

Research on the Construction of Learning City of Tianjin

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Abstract: The key to the success of the construction of Learning City is the evaluation construction progress and achievement. Reasonable and correct selection of index and evaluation of the construction of the Learning City is of paramount importance for its construction and long-term development. Based on the analysis of relative literature, this paper constructs the Evaluation System of Learning City according to the development of economy, society, technology and education in Tianjin.

Keywords: Learning City; evaluation system; learning and education; Tianjin

1. Introduction

In the new century, the first national education program National Mid-Long Term Education Reform and Development Program (2010-2020) put forward China's ten years education reform and development strategy in future is: by 2020, Education Modernization and Learning Society could have being formed on the whole, joining powerful nations of human resources. As the basis of the construction of Learning Society, the construction of Learning City is very important. Since Shanghai led to the construction of the Learning City in September 1999, there are more than 60 cities now that had put forward it.

At present, the situation of the learning city is: First, the local government's support has developed and positively practiced the learning city planning and implementation; Second, the inadequacy of implementation, and the lack of practical and effective practice mode makes it stay in experimental work stage; Third, the city has not aroused the enthusiasm of all citizens participating into construction the learning city; Fourth, the relative theoretical research are weak. Anyhow, the construction of the learning city in China is still in the experimental stage. Therefore, reasonable and correct selection of indicator and evaluation of the construction of the learning city is of paramount importance for the construction and long-term development of the learning city.

2. The Theory about Construction of the Learning City

2.1 The Connotation of the Learning City

There are basically several representative viewpoints at home and abroad which explained the Learning City as follows:

The OECD holds that the Learning City is to make plans and strategies, and to create wealth, promote the individual development and social cohesion, by encouraging the development of individual potential of all citizens and developing the cooperation among all organiza-

tions.

English Learning City Network (LCN) deems that the Learning City is to realize the cultural transformation-to understand the value of human learning, through the use of the power of social and institutional relations. Learning is used clearly as a way to improve social cohesion and reconstruction of the economic development. Through extensive resources integration, the Learning City can provide solutions to the local challenges.

Norman Lknowgorth, the famous scholar, holds that: the city, town or area mobilize and integrate its economy, politics, education, culture and environment, in order to make progress in the direction of developing talents and potentials of all citizens. Provide, test and actively expand learning opportunities, and then enhance the promotion of all citizens' potentials, so you can create energetic, participation, cultural awareness and economic prosperity of human environment."^[1]

Chen Youhua, the domestic scholar, thinks that the construction of Learning City is a kind of practice that the concepts and contents of Learning Organization can be used to manage and develop the city. Its core is through systematical study activities, trying to build a continuous innovation and improvement of the city culture and spirit.^[2]Wu Yaohong, Cai Bin and Gu Xin hold that Learning City is an effective regional within the city. Through effective individual learning and organizational learning and social learning, the city innovation system could increase city innovation ability and economic performance, form the long-term competitive advantage.^[3]

Based on the theory of Learning City above, we can give a definition of Learning City: For a Learning City, knowledge economy and knowledge society is its survival background and development space, study and education is the most essential functions. And based on the socialization of education system and lifelong learning, it can guarantee and satisfy the basic rights and lifelong learning needs of the citizens, and promote effectively people's overall development and urban sustainable development

of the city. It is a harmonious city with open, development and innovation.

2.2 Evaluation System of Learning City

The key to the success of the construction of learning City is to construction progress and achievement evaluation. The representative evaluation system of the Learning City as below:

1. The EU's Evaluation Index of the Learning City. The EU's Towards the Learning Society (TELS) project had a comprehensive research on evaluation of the Learning City. This study was the first to distinguish 10 fields that had influence on lifelong learning within the city limits and developed a learning city detection tool, which is actually a kind of interaction of the questionnaire survey to help those people who completed the survey to understand the concept and meaning of Learning City better. But because of the different understandings of the index, it is inevitable to have deviation of evaluation for the city in use. And it gave no specific evaluation standards and evaluation method.

2. The Shanghai Ming De Institute of Learning Organization: Learning Society of evaluation system. It evaluated Learning City construction respectively from seven aspects: learning individuals, learning family, learning community, social education, social information resource, social and cultural facilities and other auxiliary indexes. In reference of international the data of some developed countries or regions; it adopted 5 evaluation methods for rating criteria. But it did not distinguish difficult index and the easy, fundamental index. It also treated strategic level index and technical level index of Learning City in the same way. These were the defects of the evaluation system.

3. Research Team on Index System and Authentication of the Learning Organization of Nanjing Committee Propaganda Department: learning City index. The Learning City was evaluated by the research in four aspects: elements, structure, behavior, the effect. The research had its measurement standards, using the method of questionnaire to grade, due to the learning index distribution of index score is equivalent to the size and weight of the index. But the index system is very complex. There are many qualitative indexes reflecting learning form that need a lot of social survey data. And you will need to use other index system for collecting data statistics if you want to obtain some level indicator. It is more difficult to conduct such huge statistical evaluation than learning city itself within the city limits.

4. Chen Youhua, the professor of Nanjing university : Evaluation System of Learning City Construction. His learning city construction will be divided into six types: cultural consumption, population quality, innovative ability, competition, quality of life, social development. 15 secondary indexes are under the primary index on the assumption of the same weight. In accordance with the

weight of primary index, distribute the weight to the corresponding level index. The Evaluation System is simple, and considering international comparability, the index selection is equal to the international common index. But on the choice of the city index of social development, its learning characteristic is not outstanding. The Evaluation System of Learning City Construction is progressive, flexible and valuable.

After summarizing the existing Learning City of Evaluation index Systems, the defects are as following: (1) Piling up the simple index cannot reflect the city's overall study nature. (2) Too complicated to the social management. (3) Not make full use of the governmental social statistical index, and it is difficult to acquire the data.

3. Learning Evaluation Index of City Construction

Based on the existing urban evaluation system of learning, learning the defects of the evaluation indexes selected cities shall comply with the following standards:

1. Comprehensive and systematic. Learning City Construction is a widespread, comprehensive and systematic category, as the same as the evaluation indexes. Form organic and orderly interaction among indexes to reflect the progress of the construction of the Learning City in many aspects.

2. Easy access to the index. It is better to acquire the index from conventional statistic report, except for a few important indexes which need special investigation. Generally we can test by statistics at the end of the year, and it is helpful to implement and inspection.

3. Comparative . In order to see the construction gap between us and other cities at home and abroad better, and to promote learning city construction, the choice of index should facilitate the comparative research between cities, matching index and material caliber, scope and international index with the international common ones.

4. Concise and practical. Evaluation System of Learning City Construction should be simple and easy to understand and operate. Use fewer indexes to reflect content as much as possible, and to facilitate collection, calculation and analysis at the same time. This has practical value for the research and strategy planning of Learning City Construction.^[4]

In the process of the construction of the evaluation system, the most problem is that the index is so excessive that it greatly affects the efficiency in the use of indexes. The index systems which are generally accepted and widely used in the world, such as Quality of Life Index (PQLI), Human Development Index (HDI), are composed of several independent, representative, most commonly used, most accessible, comprehensive and informative indexes. Therefore, reasonable choice of the representative, comparative, informative index is the key of constructing efficient and systematic evaluation system of

learning city.

Thus, on the basis of the basic connotation of Learning City, adopting results scholars acquired in the construction of the Learning City, we choose 8 preliminary indexes: economic index, informatization index, index of economic globalization, social index, index of life level, cultural index, science and technology index and index of education. Each preliminary index has its secondary indexes. And we lay emphasis on the popu-

larization of education, the education input and conversion, informatization level of education, the degree of specialization of employment, knowledge and technical update rate, etc.

4. The Construction of Evaluation System of Learning City

Construct the evaluation system as follows. (table 1)

Table 1 Evaluation System of Learning City

preliminary indexes	secondary indexes
economic index	Urban per capita GDP
	Economic growth rate
	Hi-tech industry to GDP ratio
	High-tech employees accounted for practitioners proportion
	Cultural industry professionals accounted for practitioners proportion
informatization index	The information industry output value of GDP
	City informatization index
	Thousand subscribers owns the Internet
index of economic globalization	Total exports and imports proportion of the total
	Foreign trade dependence
	Foreign capital accounts for the local GDP ratio
	The international market share
social index	Jini coefficient
	Humanistic index
	rate of unemployment
	Social security coverage
	Townsmen lowest dwellers living standards
index of life level	City residents' per capita disposable income
	City residents' per capita savings deposit balance
	Engel coefficient
	consumption increase rate
cultural index	Governmental culture financial expenditure ratio
	Cultural consumption accounted for household spending in proportion
	Cities have museums and cultural center of quantity
	Every million people have the number of community culture activity center
	Cities have public library number
science and technology index	Largest public library
	The R&D of GDP
	activities expenditure
	Every million people have scientists and engineers quantity
	Scientific papers output capacity
index of education	Every million patented number
	Education funds to GDP ratio
	Education expenses of the residents of the proportion of expenditure
	Each million of the number of college students
	The average forecast by education fixed number of year
	Labor formal education fixed number of year
	Distance education of all school number proportion
	The proportion of the campus network construction

5. Basic Condition Analysis on Building Learning City in Tianjin

5.1 Conditions of Economic Development in Tianjin

During the first half of the year 2010, Tianjin GDP

reached 4106.48 billion Yuan, increasing by 18% of the last year's, and 1.8 percentage point up, the second growth in China. The realization of social activities asset investment reached 2938.89 billion Yuan, increasing by 34.7%, growth keeping above 30% for 10 quarters. The number of new batch of enterprises with foreign investment is 341, and foreign contract reached 82.11 billion

dollar, increased by 10.7%. 59.13 billion dollars has been in place in theory, increased by 20.0%, 2 points more than the first quarter.

5.2 Education Conditions in Tianjin

In 2009, the local education funds of Tianjin reached 238.17 billion Yuan, increased by 15.57%. Registration of Pre-school education has reached 95.54%, and primary school-age children 99.73%. Education development is on a high way. The number of ordinary advanced education students has over 40 million, 51.3% accounted for girls. Among master graduate students, the proportion of women and doctoral women respectively reached 38.1% 55.6% increased by 3.9% and 2.3%.

5.3 Science and Technology Conditions in Tianjin

In recent years, Tianjin science and technology innovation ability strengthens continuously. In 2009, the high-tech production reached 3923.8 billion Yuan, An application for a patent reached 19187, 7216 patent license has been given. 2020 registration of scientific and technological achievement and contractual turnover of all kinds of technology reached 102 million Yuan. There are 2 national high-tech industrialization base, 2 national key laboratories, 15 national science and technology. 15

counties has passed national scientific and technological progress test, five districts be advanced, 1 districts as demonstration.

5.4 Residents Living Conditions in Tianjin

In 2009, the total retail sales of consumer in Tianjin have reached 2430.83 billion Yuan, increased by 21.5%, and increased by 22.9% practically deducted the price factor, the new record since 1994. Achieve 2.3 times the total retail sales of consumer the year 2004, and 1.3 times for six years, showing that consumer confidence in the growth in Tianjin increased steadily.^[5]

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