Analysis of Factors Influencing Teacher Behavioural Engagement in Distance Training Based on MOA and SDT

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Abstract: Teacher training is an important way of teacher education and a powerful guarantee for achieving professionalism. Using the motivation-opportunity-ability perspective and self-determination theory, this study was tested using SPSS 26.0 and smartPLS 6 to examine the effects of teachers' motivation, learning ability and learning opportunity on behavioural engagement in training courses. The results of the study showed that active and passive motivation showed a more significant positive effect on teachers' behavioural engagement in training courses, and self-efficacy had a weakening effect on active motivation and a positive effect on passive motivation. Perceived pedagogical support was able to weaken the effect of active motivation and perceived platform support was able to weaken the effect of passive motivation. The findings provide a research basis for teacher training institutions to improve learners' behavioural engagement.

Keywords: Teacher training, distance education, self-determination theory, MOA perspective

1. Introduction

Teacher training has shifted from offline to online, and teacher training is often conducted in the form of remote connectivity and online classes. Teachers exist as learners in distance teacher training, so 'learner' is used in the following to refer to teachers who participate in teacher training. The study found that there is still little research on distance teacher training, and there is a lack of analysis of the factors that influence learners' behaviour in training. The study develops and tests theoretical models to explore how to enhance learners' behavioural engagement in teacher training, and the potential antecedents and interactions that influence behavioural engagement.

Self-determination theory suggests that the social context influences internalisation and externalisation processes (Deci & Ryan, 2012a), people are born with intrinsic and extrinsic motivation to internalise uninteresting but important things internalise and consequently generate different ways of self-regulation (Deci & Ryan, 2012b). From the Motivation-Opportunity-Ability (MOA) perspective, perceived instructional quality is the learner's perception of the instructor's feedback, diligence, and appropriateness of the instructional arrangement to the learning environment in a flipped classroom (Gasiewski et al., 2012), technology-supported learning spaces can enhance the level of engagement and social interaction; Perceived platform quality is learners' perception that the flipped classroom platform is familiar and easy to access (Kim et al., 2014), Good group perception is the basis of group collaboration, and group collaboration helps to promote learners' behavioural engagement. Self-efficacy is seen as a self-regulatory mechanism (Maricuțoiu & Sulea, 2019), learners' self-confidence in their ability to successfully organise and perform classroom tasks (Bandura, 1977), also refers to the presumptions and judgements individuals make about their ability to perform a given behaviour.

The research architecture diagram proposed in this study is shown in Figure 1.
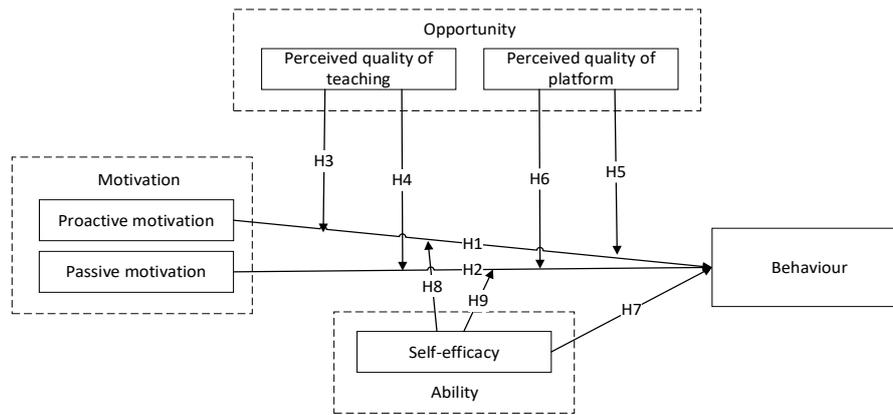
Figure 1. Research Architecture Diagram

2. Research methodology and results

The study collected samples from a total of 99 teachers from a teacher training institution in Zhejiang Province, totalling 94 valid questionnaires.Cronbach's alpha and combined reliability were used to assess the internal consistency of the variables. As shown in Table 1. The study used the Fornell-Larcker method (Fornell & Larcker, 1981) and Heterotrait-monotrait (Henseler et al., 2015) method to test the validity of the study and the results are shown in Tables 2 and 3.

Table 1. *Research reliability test*

Project	Cronbach'sAlpha	rho_A	CA	AVE
PrM	0.83	0.85	0.90	0.75
PP	0.83	0.76	0.88	0.55
PT	0.81	0.81	0.89	0.73
SE	0.78	0.79	0.87	0.69
BE	0.87	0.88	0.91	0.67
PaM	0.80	0.83	0.88	0.71

PrM. proactive motivation; PP. Perceived quality of platform; PT. Perceived quality of teaching; SE. Self-efficacy; BE. Behaviour; PaM. Passive motivation

Table 2. *Fornell-Larcker Method*

Project	PrM	PP	PT	SE	BE	PaM
PrM	0.87					
PP	0.70	0.74				
PT	0.83	0.75	0.86			
SE	0.68	0.87	0.76	0.83		
BE	0.58	0.87	0.67	0.75	0.82	
PaM	0.61	0.56	0.62	0.50	0.56	0.84

PrM. proactive motivation; PP. Perceived quality of platform; PT. Perceived quality of teaching; SE. Self-efficacy; BE. Behaviour; PaM. Passive motivation

Table 3. *Heterotrait-monotrait methods*

Project	PrM	PP	PT	SE	BE	PaM
PrM						
PP	0.89					
PT	0.81	0.86				
SE	0.83	0.86	0.84			
BE	0.67	0.87	0.80	0.80		
PaM	0.73	0.82	0.76	0.61	0.66	

PrM. proactive motivation; PP. Perceived quality of platform; PT. Perceived quality of teaching; SE. Self-efficacy; BE. Behaviour; PaM. Passive motivation

In this study, Bootstrapping (Freedman, 1981) of the resampling method to go for the assessment of PLS results, the sampling method is 5,000 resampling method, the results of the significance analysis are shown in Table 4, and the results of the analysis of the structural model are shown in Figure 2.

Table 4. *Significance analysis results*

Project	Initial sample	Mean	SD	T	P	r
PaM	0.12	0.12	0.09	1.26	0.05	0.27
PrM	0.27	0.24	0.13	2.11	0.04	0.34
PP	0.34	0.32	0.18	1.88	0.03	-0.34
PT	-0.34	-0.29	0.16	2.10	0.04	0.51
SE	0.51	0.49	0.15	3.34	0.00	0.12
PaM×PP	0.86	0.83	0.20	4.31	0.00	0.86
PaM×PT	-0.39	-0.40	0.14	2.87	0.00	-0.39
PaM×SE	-0.54	-0.51	0.18	3.09	0.00	-0.54
PrM×PP	-0.15	-0.17	0.24	0.64	0.06	-0.15
PrM×PT	-0.11	-0.07	0.18	0.62	0.06	-0.11
PrM×SE	0.26	0.27	0.15	1.71	0.09	0.26

PrM. proactive motivation; PP. Perceived quality of platform; PT. Perceived quality of teaching; SE. Self-efficacy; BE. Behaviour; PaM. Passive motivation
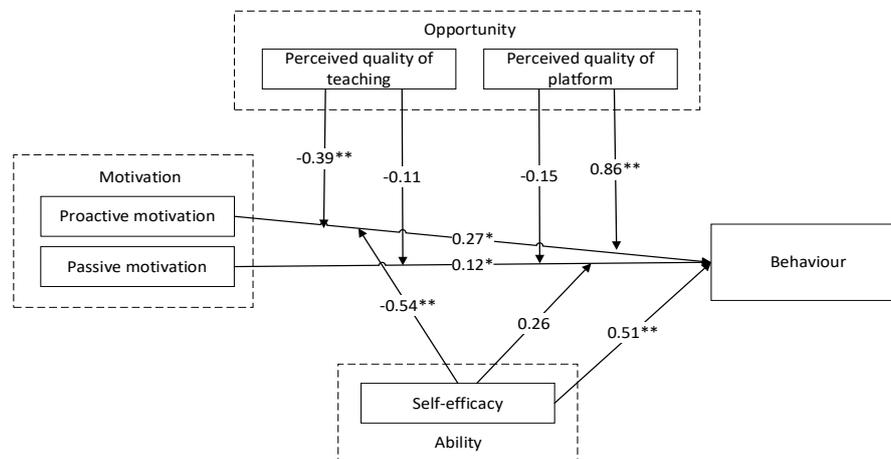

*Figure 2 Structural equation modelling (where *p<0.05;**p<0.01;***p<0.001)*

3. Research Conclusion

First, active and passive motivation show more significant positive effects on behavioural participation, the higher the motivation controlled by the individual, the more activities are performed due to psychological pressure (Yu & Zhang, 2005), Individual anxiety and boredom (Duan & Sheng, 2012) is also more. In addition, passive motivation can interact with active motivation, and learners with stronger active motivation will believe that they can improve themselves in teacher training (Zhou & Dong, 1994) . Second, self-efficacy shows a significant weakening effect on active motivation and behavioural engagement (Bartholomew et al., 2018), learners with more autonomous motivation learn tirelessly to achieve their goals (Zhang et al., 1999) Stronger self-efficacy can reduce burnout rate. Third, the effect of perceived platform support on active motivation and behavioural engagement showed a non-significant positive effect, with instructors in online teacher training tending to ignore learners' acceptance of knowledge, thus constantly outputting knowledge points, and learners often failing to free up class time for active learning (DeLozier & Rhodes,2017).

4. Conclusion

This study analyses how motivation, self-efficacy and teacher training classroom quality affect behavioural engagement, which can help to better improve the classroom quality of online teacher training. However, this study did not fully consider the impact of teachers ' teaching strategies and teaching methods on behavioural engagement; in the future, it can focus on the teachers' aspect and investigate the impact of different teaching strategies on learners' behavioural engagement.

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