Empirical Analysis of the Influence of Internationalization Process on the Quality of the Disabled Higher Education

Yanmei Wang
Special Education College of Changchun University, Changchun 130022, China

Abstract

The development trend of the world's economic integration and the science and technology and information exchange are all striding towards the internationalization, and the higher education in China is also affected to some degree. Higher education for the disabled is also affected. In order to reflect the fairness of higher education and its fairness to the group of the disabled, it is urgent to develop the internationalization process of the disabled higher education. But it may not fully adapt to the actual situation in China to blindly promote the international development, so we should study the influence of internationalization process on the quality of the disabled higher education and then consider the characteristics of its influence factors, so as to design fire-new development model or teaching model. In this article, through the analysis on the current situation of the disabled higher education in China, the related effect of the internationalization process of the disabled higher education is studied from four dimensions, such as the school running idea, curriculum system, major setting and international exchange. And then, through the relevant data of empirical analysis, the teaching evaluation system model is introduced, so as to evaluate the influence of internationalization process on the quality of the disabled higher education. The aim is to promote the international development of the disabled higher education in China, which reflects the support and fairness of our society to the disabled higher education.

Keywords: Internationalization process, The disabled, Higher education.

1. RESEARCH BACKGROUND

1.1 Literature review

At present, the developed countries such as the United States, Canada, Japan and so on have widely carried out the international exchanges of higher education, and in recent years, our country has also enlarged the dominant planning for international exchanges of higher education (Wang, 2010) under the unified guidance of the Ministry of Education. Although it starts relatively late in the field of the disabled higher education, in recent years, with the support of most international colleges and universities, it has also gotten relatively rapid development advantages and achievements (Yang, 2010). However, in the internationalization process, not all teaching models or teaching methods fully adapt to the actual situation in our country, so in the transition stage when the disabled higher education is gradually implemented the internationalization process, there are also positive effect and some unstable adaptation problems (Zhang, 2010). So, in order to improve the popularity of the disabled higher education and provide fitter development advantages for the international development process, the influence of internationalization process on the quality of the disabled higher education should be actively investigated, and then, by evaluating the actual teaching quality impact, the education mode and system which is more suitable for our country shall be designed (Liu, 2010).

1.2 Research purpose

The internationalization process for the disabled higher education mainly takes the disabled college students as the training object. By strengthening the exchange of international education experience, and through the cultural guide and the interaction of kinds of educational concepts, the development pattern to optimize teaching mode and teaching system is formed, and with the mutual recognition development concept, broader educational leading force is created at the communication and cooperation level (Xu and Gao, 2014). Therefore, for the disabled higher education in China, the internationalization process is a teaching innovation adapting to the era development, which is more conducive to the success and development of disabled college students in China.
(Zhu, 2016). But in the internationalization process, due to the influence from cultural differences, teaching ideas, technical equipment and many other factors, it is easy for internationalization process to form adverse effect on the disabled higher education in China (Wu, 2013). For this reason, it is necessary to further study that how to promote the mode of international development and how to make use of the main advantages of international development to promote teaching reform. So, in this article, based on the different influence degrees of internationalization process model in China's disabled colleges and universities, its positive effect and adaptation degree are analyzed, and then the influence of internationalization process is evaluated.

2. QUALITY REFERENCE VARIABLES IN THE INTERNATIONALIZATION PROCESS FOR THE DISABLED HIGHER EDUCATION

For the evaluation of influence change on teaching quality within certain period, we need to investigate and research the audience of teaching quality, and analyze more accurate influence effect via the actual feedback. As a dynamic evaluation indicator, it is not easy to evaluate the internationalization process as the stable factor, therefore, 5 level-one variables were designed in the research: reliability, infrastructure, influence effect, supportability, student's real feeling. Several level-two variables were set for each level-one variable to evaluate the influence degree and range of the internationalization in different universities comprehensively as shown in Table 1.

<table>
<thead>
<tr>
<th>level-one variable</th>
<th>level-two variable</th>
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<tr>
<td>reliability</td>
<td>The positive effect</td>
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<td>infrastructure</td>
<td>The cathode corresponding</td>
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<td>effect</td>
<td>Teaching environment</td>
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<td>affordable</td>
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<td>feeling</td>
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<td>student</td>
<td>The positive effect</td>
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<td>courses</td>
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<td>employment rate</td>
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Firstly, reliability refers to whether the disabled university can use the mode of international development effectively to provide the more scientific and reasonable teaching program for students (Wang, 2017). If the internationalization process can not be docked with the actual teaching content, the way can not support the promotion of teaching quality, even the adverse effect may appear, thus reducing the teaching quality. Therefore, two level-two variables were involved in the reliability: positive effect and negative effect. The positive effect refers that the university can use the international way reasonably and integrate into the specific teaching link. If the adverse teaching effect appears, the deviation between the integration and docking shall be regarded as the negative effect.

Secondly, three level-two variables were set for the consideration standard of infrastructure: professional orientation teaching tool, disabled teaching aid and teaching environment (whether have the disabled special facility). They were all beyond the consideration range of general university, the disabled living way and teaching fitness shall be the reference value, whether the infrastructure has the actual function shall be reviewed from the perspective of the disabled student.

Thirdly, the influence effect refers to the change of original teaching content, change of original major setting and staged adjustment of original course in the internationalization development process of staged expansion (Song, 2011). The influence effect of three level-two variables of major, course and content in the traditional teaching was discussed via the staged implementation of internationalization process. The positive interval was positive effect, and the negative interval was negative effect.

Finally, supportability refers that whether the disabled students improve the actual ability from the learned subject, and whether the employment and enrollment are promoted effectively in the internationalization process (Wang, 2013). Therefore, the level-two variables were set as enrollment and employment rate.

Moreover, students’ real feeling is the most important level-one variable to research the internationalization process on the disabled higher education. If there is no significant difference, or the actual learning effect is not obtained, there may be a huge cultural difference or poor fitness among three levels of education mode, education system and teaching mode in the process of internationalization development (Ma, 2013). However, the dynamic variance may also influence the calculation result due to the blind subjective judgment, therefore,
level-two variance relationship from three different dimensions of student, teacher and tutor was referred comprehensively to evaluate the influence effect brought by the internationalization process.

3. CONSTRUCTION OF DISABLED HIGHER EDUCATION QUALITY INFLUENCE MODEL

3.1 SERVQUAL quality evaluation system

SERVQUAL quality evaluation system has played the obvious quality evaluation effect since the 1980s. The disabled higher education can also use the evaluation theory to evaluate the corresponding education quality, and analyze the actual influence of disabled higher education in the internationalization process from the reliability, infrastructure, influence effect, supportability and student’s real feeling. According to SERVQUAL score of model data, the actual situation and shortcoming and other problems of current education quality can be analyzed effectively after removing the expectation value of actual feeling. The quality influence on the system model of disabled higher education in our country can be evaluated from the comprehensive analysis of student evaluation, teacher evaluation, expert evaluation, field investigation, international evaluation and other aspects, thus catering to the internationalization development process with better fitness.

3.2 Calculation way of quality influence model

12 level-two variances were set for the reality of disabled higher education in our country as the evaluation system model, and the quality evaluation formula was:

\[ S = \sum_{i=1}^{m=12} (P_i - E_i) \]  \hspace{1cm} (1)

In the formula, S was the teaching quality influence number; m was the level-two variance; \( P_i \) was the specific score of i variance factor; \( E_i \) was the disabled student’s real feeling and teaching result evaluation score for the teaching quality in i variance factor. \((i = 1, 2, 3, ..., m, m=12)\). Concerning the disabled student’s real feeling, the teaching service quality also needed to compare with the actual quality in the general university, thus further evaluating the fitness of teaching quality. Therefore, the attribute weight of teaching quality can be analyzed specifically via the average situation of S score, the formula was:

\[ S = \sum_{j=1}^{n=5} W_j \]  \hspace{1cm} (2)

In the formula: \( n \) was the attribute average score of level-one variance, and it can be deduced from 12 level-two variances in formula I: \( W_j \) was the specific weight of teaching quality in j attribute. The staged change of teaching quality can be analyzed effectively via dividing the related factors of 12 level-two variances by S score at that time, and further the actual direction to improve the teaching quality can be optimized designed. Finally, the average value of teaching quality can be obtained according to the total sum K of the collected related data, which was also the actual quality average score \( SQ \), and the average formula of sum quality was:

\[ SQ = \left\{ \sum_{j=1}^{n} s \right\} / k \]  \hspace{1cm} (3)

4. QUESTIONNAIRE COLLECTION ON THE INTERNATIONALIZATION PROCESS FOR THE DISABLED HIGHER EDUCATION QUALITY

4.1 Source of research data

SERVQUAL quality evaluation questionnaire was designed in the research according to the reference of actual situation of general university and disabled professional higher college in our country combined with the expert suggestions and doctor suggestions. The questionnaire was conducted for five universities carried out the implementation or staged implementing the internationalization process. The research school involved Special Education College of Changchun University, Deaf Engineering Faculty of Tianjin University of Technology.

7,927 questionnaires were released in two universities, 6,729 valid questionnaires were collected with the collection rate of 84.89%.

4.2 Internationalization development trend of Deaf Engineering Faculty of Tianjin University of Technology
Deaf Engineering Faculty of Tianjin University of Technology has the leading advantage in the internationalization development process. It has established the exchange and cooperation mode with TCT Tsukuba University of Technology, NTID US National Deaf Engineering Faculty and many internationally famous special education colleges. Concerning the joint school-running mode, it has established the fund support project with Japanese Shichuan Financial Group, and built international deaf higher education network organization and PEN-International network teaching project. PEN project realizes the remote meeting function via multimedia teaching advantage. It explored the exchange communication with TCT Tsukuba University of Technology and NTID US National Deaf Engineering Faculty, and the deaf students in the engineering faculty obtained the wide learning opportunity from different countries and nationalities via multiple exchanges. Their international visions were broadened, the experience exchange on the teaching method and internationally similar higher education were promoted, the driving force and scale effect for joint development were formed, thus producing the profound influence on the disabled higher education in our country.

4.3 Internationalization staged result in Special Education College of Changchun University

Special Education College of Changchun University established Tibet Visual Impairment Massage Training Class in 2010, carried out two training classes for Macao and inland special art faculty and special art talent in 2011, and developed two training classes for Changchun disabled special committee and finger language in 2012, and it was affirmed by many parties. After the establishment, the college has received the academic exchange and visit from the world, including Kang Young-Hoon, the former prime minister of South Korea, Sirindhorn, the Thailand princess and others. The exchange visit from many international organizations, ambassadors in China and overseas Chinese, Hong Kong, Macao and Taiwan people promoted the disabled higher education. Special Education College of Changchun University organized many going-out visits, enhanced the international exchange with the similar higher education colleges in Japan, Russia, US and other regions, and established the favorable cooperation relationship and pragmatic cooperation.

5. Empirical analysis result on the influence effect of internationalization process for the disabled higher education quality

The quantitative analysis was made for the related questionnaires collected from two disabled colleges. The specific number of related variance was obtained via the data processing in SPSS19.0 statistics software and taking the measuring standard of related data into the formula. We can find significantly according to the real situation that the quality of disabled higher education was improved in the internationalization process, while many problems also appeared at the same time.

5.1 The reliability was high, and the infrastructure was to be perfected

The level-two variance result that the positive effect was huger than the negative effect was reflected in the internationalization process at different periods, therefore, we shall clear that the internationalization process can influence the disabled higher education positively. However, there is certain distance on the infrastructure between two investigated colleges and the internationally famous disabled colleges. The opportunity for the suitable disabled student to choose to go abroad can also be reflected in the aspect. If the infrastructure can not be perfected in our country, the actual teaching quality can be influenced even though enhancing the international exchange (Xie,2009). Concerning the student saturation, the total enrollment ratio was only 15.67% of the total disabled number among 15 special education colleges in our country. Although the enrollment range was expanded, the actual enrollment ratio was still low. Therefore, we shall increase the staged investment ratio on the disabled higher education to guarantee more disabled in our country can realize the life value via the higher education (Guo,2000). More disabled students can be cultivated via the perfect infrastructure to reduce the social guarantee burden in our country. Meanwhile, the important advantage and docking degree of internationalization development pattern can be seen from the input-output ratio.

5.2 The supportability is high, and the influence effect is to be strengthened

According to the statistics analysis in two colleges, the graduate’s employment rates in 2015 and 2016 were improved significantly after the teaching plan of internationalization development was implemented. Although the enrollment rate was not improved significantly, the rising trend was also displayed as shown in Figure 2.
Concerning the influence effect, $S=0.569$, the fitness was decreased due to the direction deviation on the conversion of professional course setting. The acceptability problem may exist for the teaching mode of teaching content and professional course. If continuing to use the existing teaching plan, it may not be conducive to the final implementation of internationalization process. Concerning the judgment on student's feedback information, further understanding the students’ development demand and social demand are actual problems to be considered for the disabled higher education in the short term (Ding, 2004). Increasing the international exchange frequency and understanding the implementation program in other international higher colleges and similar problems at different periods shall provide a more comprehensive adjustment direction for the disabled colleges.

5.3 Actual teaching effect shall be expanded further

According to the final score of SERVQUAL quality evaluation system, the level-two variance value used for testing the factor analysis $SQ=0.886$, thus noting that the internationalization process has been fully recognized by the teacher, student and tutor. Such teaching advantage shall be further maintained, and the expanding advantage reflection can be formed in the staged expansion way. Obvious students’ feelings and significant actual teaching effect can help the disabled student realize self-value no matter from the employment rate or enrollment rate, and own labor result shall be based on the career development (Xiong and Wang, 2014). Therefore, the disabled higher education shall grasp the advantage and form a wider positive effect among the internationalization development process. Moreover, other disabled colleges in our country do not implement the internationalization development measures or have a slow execution, therefore, certain policy orientation and economic support are needed to promote the docking between the disabled colleges and the internationalization and provide a better education environment for the disabled students.

6. CONCLUSION

In summary, the internationalization process improves the actual teaching quality of disabled higher education in our country effectively, but also influences the enrollment rate and employment rate positively. However, the docking problem of the disabled higher education in our country is also a development direction to be noted concerning the infrastructure direction. Meanwhile, the current unfavorable factors on the teaching fitness can also be found based on the numerical result in SERVQUAL quality evaluation system, therefore, we need to further improve the effect and more practical teaching effect. A better teaching environment shall be provided for the disabled higher education in our country via the infrastructure construction, professional teaching innovation and optimization of course configuration to promote the positive effect of internationalization development process on the disabled higher education in our country, fully play the leading advantage of international exchange, create the driving force and most fundamental motivation for the systematic disabled education, and better promote the international development of disabled education career in our country. The leading force for the disabled higher education can be perfected from the staged development reform of education quality, teaching mode and education system.

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Province. [Research on internationalization of special higher education in Jilin Province]. Project number, The humanities and social science project of the education department of Jilin Province 2013[40].

REFERENCES

Ding Y. (2004). Synthesis: the only way to transition to the higher special education institute is the only way to transition to the higher special education institute, China special education,(02), 57-60.


Wang Z.Z. (2010). On the current situation of international education research, the characteristics of practical development and enlightenment, Journal of henan university (social science edition), 50(02), 120-134.

Wu S. (2013). Rehabilitation modern medicine's contemporary value purport also talk about modern Chinese modern rehabilitation higher education, China rehabilitation theory and practice,23(02), 131-135.


Xu D. and Gao Z.K. (2014). Based on the Chinese dream governing idea of open education for the disabled personnel training mode innovation research, national Open University education for the disabled in Qingdao institute majoring in social work for example, Journal of tianjin radio and TV university,18 (01), 16-20.


Zhu C.G. (2016). The treatment of several relationships in the 13th five-year plan of new undergraduate colleges, taking nanjing special education normal college as an example, Modern special education, (02), 8-14.