbach's α of .75.

For the test for self-efficacy, we referred to the questionnaire used in Ha [24] and modified and supplemented it for our purposes. For the sub-factors of self-efficacy, eight questions were dedicated for the academic efficacy and four questions were for self-control efficacy. 12 questions as a whole were constructed as Likert-type five-point scale. Reliability of the test was Cronbach's α of .91.

For the test for SRL strategies, we referred to the SRL strategies test tool from 3rd year material of Korean Education Longitudinal Study which is done by Korean Educational Development Institute and modified and supplemented it for our purposes. The test is constructed as eleven questions of Likert-type five-point scale. Reliability of the test tool was Cronbach's α of .81.

The test for motivation of using SNS is to measure the motivational origin of the behavior of using SNS, and we used the test tool from Cho [22]. The test is constructed as nine questions of Likert-type five-point scale. Reliability of the test tool was .84.

The test the learning satisfaction is to measure the general satisfaction and satisfaction of the interaction and of using Facebook. We used the test tool from Song [25] for the general satisfaction and satisfaction of the interaction. We referred to the test questions from Jang [10] and modified and supplemented it for our purposes. The

test is constructed as seventeen questions of Likert-type five-point scale. Reliability of the test tool was .92.

Separately, the instructor made up a written test according to the learning objectives, in order to measure academic performances of the learners. It evaluates the knowledge on Chinese Pinyin, vocabularies, grammar and basic conversations, and the perfect score was 100 points.

The data were analyzed in this study by statistical package SPSS VER. 19.0, performing descriptive statistics, correlation analysis, regression analysis.

4. Research Results

4.1. Correlation Analysis of Variables

The study investigated what effect learners' goal-orientation, self-efficacy, SRL strategies and motivations of using SNS have on the academic satisfaction in the learning situations incorporating SNS [26].

As presented in Table 2, there were statistically significant positive correlations between the goal-orientation and the learning satisfaction with r=.371(p<.05), the self-efficacy and the learning satisfaction with r=.675(p<.01), the SRL strategies and the learning satisfaction with r=.747(p<.01). There was no statistically significant correlation between the motivations of using SNS and the learning satisfaction. However, out of the sub-factors of motivations of using SNS, interactive motivation showed statistically significant correlation with the learning satisfaction with r=.401(p<.05).

Table 2. Correlation between Variables of Learner Characteristics and Academic Satisfaction and Academic Achievement

Regards	Academic satisfaction	Academic achievement
Goal-orientation	.371[*]	.373[*]
Mastery	.622[**]	.598[**]
Performance-approach	.454[*]	.335
Performance-avoidance	-.466[**]	-.341
Self-efficacy	.675[**]	.683[**]
Academic Efficacy	.596[**]	.662[**]
Self-control Efficacy	.687[**]	.578[**]
SRL Strategies	.747[**]	.454[*]
Effort and Perseverance	.588[**]	.516[**]
Time Management	.517[**]	.442[*]
Space Management	.568[**]	.270
Helping Action	.209	-.190
Resource Utilization	.517[**]	.494[**]

Motivation of Using SNS	.169	-.151
Interactive Motivation	.401[*]	.027
Expressive Motivation	.009	-.158
Networking Motivation	.059	-.075
Enjoyment Motivation	-.022	-.209

*p<.05, **p<.01

On the other hand, there were statistically significant positive correlations between the goal-orientation and the learning outcomes with r=.373(p<.05), self-efficacy and the learning outcomes with r=.683(p<.01), SRL strategies and the learning outcomes with r=.454(p<.05). However, there was no statistically significant correlation between the motivations of using SNS and the learning outcomes.

4.2. Effects of Goal-orientation, Self-efficacy, SRL Strategies and Motivations of using SNS on Learning Outcomes

The results of regression analysis between the factors of goal-orientation, self-efficacy, SRL strategies and motivations of using SNS and the learning satisfaction in the learning situation integrating SNS are as follows:

Table 3. Effects of Learner Characteristics Variables on the Learning Satisfaction

Model	Non-standardized coefficients		β	t	Significant probability	F	R2 (.adj)	Tolerance limits
	B	SE						
Constant	-.222	.846		-.262	.795			
Goal-orientation	-.054	.264	-.030	-.205	.839			.731
Self-efficacy	.326	.180	.342	1.809	.083	10.249[***]	.621 (.561)	.424
SRL strategies	.742	.270	.502	2.750	.011			.455
Motivations of using SNS	.169	.136	.157	1.243	.225			.952
Durbin-Watson=1.420								

***p<.001

First of all, multicollinearity test confirmed that all variables were not in the scopes suggested to be multicollineary with all tolerance limits above 0.1. Durbin-Watson

value of 1.420 indicated regression model was appropriate without any interrelation the residual. F value of 10.249 and significant probability of 0.001 both indicated the regression line to be appropriate for modeling. The explanatory power of the variables for the academic satisfaction was 62.1%. Only SRL strategies (t=2.750, p<.05) out of all the variables has significant effects on the learning satisfaction.

The results of regression analysis between factors of goal-orientation, self-efficacy, SRL strategies and motivations of using SNS and the academic achievement are as follows:

Table 4. Effects of Learner Characteristics Variables on the Academic Achievement

Model	Non-standardized coefficients		β	t	Significant probability	F	R2 (.adj)	Tolerance limits
	B	SE						
Constant	14.769	26.648		.554	.584			
Goal-orientation	2.744	8.316	.056	.330	.744			.731
Self-efficacy	17.713	5.686	.691	3.115	.005	5.347[**]	.478 (.395)	.424
SRL strategies	-2.391	8.502	-.060	-.281	.781			.455
Motivations of using SNS	-2.631	4.280	-.091	-.615	.544			.952
Durbin-Watson=2.153								

[**]p<.01

First of all, multicollinearity test confirmed that all variables were not in the scopes suggested to be multicollineary with all tolerance limits above 0.1. Durbin-Watson value of 2.153 indicated regression model was appropriate without any interrelation the residual. With the value of F=5.347, suitability for the regression model of goal-orientation, self-efficacy, SRL strategies and motivations of using SNS were significant at the level of p<.01, and the explanatory power of the variables for the academic achievement was 47.8%. Only self-efficacy (t=2.750, p<.05) out of all the variables has significant effects on the academic performances.

5. Discussions and Recommendations

5.1. Discussions and Conclusions

This study is conducted to investigate the relationship between factors such as learners' goal-orientation, self-efficacy, self-regulated learning strategies and the motivations of using SNS, and the learning outcomes. Now, the discussion and conclusion from the analysis of the collected data are to be presented.

First, in regards of the goal-orientation, the mastery goal-orientation has a positive relationship with the learning satisfaction and academic achievement, the performance-approach goal-orientation has a positive relationship with the learning satisfaction, and the performance-avoidance goal-orientation has a negative relationship with the learning satisfaction. The result is in consistent with the previous studies [25, 27] that the higher mastery goal-orientation the learner has, the higher learning satisfaction and academic achievement the learner shows. They are also consistent with the previous study [25] that a higher performance-approach goal means a higher learning satisfaction, and another study [25] that a higher performance-avoidance means a higher learning satisfaction.

Self-efficacy shows a positive relationship with the learning satisfaction and academic achievement, and the result is in consistent with previous studies [17, 28, 29] which argued that a higher self-efficacy means a higher learning satisfaction and a higher academic achievement.

SRL strategies show a positive relationship with the learning satisfaction and academic achievement. The result is in consistent with previous studies [20, 30, 31] which argued that SRL strategies are predicative to the learning satisfaction and academic achievement.

No strong relationship has found between motivations of using SNS and the learning satisfaction and/or academic achievement. The result is not in consistent with Cho [22] which described perceived SNS usability and SNS-oriented usage motivation as significantly effective variables in SNS participation. However, this discrepancy seems to be resulted from the test questionnaire for SNS motivation, which is used in the study. The questionnaire used in this study measures the motivation that cause the action of using SNS such as stimulating a person to use SNS and maintaining to do so. Specifically speaking, we asked the learners whether they use SNS because they are curious about new information or new reactions to what they has uploaded, or because they can express their thoughts and interests, or because they can meet new people, or because the contents on SNS are relatively various and interesting. However, these types of motivations are not important motivational factors in the learning process; thus the questionnaire merely measures the usage motivation of using a teaching medium called SNS. Therefore, the result can be different if the motivational factors related to the learning are measured in the test for using SNS. On the other hand, we should mention that the situation was not familiar for the learners, as they had no experience of learning in SNS circumstances. As the learning process conducted in Facebook provides an open learning environment, this openness can act as another burden to the learners that other students can see how he/she does the assignments. Moreover, in the aspect of computing hardware, learning experience can have been affected by the restrictions of the smartphones such as uploading/downloading movie clips, problems of sound quality, or the data plan. Therefore, the result of this study can be changed if the strength and weakness of SNS become clear and a more convenient environment for the learners are constructed.

Second, in regards of the relative effect of the learner characteristics such as goal-orientation, self-efficacy, SRL strategies and motivations of using SNS on the learning satisfaction and academic achievement, only SRL strategies shows significant effects on the learning satisfaction, and on the academic achievement, only self-efficacy shows significant

effects. This is in consistent with the previous study [31] which argued that SRL strategies affect the learning satisfaction, and with another previous study [28, 29] that self-efficacy affects the academic achievement.

Following is the conclusions of the study which are from the investigation so far:

First, learners' SRL strategies have relationship with the learning satisfaction in the learning situation incorporating SNS. That is to say, SRL strategies positively correlate with the learning satisfaction. This hints that SRL strategies should be considered first in the learning environment incorporating SNS; therefore, instructors should construct a learning environment that can promote learners to develop SRL strategies of voluntary controlling and regulating. To make this argument concrete, we suggest instructors present appropriate level of learning assignments in order for the learners to conduct the learning activities in a continuous and patient way, and construct an environment in which the learners can actively make use of the auxiliary materials such as teachers, peer students, PC, libraries in order to complete the learning assignments.

However, the learners' goal-orientation, self-efficacy and the motivations of using SNS does not affect the learning satisfaction in the learning situation incorporating SNS. The cause of this result is that there are correlations among learners' SRL strategies, goal-orientation and self-efficacy, and as the analysis considers all of these variables at the same time, the effect of SRL strategies on the learning satisfaction offsets that of goal-orientation and self-efficacy.

Second, learners' self-efficacy has relationship with the academic achievement in the learning situation incorporating SNS. That is to say, learners' self-efficacy positively correlates with the academic achievement. Therefore, in order that the learners have a firm trust in their own competence and conduct their due course, instructors and tutors should construct a learning environment in which the learners can raise academic achievement through continued interests and encouragement from them and positive active interactions with them. Learners should be given a fix period of time for practice in order for them to have confidence in their competence, or they should be presented with solvable and easy assignments rather than difficult ones in order for them to have self-efficacy in participating in the learning activities.

However, the learners' goal-orientation, SRL strategies and the motivations of using SNS does not affect the academic achievement in the learning situation incorporating SNS. The cause of this result is that there are correlations among learners' self-efficacy, goal-orientation and SRL strategies, and as the analysis considers all of these variables at the same time, the effect of self-efficacy on the academic achievement offsets that of goal-orientation and SRL strategies.

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5.2. Recommendations for Future Studies

First, more researches should be conducted in regards of the learning situation incorporating SNS so that beyond the relationship between goal-orientation, self-efficacy, SRL strategies and the motivations of using SNS, and the learning outcomes, researches should investigate the correlation between the learning outcomes and the learner characteristics variables that can be affected by learners in the process of learning, such as learning styles, social presence and personality traits.

Second, more researches should be conducted in regards of various teaching strategies for improving learning outcomes in the learning situation integrating SNS, because the outcome can vary according to how the specific characteristics of SNS are used in classroom situations.

Third, more researches should be conducted with larger group of learners including elementary and middle school students, so that effective teaching construction strategies for SNS learning situation should be investigated from various approaches.

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