Development and Construction of Higher Education in China under Perspective of Lifelong Education

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ABSTRACT
The concept of lifelong education has four indicators: school education, social education, formal education and non-formal education. Under the concept of lifelong education, the concept of “higher education” can be summarized as four indicators, such as regular higher education, adult higher education, self-study higher education examination and distance network education. Foreign scholars consider that the concept of “higher education” is aimed at adults, which has little relevance with the concept of lifelong education. In China, the influence of concept of lifelong education on the construction and development of “higher education” is not proposed clearly. Based on the research status, SWT analysis method was introduced. The internal relation between the concept of lifelong education and the concept of higher education was analyzed through the four groups of corresponding relationship between internal advantage and external advantage. Through the detailed analysis of four groups of corresponding relationship such as the school education and regular higher education, the social education and adult higher education, the normal education and self-study higher education examination, the non-formal education and distance network education. The conclusion that the concept of lifelong education could promote the development and construction of concept of higher education in China was obtained. In the process of analyzing each component, the conclusion that the external variables also increased with the increase of internal variables could be obtained. Integrating the variation tendency of four components, the overall variation trend between concept of lifelong education and the concept of “higher education” was obtained. Through this analysis, blanks in our academic research are filled. The concept of lifelong education has a strong role in promoting the development and construction of the concept of higher education. Through a detailed analysis, we will find a better way to develop higher education.

Keywords: lifelong education, higher education, four indicators, SWT analysis method

INTRODUCTION
Lifelong education refers to the summation of all kinds of education that people receive in different stages of their lives. It is the unification and comprehensiveness of different types of education (Han, 2017; Neto and Wilks, 2017). It includes the all stages and various ways of education system, which not only has school education and social education, but also has formal education and non-formal education. It advocates to provide necessary knowledge and skill in the best way at the moment when everyone needs. The idea of lifelong education has become the guideline of educational reform in many countries. The terminology “lifelong education” was proposed in 1965 by Frenchman (Paul Lengrand), which has been widely spread in the world. Even so far there is no unified authoritative conclusion (Huang, 2015; Garvey, 2017). This fact not only reflects the level of concern of new educational idea, but also proves that there is the difference between comprehensive explanation and rigorous argumentation in the theory and practice (Guerrero and Roberts, 2017).
The concept of “higher education” can be summarized as four items: regular higher education, adult higher education, self-study higher education self-examination and distance network education. In the concept of lifelong education, four indicators of concept of “higher education” in China have the corresponding relation with them. Where, school education corresponds to regular higher education, social education corresponds to adult higher education, formal education corresponds to self-study higher education examination, non-formal education corresponds to distance network education. The lifelong character, universalization, universality, flexibility and practicability are four characteristics of lifelong education. The lifelong character includes all stages and forms of education system. The universalization is a new subject in modern society which is proposed to everyone. The universality impregnates new activities for the whole education. The flexibility and practicability reflect that people choose the most suitable learning according to their own characteristics and needs (Plewa et al., 2015; Benham et al., 2017). Through the promotion of four indicators, the concept of lifelong education has gradually improved the development and construction process of the concept of higher education.

**LITERATURE REVIEW**

The “suggestion on development of adult education” was adopted in 1976 Nairobi conference. In the suggestion, adult education is a part of lifelong education. The education is not only confined to the stage of school education, but it should extend to all aspects of life and all areas of skills and knowledge. Under the influence of this lifelong education idea, governments of the world regard adult education as the forerunner for promoting lifelong education process, and they pay high attention to adult education, and make laws to ensure the development of adult education (Lo, 2016). In 1976, Norway was the first country in the world that adopted adult education, who regarded the adult education as the foundation of lifelong learning system. It promoted the coordination and cooperation among various fields of adult education. In 1982, the Republic of Korea enacted the social (adult) education law, and proposed the institutionalization of social (adult) education. In 1973, the education plan adopted by the Federal Republic of Germany ranked adult education as fourth kinds of education. In order to guarantee the implementation of adult education, many countries have taken many effective measures, such as: flexible policies in the entrance requirement; vacation with pay; economic aid; adult credit accumulation courses (Yang, 2017; Dresel et al., 2015; Ahmed et al., 2017).

From 1894 to 1911, it was the early phase of modern higher education in China. In the end of the 19th century, Tianjin Chinese and Western School, Nanyang Public School, Zhejiang Qiushi Academy and Imperial University of Peking are the prototypes of modern university. The “gui-mao school system” promulgated in 1904 includes “school rules approved by emperor”, “higher school rules approved by emperor”, “farm-industry-commerce industrial school rules approved by emperor”. In these regulations, there is a new representation about the school-running concept and training target: “to follow the imperial instruction, correct trend (Muller, 2015). In Chinese traditional education also stresses the “generalist”. However, this “generalist” takes “grasp of academic art” as the premise, which is different with the ideal personality “generalists” of feudal education, and this goal promotes the position of “art” and “specialist” (Su, 2015). In a certain sense, the concept of western higher education is more accepted. Certainly, this “generalist” must “abide by decree” (Illeris, 2015; De Abreu et al., 2017).

**METHODS**

The development and construction of the concept of “higher education” in China under the concept of lifelong education is explored. SWT analysis method is used to establish the corresponding relationship between both components. SWT analysis method has two variables: internal advantage and external advantage, where the internal advantage is the master variable, and the external advantage is the following variable (Bevitt, 2015). For the premise that the internal advantage is constantly changing, the change rule of external advantage is analyzed. The concrete application method is shown in Figure 1 (LaChausse, 2017; Nwagu et al., 2017).
In this research, four impact indicators of lifelong education: schooling education, social education, formal education, non-formal education are taken as the four components in the internal advantage. Four impact indicators of higher education: regular higher education, adult higher education, self-study higher education examination, distance web-based learning are taken as the four components of external advantage (Crick et al., 2015) corresponding to internal advantage component. Generally, in SWT analysis, the internal advantage is expressed as $I_{ia}$. The external advantage is expressed as $E_{ia}$, and the specific relationship can be expressed as:

$$\alpha = \sum_{i=1}^{n} \frac{[l_{ai} - l_{ai-1}] + [l_{ai-2} - l_{ai-3}] + \cdots + [l_{a2} - l_{a1}]}{[E_{ai} - E_{a(i-1)}] + [E_{a(i-2)} - E_{a(i-3)}] + \cdots + [E_{a2} - E_{a1}]}$$

(1)

where, $\alpha$ denotes the change rule between the internal advantage and external advantage, $i$ denotes the number of corresponding relationship between the internal and external advantages. $l_{ai} - l_{ai}$ denotes the components of internal advantage from the first item to the $ith$. $E_{ai} - E_{ai}$ denote the components of external advantage from the first item to the $ith$. In this paper, the following researches are carried out at the premise that $i = 4$.

**RESULTS**

SWT analysis method is used to analyze the development and construction of concept of higher education in China under the concept of lifelong education. Firstly, the basic relationship between four internal advantage components such as the school education, social education, formal education, non-formal education and the four external advantage components such as regular higher education, adult higher education, self-study higher education examination, distance web-based learning can be obtained, which is shown in Table 1 (Akre and Suris, 2017).

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Table 1. Basic relationship between internal advantage component and external advantage component

<table>
<thead>
<tr>
<th>Internal advantage component</th>
<th>External advantage component</th>
<th>Basic relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>School education</td>
<td>General higher education</td>
<td>With the improvement of school education, the level of ordinary higher education has gradually improved; when the school education level remains unchanged, the level of ordinary higher education remains unchanged</td>
</tr>
<tr>
<td>Social education</td>
<td>Adult higher education</td>
<td>With the improvement of social education level, the level of adult higher education is also improved; when the level of social education remains unchanged, the level of adult education remains unchanged</td>
</tr>
<tr>
<td>Regular education</td>
<td>Self-study higher education examination</td>
<td>With the improvement of formal education level, the self-taught higher education examination is becoming more and more strict; when the level of formal education remains unchanged, the self-taught higher education examinations always remain the original state</td>
</tr>
<tr>
<td>Informal education</td>
<td>Remote network learning</td>
<td>With the improvement of informal education, the number of online learning users increases; when the level of non-formal education remains unchanged, the number of remote network learning users remains unchanged</td>
</tr>
</tbody>
</table>

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In this research, four impact indicators of lifelong education: schooling education, social education, formal education, non-formal education are taken as the four components in the internal advantage. Four impact indicators of higher education: regular higher education, adult higher education, self-study higher education examination, distance web-based learning are taken as the four components of external advantage (Crick et al., 2015) corresponding to internal advantage component. Generally, in SWT analysis, the internal advantage is expressed as $I_{ia}$. The external advantage is expressed as $E_{ai}$, and the specific relationship can be expressed as:
After determining the basic relationship between the internal advantage component and the external advantage component, the corresponding component in each group is analyzed separately. Then, following four sets of results can be obtained (John et al., 2017; Stylianides and Stylianides, 2017).

**School Education and Regular Higher Education**

The Figure 2 shows that when the level of school education shows a rising trend, the level of regular higher education also increases; when the level of school education shows a decreasing trend, the level of higher education also decreases; when the level of school education keeps unchanged, the level of regular higher education increases first and then decreases, but the range of reduction is the same as range of raise (Gabel and Dreyfus, 2017; Appelbaum and Appelbaum, 2017).

**Social Education and Adult Higher Education**

The Figure 3 shows that in the initial state, the level of social education and level of adult higher education keep a balanced state; when the level of social education shows a rising trend, the level of adult higher education also increases; when the level of social education shows a decreasing trend, the level of adult higher education also decreases; when the level of social education keeps unchanged, the level of adult higher education will keep unchanged (Lawson et al., 2017; Kwon and Block, 2017).

**Formal Education and Self-Study Higher Education Examination**

From the analysis of Figure 4, in the initial state, the level of formal education is the same as the degree of strictness of self-study higher education examination; when the level of formal education shows a rising trend, the degree of strictness of self-study higher education examination also increases; when the level of formal education
shows a decreasing trend, the degree of strictness of self-study higher education examination also decreases; when
the level of formal education keeps unchanged, the degree of strictness of self-study higher education examination
has declined slightly, but the range is not obvious, which can be neglected (John et al., 2017; Singh-Pillay and
Sotsaka, 2017).

Non-Formal Education and Distance Network Education

The Figure 5 shows that when the level of non-formal education shows a rising trend, the number of users of
distant network education increases; when the level of non-formal education shows a decreasing trend, the number
of users of distance network education still increases; when the level of non-formal education keeps unchanged, the
number of users of distance network education decreases first and then increases, and the range of increase
reduction is very small, which can be neglected (Shilova and Sibgatullina, 2017).

Non-Formal Education and Distance Network Education

The Figure 5 shows that when the level of non-formal education shows a rising trend, the number of users of
remote network education increases; when the level of non-formal education shows a decreasing trend, the number
of users of remote network education still increases; when the level of non-formal education keeps unchanged, the
number of users of distance network education decreases first and then increases, and the range of increase
reduction is very small, which can be neglected (Shilova and Sibgatullina, 2017).

Remote network education is geared to the public. With the development of society, people need to constantly
charge themselves, and constantly improve their own quality, which lays the foundation for promoting life-long
and popular education of remote network education. At the same time, the distance network education provides
the basic condition for the improvement of the national quality. At present, the remote network education is
developing towards the trend of intelligence and popularization. With the development of the remote network
education, the education thought, education mode, education content and education structure will change
significantly. The remote education has entered a rapid development period. The remote network education has its
own advantages, mainly in the following aspects:

1. Freedom of learning, breaking through the limitation of time and space;
2. The introduction of multimedia, the forms of knowledge are more abundant;
3. The non-linear knowledge structure facilitates learners to master their own learning progress and improves
   learners’ learning efficiency;
Resources can be shared. The information transmitted on Internet constitutes a huge database, and learners can obtain all kinds of learning resources through the network;
(5) Interactivity is another characteristic of distance network education;
(6) Distance network education realizes the learner centered teaching model, which enables learners to have the autonomy of learning.

**DISCUSSION**

According to the analysis of relationship between internal advantage and external advantage, the change relationship between four sets of corresponding components can be obtained. On the basis of this relationship, we can carry out the following discussion.

(1) discussion of relationship between level of school education and level of regular higher education

The variation tendency in Figure 2 shows that there is a dynamic relationship between the level of school education and the level of regular higher education. When the level of school education increases, the level of regular higher education also increases, otherwise, it will decrease. When the level of school education keeps unchanged, the level of regular higher education increases first and then decreases, but the range of increase and decrease are the same, and the overall level keeps unchanged. Therefore, it can be considered that the level of school education is increased, which has a promoting effect on the level of regular higher education.

(2) discussion of relationship between the level of social education and the level of adult higher education

From the change of pie chart in Figure 3, there is a dynamic relationship between the level of social education and level of adult higher education. When the level of social education is increased, the level of adult higher education will increase, otherwise it will decrease. When the level of social education keeps unchanged, the level of adult higher education also keeps unchanged. Therefore, it can be considered that improving the level of social education can promote the level of adult higher education.

(3) discussion of relationship between the level of formal education and the degree of strictness of self-study higher education examination

Through the change of histogram in Figure 4, there is a dynamic relationship between the level of formal education and the degree of strictness of self-study higher education examination. When the level of formal education is increased, the degree of strictness of self-study higher education examination is improved, otherwise it will decrease. When the level of formal education keeps unchanged, the degree of strictness of self-study higher education examination decreases slightly, but the range is too small, which can be ignored. Therefore, improving the level of formal education can promote the degree of strictness of self-study higher education examination.

(4) discussion of relationship between the level of non-formal education and the number of users in distance network education

Through the variation tendency of curve in Figure 5, we can see that there is a stable relationship between the level of non-formal education and the number of users in distance network education. Regardless of whether the level of non-formal education increases or decreases, the number of users in distance network education always increases. When the level of non-formal education is unchanged, the number of users in distance network education has declined slightly, but the range is too small, which can be ignored, the overall trend still increases. Therefore, it can be considered that the increase of level of non-formal education promotes the number of users in the distance network education.

**CONCLUSION**

The above research shows that the lifelong education has four components. Four components of higher education are corresponding to it. Where, the level of school education, social education, formal education and non-formal education has a promotion effect on the level of regular higher education, the level of adult higher education, the degree of strictness self-study higher education examination and the number of users of distance network education. Thus, as the cornerstone of educational reform, the concept of lifelong education has the strong role for promoting the development and construction of concept of higher education. Comprehensively implementing the concept of lifelong education provides an outpouring of support for the development and construction of concept of “higher education” in China (Merrill, 2015).

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