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An Analysis of Using Social Media Scenario Teaching to Enhance Students' Willingness to Learn Research

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ABSTRACT

The rapid development of information technology has brought about the explosive growth of online learning resources, and the emergence of new media as well as self-media has strengthened the learning advantages of the Internet, and the media characteristics of remote communication, discussion and collaboration, and interaction and sharing of social media have become more prominent in the context of the globalised knowledge society era. The learning mode with Face-book, B station and other social media as the e-learning platform is changing the form of expanding college students' knowledge acquisition. Online teaching context in the mechanism of positive regulation, they according to their own cognitive level, interest needs, with the help of the Internet intelligent mobile terminal, in the massive information resources to choose to meet the individual will of the learning content, anytime, anywhere, on-demand to carry out learning activities.

1. Introduction

Social media learning, as a new type of informal learning mode, fits the 'mobile and social' media habits of college students; the characteristics of content richness, form diversity, contextualised learning field and convenient operation on social media learning platforms have expanded the space and time of college students' learning, and reconstructed the way and process of knowledge learning. The social media learning platform has expanded the space and time of college students' learning and reconstructed the way and process of college students' knowledge learning. However, social media learning inevitably brings the negative effects of fragmentation, superficiality and inefficiency in knowledge acquisition, and unreasonable use of social media will make college students deviate

from the original purpose of interpersonal communication and knowledge acquisition, and even become dependent on social media, which will in turn reduce their own learning ability and learning efficiency, and impede the development of the whole process of individual learning. This paper focuses on online learning and the path to improve the effectiveness of social media learning for college students in the network era, and builds a social media learning model for research.

2. Research hypothesis

Social media learning, as a new informal learning mode, fits the media use habits of college students; the characteristics of content richness, form diversity, learning field contextualisation and convenient operation on social me-

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dia learning platforms have expanded the space and time of college students' learning and reconstructed the way and process of college students' knowledge learning.^[1] In fact, the use of social media in higher education institutions is believed to increase the interaction between teachers and students. In addition, the use of social media for communication and collaboration helps learners to interact more actively. Face-book is recognised in foreign studies as a low-risk and versatile learning communication tool that can positively contribute to collaborative learning and strengthen the bond between students and lecturers in a rather engaging way^[2].

This leads to the hypothesis:

H1: Social media interaction between instructors and students has a positive effect on students' perceived usefulness.

H2: Social media interaction between instructors and students has a positive effect on students' perceived ease of use.

Among the many variables that may influence people's acceptance or rejection of IT use, perceived usefulness is considered particularly important and refers to the extent to which people tend to use or not use an application, and whether or not they believe that IT will help them do their job better^[2]. Furthermore, even if potential users believe that an application is useful, they may at the same time believe that the system is too difficult to use, and that the performance benefits of using it are weighed down by the effort expended in using the application. That is, in addition to usefulness, IT use is theoretically influenced by perceived ease of use^[3].

This leads to the hypothesis:

H3: Students' perceived ease of use of an online learning platform has a positive effect on perceived usefulness.

The transformation of students from 'passive acceptance' to 'active teaching' is not only reflected in the practice of offline classroom interaction, but also in the practice of online learning modes, which also realises a modification of the traditional process model of 'use and satisfaction'. This shift also achieves a modification of the traditional 'use and satisfy' process model, which gives new value to the improvement of the effectiveness of social media learning.^[4]

This leads to the following hypothesis:

H4: Students' perceived ease of use of e-learning platforms has a positive effect on satisfaction with e-learning.

H5: Students' perceived usefulness of online learning platforms has a positive effect on online learning satisfaction.

It has been suggested that teaching satisfaction has a significant mediating effect between perceived external

environment, perceived usefulness, perceived ease of use, and willingness to continue using^[5]. In other words, pedagogical satisfaction positively influences learners' continued use of the instructional platform. Therefore the hypothesis is proposed:

H6: Students' satisfaction with online learning has a positive effect on the willingness to use the platform for continuous online learning.

Recent research has shown that online users' usage behaviour is directly influenced by perceived usefulness. In the context of research on e-texts, Baker and Stone also pointed out that student satisfaction and perceived usefulness of e-textbooks are the main factors influencing students' willingness to continue using e-textbooks^[6].

Therefore the hypothesis is proposed:

H7: Students' perceived usefulness of e-learning platforms has a positive effect on the willingness to continue using e-learning platforms.

The audience of professional learning platforms in social media based on clear learning objectives, to achieve the feasibility and proximity of information acquisition and then complete the knowledge to meet the formation of positive feedback; at the same time, personalised learners with a close cognitive level, similar interests and needs to obtain the knowledge to meet the knowledge of the next learning behaviours in the further reaction, the learning path of the various key nodes interact with each other, and the cycle repeats itself. An important task for teachers is to help students recognise the need for online teaching and learning.

This leads to the following hypothesis:

H8: Online teaching context plays a positive moderating role in the relationship between students' satisfaction with online learning and their willingness to use the online learning platform continuously.

H9: Online teaching context plays a positive moderating role in the relationship between students' perceived usefulness of online learning platforms and their willingness to use continuous online learning platforms.

3. Research Methods

3.1 Subjects of the study

The study used questionnaires to collect data, first conducting a small-scale pre-test, and then making appropriate adjustments to poorly understood statements before forming a formal questionnaire. All the formal questionnaires were distributed and filled in online to a financial university from August to September 2021, and a total of 318 valid questionnaires were finally recovered. Among the valid samples collected, 161 (50.5%) were male and

157 (49.5%) were female; the grades of the students were 69 (21.6%) in freshmen, 96 (30.1%) in sophomores, 105 (33.2%) in juniors, and 48 (15.05%) in seniors; the majority of the students had owned a mobile device for more than one year (272, 85.3%), and the time spent online was more than one hour per day (272, 85.3%). online for more than one hour a day (299, 93.7%); 98 students (30.7%) had online learning experience of less than 4 months, while all other fillers had online learning experience of more than 5 months (220, 69.3%).

3.2 Research instruments

The variables involved in the study were measured using Likert 5-level scales. Among them, the scale of social media interaction was referred to Liu's study, perceived ease of use and perceived usefulness were measured using the classical scale of Davis [2], online satisfaction was referred to Moore4]'s scale, willingness to use continuous online learning platform was referred to Chintalapati and Daruri's study, and online teaching and learning context was measured using Hamidi and Chavoshi [7]'s scale. Meanwhile, online learning experience, academic qualification and years of mobile device ownership were selected as control variables to avoid the interference of other factors in hypothesis testing.

4. RESULTS OF THE STUDY

4.1 Data quality analysis

The data were processed and analysed using the software AMOS 21.0 and SPSS 25.0. The results of the reliability test showed that the overall Cronbach's alpha value was 0.973, and the value was not greatly improved by removing any question items. The lowest value of combined reliability for each variable was $0.84 > 0.6$. The test value of KMO for the overall sample was 0.983, and the chi-square value of spherical Bartlett's test was 6511.615 ($p < 0.001$). The effect of homoscedasticity bias was examined using the latent error variable control method. The results showed that the indicators of the factor analysis model with the addition of common method bias were $\chi^2/d.f = 1.247$, RMSEA = 0.029, which were larger than those of the original model, indicating that the fitting indicators of the model did not become better after the addition of the common method bias latent variable. Therefore the influence by the co-method bias is within the acceptable range.

4.2 Hypothesis testing

The test of the indicators in the structural equation model yielded the fit indices: CMIN/DF = 1.293 < 3.0, GFI = 0.936, AGFI = 0.918 > 0.9, RMSEA = 0.030 < 0.05, TLI = 0.988, CFI = 0.990, IFI = 0.990, all of them are greater than 0.9. The results of the hypothesis test show that social media interaction ($\beta = 0.769$, $p < 0.001$) has a significant positive effect on perceived usefulness, and Hypothesis H1 is supported; social media interaction ($\beta = 0.920$, $p < 0.001$) has a significant positive effect on perceived ease of use, hypothesis H2 is supported; perceived ease of use ($\beta = 0.245$, $p = 0.021$) has a significant positive effect on perceived usefulness, hypothesis H3 is supported; perceived ease of use ($\beta = 0.428$, $p = 0.010$) has a significant positive effect on online satisfaction, hypothesis H4 is supported; perceived usefulness ($\beta = 0.550$, $p < 0.001$) has a significant positive effect on online satisfaction, hypothesis H5 is supported; perceived usefulness ($\beta = 0.420$, $p = 0.009$) has a significant positive effect on the willingness to use the continuous online learning platform, hypothesis H6 is supported; perceived Perceived usefulness ($\beta = 0.581$, $p < 0.001$) has a significant positive effect on the willingness to use continuous online learning platform, hypothesis H7 is supported.

Using the path coefficient identity test to analyse and compare the two groups of samples, the test results show that in the low online teaching context group, 'perceived usefulness \rightarrow continuous online willingness' ($\beta = -1.366$, $p = 0.517$) and 'online satisfaction \rightarrow continuous online learning platform use willingness' ($\beta = 2.544$, $p = 0.266$) have insignificant standardised path coefficients; in the high online teaching context group, 'perceived usefulness \rightarrow willingness to continue online' ($\beta = 0.631$, $p < 0.001$) and 'online satisfaction \rightarrow continued willingness to use the online learning platform' ($\beta = 0.370$, $p = 0.004$) are statistically significant standardised path coefficients; Restricted Model 1 (Restricted Path Perceived Usefulness \rightarrow Continued Willingness to be Online) compared to the unrestricted model with $\Delta\chi^2 = 9.949$ ($p = 0.020$), Hypothesis H8 is supported; Restricted Model 2 (Path Online Satisfaction \rightarrow Continued online willingness) compared to the unrestricted model, $\Delta\chi^2 = 6.329$ ($p = 0.012$), assuming that H9 is supported.

Conclusion: In traditional classroom teaching, the teacher has the absolute dominant power in the classroom, affected by the allocation of class time and the uneven level of students' knowledge, the interaction between teachers and students is limited, and the starting point

of teachers' teaching under the 'one-to-many' mode is to consider the average acceptance of the students in the class, and cannot take into account the two extremes of the students with good and weak academic performance, let alone personalised teaching for each individual. The starting point of teaching in the 'one-to-many' mode is to consider the average acceptance of the students in the class, which cannot take into account the students with the best and weakest academic performance, nor can it realise personalised teaching for everyone.

As a new informal learning mode derived from the mobile Internet environment, social media learning is not limited by the teaching method, teaching content, and teaching time and space, and brings a new experience of freedom and diversity to college students. At the same time, its instant interactivity can also assist students to quickly master professional academic knowledge and learn by touch. Social media learning is a highly interactive learning process that enables learners at different levels to get corresponding knowledge satisfaction. Based on the learning of mobile terminals with instant messaging, students can interact and communicate with teachers instantly, and each communication object is a unique learning individual, which promotes the differentiation of education and the personalised development of students.

Another commonly recognised shortcoming of social media learning is that users are easily distracted when studying in the more relaxed cyberspace, and there is no effective monitoring mechanism. However, the learning platforms that college students are keen to choose have actually built an invisible monitoring system in the highly interactive Internet learning atmosphere. The 'user groups' using the same learning platform for similar learning content will upload their own learning results in a timely manner to motivate and urge their learning partners to learn and interact with each other, and this kind of learning behaviour with social attributes strengthens the sense of presence among the learners and makes them satisfied with such a pleasant and efficient learning process, so that their knowledge reserves and application abilities are continuously improved. The knowledge reserve and applica-

tion ability are continuously improved.

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