Analysis on the Influencing Factors of Jiangxi University Students' Use of Open Education Resources

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Abstract：Open educational resources (OER) are educational and research materials of various media provided in the public domain or under open licenses, which allow others to obtain, use, adapt and republish free of charge and without restrictions. Many studies have shown that many explorations and researches have been made on the design and strategy of teaching platform. In fact, college students are the users and main learners of OER. Therefore, this paper attempts to explore the key factors that affect their willingness to use OER from the perspective of college students in Jiangxi Province, based on the theory of social telepresence.

Keywords: OER; Social Presence; Willingness to Use

1. Introduction

At the beginning of 2020, the number of online education users reached a new peak of 423million. During this period, the application of online education expanded rapidly, and the number of users of this form of education increased sharply. According to researchers, learning through open educational resources will become a model of future education and teaching. Although online education has developed rapidly, and the number of users using OER to learn has increased year by year, this prosperity has also exposed serious practical problems, that is, learners' participation rate is high, the completion rate is low, and the drop out rate is high. Based on the reality of the use of OER, this paper discusses the influencing factors of the use of OER from the perspective of College Students' learners and based on the theory of social telepresence.

2. Literature review

2.1 Social telepresence theory

Social presence, also known as social existence, social presentation and social disclosure, originated in the field of communication media. It was proposed by short, williams&christie (1976). They defined it as the degree to which a person is regarded as a "real person" and the degree of perception of contact with others when people communicate through the media, and pointed out that social presence is the inherent characteristic of the media itself, Can affect people's behavior. Some researchers take learners' learning experience as the core, and divide online presence into teaching presence, social presence, cognitive presence, emotional presence, learning presence and other constituent elements.

This study focuses on two dimensions, namely cognitive telepresence and emotional telepresence. Cognitive existence refers to the degree to which learners achieve meaning construction and understanding through cooperation and reflection. It consists of stimulating events, joint exploration, information integration and problem solving. Emotional existence refers to learners' personal feelings, emotional and emotional expression, as well as personal interaction with learning technology, curriculum content, learners and teachers.

2.2 Research on perceived usefulness and perceived entertainment

Perceived usefulness refers to the level at which individuals believe that the system improves their job performance. However, with the deepening of research, some scholars try to modify and expand the technology acceptance model from the

outside. Users' attention to entertainment and usefulness also needs to introduce model species for analysis. In this study, perceived usefulness is defined as learners' learning level of OER; Perceived pleasure is defined as the degree of emotional pleasure through the use of OER.

3. Model design and research assumptions

Learners' social presence in the process of using OER is mainly reflected in two aspects: cognitive presence and emotional presence, which have a direct impact on learners' willingness to use OER. The three important factors of cognitive social presence are "degree of expression", "diversity of clues" and "natural language"; The three important factors of emotional social presence are "authenticity", "intimacy" and "real-time interaction". By generating internal state changes of perceived usefulness and perceived entertainment, learners can take action with willingness to use in online learning environment. Based on the theory of social telepresence, this paper constructs a model of learners' willingness to use OER learning platform. See the following figure.
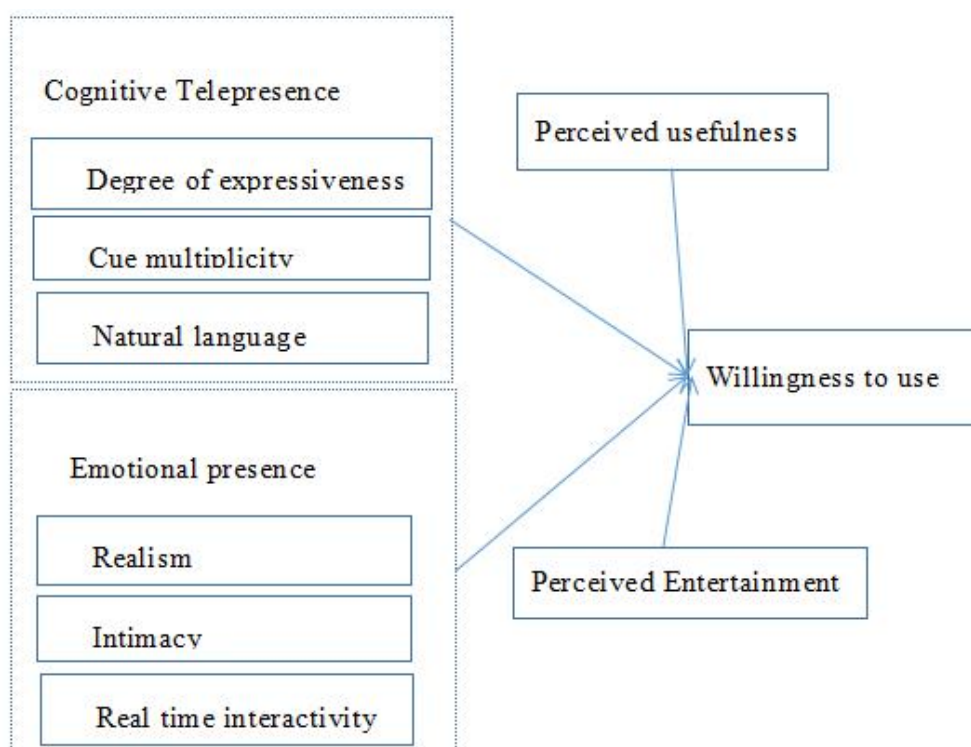

Figure 1 Conceptual model diagram

4. Samples and research results

4.1 Sample selection and source description

This study uses the Likert five point scale to investigate college students in Jiangxi Province, and uses the Internet to distribute questionnaires to obtain relevant information.A total of 228 questionnaires were collected, of which 224 were valid, with a success rate of 98.2%.

4.1.1 Reliability Analysis

Clonbach α is 0.935, greater than 0.9, indicating that the data quality obtained in the study is very high. CITC value of all analysis items is greater than 0.4, indicating that there is a good correlation between analysis items and a high level of reliability.

4.1.2 Validity Analysis

The above table shows KMO value is 0.934, and KMO value is greater than 0.8, so the survey data is very suitable for extracting information.

4.2 Empirical analysis

4.2.1 Correlation analysis

The correlation coefficient values are 0.476, 0.577, 0.590, 0.500, 0.593, 0.550, 0.678, 0.655 respectively, and the correlation coefficient values are greater than 0, which means intention to use and degree of intention, cue multiplicity, natural language, realism, There is a positive correlation between intimacy, real-time interaction, perceived usefulness and perceived entertainment.

4.2.2 Hierarchical regression analysis

Hierarchical regression is used to study the model changes caused by the increase of independent variable (x), which is usually used to test the stability of the model.

Table 1 Hierarchical regression analysis

	Layer 1	Layer 2	Layer 3	Layer 4
Constant	0.420 (1.617)	0.153 (0.583)	-0.008 (-0.030)	0.001 (0.005)
Degree of expressiveness	0.132 (1.518)	0.077 (0.873)	-0.010 (-0.120)	-0.016 (-0.188)
Cue multiplicity	0.301** (3.278)	0.192* (2.055)	0.163 (1.848)	0.165 (1.883)
Natural language	0.351** (3.925)	0.217* (2.138)	0.082 (0.830)	0.029 (0.286)
Realism	-0.019 (-0.196)		0.025 (0.279)	0.011 (0.124)
Intimacy	0.186 (1.658)	0.220** (2.627)	0.058 (0.531)	0.042 (0.386)
Realtime interactivity			0.133 (1.646)	0.112 (1.383)
Perceived usefulness			0.476** (5.046)	0.384** (3.594)
Perceived Entertainment				0.198 (1.812)
R^2	0.403	0.449	0.514	0.522
Adjustment R^2	0.394	0.432	0.496	0.502
F value	$F_{(3,220)}=44.188$ $p=0.000$	$F_{(6,217)}=26.256$ $p=0.000$	$F_{(7,216)}=28.995$ $p=0.000$	$F_{(8,215)}=26.083$ $p=0.000$
$\triangle R^2$	0.403	0.046	0.064	0.008
$\triangle F$ value	$F_{(3,220)}=44.188$ $p=0.000$	$F_{(3,217)}=5.369$ $p=0.001$	$F_{(1,216)}=25.461$ $p=0.000$	$F_{(1,215)}=3.284$ $p=0.072$

Dependent variable: willingness to use

*P<0.05 * * p<0.01 t value in brackets

The model formula is: willingness to use = 0.001-0.016 * degree of intention + 0 165* clue multiplicity + 0.029* natural language + 0.011* realism + 0.042* intimacy + 0 112* real time interaction + 0.384 * perceived usefulness + 0 198* perceived entertainment, the R-square value of the model is 0.522.

5. Summary of hypothesis test

Summarize and count the hypothesis tests, and get the eight hypothesis tests of the article according to the experiment. The summary results are shown in Table 2.

Table 2 Hypothesis test summary

Hypothetical question	Inspection condition
H1: Information attainment of OER learning platform has a positive impact on learners' willingness to use.	significant
H2: Clue multiplicity of OER learning platform has a positive impact on learners' willingness to use.	significant
H3: Natural language of OER learning platform has a positive impact on learners' willingness to use.	significant
H4: Sense of reality in the learning platform of OER has a positive impact on learners' willingness to use.	Not significant
H5: Teachers' intimacy has a positive impact on learners' willingness to use.	significant
H6: Real-time interaction in the learning platform of OER has a positive impact on learners' willingness to use.	significant
H7: Perceived usefulness of College Students' learners has a positive impact on the willingness to use OER.	significant
H8: Perceived entertainment of College Students' learners has a positive impact on the willingness to use OER.	significant

6. Conclusion

There are significant effects between seven variables and dependent variables. Therefore, in the process of using OER, we should pay attention to Jiangxi University Students' satisfaction with OER, teachers' preparation of teaching content, teachers' language expression in class, and Jiangxi University Students' real-time communication through OER services on the OER platform. Only by doing a good job of service and making it useful to college students, can Jiangxi students' willingness to use OER and service be improved.

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