

## The Research on Factors of the Distance Learners' Motivation

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**Abstract**—By literature review, five categories of factors were found to impact the distance learners' motivation. Then explore the relationship between academic motivation and its impact factors, as well as how the factors can predict the academic motivation level of distance learners. This study was to investigate the level of distance learner's academic motivation and what kinds of factors impact it. Finally, some suggestions are made to improve academic motivation for the distance learners.

**Keywords**—distance learners; factors ;motivation; suggestions

### I. INTRODUCTION

All Modern distance education has become the undisputed hot and has been widely accepted in higher education worldwide. But there are still many problems and challenges in teacher training, teacher management, interactions between teachers and students in distance education, evaluation of learning, sharing and constructing the learning resources and evaluation of teaching qualities, etc. It is urgent for the modern distance education to study the learning evaluation of learners. Most researchers think that there is close relationship in learning motivation and learning results, therefore, more and more researches pay attention the relationship between learning motivation and online learning results. But these researches are still at an early stage and not form a system.

Learning motivation of learners is an important decisive factor and measurement on the quality of distance learning, whose level has the significant positive correlation with learning results. (Sean B. Eom, H. Joseph Wen, Nicholas Ashill, 2006) We know the present situation of the distance learners' motivation and the influence factors and find the problems existing in the distance learning motivation by the surveys, so we can enhance the learners' environment and improve the quality of the distance education with the help of this survey results.

### II. METHOD AND SAMPLES

The first part of this study is motivation level measurement on distance learners learning, adopting the famous LASSI motivation questionnaire. Learning and Study Strategies Inventory (LASSI) has ten subscales in total. The measurement results norm is got by checking thousands of learners with the different culture in worldwide, so it has high reliability and validity. What is more, the subscale can

be used alone and there are more than 2000 organizations adopting the LASSI (Weinstein & Palmer, 2002).

Several factors that affect the learners' motivation of the distance education are concluded by the literature review. The intrinsic cognitive factors include individual self-efficacy, interest, achievement motivation, the sense of community belonging, self control, concentration. While the extrinsic objective factors include the quality of network course and learning resources, learning support service, personal time limit, and so on. The questionnaire is made on the basis of the network learning motivation factors of learners.

Questionnaire is made according to Likert scale and is released by the Google Online Survey System and all of the filled information is automatically converted to coded data and all the data is conducted statistical analysis by using the SPSS11.0.

To ensure the accuracy and rationality of the subject, the research carries out a forecasted check before the formal measurement. The 15 Participants come from QQ (which is a chatting tool, similar to MSN) of Renmin University of China, South China Normal University, Wuhan University. After project analysis, we delete questions that fail to reach significant levels, and then adjust the matrices whose correlation coefficient is more than 0.8. Besides, we modify the relevant problems and the initial phrase of questionnaire and the questions in the questionnaire is changed from 49 to 39.

The questionnaire's URL is released by homework release system and QQ and in three weeks there are 432 students complete online questionnaire. Through the polygraph topic selection, we get 279 valid questionnaire and the valid rate reaches 64.58%. Table I is the sample.

TABLE I. THE COMPOSITION OF THE QUESTIONNAIRE FILLED

Gender		Whether		From		
Male	Female	Yes	No	Town	Rural	
141	138	251	28	221	58	
50.5%	49.5%	89.9%	11.1%	79.2%	21.8%	
Marriage		Grade ratio				Field Distribution
Yes	No	1	2	3	4	Arts Science Else
124	155	116	89	45	29	111 53 115
44.4%	55.6%	41.6%	31.9%	11.6%	10.4%	39.8% 19.0% 41.2%

### III. THE RELIABILITY AND VALIDITY OF THE QUESTIONNAIRE

The Cronbach's coefficient of motivation level is 0.8684 and the 1/2 reliability is Alpha1 = 0.7521, Alpha2 = 0.7152.

The Cronbach's coefficient of influence factors is  $\alpha = 0.8328$ , the 1/2 reliability is  $\alpha_1 = 0.7521$ ,  $\alpha_2 = 0.7152$ . Each part of the internal uniformity coefficient is achieved. Because the anonymous questionnaire, we can not get test-retest reliability of the questionnaire.

Through inspection, modification and adjustment of initial phrase by many experts, questionnaire has good content validity. And we use SPSS software to do causal analysis on the questionnaire data and use principal component analysis to extract the factor and we get the KMO coefficient is 0.836, so it is suitable for factor analysis. Bartlett Schema chi-square is 1781.643 and degree of freedom is 253 and both of them reach significant level. After many exploratory factor analysis, we delete the small load factors. Finally the factor analysis results obtain five factors and are named respectively as the perseverance of concentration and action, inner cognitive factors, the quality of network curriculum, study support service, personal external objective factors. The characteristic value of five factors is 2.298, 2.282, 2.063, 1.722, 1.601 respectively and the explained variance is respectively 14.364%, 14.264%, 12.897%, 10.761%, 10.009% and the accumulative explained variance is 62.295%. The results of the factor analysis tallies with the design of the variable structure of original papers, so it indicates that questionnaire designs with high structural validity.

#### IV. RESEARCH RESULTS

##### A. The level of learning motivation

According to the research results, we get that the minimum and maximum of the learners' motivation is 13, 56 respectively and the average value is 38.69 and the standard deviation is 38.69, which higher about 0.7 than the theoretical standard deviation. 89% students motivation level is over 32, Which shows that the overall learners' learning motivation is high, but the individual motivation have many differences.

Ying Sanchao's research (2003) shows that the learners' learning objectives have strong learning needs and motivation and based on the professional and learning choice of distance education form of this most say that they like this type of learning without space-time limit and self autonomy learning. Liu Chengfeng and Zhu Zulin's (2001), research also come to similar conclusions that students in the network college have strong learning motivation and it is good for them to overcome difficulties and smoothly finish school study. However, Li Xinyu (2003) points out that the students of the distance education are main working adults, so the contradictions among learning, work and family are serious. What is more, the adults' thoughts are complex and difficulty in learning is high. These factors cause the low learning motivation of students. It should be noted that the learning motivation is an internal learning desire rather than the direct learning behavior. When something external affect the learning motivation, people usually show that the learning passion is less.

##### B. Network interactive learning time

81.6% students think that interaction between teachers and students is not enough. Sun Duo's research shows that interaction between teachers and learners in the distance learning is too less. This indicates that network institute needs to further improve the learning support service and increase student-staff ratio or set more for guiding, and meanwhile provide more communication ways to teachers and students.

Nearly 70 percent of the distance learners show that their normal distance learning is seriously affected by work and family affairs, etc. The sample of this questionnaire is consisted of part-time students and married students which account for 89.9% and 44.4% respectively. Work and family life occupy their so much personal time that they do not have enough time to learn. Zhang Wei also finds that not having enough time to learn is one of the three main obstacles on distance learners. Morris (2005) also points out that time is an important factor affecting learners' motivation.

##### C. Various motivations of different students

The students' gender, origins, working or not, marital status, purposes and something are checked significant different motivations by the T-test. The results show that different genders, origins, on-the-job or not, marital status of students motivation level is not existing significant differences. But the students with different purposes between motivation levels have significant difference. Learners with inner purpose ( $M = 40.56$ ,  $SD = 7.63$ ) whose motivation level are significantly higher than those the outer purpose learners ( $M = 35.36$ ,  $SD = 7.91$ ) ( $t = -5.39$ ,  $p = 0.00^{**}$ ). Previous studies have shown and verified that in the different ages the inner purposes of learners have stronger persistence and more of them can realize the teaching goals and the self-control is also stronger. (Robl Martens et al 2004)

We use the single factor to analyse the differences among students motivation levels on ages, inspection, computer skills, professional grade. The results show motivation levels of distance learners who are at different ages, grades, the computer levels, professionals don't exist significant differences. But different grades of student learning motivation levels exist significant differences ( $F(2,276) = 14.629$ ,  $p = 0.01^{**}$ ). After LSD inspection, we find that significant difference between the two is poor. The better of the grades, the higher of learning motivation level. This proves Siva and Tung (2001) and Stefanie (2005) research conclusions that they think distance learners' motivation in learning and achievement is closely related to the grades. The better of the grades, the higher level of motivation.

##### D. The motivation levels and correlation between the various factors

All of learners' motivation level, learners and focus, inner cognitive factors, the quality of network curriculum, study support service offering by the network colleges, external objective factors, etc are continuous variable, so we use Pearson product-moment correlation to get the variables of correlation coefficient. Results show that the learners'

motivation level and cognitive factors have a higher degree of correlation, which is 0.648 and it also shows that the motivation of the learners has moderate correlation coefficient, which is 0.489. What is more, the motivation has related to the factors of network course, study support service, external objective, and the correlation coefficient is respectively, 0.257, 0.355. After bilateral inspection, all related coefficient are achieved significant level.

#### E. Multiple regression analysis on various influential factors

The amount of the study sample is 279 and 5 variables in total, reaching the sample size of multivariate regression and ratio of the sample size and Variable number is 10 to 1. It passes the Durbin - Watson D inspection by the residual value of the inspection,  $D = 2.245$  and satisfy multiple linear regression residuals without self related condition. The VIF value is between  $1.056 \sim 1.336$ , showing no violation of multiple linear assumption.

Adopting stepwise regression methods to get the distance learners' motivation level influence factors of standardized regression coefficients are respectively inner cognitive factors 0.581, behavior persistence 0.186, external objective factors 0.162, the network course 0.143, study support service 0.105. And the learners' motivation level correlation coefficient is 0.78. Five variables linear combination can explain 60.8% dependent variable.

### V. SUGGESTIONS

#### A. Develop the learners interests and help them set internal goals

Surveys show that some students of the distance education have the low motivation and most of those students belong to extrinsic motivation. Network colleges should help the learners to set the clear and specific learning goals, and let learners to know themselves continuously through the feedback form, meanwhile the students should adjust achievement goals according to their own actual learning situation flexibly.

#### B. Provide individualized learning mode according to the learners' time

Surveys show that the students of network colleges do not have enough time to learn and this produces adverse effects to normal learning. Now there are still many disadvantages on personal learning in the distance learning platform. One of the disadvantages is students with different levels are received the identical study mode, so we need to change the existing curriculum evaluation models that are single, and overall. Learners should have the rights to set their own learning goals, and study plans according to their own time. Learning platform should set specific learners

evaluation index system and to the greatest degree of individualized learning according to the learners' goals and plans to allocate individualized learning resources. What is more, various time management tools should be set to help learners to use their time scientifically, high effectively.

#### C. Provide various methods to make the network learners keep studying

The results of this research indicate that it exists the medium positive correlation between the learners' and learning motivation and persistence. From the descriptive statistics data of the survey, we can know that learners are vulnerable to other irrelevant factors, what is worse, the lack of supervision system in distance education causes the persistence of the learners worse.

It is the inspiration of learning achievement goals, internal motivation and external learning supervision mechanism that make students keep learning. For learners, they need to set clear goals and make themselves to know the value and significance learning by various means. In addition, many rewards and various external stimuli (such as: network memo, etc.) should be used to remind students of the study progress and the task need to finish. Moreover, it needs enough interaction among the teachers and students to maintain the learning interest and eliminate learning difficulties to avoid students feeling frustrated when they encounter the problems in the study.

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