A Research in the Introduction of Game Level Mechanism in MOOC

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***Abstract*-Generally, the design of online courses is based on the content of the curriculum instead of the learners' subjectivity. This thesis mainly explores the application of game level planning in the MOOC system from the thinking of gamification.**

INTRODUCTION

MOOC is an online course , which aims to be participated and accessed through network without limitation. The large-scale open network course MOOC has been developing rapidly in recent years, which has become the main direction of network learning nowadays.

Over time, in the development of the learning, MOOC also encountered a set of problems like weak continuity, high dropout rate, lack of interaction and difficult adaptation of network teaching to the needs of teaching practice, single teaching mode, difficult credit certification. Among them, one of the most serious problem is that it is difficult for the learners to successfully complete a full course of MOOC learning. This thesis proposes to integrate the game planning mechanism effectively in the MOOC course design, making the learning process more personalized and prolonging the sustainability of the learning.

PLANNING AND SIGNIFICANCE OF GAME LEVEL

Human beings have the inherent curiosity. People are more inclined to explore things with more mystery. In games, level design is very important. And the unknowability and challenge contained in these levels can meet people's curiosity and desire to conquer, making players truly addicted to games.

The game master Yu-kai Chou began to study the reasons why games are so popular. It has been discovered after ten years that the reason why people play games basically cannot be separated from the eight core driving forces. That is the " Octalysis " (See Figure 1). In game level planning, we use rewards, punishment, story driven, time control, expand purposes, situational creation and other methods to promote the unknowability of the game, enhance the tension of the game, and effectively stimulate the players to play games. In addition, as has been discussed much by people, the "Flow theory" put forward by psychologist Mihaly Csikszentmihaly makes the game level balance one's challenges and skills, frustrations and boredom to stimulate a sense of accomplishment and ownership.

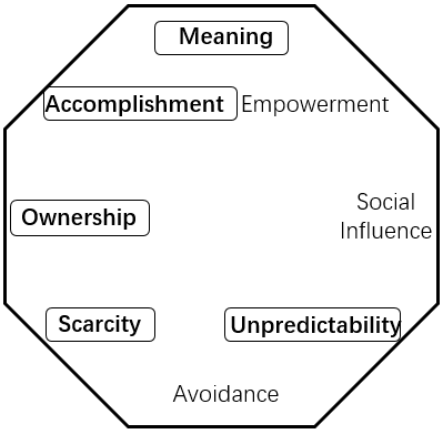


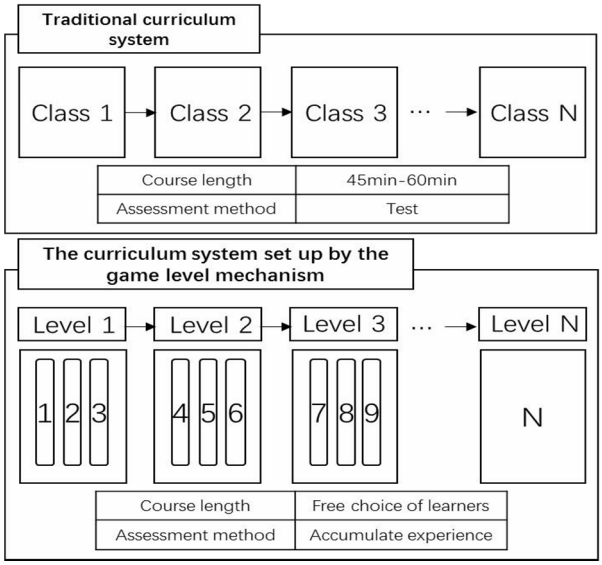
Fig.1 Level planning attraction model based on the Octalysis framework

INTRODUCING THE GAME LEVEL STRATEGY IN THE MOOC DESIGN

In the game level mechanism, the game difficulty degree design is an important part, which refers to the mental and / or physical effort required by the players to achieve the goal of the game. The difficulty of game design follows the "Flow Model" (see Fig.4). Through effective feedback and step-by-step progress, we will master the system through one pass and another. Flow is used to describe a person's state of being devoted to his work and addicted to it. If the challenge is beyond his ability, his behavior will become arduous, which will create anxiety for the players. If it's not challenging enough to attract the player, the player will soon lose interest and exit the game.

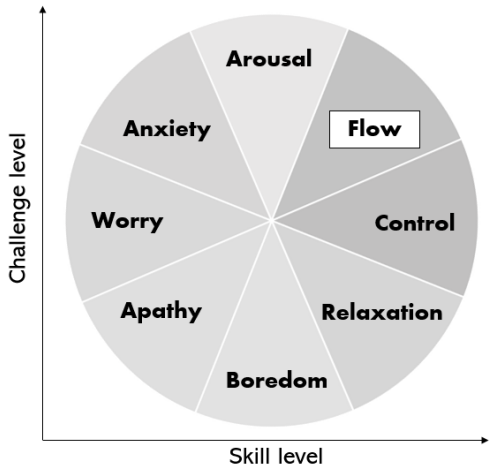
According to the "Flow Model", after analyzing the design of MOOC, it suggests that most MOOC takes teaching material as the center, and arranges teaching difficulty according to teaching materials or simply dividing knowledge types. Once learners encounter difficulties in learning without timely feedback and effective guidance, they will fall into the state of anxiety or worry caused by lack of ability in the "Flow Model". If difficulty degree design and feedback mechanism in game level planning

were put into use, the learning process of learners can stay in the state of "Flow", every "full EXP" is require for the next stage of the learning (as shown in Fig. 2).

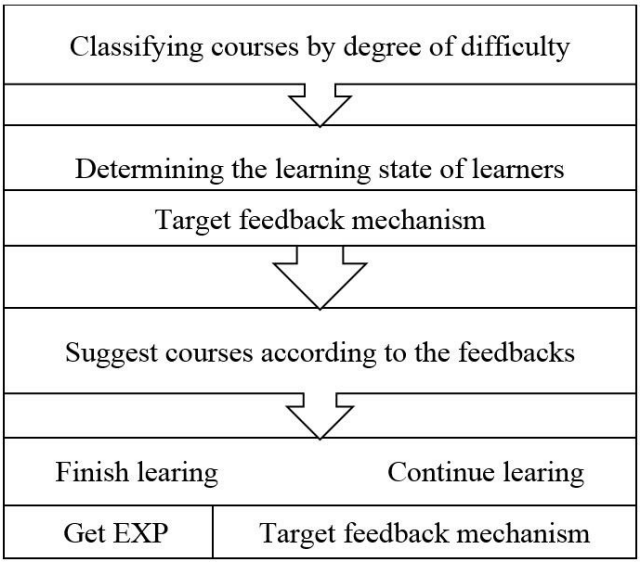


Feg.2 Comparison of Traditional MOOC design before and after introducing game level mechanism improvement

With a perfect "Flow" course, learners will feel the resistance and will be attracted by what is going to happen next. To balance the "challenge" and "skill" in the learning process, this study attempts to introduce the MOOC design points of the game level planning. Video course can be divided into sections of different difficulty degrees. To make use of the advantages of online courses, videos can be cut into short video clips in order to adapt to the fragmentation of learning needs (see process in figure 4, figure 5). Adding the feedback mechanism, learning the current degree of leaners (such as adding some online testing games, or mutual level recognition for learners of the same course) and making interactive recommendations of learners' stage curriculum promote knowledge and ability of all learners, which truly targets to learners.



Feg.3 Mihaly Csikszentmihaly's"Flow Model"



Feg.4 the design procedure of the introduction of game level mechanism in MOOC based on the"flow model"

CONCLUSION

In recent years, the game theory and the MOOC research are increasingly developing. The integration of the gamification and the MOOC is bond to have a broader prospect. Humans are naturally more willing to face unknown challenges with a sense of joy. Although some scholars believe that initially there is a conflict between education and game, it is undeniable that many educational reformations using game mechanics have achieved success, such as the gamified educational system of the Q2L school. As an attempt and preliminarily discuss of the introduction of game level mechanism in MOOC, this thesis aims at providing a direct and effective improvement method for current MOOC design, hoping to have a certain reference value for the future gamified learning and MOOC development.

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