Research of influencing factors of college teachers MOOC teaching acceptance

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Abstract. Nowadays, MOOC is developing rapidly athomeandabroad. The influencing factors of behavior intention of MOOC teaching is studied in the paper. The model is built based TAM3 model , and related research hypothesis is put forward .Then empiricalstudy is given. The questionnaires are sent out through network way and face-to face way. The data is dealt with by SPSS17.0 and AMOS 21.0. The data has good reliability andvalidity .The study result shows that perceived usefulness and social influencing are significantly positive related with behavior intention of behavior intention of college teachers. social influencing、job relevance、output quality and online teaching experiment are significantly positive related with perceived usefulness . Computer selfefficacy and perceptions of external control are significantly positive related with perceived ease of use . The gives us enlightenment for our policy making. The difference test of regression coefficient is tested, and we find that the regression coefficient of the job relevance influencing the perceived usefulness is much greater than that of other variates influencing perceived usefulness. The fittingdegree of the model is good. The explanatory power is good, and the explanatory proportion of behavior intention reaches 58.5%. And the moderator effect is tested. The results show that the professional titles and other variates have certain moderating effect on the model.Some countermeasures are put forward finally.

Introduction

Nowadays, MOOC(massive open online courses) is developing rapidly, and many MOOC platforms emerge. Now many universities take certain measures to promote the MOOC development of the universities,such as giving teachers funds support to make the MOOC teaching resourses and have the MOOC teaching. But the enthusiasm of teachers should be further stimulated. Many teachers are not willing to have the MOOC teaching , and there are many reasons for this, such as MOOC teaching will cost much energy but it is not concerned with the promotion of the professional title. So it is essential to research the influencing factors of MOOC teaching behavior intention of the college teacher.

Model building and questionnaires issuing

Davis built TAM model (Technology Acceptance Model) in 1986,and TAM2 was developed based on TAM in 2000. Venkatesh (2008) puts forward TAM3 model by combining TAM2 and perceived ease of use model . TAM3 model has many advantages such as it is comprehensive and has operability.

TMA3 theory shows integral theory network of decision and acceptance influencing variate . Subjective norm and image represent social influence of the theory frame. TAM2 put forward two theory process——social influence and cognitive process that explain effect of various perceived usefulness and behavior intention influencing factors . Kelman(1958, 1961) put forward three social influencingmechanism ——compliance、internalization and self-identity. The other variates of TAM2——job relevance、output quality and result demonstrability and perceived ease of use represent cognitive structure process influence. Job relevance and output quality will have an

alterative influence on perceived usefulness.The first three influencing variables of perceived ease of use representindividual differences of computer using . Perceived enjoyment and objective usability are variates of adjusting perceived ease of use .

Based TAM3 model , combining MOOC practical situation, we build the MOOC influencing factors model(figure 1)

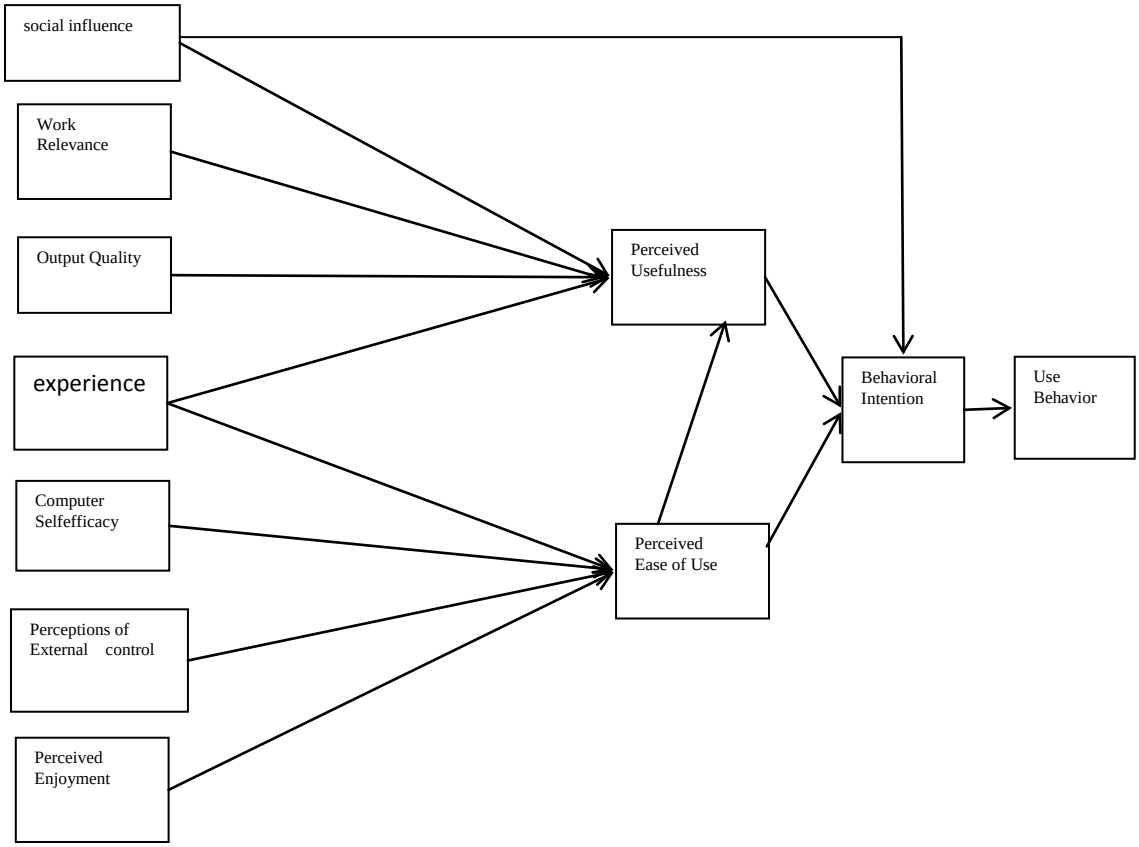

Fig 1 the built model

Data processing and related conclusion

The questionnaires are sent out through network way and face-to face way. About 1000 questionnaires are sent out for the college teachers ,and 430 questionnaires are valid. We deal with the data with SPSS17.0 and AMOS21.0. The questionnaire has good reliability and validity and Cronbach αcoefficient of all variables is greater than 0.7. The variable is suitable for factor analysis ,and The KMO=0.897,sig=0.000.The questionnaire has good convergent validity and variable factor of each observation variable is greater than 0.5. The combination reliability (CR) of each variable is greater than 0.7.The questionnaire has good cross validity , and the average extraction variance of the variables is greater than the average root of correlation coefficient of the variable with other variable.

The data fitting degree is good(table 1).

Table 1 Test of Goodness for Fit

indicator	X2/df	GFI	RMR	RMSEA	AGFI	NFI	CFI	IFI	AIC	ECVI
value	2.613	0.967	0.259	0.094	0.920	0.902	0.982	0.985	27.983	6.024

The data is processed with AMOS21.0, and regression path graph is as followings(fig 2).The study result shows that perceived usefulness and social influencing are significantly positive related with behavior intention of behavior intention of college teachers, and perceived usefulness

is significantly higher than other variates. social influencing、job relevance、output quality and online teaching experiment are significantly positive related with perceived usefulness . Computer selfefficacy and perceptions of external control are significantly positive related with perceived ease of use .

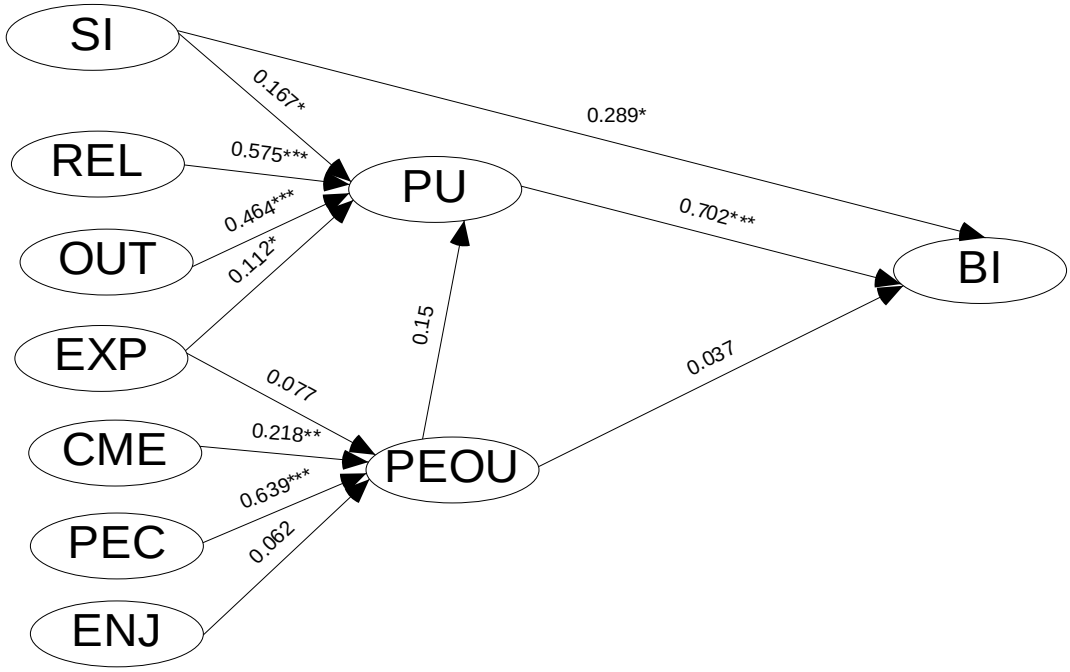

Fig 2 regression path graph

（*represent**p<0.05**，**representP<0.01，***representP<0.001，none is not Significant）

The regression coefficient difference test is done,and we find that the regression coefficient between work relevance and perceivedUsefulness is morethan other variates. The regression coefficient between perceptions of external control and perceived ease of use is more than other variates(table 2).

We find that the moderator variable have certain adjustmentto relative path(table 3). The results show that the professional titles and other variates have certain moderating effect on the model,such as the gender(divided into male and female) and the professional titles (divided into the lecturer、 Associate professor and professor)have certain moderating effect on related paths.

The explanatory power of the model is good(table 4). The explanatory power is good, and the explanatory proportion of behavior intention reaches 58.5%.The explanatory proportion of perceived usefulness and perceived ease of use respectively reaches 41.0% and 46.6%.

Table 2 regression coefficient difference test

	H1	H2	H3a	H3b	H4	H5	H6	H7	H8	H9	H10	H11
H1												
H2	-4.612											
H3a	-3.777	-1.442										
H3b												
H4												
H5				-4.412	3.366							
H6				-1.829	2.924	-2.732						
H7				-.760	.230	4.465	2.175					
H8												
H9									2.022			
H10									4.812	3.248		
H11									-.463	1.982	-5.250	

Table 3 Regulating effect inspection

	gender（1/2）	Pass or not	professional title			Pass or not
			1/2	1/3	2/3	
BI<---PU	.063	not	0.652	-1.497	-0.086	not
BI<---PEOU	.690	not	1.017	0.979	-0.298	not
BI<---SI	-1.502	not	-0.374	0.105	0.460	not
PU<---SI	.284	not	-2.992	0.814	-0.360	pass
PU<---PEOU	-.920	not	1.668	1.128	-0.785	not
PU<---REL	-.408	not	-3.897	-0.089	3.638	pass
PU<---OUT	3.282	pass	2.280	1.101	-1.843	pass
PU<---EXP	-2.243	pass	-0.290	-1.352	-1.486	not
PEOU<---EXP	.417	not	-1.295	1.197	1.998	pass
PEOU<---CME	3.757	pass	1.427	1.895	-1.562	not
PEOU<---PEC	-1.397	not	1.385	2.271	1.172	pass
PEOU<---ENJ	-0.369	not	2.259	0.208	-2.045	pass

Table 4 R^2

variate	PU	BI	PEOU
R^2	.410	.585	.466

Conclusion

We can take certain measures to arouse the MOOC teaching enthusiasm of teachers,such as making related management policy、encouraging the teacher to try to have the MOOC teaching and considering the moderating effect and so on. It is possible that making related management policy is the key countermeasure to improve the perceived job relevance and encouraging the teacher to try to have the MOOC teaching is the key countermeasure to improve the perceived output quality. The external control includes the funds supporting 、technology supporting and the late learning support services .

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