Exploring Difference of Educational Game Design between the United States and China through the Lens of Hofstede's Culture Dimensions

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Abstract: Today, the fields of international education, economic and politics exchanges closely, with the patterns of cultures exchanging closely. Settled into the game, in the intercultural era, how are the difference behind the educational games design under different culture context? On this issue, this research makes intercultural value comparisons between the US and China, and have an inspection of design mechanisms about cultural impact on educational game from the Hofstede Cultural Dimensions. This research adopt a comparative study of currently educational game design between China and the U S, aimed at identifying cultural differences between the games with a view to provide a basis for design innovation for the educational games in cultural diversity.

Keywords: Design of educational game; Cultural Dimensions, The United States and China, Comparison

1. Method

This study compared the cultural differences of Sino-The United States educational games from the perspective of Hofstede cultural dimension, This section will explain 1. Study Sample 2.Research design 3.Coding the game described as followings.

1.1 Research Questions

Main research question of this study can be summarized as follows. (1) Which cultural values are reflected in differences about the existing educational game design between the two countries? (2) From the perspective of cultural differences, the author can explore how Chinese educational game design needs "CHANGE" or "HOLD"?

1.2 Samples

Did not choosing classic educational games for case study, this study selected 40 most popular and representative Sino-US educational games cases for parents and students from the android

App market called Application Treasure and Apple Stone. It is easiest to discover the general rules of the games, which are easier to download and not far from daily life.

Table 1. Games-Scoring of Two Countries Example

Dimensions	Rater1						Rater2					
	P D	U A	I vs C	M vs F	LTO vs STO	I vs R	P D	U A	I vs C	M vs F	LTO vs STO	I vs R
Game1	1	3	0	2	2	2	1	3	2	3	2	3
Game2	2	1	0	1	2	3	3	0	4	0	3	1
…	…	…	…	…	…	…	…	…	…	…	…	…

1.3 Coding the games

In the cultural values evaluation of educational games design, the author mapped the game design elements, such as motivation, gameplay, plot, the implied meaning into the detailed description of the Hofstede cultural dimension (Hofstede, 2000). The author designed five-level Likert Scale for the evaluation of educational game design in the orientation of the cultural dimension. See Appendix 1 for specific information.

2. Findings

In order to make the score more reliability, the author made the training about coding to the two graduate students from the department of Curriculum and Instructional Theory of East China Normal University. They coded a round of experimental points for the five educational games of both China and The United States, getting two copies of the assessment, and analyzed the reliability of the valuators, of which each item is good (scope of 0.7-0.8 shown in Table 2), showing the scoring levels of the two evaluators was similar after training. Then let them evaluate the 20 educational games both form China and The United States to get an average data. Finally, according to rating data, the author make a mean value analysis and a diffuse analysis as successively shown in Figure 1 and Table 2.

Table 2. Inter-Rater Reliability Calculation

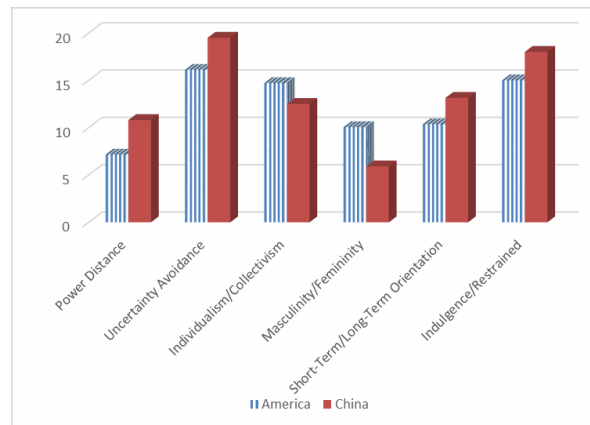| Dimensions	PD	UA	I vs C	M vs F	LTO vs STO	I vs R
Inter-Rater Reliability	0.812	0.745	0.837	0.766	0.705	0.739

Figure 1. The Average Scores of Educational Games in Cultural Dimensions between China and the United States

Table 3 T-Test Results from the Culture dimensions of Sino-U.S. educational games

Cultural Dimension	F	df	Sig
Power Distance	3.267	29.807	.000
Uncertainty Avoidance	.235	37.936	.000
Individualism/Collectivism	13.289	27.135	.003
Masculinity/Femininity	.014	37.995	.000
Short-/Long-Term Orientation	1.916	34.083	.000
Indulgence/Restrained	3.327	25.398	.000

3. Conclusion

Faced with traditional culture which has thousands of years of accumulation, and it has penetrated into people's social life, ideology and behaviors, the author should consider how to identify its positive and negative aspects. How to change the traditional concept and adapt to new ideas and behavior of the needs of modern society through education? How to innovate the traditional ways of education based on the traditional concepts? All of the above issues should be paid more attention to by the educational industry and be explored by the educators.

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