Performance Evaluation Model of Foreign Language Research Level Based on Grey Correlation Analysis

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Abstract

Foreign language research focuses on the goal and effectiveness. And they are also more flexible in terms of models and methods. How to improve learners’ learning enthusiasm and improve learners’ practical application level in foreign language research activities has become the focus of curriculum reform. This paper firstly provides an overview of the current situation of foreign language research courses, and then gives a deep analysis on the importance of foreign language research curriculum reform from the perspective of social demands. It puts forward reform strategies to foreign language research course from the perspective of social demand in terms of innovation of practical curriculum system, reforming models, construction of school-enterprise cooperation model and improvement of evaluation system, thus stimulating the learners’ initiative and enabling them more suitable for the needs of the society.

Keywords: Grey correlation, Foreign language research, Performance; Evaluation model.

1. RESEARCH BACKGROUND

1.1 Literature review

Foreign language research fails to conduct an in-depth exploration on the knowledge points in the teaching materials, and lacks dynamics in its presentation of knowledge, which tends to be relatively rigid. Meanwhile, the relatively backward concept of foreign language research and lack of connection between its plans and strategies makes it unable to keep up with the development of the times in its strategies, resulting in single means in its research process with a lack of advanced technologies. Moreover, the related learning platform is lacking, which makes it unable to share resources and fail to make full use of multimedia and network technology, so the learning time and place are subject to varying degrees of constraints (Wei, 2010). Furthermore, the school fails to construct a good campus culture, which hinders the overall development of learners, as the learners do not have a good learning atmosphere where their initiative can be better motivated by the environment. Under the impact of examination-oriented education, the goal and focus of foreign language research lie in improving the learners’ academic achievements, resulting in boring course content and dull atmosphere, which seriously affected the learners learning enthusiasm. A reasonable performance evaluation system for foreign language research level will set the goal for teacher’s teaching and the standard for other related teaching work. It will also provide a reference standard for foreign language curriculum and reduce the difficulty of teachers’ work. (Jia, 2016)

1.2 Significance of the study

Foreign language research knowledge can provide language support for learners to acquire the knowledge of other professional disciplines. It can improve learners’ practical comprehensive capabilities of foreign language research by increasing foreign language research knowledge reserve and enhancing the application ability of foreign language research knowledge. The education reform of foreign language research from the perspective of social needs has brought the development of learners and the development of society gradually to a uniform level, which has more effectively improved learners’ self comprehensive knowledge quality, thus realizing the educational significance of foreign language research education beyond that of the basic knowledge (Sun, 2013). The foreign language research level is one of the important means of cultivating talents and is of great significance to comprehensively improve the quality of learners. First of all, foreign language research is the focus of foreign language teaching. Therefore, a reasonable evaluation system for it equals to a work standard
for the relevant educators, according to the requirements of which teachers’ education methods can be improved and updated, the teachers’ sense of mission can be enhanced and their enthusiasm motivated. Secondly, China’s economy and politics are on the rise. With the increase of international exchanges, China’s basic national conditions are constantly changing, which brings great difficulties to foreign language research. Lastly, in combination with the current situation of national development and basic conditions of economy, politics, society and others in China, China shall comprehensively improve foreign language research level and set up a performance evaluation system of foreign language research level, which would help to ensure that foreign language research match our national conditions all the time, and is also beneficial to implement the Party’s educational policies (Zhu, 2013). A scientific and reasonable education system on the basis of the target system and evaluation system, which should also include evaluation methods, feedback, and others, is an important criterion for measuring foreign language level.

2. THE BASIC PRINCIPLES OF CONSTRUCTING THE PERFORMANCE EVALUATION MODEL OF FOREIGN LANGUAGE RESEARCH LEVEL

The standard of foreign language research level is not fixed, thus the relevant evaluation system can only evaluate the level of foreign language research for a recent period of time. In the process of globalization, as to the learners, their focus should not only lie in the general knowledge courses and specialized courses. As to foreign language research, a number of courses in line with the development of the times should be set up starting from social development, to comprehensively improve the overall quality and social adaptability of learners with full consideration of overall development in foreign language learning. The learners’ connotation of foreign language reading literacy is as shown in Figure 1.

![Figure 1. Connotation Of Foreign Language Reading Literacy](image)

There is no fixed pattern for foreign language research level. Therefore, the evaluation system should be adjusted according to the changes in teaching content, with emphasis on the effectiveness of performance evaluation of foreign language research level, while eliminating any formalism. Through the scientific and systematic teaching evaluation, the relevant departments can truly understand the situation of foreign language research, so that the evaluation system is no longer empty talk on paper. Under the supervision and urge of foreign language research performance evaluation system, the learners can fully understand their own deficiencies to help them to continuously progress in the exploration, so that they can fully aware of the importance of learning courses related to foreign language research (Sun, 2013). The reason for setting up foreign language research related courses is to improve the level of foreign language research, and through its evaluation the shortcomings in the foreign language research activities can be known. The evaluation system of the foreign language research level should be in line with the social development and social needs, so that learners can achieve greater progress through it. Foreign language research activity is a constantly changing process and also a continuously developing process. The evaluation system of the foreign language research level will also be continuously changing. Therefore, relevant departments should timely update and upgrade the whole evaluation system according to the changes within the system. During this process learners can adjust
themselves according to the changes of relevant systems to gradually adapt themselves to the society so as to establish themselves in society (He and Li, 2016). We should pay attention to all aspects of the learners, and evaluate the learners in various ways in terms of dialectical and pluralistic ideas. Foreign language research level evaluation system should pay attention to learners’ comprehensive quality by examining the learners’ academic records, daily performance and enthusiasm for participating activities to evaluate the learners from various perspectives, so that a scientific evaluation idea can be established. At the same time, the evaluation content should be improved, so that a scientific performance evaluation system of foreign language research level can be built. In the process of globalization, as to the learners, their focus should not only lie in the general knowledge courses and specialized courses. As to foreign language research, a number of courses in line with the development of the times should be set up starting from social development so as to comprehensively improve the overall quality and social adaptability of learners (Wang, 2014).

3. THE IMPORTANCE OF ESTABLISHING A PERFORMANCE EVALUATION MODEL OF FOREIGN LANGUAGE RESEARCH LEVEL

3.1 In line with social development.

With the development of economic integration, the demand for talents is more diversified. In order to cultivate talents in line with social needs, foreign language research has begun to establish a comprehensive curriculum system, with a better selection and application of more reasonable content. Thus foreign language research has gradually developed and gained many achievements. Starting with meeting social demands, foreign language research is committed to cultivate interdisciplinary talents in line with the economic development, by emphasizing the learners’ principle role while training foreign language research skills in which case a flexible transformation between targets and strategies can be done based on the needs of learners and that of the society. The talent cultivation in China has also ushered in a new period of its own development and innovation after the new normal stage of national economic development (Luo and Wei, 2014). The direction of talent training must be integrated with the development of the times to provide relevant talents needed for the social and economic construction. Therefore, with the innovation of social and economic development mode, further deepening social structure adjustment, as well as social demand, foreign language research disciplines need to optimize and renovate in talent cultivation concerning the direction, as well as strategies. What’s more, the objectives and targets of foreign language research should refer to the teaching objectives of compulsory education and higher education, as shown in Figure 2.

![Figure 2. Foreign Language Teaching Objectives](image)
3.2 Improving learners’ interest in learning

It encourages learners to participate in the process, so that learners can master the practicality of foreign language research knowledge through the practical cognitive process. The practicality is embodied in two aspects, namely, the practicality of learners’ learning methods and the practicality of knowledge content presentation. Only these two aspects are connected through certain educational strategies, will the learners' practical ability for applying foreign language research knowledge be improved. Therefore, in foreign language research activities, we must adhere to the basic principle, that is to highlight the practicality of strategies and the practicality in every link (Zhang and Wang, 2007). The reform of foreign language research can make full use of new media’s advantages in information transmission to maintain the contemporaneity and progressiveness in the concept of foreign language research. Furthermore, the interactive advantages of new media can also be used. The Internet-based platform, on which campus cultural activities are carried out through the network media, can achieve the comprehensive educational significance of practice, network, and other aspects. Moreover, this kind of activities can attract social attention, thus can increase the learners’ interest in participation.

3.3 Training the talents’ practical abilities

Under the current situation, foreign language research should pay more attention to the training of talents’ practical application ability of foreign language research, so as to give play its educational role in increasing learner’s knowledge reserve and enhancing their capacity composition, while realizing its value for achieving educational goal. From the perspective of social demand, foreign language research should play a basic educational value as a linguistic subject to provide linguistic support for learners to learn other professional disciplines, so as to help learners to gain an in-depth understanding of professional knowledge of other disciplines while improving their practical application capabilities in foreign language research (Liao, 2012). This model will be more targeted to enhance the learners’ knowledge reserves and application capabilities. Under the current situation of educational development, foreign language research will draw up strategies and methods to achieve the overall goal of cultivating innovative and compound applied talents. The cultivation should not only focus on the basic knowledge reserve and practical application ability of foreign language research, but also help the learners to be more directional in acquiring foreign language research knowledge from the perspective of foreign language research, so that it can be more aligned with learners’ professional knowledge and better meet the needs of learners’ future career (Wang, 2012). Therefore, under the guidance and norms of foreign language research talents training target, the specific practical methods of foreign language research should be optimized and innovated in a targeted way so that the cultivation of talents can be all-around and three-dimensional. Foreign language teaching model is as shown in Figure 3.
3. CONSTRUCTION OF PERFORMANCE EVALUATION MODEL OF FOREIGN LANGUAGE RESEARCH LEVEL BASED ON GREY CORRELATION

3.1 Building a reasonable evaluation mechanism

During the process of conducting performance evaluation of foreign language research level, all the evaluation procedures should be made public, with all the details of the process presented to the public through network or other related channels. A systematic and complete performance evaluation system of foreign language research level must include content of many aspects and involve many departments. It is necessary for the leadership department of each school, who is responsible for the overall performance evaluation of the foreign language research at the school to have a general understanding of the performance evaluation of the foreign language research level and to organize and construct the relevant management team (Liang, 2012). Educators need to manage learners and play a leading role in foreign language research work. They also need to understand the actual situation of each learner to coordinate the relationship between learners and foreign language research level. At the same time, the core values of Chinese socialism serve as the theoretical core of the foreign language research level of the learners, guiding the practical work of the foreign language research level of the university learners (Song, 2014). The educational practice of foreign language research level enables learners to master the connotation of foreign language research, and then enable them to develop scientific value judgment thinking skills, so that they can conduct a certain degree of value criticism and identification on socialtrendsofthoughts. That is also one of the effective ways to build the performance evaluation system of foreign language research level.

3.2 A brief introduction to grey correlation analysis

Grey correlation analysis is a method of comparative analysis of factors, whose essence is the analysis of the curve development and changing trend, with the difference between curves used as a measure of the degree of correlation. Specify a reference data column $T_0$, $T_0 = \{t_0(1), t_0(2), ..., t_0(n)\}$, there is an $m$ comparison sequence $T_1, T_2, ..., T_m$, $T_i = \{t_i(1), t_i(2), ..., t_i(n)\}, i=1,2,...,m$.

Calculate the correlation coefficient of $T_i$ to $T_0$ on the $q$th element ($q=1,2,...,n$) according to the following formula

$$\rho_q = \frac{\max_i \max_q |t_0(q) - t_i(q)| + h \max_i \max_q |t_0(q) - t_i(q)|}{|t_0(q) - t_1(q)| + h \max_i \max_q |t_0(q) - t_i(q)|}$$

Where, $\rho$ is the resolution coefficient, generally chosen between 0 and 1, which is usually selected as 0.5. In order to summarize the information in each correlation coefficient for comparison, a method of averaging is used to find the absolute correlation between the curve and that between $T_i$ and $T_0$.

$$w_i = \frac{1}{n} \sum_{q=1}^{n} \rho_i(q)$$

then $\rho_i(q)$ and $w_i$ can reflect the correlation degree of $T_i$ to $T_0$ both microscopically and macroscopically.

3.3 Steps for grey correlation analysis

Firstly, we shall determine the reference sequence which can be constituted by selecting the optimal value of the indicators of all samples. Secondly, we shall process the obtained indexes and data with standardization. In order to facilitate the selection of the reference sequence and the calculation of correlation, it is necessary to standardize the data column, so that the original data can be transformed into the non-dimensional, same level, and positive additive data.

A. for maximum index: $t'_q = \frac{t(q) - t_{\min}(q)}{t_{\max}(q) - t_{\min}(q)}$

B. for miniature index: $t'_q = 1 + \frac{t_{\min}(q) - t(q)}{t_{\max}(q) - t_{\min}(q)}$
Thirdly, we shall construct the optimal reference data column. Suppose the standardized index data column:

\[ T'_1 = (T'_1(1), T'_1(2), ..., T'_1(n)) \]
\[ T'_2 = (T'_2(1), T'_2(2), ..., T'_2(n)) \]
\[ T'_a = (T'_a(1), T'_a(2), ..., T'_a(n)) \]  

(3)

And then construct the optimal reference data column, which is made up of the best values of each index in the above data column. It is denoted by \( T_0, T_0 = \{ t_0(1), t_0(2), ..., t_0(n) \} \).

Where,

\[ T'_0(z) = \max (T'_1(z), T'_2(z), ..., T'_m(z)), (z = 1, 2, ..., n) \]  

(4)

Fourthly, we shall calculate the optimal degree of correlation. We shall calculate the optimal correlation degree \( r \), based on the two formula, that is, the correlation degree between \( T'_i \) and \( T_0 \), the optimal reference data columns.

Fifthly, we shall sort correlation degree for empirical analysis. The foreign language research levels of schools and teachers can be compared to each other by sorting each obtained correlation degree \( w_i \).

3.4 Establishing a monitoring platform for evaluation

It is a long process to cultivate learners' foreign language literacy and to establish a performance evaluation system for foreign language research. The level of foreign language research and its evaluation system should both be combined with the characteristics of the times. In the process of performance evaluation of foreign language research level, we should give full consideration to the monitoring mechanism of evaluation, and then explore new education methods in view of the problems appeared in the process of evaluation (Li, 2011). We can also try many different kinds of evaluation mechanisms to find flexible ways and means that conform to the development of the times and adapt to the basic situation. At the same time, it is necessary to select learners' representative and teachers' representative to supervise so as to ensure the transparency of the whole process. During the supervising process, the learners' representative can raise questions about any link, or they can put forward their own opinions or suggestions for the imperfect part of the system to discuss with teachers and the relevant responsible person so as to update for a scientific and reasonable system. The monitoring process is the process of revision. The teachers or the relevant persons in charge should communicate with the learners to know their hobbies and psychological changes, so as to adjust the relevant provisions of the evaluation objectives according to the reality of the learners from time to time.

4. CONCLUSIONS

The level of foreign language researches is one of the important means to cultivate foreign language talents, and it is of great significance to improve the quality of learners. Foreign language research level is the key of school education. A reasonable evaluation system for it equals to a work standard for the relevant educators, according to the requirements of which teachers’ education methods can be improved and updated, thus the teachers’ sense of mission can be enhanced and their enthusiasm motivated. Secondly, China's economy and politics are on the rise. With the increase of international exchanges, China's basic national conditions are constantly changing, which brings great difficulties to foreign language research. A reasonable performance evaluation system for foreign language research level will set a goal for teacher’ teaching and a standard for other related teaching work. It will also provide a reference standard for foreign language curriculum and reduce the difficulty of teachers’ work (Xu, 2017). Therefore, in order to guarantee the scientific and practical effect of foreign language research, it is necessary to construct a reasonable performance evaluation system of foreign language research level, so as to give full play to the role of foreign language research.

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