

The ego resilience, social support, awareness of the instructional outcome of pre-service teacher in university classes using SNS(Social Network Service)

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SNS(Social Network Service)를 활용한 대학 수업에서 예비교사의 자아탄력성, 사회적 지지, 수업성과 인식

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Abstract In recent university classes, consistent effort to improve co-operative interaction and communication between student and professor utilizing SNS(Social Network Service) is being made. This research conducted survey study with 137 pre-teachers in Daejeon & Chungnam area in order to find the relationship between pre-teachers' ego resilience, level of social support and awareness of the instructional outcome in classes that incorporate SNS. According to the result, it has been found that male's class satisfaction is higher than female's class satisfaction, while significant correlations have been found between ego resilience-social support, social support-class satisfaction, social support-semester satisfaction, and class satisfaction-semester satisfaction. Also, ego resilience and social support have significant effect on awareness of the instructional outcome. From these results, a rather close attention towards students' characteristics and their adaptation in class is needed in order to successfully carry out classes that incorporate various new media.

Key Words : SNS(Social Network Service), university classes, pre-service teacher, ego resilience, social support

요약 최근 대학 수업에서 SNS(Social Network Service)를 활용하여 교수자와 학습자 간의 협력적인 상호작용 및 의사소통을 향상시키고자 지속적인 노력이 이루어지고 있다. 본 연구는 SNS를 활용한 수업에서 예비교사의 자아탄력성, 사회적 지지 수준이 수업성과 인식에 어떠한 관계가 있는가를 알아보기 위하여 대전·충남지역 대학의 예비교사 137명을 대상으로 하여 설문조사를 실시하였다. 연구 결과에 따르면, 여학생보다 남학생의 수업 만족도가 높은 것으로 나타났으며, 자아탄력성-사회적 지지, 자아탄력성-수업 만족도, 사회적 지지-수업 만족도, 사회적 지지-학기 만족도, 수업 만족도-학기 만족도 간에 유의한 상관성이 있는 것으로 나타났다. 또한 자아탄력성과 사회적 지지가 수업성과 인식에 유의한 영향을 미치는 것으로 나타났다. 이에, 대학 교직과정에서 다양한 뉴미디어를 활용한 수업을 성공적으로 운영하기 위해서는 학습자 특성 및 수업활동 적용에 보다 세밀한 관심을 기울일 필요가 있다.

주제어 : SNS(Social Network Service), 대학 수업, 예비교사, 자아탄력성, 사회적 지지

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1. Introduction

In recent university classes, lectures utilizing various media to improve the communication between the professor and the students are being emphasized. Especially, persistent effort to improve lectures by incorporating SNS(Social Network Service) has been ongoing. Distinct characteristic of SNS is mobile-based real-time, therefore; its immediacy. Communication and interaction between the professor and the student are possible whenever and wherever without time and space constraints. According to Ministry of Science, ICT, and Future Planning's statistics, there are 41,669,694 Koreans who own smartphones based on May 2015 record. It is no exaggeration that there is almost no student who does not own a smartphone in actual college class. Such connection did not only bring a large change, but also it brought an advantage to implement lectures that apply SNS. SNS supports various learning experiences for students as it provides expanded learning space that connects with daily life. Also, it expedites information sharing and knowledge creation, and it can strengthen intimacy, a sense of belonging, and fellowship[1,2].

However, class that incorporates new media does not always have positive influence on majority of students' awareness of the instructional outcome. The university professor designs and manages the environment for multi-media based on creative idea, possibility of implementation, and method from his perspective of class design, but there are cases in which students perceive this negatively. Unfamiliar class environment and medium demand students' new adaptation, which can cause negative psychological mechanism. Rapid change of technology increases emotional anxiety related to feeling of falling behind to users. It also causes large amount of techno-stress to users depending on accessibility of technology and ability to apply[3,4,5]. In order to search for main causes that influence awareness of instructional

outcome in teacher education, main causes related to students' adaptation need to be considered.

First of all, the individual learner needs to face and manage various problems, challenges, and demands in order to adapt to a new environment of class, and pre-service teacher's ego-resilience can be considered significantly in relation to this circumstance. Recently, university students are under many complicated and uncertain situations, and it is easier for them to experience stress under uneasy state and exhaustion for long period[6,7,8,9]. Ego-resilience is an ability to adapt well to one's own environment by maintaining harmony and balance[10]. It is also a meta-ability to strengthen or maintain personal self-control level for successful adaptation to environment with many situational demands or stress. Also, personal social support experience gives feelings of love, acceptance, and stability that prevent behavioral disorder when faced with stressful life situation and improve one's self-efficacy and coping strategy[11].

Following is research questions of this study.

First, how are pre-service teacher's ego-resilience, social support and awareness of the instructional outcome in university class that utilizes SNS?

Second, how does pre-service teacher's ego-resilience have effect on awareness of the instructional outcome in university class that utilizes SNS?

Third, how does pre-service teacher's perception of social support have effect on awareness of the instructional outcome in university class that utilizes SNS?

2. Literature Review

2.1 SNS(Social Network Service)

SNS is useful technology that can improve bond among members based on instantaneous interaction, compatibility between digital devices, and various

technological interlock among SNS types, and raise performance of given learning activity[12]. Along with rapid development of information and communication technology, various types of SNS are being introduced in education field and they are being perceived or used as innovative tool, concept, or method in many educational spots[13].

Educational utilization of SNS in university can be divided into four domains, which are relationship formation, sharing information, cooperation, and feedback[14]. Relationship formation means using SNS as a mean to promote bonding between students, and sharing information does using SNS with a purpose of universal sharing information by spreading new information found online. Cooperation is a domain in which a team solves a problem through mutual collaboration and composes new knowledge to tackle a given problem with relationship formation and sharing information online. Also, feedback is a domain in which SNS is used to accept and use optimum response when various solutions induced from many teams presented to all students.

Many SNS, such as Facebook, Twitter, and Instagram, are being used nationally and internationally. Such SNS can be classified into open type and closed type. Facebook and Twitter are classified into open type, while Kakaotalk, Kakaostory, Line, and Band are classified into closed type. According to 2014 Korean Information Society Development Institute's report of "Analysis of use of SNS and change of individual social relation", there is more increase in use of closed type SNS than open type SNS in Korea. It can be seen that such trend provides an aspect that needs to be considered when SNS is utilized in university classes.

Recently, educational SNS called 'Classting' (<http://www.classting.com>) is used frequently in order to increase communication between professor and students in educational field. Classting was developed by Hyun-Goo Cho, a teacher from Dong Bang

Elementary School in Incheon. 150,000 teachers in 13,000 schools and 2,000,000 households (students and parents) are currently using this SNS which started its service in November, 2012. Classting is applied not only in elementary, middle, and high schools, but also in universities, and it is a useful platform that provides smart education for college pre-teachers. Classting functions include, not only instant sending from either PC or mobile device, but also class notice function that shows people who either have read or not at a glance. Also, it provides functions such as class meeting service that facilitates education exchange among classes and secret counseling room with individual counseling with students. Classting has advantages that it protects personal life because classes that signed up Classting share things that happen in classes and it allows communication with students and parents individually or as a whole.

2.2 Ego-resilience

As stress that people need to overcome is increasing, there are people who have not overcome stress and show various inadaptible responses due to conflict and complexity created by rapid societal development. On the other hand, there are people who adapt well to the same stress or in threatening environment without showing behavioral and emotional problem. Ego-resilience is a concept that explains difference between personal ability to adapt.

People with high ego-resilience use various emotional, cognitive, and societal process flexibly for adaptation, get involved positively with the world, and show openness towards positive affect and experience[15]. They are able to pull through new or unresolved situation, low in uneasiness level in stressful situation, and maintain integrated task. Especially, people with high stress-related ego-resilience find positive meaning in stressful situation when clashed with stress and use effective emotional adjustable base to recover efficiently from stress.

On the other hand, people with low ego-resilience experience negative emotion and are unable to achieve successful experience because they feel uneasy in novel experience and cannot adapt to the environment flexibly. Also, they have difficulty in demonstrating flexibility needed for adaptation and feel uneasy with new change. They have situations in which they show conservative response and confusion when dealing with change[16]. People with low ego-resilience perceive stress in many occasions and use emotion-based coping.

Ego-resilience refers all efforts regarding limiting and controlling one's impulse for efficient adaptation accordingly to a situation when faced with diverse situational demand in a person's life. Also, it is an ability to be almost not affected by stress in situation with increasing stress, or to decrease stress level noticeably by coping with capability in a stressful situation. Thus, ego-resilience, in a narrow perspective, refers to controlling one's emotion level and adapting level that changes situation and environmental contingency. In a wider perspective, it means a general ability to adapt flexibly by facing internal and external stress[15]. It is reported that group with high ego-resilience is extroverted, friendly, sincere, emotionally stable, and opened to experience in a study of group with high ego-resilience's personality characteristics[17].

2.3 Social support

Concept of social support is defined diversely among scholars. Following is the table of definition. Commonly, social support means positive resources that a person gains from others[18].

<Table 1> Concept definition of social support

Researcher	Concept definition
Cobb(1976)	Information that one is receiving caring and love and believing that oneself has value and worth, which promotes adaptation in crisis and functions as a buffer for adapting to change.

Cohen & Hoberman(1983)	Positive resource that one can gain from one's relationship with others.
Thoits(1986)	Satisfies one's desire of affection, acceptance, belonging, and stability.
Dixon(1979)	Multi-dimensional phenomenon provided from many supporters that conceptualizes one or more expression of positive emotion towards others, acceptance of others' behavior and perception, provision of either symbolic or physical help towards others, or interaction in relationship with others.
Park(1985)	Support (emotional support, physical support, informational support, and evaluative support) from family, friend, neighbor, and other relationship with others in terms of functional perspective.
Han (1996)	Every positive resource one can gain from others through social relationship.
Kim (1998)	Societal act or attitude provided to a person from various resources, which enhances one's functioning and has intention to improve relationship with others.

*Extracted and restructured from Eom(2015)'s research[19].

According to research related to social support, social support decreases people's stress and alleviates depression and unstable symptoms as it is an important social and psychological main cause that aids adaptation[20]. Higher one's perceived social support leads higher welfare and positive thinking and lower one's perceived social support leads to negative psychological stress and experiences psychopathological problems. Also, it is known that social support has direct influence on one's adaptation and health, and helps people to overcome change and stress.

In order to explain positive effects of social support, there are main effect model and buffering effect model as typical models[21]. According to main effect model, social support directly decreases stress or has positively influences mental and physical health. Thus, regardless of the amount of stress, one's perceived social support has direct effect on one's welfare.

On the other hand, according to buffering effect model, if there is social support in stressful situation, social support provides one with resource to solve stressful situation. Therefore, it protects one from negative effects of stress. Thus, even if one experiences a serious stress, he or she can avoid

psychological problem because social support buffers the negative effects of stressful event. In addition, higher social support decreases stress related to finding a job, which has an effect on dealing with stress actively. Higher level of perceived social shows that stress related to studying is perceived less and it supports the buffering effect.

3. Methods

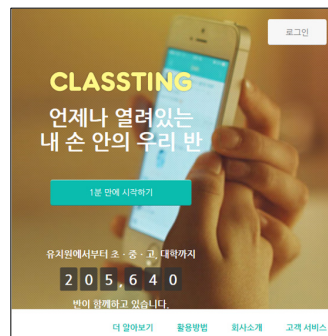
3.1 Participants

This research surveyed 137 university pre-service teachers in Daejeon & Chungnam area to find out the relationship between pre-service teachers' ego-resilience and level of social support affects awareness of the instructional outcome in class that utilizes SNS. Participants' gender consisted of 40 male students (29.2%) and 97 female students (70.8%). In terms of year in university, there were 7 freshmen (5.1%), 98 sophomores (71.5%), 22 juniors (8.0%), 8 seniors (5.8%), and 2 with no response (1.5%).

3.2 Instrument and data analysis

This research used the 'Classting' in classes, which is being used frequently for smooth communication and information sharing, in recent education field. Also, in order to find out pre-service teachers' ego-resilience in classes that utilize SNS, [22]'s checklist was used which was developed by modifying Klohenn(1996)'s CPI(California Personality Inventory). Tool for measuring ego-resilience included questions(14, 16) and consisted of 10 questions about self-esteem, 8 questions about efficiency of relationship with others, and 5 questions about optimistic attitude. It used Likert's scale which measured 5 points for "Very true", 4 points for "True", 3 points for "Normal", 2 points for "Not true", and 1 point for "Not very true." Also, Cronbach *a* was calculated and the result was 0.94. Second, [23] was modified to be compatible with the

content of this research and it was used to measure perception level about social support. Questions about social support consisted 22 items. Likert's scale was used to measure how much students perceive social support from classmates and juniors/seniors in classes that utilize SNS. Likert's scale which measured 5 points for "Very true", 4 points for "True", 3 points for "Normal", 2 points for "Not true", and 1 point for "Not very true.", and Cronbach *a* was calculated as 0.98. Social support contained 4 sub-criteria, which were emotional support, physical support, information support, and evaluative support. In this research, in order to draw results SPSS 22 was used to carry out correlation analysis and regression analysis.



[Fig. 1] The Classting
(<http://www.classting.com>)

4. Results

4.1 Pre-service teachers' degree of ego-resilience, social support, awareness of the instructional outcome

T-test was performed in order to find out the difference in genders in terms of pre-service teachers' ego-resilience, social support, awareness of the instructional outcome in classes that utilizes SNS. According to the results, male students had higher ego-resilience, social support, class satisfaction, and semester satisfaction than female students. Especially, male students had significantly higher class satisfaction than female students ($t=4.54, p<.01$).

〈Table 2〉 Pre-service teachers' degree of ego-resilience, social support, awareness of the instructional outcome

Variables	Sex	N	M	SD	t
ego-resilience	M	40	3.94	0.63	3.28
	F	97	3.55	0.62	
Social support	M	40	3.70	0.78	0.63
	F	97	3.62	0.64	
class satisfaction	M	40	4.25	0.59	4.54**
	F	96	3.55	0.89	
semester satisfaction	M	40	3.88	0.79	3.68
	F	97	3.33	0.79	

** $p < .01$

4.2 Correlation between ego-resilience, and social support, awareness of the instructional outcome

After examining the correlation between pre-service teachers' ego-resilience, and awareness of the instructional outcome, the result showed that correlations of ego-resilience-social support ($r=.48, p<.01$), ego-resilience-class satisfaction ($r=.27, p<.01$), social support-class satisfaction ($r=.21, p<.05$), social support-semester satisfaction ($r=.23, p<.01$), and class satisfaction-semester satisfaction ($r=.46, p<.01$) were significant.

〈Table 3〉 Correlation between ego-resilience, and social support, awareness of the instructional outcome

Variables	1	2	3	4
1. ego-resilience	1			
2. Social support	.48**	1		
3. class satisfaction	.27**	.21*	1	
4. semester satisfaction	.16	.23**	.46**	1

$n=137, **p<.01, *p<.05$

4.3 Effects of ego-resilience on awareness of the instructional outcome

After carrying out regression analysis to find out whether pre-service teachers' ego-resilience has effect on awareness of the instructional outcome in classes that utilizes SNS, the result showed 7.1% power of

explanation for ego-resilience's awareness of the instructional outcome. Also, ego-resilience had significant static result on awareness of the instructional outcome ($F=10.310, p<.01$). Therefore, it could be said that higher the pre-service teachers' ego-resilience leads to higher awareness of the instructional outcome, but the power of explanation was rather weak.

〈Table 4〉 Effects of ego-resilience on awareness of the instructional outcome

Independent variables	Non-standardized coefficients		B	T
	B	Standard error		
ego-resilience	.359	.112	.267	3.211**

$R=.267, R^2(\text{adj.}R^2)=.071(.065), F=10.310^{**}$

$n=137, **p<.01$

4.4 Effects of social support on awareness of the instructional outcome

After carrying out regression analysis to find out whether pre-service teachers' social support has effect on awareness of the instructional outcome in classes that utilizes SNS, the result showed 4.3% power of explanation for social support's awareness of the instructional outcome. Also, social support had significant static result on awareness of the instructional outcome ($F=6.012, p<.05$). Therefore, it could be said that higher the pre-service teachers' social support leads to higher awareness of the instructional outcome, but the power of explanation was rather weak.

〈Table 5〉 Effects of social support on awareness of the instructional outcome

Independent variables	Non-standardized coefficients		B	T
	B	Standard error		
Social support	.269	.110	.207	2.452*

$R=.207, R^2(\text{adj.}R^2)=.043(.036), F=6.012^*$

$n=137, *p<.05$

5. Discussion and conclusion

This research objective was to analyze the relationship between pre-service teachers' ego-resilience, social support and awareness of the instructional outcome in classes that utilizes SNS. Its significance was in finding variable that enhances students' emotional ability, which needs to be considered during pre-service teacher training process. According to the research results, male students had higher class satisfaction than female students ($t=4.54, p<.01$). Also, the following correlations had significant results. Ego-resilience-social support ($r=.48, p<.01$), ego-resilience-class satisfaction ($r=.27, p<.01$), social support-class satisfaction ($r=.21, p<.05$), social support-semester satisfaction ($r=.23, p<.01$), and class satisfaction-semester satisfaction ($r=.46, p<.01$). In addition, ego-resilience had significant emotional effect on awareness of the instructional outcome ($F=10.310, p<.01$), and social support had significant emotional effect on awareness of the instructional outcome ($F=6.012, p<.05$).

Based on these results, pre-service teachers' gender, ego-resilience and social support are significantly related to awareness of the instructional outcome. Especially, there is a need for rather closer interest in female students' adaptation of academic activities, and teaching strategy for students who are low in ego-resilience and perception of social support is needed.

Arguments based on the results, first, include a need for close attention towards students' ability to apply medium and class adaptation for a successful application of various new media in classes. This is related to difference in characteristics of students in different majors in university classes. Learning outcome is higher in SNS based classes with students who have learning motivation to apply computer and media than in regular classes[24]. However, the ratio of female students is higher and female students show

relatively normative learning inclination. In order to constantly provide new learning experiences and embrace innovation for students, the school needs to emphasize and support a change of learning paradigm. Second, a teaching strategy is demanded to encourage participation from students who lack in ego resilience and level of social support. In order to do this, students' general characteristics need to be understood through learner analysis in the beginning of the semester. Rather than forcing regular teaching method unconditionally, a solution for student to choose needs to be provided. Application of various media in class needs to give pleasure and satisfaction to students. However, it can give negative perception to students if the class is focused too much on class assignment and assessment. Third, an opportunity to provide a positive learning experience to students through constant interaction between professor and students, and growth through cooperation and reflective process is important. Utilizing SNS, social media in university classes is pursuing knowledge creation through the collective intelligence[25]. This is an important approach towards ultimately fostering university student's essential competency demanded by the 21st century.

Finally, this research investigated arguments regarding the relationship between student's ego resilience, social support and awareness of instructional outcome in university teaching profession that applies SNS. In conclusion, university pre-teachers have important role and mission to take charge of education in the future. However, the reality is lack of practical approach in qualification and personality aspects that pre teachers need to possess and such issue is not taken seriously in fostering process. Therefore, there must be aid in developing not only students' ability of personal adaptation, but also that of social relation by allowing students to experience various new media based activity, rather than excessive focus on educational objective of fostering experts in content in university teaching profession.

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