Effects of Meaning Making Activities on State Boredom

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Abstract

The purpose of this study is to verify whether there is a difference in boredom between education types (offline vs. online) in the mandatory education scene, and to explore the moderator effect of meaning making activities in the relationship between education types and boredom. In this study, 197 college students were divided into offline and online groups and they participated in mandatory education. The meaning making activity was operationalized based on the meaning discovery scale. As a result of the study, the state boredom after mandatory education was significantly higher in the online group than in the offline group. However, meaning making activities did not moderate the relationship between education type and the state boredom. Through further analysis, it was found that boredom in both groups significantly decreased after the meaning making activity.

Keywords: Boredom, Education Type(offline vs online), Mandatory Education, Meaning Making

1. INTRODUCTION

People feel bored when they participate in activities that they are not satisfied with (Eastwood et al, 2012; Fahlman et al, 2013). Even if individuals do not want to, the activities they experience throughout their lives are sometimes unsatisfactory, and boredom is an unexceptional task that everyone has to deal with throughout their lives. Even with the same educational content, students experience more boredom in an online environment (Kim & Lee, 2014). The boredom of online education has emerged as a major problem in the educational environment caused by the government's high-intensity social distancing following the pandemic. Even after entering the endemic, online education is still maintained due to the advantages of simultaneous and non-simultaneous online education that allows the use of various media and teaching and learning materials (Kim, Choi, & Kim, 1999). Therefore, rather than acknowledging the changed trend of the times and blindly returning from online education to offline education, the need for a better online education environment and a way to cope with boredom emerged.

Boredom does not necessarily produce only maladaptive results. Boredom makes people pursue satisfying

and meaningful activities (Igou et al, 2021; Van Tilburg et al, 2019), and if they find meaning during activities, they can be expected to reduce boredom. This study tried to determine whether meaning making can affect boredom by selecting "mandatory education," an environment that is prone to boredom due to coercion and repetition.

2. THEORY

2.1 Boredom

Boredom is the feeling experienced when participating in unsatisfactory activities, and is a state of loss of meaning and goal (Eastwood et al., 2012; Fahlman et al, 2013). Boredom is divided into a 'boredom state' that occurs temporarily in certain situations and a 'boredom propensity' as a personal vulnerability that is prone to feeling bored (Bernstein, 1975; Sundberg et al., 1991). About 58% of learners reported feeling bored in class, learners experience boredom easily in educational situations (Nett, Goetz & Hall, 2011). Although there has been a problem that boredom leads to shallow information processing levels and poor learning outcomes (Goetz, & Hall, 2014; Nett, Goetz, & Daniels, 2010), there is still a lack of research on boredom (Lee & Lee, 2020).

Various theories that suggested the cause of boredom from an educational point of view pointed out the sense of meaningless learning content, the absence of new stimuli, and the loss of control. The control-value theory of achievement emotion, which explained that the meaningless sense of educational content causes boredom in students, explained that the greater the subjective sense of meaning and control a student feels, the lower the boredom. (Pekrun, 2006; Pekrun et al., 2010). The higher the educational content felt related to oneself, the higher the value, and the higher the value, the higher the learner's enjoyment and the lower the boredom (Noteborn et al., 2012). In addition, another theory that explained the cause of boredom presented the lack of new stimuli satisfactory to learners (Larson & Richards, 1991) and the situation in which learning is deprived and forced (Hill & Perkins, 1985). Taken together, legal mandatory education that is compulsory and repetitive without stimulating the learner's spirit of challenge is an educational form that maximizes boredom. Therefore, it is necessary to explore ways for learners to recognize the meaning of education and reduce boredom.

2.2 Boredom According to Education Type (Offline vs Online)

Throughout the pandemic, many offline education has been replaced by online education. As with elementary, middle and high school education, online employee education, including legal mandatory education, showed a change from 4.2% before COVID-19 to 76.4% thereafter (Lee, 2020). However, despite the increase in the proportion of online education, research on the "experience" that learners feel online is insufficient (Heckel & Ringeisen, 2017).

Online education has the advantage of contrasting with offline education in that it is non-face-to-face with time's space constraints, but learners experience more boredom in the online environment (Kim, 2013), and learning interest also easily declines (Yuzulia, 2021). The boredom problem of online education can be explained for various reasons, and the problem of poor learner participation and limited interaction with educators in the online environment is typical (Kounin, 1970). Previous studies have shown that boredom can be solved through activities that promote the relationship between learning content and learners (Keller, 2010).

This study aims to confirm the difference in boredom according to the type of education at the time of the pandemic when both offline and online education have become essential. There are previous studies that report that more than half of students experience boredom offline, but studies on boredom felt in online educational

situations are limited (Yuan, 2020). In the context of the times when the proportion of online education has suddenly increased and is maintained, it is necessary to compare the difference in the degree of boredom experienced in the online education situation.

Hypothesis 1: Online learners will feel more bored than offline learners.

2.3 Meaning Making

'Presence of meaning' is a sub-factor of 'meaning of life', and meaning making is an individual's active attitude to discover meaning, such as discovering the meaning of life and trying to find a purpose (Steger, 2006). "The meaning of life" is a subjective feeling that one's life is meaningful (Reker & Chamberlain, 2000) and includes "search for meaning" in a state of trying to find it and "meaning making" in a state of establishing meaning (steger et al., 2008).

Individuals who experience boredom due to loss of meaning try to restore meaning again (Van Tilburg et al., 2013), which is called semantic regulation behavior. Learners who feel bored regain meaning and try to offset boredom by taking new actions (Nett et al., 2010, 2011). Hill and Perkins (1985) argued that if learners perceive the educational content as related to their needs, the situation will become meaningful to them and are less likely to cause boredom. In fact, when educators presented interactive activities such as group activities or projects, or materials that remind them of the value of education or content that can be applied to real life, they often perceived the educational content as meaningful and valuable (Moore, 1987; Mora, 2011).

Accordingly, this study aims to confirm whether learners' meaning making during education can lead to a decrease in boredom. In particular, online mandatory education is vulnerable to boredom, so it has the seriousness that leads to hindrance of learning effects. Therefore, we would like to present discussion questions that help discover meaning in the educational content during mandatory education, and check whether these meaning making activities effectively reduce boredom.

Hypothesis 2: Meaning making activities will moderate the relationship between education type and sate boredom.

3. EXPERIMENTS

3.1 Participant

This study was conducted with 197 college students in Korea. To find out whether there is a difference in the degree of state boredom between offline mandatory education and online mandatory education, the study was conducted by dividing 90 students who participated in the dormitory offline mandatory education program conducted by domestic universities and 107 students who participated in the dormitory online mandatory education program.

The participants in the offline mandatory education were 90 out of 197 participants, 30 men (33.3%) and 60 women (66.7%). The average age of the participants was 21.31 (SD = 1.82). Participants' majors consisted of psychology (41.1%) and liberal studies (14.4%). The participants in the online mandatory education were 107 out of 197 participants, 46 (43%) were men and 61 (57%) were women. The average age of the participants was 20 years old (SD = 2.32). Participants' majors consisted of liberal studies (42.1%), psychology (13.1%), and computer science (12.1%).

3.2 Research Tools

3.2.1 State Boredom

To measure state boredom, sub-factors of carelessness, and perceived time were used, except for high and low arousal, among the Multidimensional State Boredom Scale (MSBS) developed by Fahlman et al. (2013). A total of 19 questions were made up of a 7-point Likert scale, consisting of 1 point "not at all" and 7 points "very much", and we translated the measure into Korean. Examples of questions include "time goes slower than usual" and "It is difficult for me to concentrate." In Fahlman's study, the internal consistency was .87, .83 and .73, respectively, and the internal consistency in this study was .85, .86 and .56.

3.2.2 Meaning Making

To measure meaning making, participants were induced to discover meaning by referring to the Korean version of the Meaning in Life Questionnaire (MLQ) developed by Steger et al. (2006) and adapted by Won Du-ri et al. (2005) for domestic college students. According to Steger's research, meaning making is an individual taking an active position to discover meaning, such as discovering the meaning of life and trying to find the purpose (Steger, 2006). The researchers devised two questions to discover the purpose and meaning of the education by referring to example questions such as "I understand the meaning of this education" and "I found a satisfactory purpose of education." Based on the questions, 10 minutes of discussion were given to help participants more clearly discover the meaning and purpose of the education they experienced. During the 10-minute discussion session, a pre-trained facilitator helped participants find meaning. The questions used include, "What purpose and meaning do you think this education has?" and "I think the core value of dormitory is 00, and I will practice it through 00."

3.3 Research Procedures

In this study, we tried to examine the difference in boredom according to the type of education (offline vs. online) in the situation of mandatory education through experiments. The mandatory education adopted in this study is a dormitory life rule education for participants, which must be completed at the beginning of the semester. The training time is about 30 minutes, and includes dormitory etiquette, rules and regulations and disaster safety. First, participants were divided into two groups, offline and online, and the offline education group participated in 30 minutes of mandatory dormitory life rules education, and the online education group used the ZOOM platform to conduct the same experimental procedure as the offline education group. Second, participants responded to a survey on state boredom after mandatory education. Third, based on two meaning making questions prepared by the researchers, the participants formed a group of 4-5 people and conducted discussion activities for about 10 minutes to discover the meaning of this education. In the above process, pre-trained facilitators led the group's meaning making activities based on the subject of the given discussion. The facilitator minimized the difference in meaning making activities for each group by controlling the discussion time, speech time distribution, and discussion direction for each group. Finally, this study was terminated by responding to the state boredom. The educational content, order of progress, and question and answer of the two groups were controlled equally through scripts and timetables.

3.4 Data Analysis

The data were analyzed using SPSS 29.0. First, an independent sample t-test was conducted to find out the difference in state boredom between education types (offline vs. online) after mandatory education. Second, a two-way ANOVA of repetitive measurements was conducted to find out the moderating effect of meaning making activities between education type and state boredom.

4. RESULTS AND DISCUSSION

4.1 Difference in State Boredom by Education Type (Offline vs Online)

The difference in state boredom between the group that completed mandatory education offline and the group that completed online is presented in (<Table 1>). The state boredom ($t(195) = 2.52$, $p < .007$) was significantly higher in online mandatory education even though the same scenario, educational time, and educational materials were used. Therefore, Hypothesis 1 that people would feel higher boredom online when completing mandatory education was supported.

Table 1. Result of the Different in State Boredom by Education Type (Offline vs Online)

Variable	Education Type	N	M	SD	t
State Boredom	Offline	107	3.22	.93	2.52 **
	Online	90	3.55	.90	

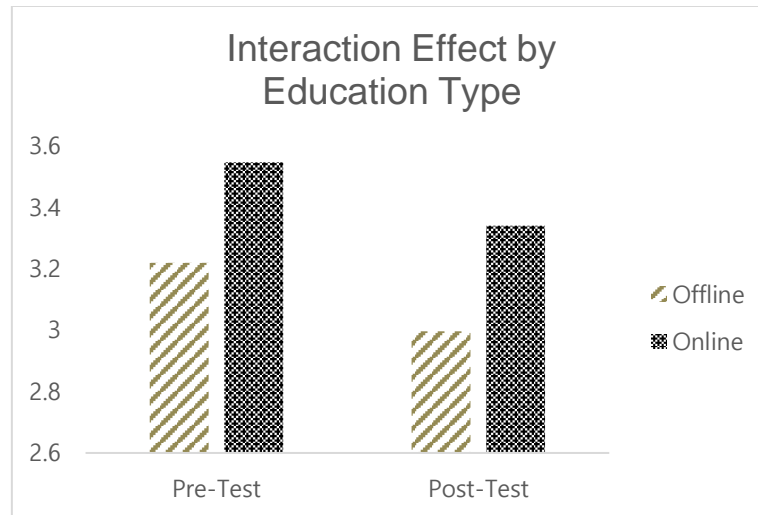* p < .05, ** p < .01, *** p < .001

4.2 The Moderating Effect of Meaning Making Activities Between Education Type and State Boredom

Two-way ANOVA of Repeated measurements was conducted to find out whether meaning making activities play a moderating role between education type (offline vs. online) and state boredom. As a result of the analysis, meaning making activities between education type and boredom did not play a significant role ($F(1, 195)=.034$, n.s). Thus, Hypothesis 2 that meaning making activities will moderate the state of boredom according to the type of education was not supported. However, when examining each variable, we found that the decrease in boredom was significantly related to the type of education ($F(1, 195)=6.74$, $p>.01$) and the time of measurement ($F(1, 195)=23.34$, $p<.001$). In other words, state boredom before the meaning-making activity was higher online ($M=3.55$), but afterward, it decreased significantly for both online ($M=3.34$) and offline ($M=3.00$) in (<Table 2>).

Table 2. Pre-Post State Boredom by Education Type

Meaning Making Activities	Pre-Test		Post-Test	
Education Type	Online	Offline	Online	Offline
State Boredom	3.55(.90)	3.22(.93)	3.34(.98)	3.00(1.01)

Figure 1. Results of Two-Way ANOVA of Repeated Measurements for State Boredom

State boredom showed no significant interaction between meaning making activities and education types, but a dependent sample t-test was conducted to examine if meaning making activities significantly reduce boredom for all participants regardless of education type. As a result of the analysis, there were significant differences in all types of education after meaning making activities (<Table 3>). Boredom before meaning making was M=3.37 (SD=.93), and the boredom after meaning making was M=3.15 (SD=1.01), indicating that the state boredom was significantly lowered after meaning making activities (t(1) 4.88, p<.001).

Table 3. Dependent *t*-test for State Boredom

Variable	Pre-Test		Post-Test		t
	M	SD	*M*	SD	
State Boredom	3.37	0.93	3.15	1.01	4.88***

* p < .05, ** p < .01, *** p < .001

5. DISCUSSION

The purpose of this study is to examine whether there is a difference in state boredom between educational types (offline vs. online) and to investigate whether there is a difference in the degree to investigate the moderating effect of meaning making. As a result of the study, it was found that the online education group showed a significantly higher level of boredom than the offline education group, but meaning making did not moderate the relationship between boredom according to the type of education. Additionally, we analyzed whether meaning making activities reduce participants' pre- and post-boredom regardless of the type of education. As a result of the analysis, state boredom significantly decreased after the meaning making activity. This study not only confirmed previous studies through the results that meaning making activities in offline environments can reduce boredom, but also derived meaningful results in that meaning making activities have the same effect of reducing boredom in online educational environments.

In the situation of mandatory education, the content delivered can be one-sided, and in most cases, it is completed without discussion and other meaning-finding activities. However, in this study, meaning making activities, a method of interpreting and evaluating one's experiences, were used. Active meaning making was promoted through the process of asking and thinking about factors that individuals can discover through education and applying to life. The results were derived that boredom in special situations could be overcome through the process of discovering meaning. This is in line with the aforementioned control-value theory (Pekrun, 2006; Pekrun et al., 2010).

The limitations of this study and suggestions for follow-up studies are as follows. First, the experimental group was classified according to the type of education (offline vs. online), but it was not classified as whether meaning making activities were carried out. In the current study, boredom was repeatedly measured before and after meaning making activities in the group, and if it can be compared between groups, the difference in boredom reduction can be directly compared. Second, the effect of boredom reduction on educational performance could not be measured. Based on previous studies the decrease in boredom leads to improvement in educational performance, future studies can investigate the relationship between boredom and educational performance (Hyun & Shin, 2011). This study verified that meaning making activities can reduce boredom in mandatory education and reduce boredom not only offline but also in online environments. Based on these results, we suggest that educators will be able to reduce boredom by actively utilizing "meaning making activities" when online education beyond spatial limits faces the limit of "boring."

6. REFERENCE

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