A Study on the Relationships of Adult e-Learning Learners’ Learning Motivation, Self-Regulated Learning, Learning Satisfaction, and Procrastination

Seak-Zoon Roh

Abstract. This study aims to investigate how adult e-learning learners’ learning motivation and self-regulated learning influence learning satisfaction and procrastination mediated by learning flow, and to show its structural relationship. 524 participants are adult e-learning learners who have taken e-learning courses more than one time since age nineteen. The data was collected through both online and offline questionnaires and analyzed by using descriptive statistics and structural equation modeling (SEM). The findings are as follows: First, adult e-learning learners’ learning motivation and learning flow directly affected learning satisfaction and procrastination. Second, self-regulated learning significantly had relation to learning flow and learning satisfaction, whereas it had no effect on procrastination. Third, learning motivation on learning satisfaction, and learning flow on procrastination showed the most significant influence.

Keywords: Adult e-learning learners, learning motivation, self-regulated learning, learning satisfaction, procrastination, learning flow

1 Introduction

According to the previous studies, there are some different learning features in adult learners including both university students and school-age learners, from primary to secondary school. First, adult learners have stronger self-learning motivation. Second, school-age learners tend to be more passive in their learning. Adult learners, on the other hand, actively search for the contents of their own needs for self-development. Third, school age learners are often influenced by extrinsic motivation to participate in learning whereas adult learners actively take part in their learning to fulfill their intrinsic motivation. Forth, compared to school age learners, adult learners decide by themselves to choose types or contents of e-learning courses based on their goals.
Due to these differences, there is a high possibility that learning factors of adult e-learning learners’ learning satisfaction and procrastination can differ from those of school-age learners. Therefore, this study attempts to explore in a more structural way how three factors of adult e-learning learners such as learning motivation, self-regulated learning, and learning flow influence their learning satisfaction and procrastination by having adult e-learning learners who have experienced various e-learning contents participate in a variety of e-learning circumstances.

2 Brief Literature Review

Ha and Ha[1]’s study showed that learning satisfaction is directly influenced by learning motivation which is the intrinsic value, and also by learning flow. Choi and Shin[2]’s study also indicated that learning satisfaction is influenced by learning motivation. In the research targeting adult learners of company cyber education, Kim and Choi[3] found that self-regulated learning directly influenced learning flow, whereas it did not significantly influence learning satisfaction. The study also reported that learning flow significantly influenced the relationship between self-regulated learning and learning persistence, as well as between self-regulated learning and learning satisfaction. Lee[4]’s research also revealed that learning flow significantly affected learning satisfaction. Park and Kim[5]’s study indicated that learning motivation significantly affected learning flow. Lee, Kwon, Ko, and Lim[6] conducted a survey asking about learners’ methods of learning progress with e-learning adult learners in a Korean company. 13.2 percent of the participants replied that they conduct their learning and do an assignment simultaneously at the last minute. You[7] and Song[8]’s analyses revealed that self-regulated learning directly results in a decrease in procrastination.

The following figure shows the research model of this study based on preceding studies above.

3 Methods
The participants in this study are adult e-learning learners who have taken e-learning courses more than one time since age nineteen, that is, post-school-age learners including university e-learning students. 5 types of online and offline survey questionnaires (learning motivation, self-regulated learning ability, learning flow, learning satisfaction, and procrastination) were collected. Each questionnaire conceived of a 5-point Likert scale: Strongly Disagree (1 point)-Strongly Agree (5 points). 524 data collected were analyzed for descriptive statistics, confirmatory factor analysis, and SEM (Structural Equation Modeling). The data analysis is performed under 5% significance level ($p<.05$).

4 Results and Discussions

TLI was .923, CFI was .938, and RMSEA was .077 in the case of the measurement model. When it comes to the structural model, TLI was .921, CFI was .936, and RMSEA was .077, meaning that these statistical results highly meet the acceptance criterion of the adequacy of both research models (measurement model and structural model) in this study.

Table 1 provides structural coefficient estimates of the structural model which analyzed whether learning motivation, self-regulated leaning, and learning flow directly influence learning satisfaction and procrastination at the .05 significance level.

Table 1. Coefficient estimates of the structural model, and accepting or rejecting hypotheses

<table>
<thead>
<tr>
<th>Path</th>
<th>Unstandardized Coefficients (B)</th>
<th>Standardized Coefficients ($\beta$)</th>
<th>S.E.</th>
<th>C.R.</th>
<th>$p$</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF ← LM</td>
<td>.68</td>
<td>.58</td>
<td>.09</td>
<td>7.06</td>
<td>***</td>
<td>O</td>
</tr>
<tr>
<td>LF ← SRL</td>
<td>.32</td>
<td>.28</td>
<td>.09</td>
<td>3.46</td>
<td>***</td>
<td>O</td>
</tr>
<tr>
<td>LS ← LF</td>
<td>.46</td>
<td>.39</td>
<td>.07</td>
<td>6.60</td>
<td>***</td>
<td>O</td>
</tr>
<tr>
<td>AP ← LF</td>
<td>.25</td>
<td>.29</td>
<td>.09</td>
<td>2.63</td>
<td>.008</td>
<td>O</td>
</tr>
<tr>
<td>LS ← LM</td>
<td>.45</td>
<td>.32</td>
<td>.09</td>
<td>4.64</td>
<td>***</td>
<td>O</td>
</tr>
<tr>
<td>AP ← LM</td>
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<td>-.38</td>
<td>.13</td>
<td>-2.83</td>
<td>.005</td>
<td>O</td>
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<tr>
<td>LS ← SRL</td>
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<td>.25</td>
<td>.09</td>
<td>3.82</td>
<td>***</td>
<td>O</td>
</tr>
<tr>
<td>AP ← SRL</td>
<td>-.22</td>
<td>-.22</td>
<td>.12</td>
<td>-1.82</td>
<td>.068</td>
<td>X</td>
</tr>
</tbody>
</table>

Note: LF = Learning Flow, LM = Learning Motivation, SRL = Self-Regulated Learning, LS = Learning Satisfaction, P = Procrastination

As shown in Table 1, all the hypotheses were accepted, except the one in which the impact of self-regulated learning on procrastination was rejected under 5% significance level ($p<.05$) in the present study. The hypothesis which was rejected, however, was statistically significant at the level of $p<.10$. Therefore, there is
somewhat of a probability that self-regulated learning influences procrastination.

The results also indicated that learning motivation had the greatest effect on learning satisfaction ($\beta=0.58$) and learning flow had the greatest effect on procrastination ($\beta=0.29$). In the latter case, however, preceding research showed a negative effect of learning flow on procrastination which contradicts the results of this study. For this reason, it is necessary to conduct further study on this question.

References