Incentive Strategy and Learning Effect of Online Education APP

A Case Study of LAIX*

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Abstract—**The development of mobile internet has brought great opportunities of self-improvement, and most people would like to choose an online education APP. At present, online education APPs have become a red sea, and the courses they can provide are similar to each other. Therefore, from the perspective of users, they tend to choose apps that can improve the learning effect. And how to improve the learning effect of users has become an urgent problem for many online education APPs to solve. By studying the incentive strategy and the users' learning effect of LAIX, it is expected to provide an effective reference for improving the users' learning effect of online education APPs.**

Keywords—online education APP; LAIX; goal; learning style; learning motivation

I. INTRODUCTION

LAIX is an application of spoken English combined with innovative oral English teaching ideas and cutting-edge speech evaluation technology, aims to help users to get rid of dumb English. It uses the present rapid development of internet and rich content of information network platform, combined with the people's need of self-improvement, quickly completed the brand accumulation. From LAIX's official launch in February 2013 to December 2015, it successfully attracted 25 million users in about two years. In June 2018, it reached 80 million registered users and was listed on the New York stock exchange in September. According to Baidu index search for "LAIX", it can be found that from June20, 2018 to December16, 2018, the national average daily search times for this APP reached 2310. In the search results of "English", the average daily search times is 7542, LAIX in the proportion of English search as high as 30.63%, that is almost every three people search English, one is in the search of LAIX. This effect may be due to quality of their own products is better, it may also be of a good marketing promotion.

Most APPs have incentive systems for users, and online education APPs are no exception. LAIX is to guide users to learn through an incentive learning mechanism, and to increase customer stickiness by providing different incentives for

ordinary users and paying users. We mainly interested in its current most prominent tuition refund and punching mechanism, which is the earliest online education APP to adopt such material rewards. Taking the 199-package as an example, tuition refund and punching mechanism is that within 100 days of the course validity, 10 minutes of learning every day, a total of 80 days clocking in friends circle for all visible, you can get full tuition fee refund. In addition, if the course content does not meet the expectations, you can choose to refund within three days without any reason. Owing to this mechanism is only for the first-time users, so it is generally considered as a promotion strategy of LAIX. However, we believe that this method not only has the effect of promoting APP, but also may improve the learning effect of users by increasing their stickiness. We aim to study whether such incentive strategy can help improve the learning effect of users who use LAIX, and we hope to extend the results of our research to all online education APPs.

II. THEORETICAL BACKGROUND AND HYPOTHESES

A. Goal Difficulty

Goal Setting Theory is regarded as one of the most important contents of motivation theory, it was first proposed by the American psychologist Locke in 1967. Locke believed that individuals who assigned clear and challenging goals could perform better than those without goals. The goal itself has incentive effect, which can make people's behavior toward a certain direction. People's behavioral results are compared with the established goals, and adjustments and corrections can be made in time to achieve the goal. At the same time, the goal can affect the persistence of behavior. The clarity and difficulty are the two most basic attributes of the goal. Since Locke proposed the Goal Setting Theory, 30 years of research has strongly proved that it is effective to study incentives from the perspective of goal setting. Since the tuition refund and punching mechanism has established a sufficiently clear goal for the participating users, we mainly study the independent variable of the goal difficulty. Naylor and Ilgen (1984) defined the goal difficulty as the likelihood of achieving the goal. They considered that the higher the likelihood of personal realization is, the lower the difficulty of the goal. One of the most robust

findings of goal setting research is the positive association between goal difficulty and task completion (Hirst and Lowy 1990; Lee et al. 1997). Latham and Yukl (2001) reviewed seven field studies that investigated the effects of goal difficulty, and six studies confirmed that difficult goals lead to factors that are related to better completion of task. More difficult goals could improve completion by inducing greater effort and persistence at a task (Klein 1991; Locke and Latham 1990, 2002）.Bonner and Sprinkle (2002) believed that when the goal difficulty level is set, the greater the challenge, the greater the incentive for the individual, and the individual would make more goal-oriented behavior. Since the goal of continuous punching has different difficulties for users of different English levels, we can make the following assumption:

H1: High goal difficulty has a positive influence on goal commitment.

B. Goal Dimension

In many practices in the field of goal setting, there is a problem of the goal dimension. For example, after LAIX introduced this kind of tuition refund and punching mechanism, there are also some APPs that have imitated this method and made some innovations, that is, setting the feedback including learning time and learning efficiency after the completion of the daily learning tasks. Only when all the indicators meet the requirements can full tuition be refunded. Because the relationship between learning time and learning efficiency is difficult to express through linear relationship, that is, the learning efficiency can be high or low when learning time is short, so there are conflicts between the two measurement dimensions of the goal. Halford et al. (2005) proposed that the dimensions of the goal are usually not isolated; even in a simple task, the individual will have a conflict due to the limitations of cognitive processing capabilities. In addition, some previous studies have also shown that goal conflicts can affect the execution of tasks. We believe that conflicts between goal dimensions will cause individuals to generate negative emotions when completing tasks, which will further lead to a decline in individual efforts. Therefore, we can make the following assumption:

H2: Setting a single goal has a positive influence on goal commitment compared to a multi-dimensional goal.

C. Goal Commitment

The connotation of the goal commitment is also proposed by Locke at the earliest. It refers to the extent to which individuals are determined to achieve their goal even in the presence of obstacles or challenges (Latham and Locke 1991). Hollenbeck and Klein (1987) also proposed a similar definition, summarizing the goal commitment to persistence. Scholars with similar views believe that when people think that the goal can be achieved and is important, the goal commitment will be strengthened. In addition, scholars define goal commitment in other ways. For example, Naylor and llgen (1984) argued that goal commitment is the extent to which individuals allocate their resources to achieve their stated goals. This paper mainly adopts the first viewpoint, and believes that the goal commitment is the degree of effort of the individual to make up

his or her goal. Individuals with high goal commitment show greater effort and persistence toward task completion than individuals who are less committed to the goal (Seijts and Latham 2000; Erez and Judge 2001; Latham and Locke 2006; Wright 2007). Turner and Husman (2008) found that after experienced a failure in a difficult class, those students who had higher goal commitment were more likely to invest time in their study, and they were more likely to increase their final grade. Therefore, a high goal commitment is that the individual will make more efforts to achieve the goal. In the previous section, we established that goal difficulty and goal dimension have direct influence on goal commitment, so we can make the following assumption:

H3: Goal commitment will mediate the relationship between goal difficulty and dimension and users' learning effect.

D. Learning Style

Learning style is the embodiment of the individual learning style differentiation. American scholar Dunn believes that learning style is the preference that learners display when they concentrate and try to grasp and remember new or difficult knowledge skills. It is a function of an individual's interaction with the environment (Bettman and Park 1980; Brucks 1985; Park and Lessig 1981; Park, Mothersbaugh and Feick 1994). Some scholars believe that individual enthusiasm is more likely to be motivated when the learning style matches the curriculum style. Domestic scholars such as Liu's (2007) research on English teaching, Li and Zhang's (2016) research on online collaborative learning of students also found that learning style is an important factor affecting the learning effect. When the learning style matches the selected teaching method, learning effect can be significantly improved. In the LAIX's package, the teaching method is fixed, and the user's learning style has a wide range of individual differences. There are hundreds of learning styles currently used. Here we use the FDI model proposed by Witkin et al. (1971) to classify the users' learning style into field dependence and field independence. The basis of the division is the individual as part of the field depends on the extent of the perception field. Field independence-dependence, has been found to be related to analysis and intuition in problem solving and decision making (Henderson and Nutt 1980; Hunt, Krzystofiak, Mmeindl and Yousry 1989). Previous study found that field independent learners are good at using their internal references, are not easily influenced and disturbed by external factors, and are more inclined to actively learn. While field dependent learners are good at using external references as the basis for information processing, are difficult to get rid of the influence of environmental factors, and are more inclined to rely on learning. The tuition refund and punching mechanism of LAIX helps to cultivate users' self-learning ability, so users who already have active learning ability have more advantages. Therefore, we can make the following assumption.

H4: Compared with field dependent learners, field independent learners' goal commitment has a stronger influence on the learning effect.

E. Learning Motivation

Motivation is considered to be the psychological motivation to motivate an individual to perform an activity in management, with the aim of moving the activity toward a given goal (Ren and Zhang, 2004). It can be divided into many types according to different classification principles. This article focuses on the source of motivation. According to different sources, motivation can be divided into two types: intrinsic motivation and extrinsic motivation. Intrinsic motivation means that individual behavior is mainly induced by certain traits of the task itself (Remedios, Ritchie and Lieberman, 2005). For example, one's intrinsic motivation is reading because he or she enjoys reading. While extrinsic motivation refers to the individual's participation in an activity in order to obtain some results such as rewards other than the task itself. Such person is motivated to study not only for the enjoyment, but also to obtain the highest grade in the class. By reviewing relevant literature on motivation, it can be found that intrinsic motivation and extrinsic motivation are important factors influencing the outcome of task completion. For example, Klimova (2011) found that the stronger learning motivation a person has the better learning results he or she will achieve. The tuition refund and punching mechanism of LAIX is for all registered users, which means that it has provided users with extrinsic motivation for learning, so users with high motivation are more advantageous in the same situation. Therefore, we can make the following assumption:

H5: Compared with users with extrinsic motivation, users with high intrinsic motivation, goal commitment has a stronger influence on learning effect.
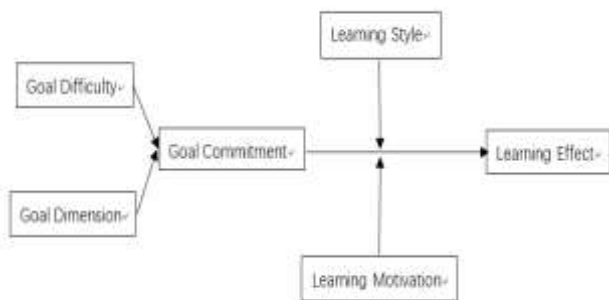

Fig. 1. Research model.

III. Methodology

This study intends to adopt a questionnaire survey to conduct research. According to the review of the relevant literature, the research measurement indicators are as following "Table I":

TABLE I.   Research Measurement Indicators

Dimension	Variable	Reference
Goal	Goal Difficulty	Fang and Evans (2005)
	Goal Dimension	Button et al. (1996)
	Goal Commitment	Hollenbeck, Williams, and Klein (1989)
	Learning Style	Ekstrom et al. (1976)
Learning Motivation	Intrinsic motivation	McAuley, Wraith, and Duncan (1991)
	Extrinsic motivation	Ryan and Connell (1989)

IV. Conclusion

The rapid development of mobile terminal equipment and internet technology have changed the way knowledge is acquired, and online education APPs have ushered in a new round of development opportunities. Nowadays, users are purchasing more and more courses, but the learning effect has not improved significantly. This paper theoretically clarifies the influencing mechanism of the goal on the learning effect and expands the research on the Goal Setting Theory. At the same time, we also explored the moderating effect of learning styles and learning motivations. In terms of learning style, we believe that field independent learners' goal commitment has a stronger influence on the learning effect than field dependent learners. In terms of learning motivation, we divide it into intrinsic motivation and extrinsic motivation from the source, and believe that users with high intrinsic motivation, goal commitment have a stronger influence on learning effect.

Nevertheless, this research has the following limitations. First of all, we intend to use the scales for measuring each variable from foreign scholars. Although each scale has been widely recognized by many scholars, some items in the scales may not be applicable in China due to the great culture differences between different countries. Second, we study the motivational strategy and users' learning effect of LAIX, but the conclusions may not be extended to online learning platforms such as MOOC. Third, the relationship between goal commitment and learning effect may be influenced by other factors, and future research may consider other moderating variables. Last, we only do research on a theoretical level, thus an empirical research may provide more insights in the future.

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