

A STUDY ON ONLINE LEARNING MOTIVATION OF IN-SERVICE ADULTS AT HUNDUN UNIVERSITY IN BEIJING, CHINA *

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Abstract

This study investigated the learning motivation of 206 in-service adults who study online at Hundun University Beijing, China. By collecting 206 valid data, this study analyzed the current situation and motivation level of in-service adults who study online at Hundun University Beijing, China according to their gender, age, education background and work status. The study firstly used a descriptive analysis, which found that the total motivation level of in-service adults to participate in online learning is high, and their intrinsic and extrinsic motivation levels are both high. Secondly, by comparing the motivation of online learning among in-service adults with different gender, age, education background and work status. The study found there were significant differences in all variables except gender. Finally, the study also provided related discussions and recommendations.

Keywords: In-Service Adults, Hundun University, Beijing, Online Learning Motivation

Introduction

Today's world economy and society is in a period of rapid development and adjustment. The progress of information technology, puts forward new requirements for personnel training. The concept of "lifelong learning" was gradually popularized and promoted in various countries all over the world. Continuous learning of the in-service adults is not only an inevitable personal promotion, but also a necessity of social development (Dornyei, 2000). Compared with the traditional classroom, there are limitations of time and space. The timeliness and convenience of online learning, as well as breaking the limitations of time, region, and space, are trusted by more and more employees. In addition, with the impact of the new epidemic situation since 2019, online education and learning began to become a strong momentum.

Learning motivation is a direct driving force to promote people's hard learning. It is an internal force and an important part of human behavior motivation system. Learning motivation can stimulate students' enthusiasm and initiative in learning, and make them more active in learning (Jessica, Wang & Wu, 2021).

However, in recent years, the research on online learning motivation of in-service adults is mainly focused on the learning motivation of adults both at home and abroad. Chinese scholar Ji (2006) defined adult learners as "adults who have left various traditional physical schools and were in different stages of life (including but not limited to employment, quasi employment, unemployment, etc.).

The major purpose of this study was to explore the motivation of online learning among the "in-service adults", that is, adults in the stage of employment. For in-service adults, their academic background, social role, learning motivation, learning purpose, etc. are different, and

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they no longer had a lot of time arrangement as in their student days (Elliott & Shin, 2002). This is especially true for the in-service adults. Adults in the state of employment need to balance the factors of work, study, life and even family. Therefore, the study on the online learning motivation for in-service adults has certain reference significance and value for understanding and observing the learning situation of the in-service adults, as well as providing more targeted course content by various online institutions.

Research Objectives

The following objectives guide the direction of the research.

1. To study the demographic factors of the online learners in Hundun University, including their gender, age, educational background and working status.
2. To determine the level of in-service adults' online learning motivation, including their intrinsic motivation and extrinsic motivation levels.
3. To compare the differences in the level of learning motivation of online learners in Hundun University compared with their demographic factors.

Literature Review

Motivation is a kind of motivation or force that drives people to participate in activities. It is composed of individual intention, desire, psychological impulse and self-realization goal (Nicholls, 1984). Dweck's motivation to do something in the future is certain. Intrinsic motivation is one of the important psychological components of motivation. It is the behavior motivation generated by one's heart. It is the self-motivation of learners to achieve their goals. It can be that they regard learning as their belief and desire under the premise of zero expectation of all tangible returns. Extrinsic motivation refers to the belief and desire of in-service adults to learn in order to get external rewards or avoid punishment. It is also an important part of motivation (Gardner, 1985). Learning motivation can bring different learning outcomes and experiences to individuals (Deci & Ryan, 2000). According to Santrock (2009), "learning motivation is a key aspect of teaching and learning. Students without motivation will not spend the necessary effort to learn" (p459). Motivation is "an abstract, hypothetical concept that we use to explain why people think and behave like this" (Dornyei, 2001, P1). Motivation is when an individual is prompted to do and achieve the goal of completing a task. It has a certain influence on individuals, which will arouse their interest in doing things, and some factors will arouse people's interest. For example, an incentive or reward that a person can get. It could be in the form of high scores. In some cases, students will be recognized if they do well (Pintrich, 2003). Researchers believe that the realization of wishes, hopes and dreams is a goal for a person, and this motivation has a great impact on language learners.

In addition, motivation and learning interest are closely related to learning effect (Strong, 2011). If students are goal oriented, focused and interested in the task at hand, they can perceive motivation, depending on how they feel inside. Motivation is obviously a stimulus driving force and can be changed from time to time according to the task (Ellis, 1997).

In addition, the word motivation is similar to the stimulant that keeps people in motion and the desire to complete an action. Early studies on motivation have been found to be related to racial attitudes, orientation, motivation and second language (Gardner, 1985). Gardner and Lambert (1972) proposed that comprehensive motivation is about positive thinking and attitude towards learning tasks, while instrumental motivation is about possible utilitarian benefits or the need to find a job.

Ryan & Deci's self-determination theory about intrinsic and extrinsic motivation has been included in this study. Self-determination theory (SDT) is also used because it is a method

to study the human motivation and personality of individuals to achieve their social development and personal needs (Deci & Ryan, 2000). SDT focuses on the intrinsic and extrinsic motivation of doing things, and it also plays an important role in the social and cultural aspects of influencing learners' sense of action on specific tasks (Deci & Ryan, 2008; Yamo, 2017).

Whether or not the motivation of the action above is significant to the outcome of the study, or whether the motivation to engage in the research will continue. Motivation can be defined as the tendency or intention to actively explore a matter or promote an action or maintain an activity (Deci & Ryan, 2008; Santrock, 2009).

Methodology

This study was a quantitative study that analyzed and compared the motivation of in-service adults from different backgrounds to participate in online learning by understanding a questionnaire survey of in-service adults who study Hundun University online. Data analysis and conclusions are drawn from the intrinsic and extrinsic motivation levels of learning motivation through survey scales.

In this study, descriptive analysis, frequency, percentage, mean and standard deviation were used to determine the demographic background variables of the in-service adults and their motivation level to participate in online learning, and then t-test and one-way ANOVA were used to compare the differences in motivation of in-service adults from different demographic factors.

The questionnaire for this study was mainly adopted from Wu, F., et al. (2015) in Development of an Online Learning Motivation Scale for Adults under Unconstrained Conditions, only the demographic background factors were added, thus forming the research questionnaire for this study.

The questionnaire part of this study consists of two parts: The first part is the basic information of individuals, including gender, age, education, and work status of in-service adults. The second part is about the motivation of in-service adults to study Hundun University online, including their intrinsic and extrinsic motivation.

The questionnaire for this study was distributed electronically to the in-service adults enrolled in Hundun University in Beijing, China after the first spring/summer semester of 2022. A total of 206 valid questionnaires from in-service adults were collected, corrected, exported and manually cleaned, and then imported into SPSS for data analysis.

In this study, data were collected through a scale design and the questionnaire was processed using SPSS 23.0. First, descriptive statistics were reported on the valid data section for participant information; mainly using percentage and frequency methods. Secondly, descriptive analysis was used to understand the motivation profile of in-service adults in online learning. Then, one-way ANOVA and t-test analysis were used to test the hypotheses and make comparisons between groups.

The overall Cronbach's α coefficient of the questionnaire was 0.980, and the Cronbach's α coefficient of each variable was more than 0.6 and as high as 0.9. The KMO value of the questionnaire is 0.983, far higher than the minimum standard 0.6. Bartlett's sphericity test is 4473.103 (df=210), $p < 0.001$, significantly.

Results

According to Table 1 below, the level of learning motivation of employees participating in online learning is high. From the sub dimensions of the project, internal motivation and extrinsic motivation are higher than 3.7, the total level of motivation is 3.79, so the total level

of learning motivation of online learning in Hundun University Beijing area is high.

According to the analysis of the average value, the highest score appears in "diverting attention from difficulties and problems", and the lowest score appears in "giving back to society or unit".

Table 1: Descriptive Statistics of Online Learning Motivation of Participants.

Internal motivation	Mean	SD	Interpretation
1. Satisfy the thirst for knowledge	3.81	1.277	high
2. Hope to learn new knowledge	3.83	1.196	high
3. Interested in seeking knowledge	3.80	1.264	high
4. Be interested in the major or course content	3.78	1.252	high
5. Make up for what you have learned in the past	3.80	1.259	high
6. Become a more learned person	3.83	1.232	high
7. Improve personal professional ability	3.79	1.195	high
8. Mastering certain knowledge will give me a sense of achievement	3.81	1.283	high
9. Get a job or career development	3.75	1.186	high
10. Return to society or unit	3.74	1.271	high
External motivation	Mean	SD	Interpretation
11. Influenced by other people's participation in this form of learning	3.76	1.256	High
12. Social or unit requirements	3.83	1.282	High
13. In order to promote a position or find a better job	3.79	1.226	High
14. Salary increase or income increase	3.78	1.28	High
15. Make new friends and expand social circle	3.81	1.272	High
16. Better participate in group activities in your circle	3.76	1.232	High
17. Promote or maintain one's social status or level	3.75	1.269	High
18. Kill time and fill the void of life	3.87	1.229	High
19. Change the rigid and unchanging way of life	3.79	1.23	High
20. Get some time out of social responsibility	3.82	1.286	High
21. Divert attention from difficulties and problems	3.86	1.319	High
Total	3.79	1.230	High

Table 2: Comparison of Online Learning Motivation of In-service Adults with Their Genders

	Gender	Number	Mean	SD	t	Sig
Learning motivation	Male	106	3.77	1.962	-0.39	0.697
	Female	100	3.82	2.627		
Internal motivation	Male	106	3.77	0.441	-0.37	0.709
	Female	100	3.82	0.651		
External motivation	Male	106	3.77	1.75	-0.39	0.693
	Female	100	3.83	1.21		

H1: There are significant differences of in-service adults' online learning motivation based on their genders.

According to the hypothesis H1, it needed to compare the differences of online learning motivation between different genders. Here, independent samples t-test was used to test this hypothesis. The results of the test were shown in Table 2. In the process of comparing the

differences in the willingness to participate in online learning among the in-service adults of different genders, since the total learning motivation of SIG reached 0.697, the intrinsic motivation and extrinsic motivation of SIG were 0.709 and 0.693 respectively, which are higher than the standard of 0.05. Therefore, it was certain that this research hypothesis was not tenable, that is, there was no significant difference in online learning motivation between different genders.

Table 3: Comparison of Online Learning Motivation of In-service Adults with Their Genders

Variable	Groups	Number	Mean	SD	F	Sig
Learning motivation	Age 23 and below	42	2.28	2.56	3.738	0.000
	24-39 years old	78	4.23	1.97		
	40-50 years old	44	4.31	1.98		
	50 years and above	42	4.35	1.95		
Internal motivation	Age 23 and below	42	2.16	1.88	1.478	0.000
	24-39 years old	78	4.31	1.1		
	40-50 years old	44	4.28	1.09		
	50 years and above	42	43.4	1.14		
External motivation	Age 23 and below	42	2.09	2.49	2.096	0.000
	24-39 years old	78	4.27	1.4		
	40-50 years old	44	4.34	1.17		
	50 years and above	42	4.39	1.85		

H2: There are significant differences of in-service adults' their online learning motivation based on their age groups.

The test results were shown in table 3. In the process of comparing the differences of in-service adults online learning motivation of different ages, because p value under the analysis of F-test, the overall learning motivation, intrinsic motivation and extrinsic motivation are 0.000, which were significantly smaller than 0.05. Therefore, it could be confirmed that the hypothesis H2 of this study was true, that is, there are significant differences of in-service adults' online learning motivation based on their age groups.

For example, according to the results of multiple comparisons, the overall learning motivation of online learning motivation of 24-39-year-old adults was higher than that of 23-year-old and below, that of 40-50-year-old was higher than that of 23-year-old and below, and that of 50-year-old and above was higher than that of 23-year-old and below.

Table 4: Comparison of Online Learning Motivation of In-Service Adults with Their Educational Backgrounds

Variable	Group	Number	Mean	SD	F	Sig
learning motivation	High school	40	4.34	1.31	2.169	0.000
	College	140	3.55	1.25		
	Master	24	4.03	1.01		
	Doctor	2	4.33	1.41		
Internal motivation	High school	40	4.32	1.17	2.131	0.000
	Junior College	140	3.56	1.99		
	Master	24	4.23	1.81		
	Doctor	2	4.40	1.83		
External	High school	40	3.63	1.29	3.769	0.000

motivation	College	140	3.54	1.48
	Master	24	2.90	1.26
	Doctor	2	3.81	1.24

H3: There are significant differences of in-service adults' online learning motivation based on their different educational backgrounds.

According to the hypothesis H3, it needed to compare the differences of in-service adults' online learning motivation with different educational background. The test results were shown in Table 4. In the process of comparing the differences of online learning motivation of in-service adults with different education background because p value under the analysis of F-test, the overall learning motivation, intrinsic motivation, and extrinsic motivation are 0.000, or even less than 0.01, respectively. Therefore, it could be confirmed that H3 was true in this study, that is, there are significant differences of in-service adults' online learning motivation based on their educational backgrounds

From the multiple comparison results in Table 4, it could be seen that the overall motivation level, internal motivation level and external motivation level of online learning of in-service adults with high school degree are higher than those with college or bachelor's degree, while those with master's degree have higher overall motivation level, internal motivation level and external motivation level than those with college degree.

Table 5: Comparison of Online Learning Motivation of In-service Adults with Their Working Status

Variable	Group	Number	Mean	SD	F	sig
Learning motivation	Common workers	83	3.12	1.44	1.172	0.000
	Middle-level employees	56	4.02	1.92		
	Senior managers	48	4.08	1.68		
	Entrepreneurs	19	4.13	1.14		
Internal motivation	Common workers	83	2.98	1.75	2.743	0.000
	Middle-level employees	56	4.32	1.10		
	Senior managers	48	4.34	1.36		
	Entrepreneurs	19	4.36	1.58		
External motivation	Common workers	83	3.14	1.88	3.439	0.000
	Middle-level employees	56	3.82	1.15		
	Senior managers	48	4.26	1.66		
	Entrepreneurs	19	4.42	1.06		

H4: There are significant differences of in-service adults' online learning motivation based on their different working status.

The test results were shown in table 5. In the process of comparing the differences in the willingness of adults with different working status to participate in online learning, due to the p value under the analysis of F-test, the overall learning motivation, intrinsic motivation, and extrinsic motivation were 0.000, or even less than 0.01, respectively. Therefore, it could be confirmed that H4 was true in this study, that is, in-service adults with different working status, there were significant differences of in-service adults online learning motivation based on their working status.

Through multiple comparisons, it could see that the level of online learning motivation of middle-level enterprises was higher than that of common workers, the level of online learning motivation of high-level enterprises was higher than that of grassroots workers, and

the level of online learning motivation of entrepreneurs was higher than that of common workers.

Discussion

According to the above research results, this study would like to discuss the findings in the following related aspects:

First of all, the results of this study show that there was no significant difference in the proportion of male and female adults, and the number of men was only slightly higher than that of women. The working population aged 24-39 was relatively concentrated, which was also the backbone of social development. On the whole, the motivation level of online learning was high.

Secondly, through the comparison of the motivation level of in-service adults with different gender, age, education background and work status, the following findings are found:

1) There was no significant difference in the overall motivation, intrinsic motivation, and extrinsic motivation of employees of different genders to participate in online learning. Because Hundun university provides cognitive course content, there was no obvious particularity. There was no significant difference between male and female adults in online learning motivation level, which is in line with the circle structure of content system.

Although there was no literature on the motivation of online learning, Jessica, Wang, and Wu (2021) analyzed the self-efficacy of adult online learning and found that the overall self-efficacy of women was higher than that of men. Further analysis found that gender differences were not significant in the two dimensions of learning ability and learning will. This conclusion can also be confirmed from the side (Zhang, 2003; Sun, 2006). It is very possible that there is no significant difference in the motivation level of online learning between different genders.

2) There are significant differences in the level of motivation of online learning among the in-service adults of different ages. The level of online learning motivation of adults aged 24-39, 40-50 and 50 and above was higher than that of those aged 23 and below. The level of extrinsic learning motivation of adults aged 50 and above was higher than that of those aged 24-39. The possible reason was that older people do not want to lag behind the rapid development of society, they needed to catch up with the wave of Internet entrepreneurship and innovation through online learning.

Li & Yu (2021) also compared the learning engagement of distance students in the article "development and comparison of the evaluation scale of learning engagement of distance students". Although they did not find the difference of learning engagement in age, they pointed out that older non-academic students mainly took improving knowledge and skills as their main motivation in distance learning or online learning. They were more interested in the content of the course, and the learning goal orientation is clear. Therefore, the older learners may not have less initiative, strategy application and emotional input than the young.

3) There were significant differences in the level of online learning motivation of in-service adults based on their educational background. The level of overall motivation, intrinsic motivation, and extrinsic motivation of the adults with junior high school education and master's degree were higher than those with junior college or bachelor's degree. The result might reflect that the adults with junior high school education background need to supplement their knowledge system and innovation and entrepreneurship theory in the form of online learning to enrich their own reserves; The in-service adults with a master's degree may have a stronger willingness to learn because of the better feedback from the degree bonus.

4) There were also significant differences in the online learning motivation level of in-

service adults based on their working status. The motivation levels of middle-level, high-level and entrepreneurial adults were higher than those of common workers (low level).

Through multiple comparisons, it could be seen that the level of in-service adults' online learning motivation of middle-level employees were higher than that of common workers, the level of online learning motivation of senior managers was higher than that of common workers, and the online learning motivation of entrepreneurs were higher than that of common workers. According to this result, we can see that the middle and senior level of employees and entrepreneurs have stronger online learning motivation, while the level of online learning motivation of common workers was lower. Based on Maslow's hierarchy of needs theory, different working conditions of people will represent different needs, and middle and high-level employees and entrepreneurs have met the basic physiological needs, safety needs, etc. they are more self-realization and have clear goals. The common workers in enterprises were more concerned about the basic needs, so the willingness of online learning was not as good as that of other employees.

Jessica, Wang, and Wu (2021) analyzed the "adult online learning self-efficacy". The results showed that income and education background had significant differences in adult online learning self-efficacy. Based on different background variables, this scale is used to measure the self-efficacy of adult online learning in China. It is found that education background and income have significant influence on adult online learning self-efficacy. Jessica, Wang, and Wu (2021) found that monthly income has a significant impact on the overall level, learning will and learning technology dimensions of online learners. Learners with low monthly income are not confident enough in their own abilities, and their education level may be at a lower level. Students with middle and higher education background and positions would have higher demand and desire to improve themselves. Therefore, there were some differences in the level of motivation. In addition, the research by Li (2004) also showed that the social and economic status, occupation, and income level are positively related to two factors: interest in learning and serving the society. Therefore, it was possible that people with different educational backgrounds and working conditions have different motivation for learning online courses.

Conclusion

This paper studied the current situation of online learning motivation of the in-service adults in Hundun University's Beijing Regional Learning Center, including the following aspects:

1. In this survey, the number of male students was slightly more, but there was no significant difference between men and women. The number of respondents aged 24-39 was the most, accounting for nearly 40%. The proportion of other age groups was similar.

2. On the whole, the motivation level of in-service adults to participate in online learning was high.

3. Comparison of the differences of the in-service adults' online learning based on their different gender, age, education background and working status.

- 1) There was no significant difference in the overall motivation, intrinsic motivation, and extrinsic motivation of in-service adults of different genders to participate in online learning.

- 2) In the online learning of in-service adults of different ages, those aged 23 and below scored lower. The level of overall learning motivation, intrinsic learning motivation and extrinsic learning motivation of in-service adults aged 24-39, 40-50 and above were higher than those of those aged 23 and below; In addition, on the level of external motivation of online

learning, the in-service adults aged 50 and above were higher than those aged 24-39.

3) There was a significant difference in the level of motivation of online learning among in-service adults with different educational background. From the perspective of the overall level of learning motivation, internal motivation level and external motivation level, the level of motivation of in-service adults with junior high school education and master's degree was higher than that of people with junior college or undergraduate education.

4) There were significant differences in the level of motivation of online learning among in-service adults with different working status. The level of learning motivation of the middle-level, high-level and entrepreneurs of enterprises was higher than that of common workers. The overall level of motivation, the level of internal motivation and the level of external motivation were consistent with this result.

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