

The College Students' Satisfaction related to Expectation and Interaction in the Online Counseling Courses

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Online education is moving forward with more interactive environments due to the availability of new technologies. In addition, many researches have represented that interaction and high motivation are very critical factors in order to improve students' motivation and teaching effectiveness in online learning and education. Therefore, it is very meaningful for students and educators that motivation and effectiveness are observed by positive expectation and interaction satisfaction in their online counseling courses. For this study, two important instruments are used: Modified Short Forms of Instructional Materials Motivation Survey and Student Evaluation of Online Teaching Effectiveness. Results show that high expected students who are satisfied with interaction indicate higher motivation and evaluation on the online teaching effectiveness than low expected students who are not satisfied with interaction.

Keywords : Online counseling course, Motivation, Teaching effectiveness, Expectation, Interaction satisfaction (IS), Instructional material motivation survey (IMMS), Student evaluation of online teaching effectiveness (SEOTE)

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Introduction

Technology is a part of the solution in delivering support and help for students. University and colleges today are educating the first cohort of students raised on technology, and online images and communication are a comfortable and approachable modality for the current college generation. With this effective way to outreach and communicate, it has been the goal of the student support services on campus (Hamilton, Larsen, McDowell, & Brown, 2008). In addition, technology in education and counseling is a critical trend that educators and counselors need to learn to use it effectively (Carter, 2001; Han & Heo, 2010; Vaccaro & Lambie, 2007).

Today's trend toward advanced technology presents several implications for the education and counseling profession. For example, electronic innovations provide opportunities for students, who have been otherwise limited, to receive education and counseling (Flamez, Smith, Devlin, Ricard, & Luther, 2008). That is to say, many students can now interact with geographically remote instructor, counselors and peers in a real time.

Using technology can be getting interest in online education and counseling services, and many researches have performed to approve the effectiveness of technology in the areas of online education and counseling (Bloom & Walz, 2000; Chandras, DeLambo, Eddy, 2005; Quinn, Hohenshil, & Fortune, 2002). As a result, a variety of interaction in the online education must be very critical to improve teaching effectiveness of online counseling courses and discipline for students (Emerson & MacKay, 2011; Lee, 2011; Lei & Govra, 2010).

This study is to examine whether students' satisfaction for expectation and interaction have an influence on their motivation and online teaching effectiveness in the online counseling courses. Many researches have represented that the degree of expectation and interaction is a critical factor to satisfy students in terms of the effectiveness of online education (Bangert, 2008; National Center for Education

Statistics, 2003; Saba, 2000; Stone, 2006). However, there are few researches on students' evaluation of effectiveness in terms of their online counseling course. Therefore, it is very important to examine how students' expectation (psychological factor) and satisfaction for interaction (educational factor related to diverse synchronous and asynchronous communication) have an influence on their motivation and effectiveness in the online counseling courses.

The research questions for this study are as follows.

1. Are there any significant mean differences in the combined Dependent Variables (DV) of students' motivation and teaching effectiveness by expectation and interaction in the online counseling course?
2. Are there any significant mean differences on students' motivation in the online counseling courses by expectation and interaction satisfaction?
3. Are there any significant mean differences on the online teaching effectiveness in the online counseling courses by expectation and interaction satisfaction?

Expectation and Interaction

Many researchers have agreed the fact that, motivation is the key variable which students should possess (Carter, 2001; Chandras, DeLambo & Eddy, 2005; Keller, 2008; Sankaran & Bui, 2001). Therefore, improvement of motivation and use of technology in diverse educational settings will be a critical factor to online learning. In addition, completing the coursework often requires a great deal of self-motivation and discipline with a variety of interaction for their achievements since students are often learning from home or work places. Therefore, instructors need to pay attention to the motivation and effective interaction by using proper technologies in their online counseling classes.

In the online counseling learning and education, a variety of interaction by using technology is very critical to improve effectiveness of online counseling courses and

discipline for students. Hohenshil (2000) describes that new technology development to improve online interaction takes for granted in the counseling assessment and counseling education. Technology relevant to online interaction in counseling education is getting a critical trend that counselors and supervisors need to learn to use it effectively (Layne & Hohenshil, 2005; Vaccaro & Lambie, 2007). For example, E-mail and video conferences allow supervisors and counselors-in-training to communicate in real time via video and audio equipment installed in their computer stations.

Moreover, chat-rooms and Instant Messaging (IM) are effective technologies related to synchronous/asynchronous telecommunication that may be integrated into for counselor-in-training supervision and Cyber Counseling. These technologies allow a supervisor and a supervisee to communicate instantly without any limitation of time and space. In other words, it is clear that future online learning and education will become and be needed to be more interactive, exploration promoting, problem solving, communicative and high-order thinking with high motivation and interest by using advanced technology.

Online Counseling Courses and Interaction

Students and clients usually expect that they can have more interaction and communication with their instructors and counselors. Therefore, it is very important to use diverse synchronous/asynchronous telecommunication to promote interaction and relationship in the online education. Online education is moving toward more interactive environments and popularized due to the availability of new technologies.

The interaction between instructor and student seems to be of utmost importance in online education (Stone, 2006). Student learning seems highly dependent on an interactive and responsive relationship with the instructor,

regardless of class delivery mode (Johnson, 1999; Saba, 2000; Stone, 2006). Therefore, instructors should consider effective synchronous/asynchronous communication tools to promote interaction in their online course.

Schwier (2002) maintains that synchronous/asynchronous communication strategies are suitable for different types of learning and community in learning groups. A combination of synchronous/asynchronous seems to be necessary to promote the kind of learning efficiency and enrich the variety of teaching methods. For instance, the regular internet chats provide students with a forum and a conference for professional discussion. These diverse applications with synchronous/asynchronous communication tools will be able to enrich online learning/education as well as offline learning.

Method

This study is to examine whether expectation and interaction have significantly influence on the students' satisfaction (such as students' motivation and evaluation on the teaching effectiveness) in the online counseling course. The 2×2 factorial ANOVA is conducted to examine whether there are significant mean differences by expectation and satisfaction about interaction in the online counseling courses.

Two instruments used in this study are modified into the short forms of Instructional Materials Motivation Survey (IMMS) and Student Evaluation Online Teaching Effectiveness (SEOTE). The original instrument of IMMS was developed by Keller (1993) and the original questionnaire of SEOTE was created by Bangert (2008). For this study, IMMS and SEOTE are translated into Korean.

Participants

The subjects in this study were students who are taking online counseling classes

at the Seoul Cyber University (SCU) in Korea. A total of 192 students responded to the survey questionnaire. 69.3% (n = 133) are females, and 30.2% (n = 59) are males. In addition, 38% (n = 73) are 41 to 50 years old, 34.4% (n = 66) are 31 to 40 years old, 15.1% (n = 29) are equal to and more than 51 years old, and 12.5% (n = 24) are equal to and less than 30 years old.

Data Collection

The web survey is used to collect data in order to measure the motivation and online teaching effectiveness by using the short forms of IMMS and SEOTE. The electronic survey consists of three parts; demographic/background information, motivation, and online teaching effectiveness. The data was collected from May 1st to 30th in 2011.

Instruments

For this study, two modified survey questionnaires are used to evaluate students' motivation and online teaching effectiveness.

Instructional Materials Motivation Survey (IMMS)

Keller and Subhiyah (1993) developed two instruments that measure ARCS (Attention, Relevance, Confidence, and Satisfaction) components of motivation, the IMMS (Instructional Materials Motivation Survey) and the CIS (Course Interest Survey). The IMMS includes 36 questions with a five-point Likert-type scale (Keller, 1996). Participants are asked to think about each statement in relation to the instructional materials they have just studied, and to indicate how true each statement is. The response scale ranges from 1 (not true) to 5 (very true). The

minimum score is 36, and the maximum is 180 with a midpoint of 108. The minimum, maximum, and midpoint for each subscale vary since they do not have the same item numbers. There are 5 subscales; one for each of the ARCS components and one for the ARCS total score. Ten of the 36 items are reversed. The IMMS measures the situational components of learning motivation in regard with the specific instructional materials.

Modified Short Form of IMMS

The Short Form of IMMS includes 20 questions with a five-point Likert-type scale. Participants are asked to think about each statement in relation to the course itself, and to indicate how true each statement is. The response ranges from 1 (not true) to 5 (very true). Therefore, the minimum score on 20 questions is 20, and the maximum is 100 with a midpoint of 60. There are 5 subscales: four from each of ARCS components (Attention, Relevance, Confidence, Satisfaction) and one for the external motivation. Especially, two out of 20 items are reversed (eighth and eleventh questions). The reliability of the IMMS using Cronbach's alpha is greater than .81 in all 5 components (Attention, Relevance, Confidence, Satisfaction, and ARCS total score).

Student Evaluation of Online Teaching Effectiveness (SEOTE)

Bangert's Student Evaluation of Online Teaching Effectiveness (SEOTE)

The SEOTE was developed by Bangert (2004) to assess constructive online teaching practices with seven subscales and a six-point Likert scale ranging from strongly agree to strongly disagree. Content validity of the instrument was evaluated by a panel of college and university online instructor for clarity, accuracy, and appropriateness of seven effective teaching practices such as a student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectation, and respect for diverse talents and ways of learning (Bangert, 2004). The SEOTE was evaluated in high reliability yielding a coefficient alpha

of .94 (Bangert, 2008). In addition, Cronbach's alpha for each of the seven subscales was reported to exceed .70.

Modified Short Form of SEOTE

Short-form of SEOTE is developed and modified from the original SEOTE. It includes twenty-four items. The modified SEOTE has eight subscales after adding new subscale of interest and motivation: (a) Student Faculty Contact (SFC), (b) Cooperation among Students (CAS), (c) Active Learning (AL), (d) Prompt Feedback (PF), (e) Time on Task (IT) or Effective Educational Design (EED), (f) High Expectation (HE), (g) Diverse Talents and Ways of Learning (DTWL), and (h) Interest and Motivation (IM). The maximum score is 120, and minimum is 24. In addition, Short-Form of SEOTE is assessed by a five-point Likert scale ranging from *always agree* to *always disagree*.

Reliabilities for Short Form of IMMS and SEOTE

For this study, Cronbach's alpha was used to establish the instruments' internal consistency reliabilities, with a sample of 192 students who are registering for the Seoul Cyber University (SCU). Table 1 presents the reliability coefficients for modified IMMS and SEOTE in Korean version based on the average inter-item correlation. The Short Form of IMMS (20 items) and SEOTE (24 items) have yielded high reliability coefficient (Cronbach's alpha = .92, .96, respectively).

Table 1. Reliability Coefficient

Instruments	Number of Items	Cronbach's Alpha
Keller's IMMS	36	.81
Short Form of IMMS	20	.92
Bangert's SEOTE	26	.94
Short Form of SEOTE	24	.96

Research Questions

The following research questions guided the inquiry for this study:

1. Are there any significant mean differences in the combined Dependent Variables (DV) of students' motivation and teaching effectiveness by expectation and interaction in the online counseling course?
2. Are there any significant mean differences on students' motivation in the online counseling courses by expectation and interaction satisfaction?
3. Are there any significant mean differences on the online teaching effectiveness in the online counseling courses by expectation and interaction satisfaction?

Results

The purpose of this study is to evaluate students' satisfaction (such as, their motivation and evaluation on the online teaching effectiveness) in terms of the degree of expectation and interaction in the online counseling courses. The motivation and online teaching effectiveness in the online counseling courses can be affected by students' level on expectation and interaction. For example, Bangert (2008) explains that high expectation and diverse interactions such as student-faculty contact, cooperation among students, and feedback are critical factors related to online teaching effectiveness. In addition, Han (2007) maintains that the satisfaction of diverse interactions is a critical factor for students and clients when using technology in their classes or counseling sessions.

When asked whether interaction and good relationship between a student and an instructor, and among students are satisfied, 107 (55.7%) of participants answered that they are satisfied in terms of their interaction and good relationship. On the other hand, 44.3% (n = 85) reported that they are not satisfied with the interaction and relationship in their online counseling courses. In a critical question related to

the expectation of online courses, 93 students (48.4%) reported a high expectation that the online courses will be very helpful to their counseling studies, while 99 students (51.6%) reported a low expectation.

To answer the research questions, a factorial ANOVA was conducted to compare means on the combined DV (IMMS and SEOTE) between high and low expectation groups, and for two groups that include satisfaction and no satisfaction in terms of interaction in the online counseling courses. Table 2 indicates means on students' motivation and online teaching effectiveness by expectation and interaction.

Table 2. Means on IMMS and SEOTE by Expectation and Interaction Satisfaction

	IMMS M	SEOTE M
Expectation		
High Expectation	81.82	91.19
Low Expectation	73.97	81.56
Interaction Satisfaction		
Satisfaction	81.37	92.13
No Satisfaction	73.24	78.79

Research Question One: A factorial ANOVA in Combined DV of IMMS and SEOTE by Expectation and Interaction Satisfaction. Table 3 shows the results of homogeneity of variance-covariance. Box's test was not significant. Wilks' Lambda can be used to interpret a factorial ANOVA by Expectation and Interaction Satisfaction (IS) in the online counseling courses.

Table 3. Box's Test of Homogeneity of Variance-Covariance

Box's M	F	df1	df2	Sig.
4.80	.52	9.00	243031.43	.86

A 2X2 factorial ANOVA was conducted for this. And Table 4 indicates the interaction effect (Wilks' $\Lambda = .95$, $F(2, 187) = 4.55$, $p < .05$, $\eta^2 = .046$) was significant. In addition, there was significant difference between high expected students and low expected students in the combined DV of IMMS and SEOTE (Wilks' $\Lambda = .90$, $F(2, 187) = 10.94$, $p < .05$, $\eta^2 = .105$). The factor of interaction satisfaction (Wilks' $\Lambda = .82$, $F(2, 187) = 21.00$, $p < .05$, $\eta^2 = .183$) also indicated the significant differences in the combined DV (IMMS and SEOTE).

Table 4. A 2X2 Factorial ANOVA: *Expectation by Interaction Satisfaction in the Online Counseling Courses*

Effect	Value	F	Hypothesis df	Error df	p	η^2
Expectation Wilks' Λ	.90	10.94	2	187	.001*	.105
IS Wilks' Λ	.82	21.00	2	187	.001*	.183
Expectation *IS Wilks' Λ	.95	4.55	2	187	.012*	.046

* $p < .05$ (IS = Interaction Satisfaction)

Research Question Two: A factorial ANOVA on Instructional Material Motivation related to Online Counseling Courses. Table 5 represents the results of a 2x2 factorial ANOVA, Expectation by Interaction Satisfaction, in terms of the motivation in the online counseling courses. The factorial ANOVA between expectation and interaction satisfaction did not reveal any significant interaction on instructional material motivation ($F(1, 188) = .02$, $p = .89$, $\eta^2 = .000$).

On the other hand, the ANOVA indicated significant differences between high and low expected students on IMMS ($F(1, 188) = 21.61$, $p < .05$, $\eta^2 = .103$). In terms of the instructional material motivation related to online counseling courses, the students with high expectation ($M = 81.82$, $SD = 10.27$) considered them as having higher motivation in the online counseling courses than the students with low expectation ($M = 73.97$, $SD = 11.02$).

In addition, those results in table 5 revealed the significant differences between groups with satisfaction and no satisfaction of interaction ($F(1, 188) = 23.93, p < .05, \eta^2 = .113$). The students who are satisfied with their interaction ($M = 81.37, SD = 9.99$) revealed higher motivation than those who are not satisfied with the interaction in the online classes ($M = 73.24, SD = 11.36$).

Table 5. A 2x2 Factorial ANOVA, Expectation by Interaction Satisfaction in IMMS

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Expectation	2202.83	1	2202.83	21.61	.001*	.103
IS	2438.46	1	2438.46	23.93	.001*	.113
Expectation*IS	1.84	1	1.84	.02	.89	.000
Within (Error)	19161.31	188	101.92			
Total	1185830.00	192				

* $p < .05$ (*IS = Interaction Satisfaction*)

Research Question Three: A factorial ANOVA on Online Teaching Effectiveness in the Online Counseling Courses. Table 6 indicates the results of a 2x2 Factorial ANOVA, Expectation by Interaction Satisfaction on online teaching effectiveness in the online counseling courses. Figure 1 also shows a line plot of the interaction between expectation and satisfaction of interaction. And it is not exactly parallel.

There is a significant interaction effect on SEOTE ($F(1, 188) = 4.35, p < .05, \eta^2 = .023$). The ANOVA indicated the significant differences between high and low expected students on SEOTE ($F(1, 188) = 15.27, p < .05, \eta^2 = .075$). In terms of the online teaching effectiveness in the online counseling courses, the students with high expectation ($M = 91.19, SD = 15.41$) evaluated higher online teaching effectiveness than the students with low expectation ($M = 81.56, SD = 13.72$).

Those results in table 6 also represent the significant differences by interaction satisfaction ($F(1, 188) = 42.22, p < .05, \eta^2 = .183$). The satisfied students ($M = 92.13, SD = 14.14$) showed higher evaluation of online teaching effectiveness than the group with no satisfaction in the online counseling courses ($M = 78.79, SD = 13.43$).

Table 6. A 2x2 Factorial ANOVA, Expectation by Interaction Satisfaction on SEOTE

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Expectation	2641.35	1	2641.35	15.27	.001*	.075
IS	7301.70	1	7301.70	42.22	.001*	.183
Expectation*IS	752.85	1	752.85	4.35	.038*	.023
Within (Error)	32511.73	188	172.94			
Total	1472195.00	192				

* $p < .05$ (*IS* = Interaction Satisfaction)

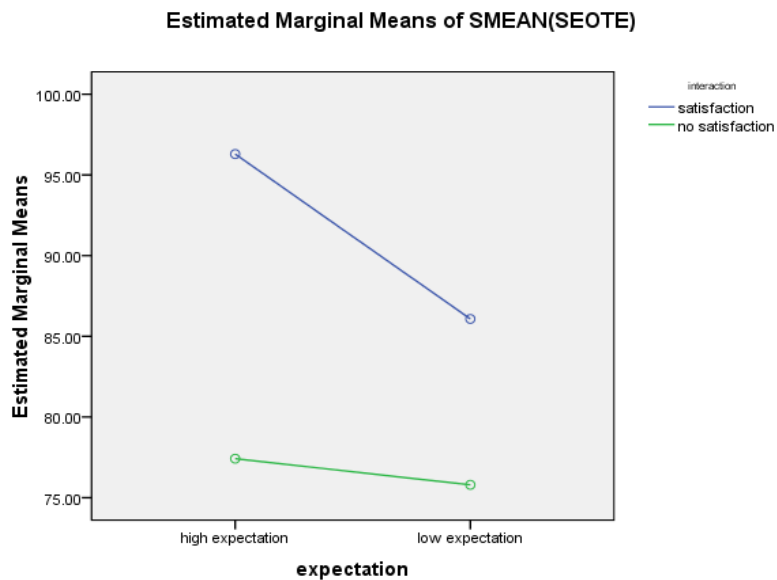


Figure 1. A Line Plot of Interaction between Expectation and Satisfaction in SEOTE

Implications

A 2x2 Factorial ANOVA was conducted to determine the effects between expectation and satisfaction of interaction on the combined DV of instructional material motivation and online teaching effectiveness in the online counseling courses. The results of a Factorial 2x2 MANOVA, Expectation by Satisfaction of

Interaction, revealed that there was significant interaction effect on the combined DV of IMMS and SEOTE. There are also significant interactions in the Expectation as well as Interaction Satisfaction.

In a two-way ANOVA, there is a significant main effect between the group with high expectation and with low expectation on instructional material motivation in the online counseling courses. In addition, Interaction Satisfaction has a significant influence on the IMMS. For instance, high expected students showed higher instructional material motivation than low expected students. The group with satisfaction of interaction also represented higher motivation than the group with no satisfaction of interaction.

In a 2×2 Factorial ANOVA, there was a significant interaction effect between expectation and satisfaction of interaction on SEOTE toward online counseling courses. In terms of the significant mean differences on SEOTE, high expected students considered them as having higher online teaching effectiveness than low expected students. In addition, the group with satisfaction evaluated higher online teaching effectiveness toward online counseling courses than the group with no satisfaction of interaction.

Through significant results of a factorial ANOVA on IMMS and SEOTE in the online counseling courses, high expected students revealed higher motivation and evaluation toward online teaching effectiveness than low expected students. Students who are satisfied with interaction also represented higher motivation and evaluation of effectiveness toward online counseling course than those who are not satisfied with interaction. Furthermore, the high expected students who are satisfied with interaction revealed the highest motivation and evaluation toward online teaching effectiveness on IMMS and SEOTE.

The significant result of interaction effect in SEOTE, by Expectation and Interaction indicated that the expectation factor (IV) had a significant influence on the different categories of Interaction Satisfaction. In other words, learning expectation toward online counseling courses can be a very critical factor. And it

could have an impact on different categories by Interaction in SEOTE. Therefore, instructors can improve the effectiveness of online teaching and encourage students to have high positive expectation toward online learning. Students can be provided with communication and interaction in terms of positive expectation on their online learning. In addition, instructors are needed to offer a variety of synchronous /asynchronous communication in order to activate lots of interaction between a student and an instructor, and among students. Therefore, instructors could be able to encourage students to make positive learning expectation, high motivation, and satisfaction which might affect the effectiveness of online learning.

In other words, the significant results revealed that students can be motivated very positively and encouraged to evaluate their online learning to be much more effectively by high positive expectation and satisfied interaction. Therefore, instructors can approach students' positive expectation in their online learning when detailed learning goals and objectives are presented through the first class or orientation for online learners. Educators could be able to communicate and interact with students in terms of learners' expectation in the online counseling courses to improve their learning. In addition, instructors can increase students' satisfaction of interaction when a variety of interaction methods can be used so that students can activate lots of learning interaction. Furthermore, educators should be able to develop a variety of online activities by using diverse interaction tools such as, synchronous/asynchronous communication tools.

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