

A Research of Informationalized Teaching Competency of Teachers of Chinese to Speakers of Other Languages

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ABSTRACT

In the 21st century, characterized by rapid advancements in informatization and intelligence, the Informationalized Teaching Competency (ITC) of college and university instructors is pivotal to the caliber of talent development. The traditional linear model of education is being surpassed as learners demand more flexible, fragmented, ubiquitous, diverse, and self-directed approaches to knowledge acquisition. This evolution presents significant challenges to educators, necessitating the development of a comprehensive framework for ITC that aligns with our informatized society and fosters continuous professional growth, especially for Teachers of Chinese to Speakers of Other Languages (TCSOL). This study, grounded in the perspective of Educational Ecology, positions TCSOL within the broader ecosystem of Chinese education, acknowledging the myriad of influencing factors within this ecosystem. It aims to assess the current state of TCSOL's ITC, employing ecological principles and methodologies to explore avenues for enhancement and advocating for a harmonious development between TCSOL and international students, thereby ensuring a balanced and sustainable growth of the international Chinese education ecosystem.

KEYWORDS

Informationalized Teaching Competency; TCSOL; Development Strategies

1 Research Background

With the swift advancement of informationalized technology, concepts such as the Internet of Things (IoT), cloud computing, big data, blockchain, 5G networks, augmented reality (AR), virtual reality (VR), mixed reality (MR), and holography have not only become familiar terms but have also permeated every facet of daily life. In the realm of higher education, the integration of these technologies to facilitate information-based education is increasingly recognized as a catalyst for educational reform. In the context of the informationalized age, the use of informationalized technology in the process of International Chinese Education has become the norm. This trend of teaching reform also puts forward higher requirements for the informationalized teaching competency of TCSOL, and requires teachers to change their roles and positions in the new teaching paradigm, and teachers are no longer the center of the classroom in the process of instruction. The role of teachers has changed, and the content of teachers' teaching competency also needs to alter. In order to more effectively integrate informationalized technology and International Chinese Education, teachers need to reposition their roles scientifically, update teaching concepts, improve informationalized teaching competency, and help students effectively use information-based learning methods. As per Professor Liu, the development process of International Chinese Education

can be roughly divided into three periods: inauguration from 1950s to 1970s; discipline established from 1980s and 1990s; and acceleration since 21st century (Liu Xun, 2021).

2 Research Significance

This thesis critically examines the informationalized teaching competency (ITC) of TCSOL faculty in higher education institutions, focusing on both educators and international students to gather primary research data complemented by extensive literature review.

3 Literature Review

3.1 Ecology

According to Zhu Chunquan (2021), "Ecology is the study of the relationships between living organisms, including humans, and their physical environment." Ecology considers organisms at the individual, population, community, ecosystem, and biosphere level. During the development of the discipline of ecology, different scholars have given different definitions of it, which also represents the different stages of ecological research and the deepening of its understanding from other aspects. Ecology is integrated as an interdisciplinary with many other disciplines as well.

3.2 Educational Ecology

Lawrence Arthur Cremin (1925-1990) was an educational historian and administrator. In the 1970s, he first proposed the theory of Ecology of Education, he defines education as "the process of deliberate, systematic and continuous efforts to evoke knowledge, attitudes, values, skills and emotions" (Lawrence, 1976). He points out "Interaction Theory" is the basic of Ecology of Education, that is, the various educational institutions and the society as a whole are interconnected and influence each other as an ecosystem.

3.3 Framework of the Latest Standard of TCSOL



Figure 1 Professional Competence Standards for TCSOL (2022)

3.4 Influencing Factors of Development of Teachers' ITC

4 Research Methodology

4.1 Research Objects

This dissertation takes TCSOL and international students as the research objects.

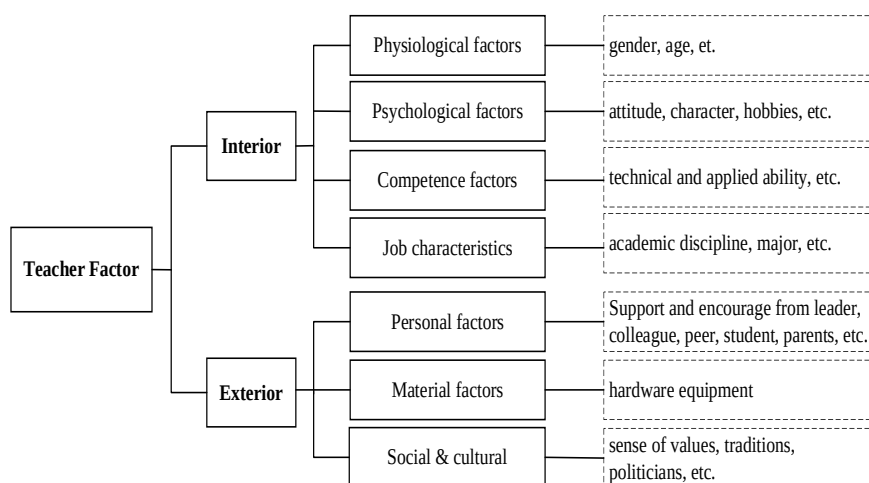


Figure 2 Factors influencing teacher's Informationalized Teaching Competency

4.2 Research Methods

American scholar Johnson (2004) proposes that a combination of qualitative and quantitative research techniques can be used in the same research. This is a conceptual method based on pragmatism, and advocates choosing the corresponding research method oriented by practical problems. Bryman (2008) conducts a research analysis on some journal literature and finds that most of the quantitative and qualitative research are to use a variety of methods to collect more data to improve the research level, and the use of mixed research methods will make the interpretation of the research more comprehensive.

4.3 Research Tools

There are two main research tools in this paper, namely questionnaires and interview outlines.

4.4 Research Process

4.4.1 Questionnaires

TCSOL's Questionnaire

Through the "Wjx.cn", TCSOL who participated in the questionnaire survey came from 18 provinces and municipalities including Liaoning, Beijing, Shanghai, Guangdong, Shandong, Shanxi, Jiangxi, Shaanxi, Guangxi, Chongqing, Jiangsu, Zhejiang, Hebei, Jilin, Heilongjiang, Tianjin, Gansu, Fujian Henan, Hubei and Sichuan (Figure 4-3). And TCSOL who are working in 14 foreign countries' Confucius Institute like South Korea, the United Kingdom, the United States, France, Jordan, Tajikistan, Kyrgyzstan, Burundi, Japan, Austria, Mongolia, and Spain (Figure 4-4). There is also a pre-test for the validity and reliability of the questionnaire, 52 TCSOL participated in the testing phase of the questionnaire, and a total of 350 TCSOL participated in the formal survey.

4.4.2 Interviews

TCSOL's Interview

The author invites 6 TCSOL to conduct interviews, including: 1 professor, 2 associate professors, and 3 lecturers, and they are from different universities in Liaoning province.

5 Analysis and Discussion

5.1 Analysis of TCSOL's Informationalized Teaching Competency

Five-point Likert Scale for the design of the questionnaire was applied for the research as: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. The questionnaire data is analyzed by the descriptive statistics method of SPSS software. According to the Five-point Likert scale of the questionnaire, when the *Mean Score* is above 4, it means that TCSOL have better ITC.

The following table shows the mean values of average ability of the five first-level dimensions of TCSOL's ITC (Table 1):

Table 1 Five-dimensional descriptive analysis of TCSOL's ITC

	N	Minimal value	Maximum value	Mean	Std.
1.ICT Competency	304	2.67	5.00	4.26	.551
2.Informationalized Discipline Knowledge Competency	304	2.33	5.00	4.08	.646
3.Integration of Informatization and Chinese Teaching	304	1.33	5.00	3.67	.851
4.Innovation and Development Competency	304	2.00	5.00	3.39	.528
5.Facilitating Learners Informationalized Learning Competency	304	1.75	5.00	3.55	.887

Through the above table of the five first-level dimensions of the Framework, the average ability of ICT competency (Mean=4.26) and Informationalized Discipline Knowledge Competency (Mean=4.08) exceeded 4, which have reaching ideal state. While, Integration of Informatization and Chinese Teaching, Innovation and Development Competency, Facilitating Learners Informationalized Learning Competency have not reached 4, which are deviating from the ideal state, these three ability levels are also the focus of future efforts.

5.2 ICT Competency

Descriptive analysis of the first dimension through SPSS yields the following results (Table 2):

Table 2 TCSOL's ICT descriptive analysis

Indicator	Mean	Std.
1.I can proficiently use the network, e-mail, communication tools, etc. to share network search and obtain resources with students, colleagues, etc.	4.32	.672
2.I am NOT proficient in using multimedia audio-visual equipment such as computers, electronic whiteboards, projectors, etc.	1.57	.922
3.I can proficiently use corresponding teaching software (such as PPT, Zoom, Tencent, DingTalk, MOOC, etc.) for online teaching and the arrangement, design and development of Chinese teaching resources, etc.	4.04	.667

Among the three competencies under the first-level dimensions of the ITC framework, the average competency level has reached the ideal state. Because the second question of the questionnaire is a reverse worded question and the mean value is 1.57, the converted score should be 4.43. It can be seen that the basic ICT operation ability of TCSOL, including the operation of hardware and software, have reached an ideal state. It shows that TCSOL have mastered the competency of ICT.

Through the above data analysis of each dimension of the competency, in order to more intuitively understand TCSOL's ITC, the author shows the following figure through the radar chart by the mean value of each competency (Figure 3):

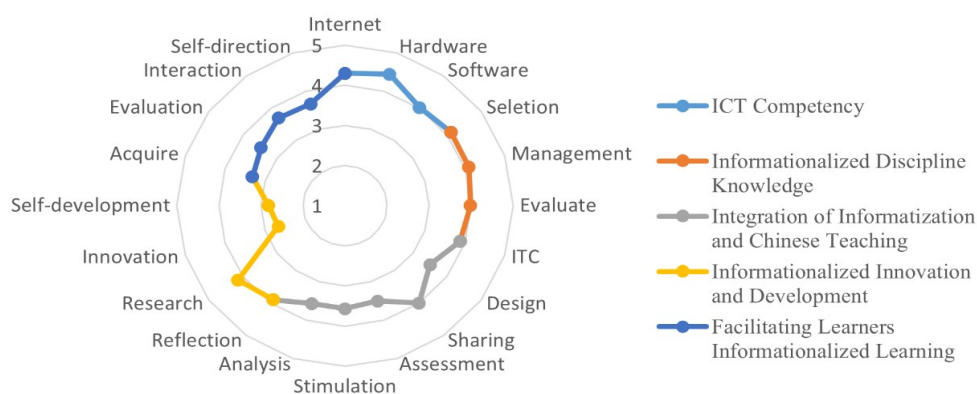


Figure 3 Radar Chart of TCSOL's Informationalized Teaching Competencies

6 Conclusions and Suggestions

6.1 Conclusions

Through literature analysis, combined with the informationalized teaching competency frameworks of the Education Society of United States, the European Union, and the United Nations, and the advice and verification of TCSOL experts, this paper constructs the TCSOL's informationalized teaching competency framework, and sets weights to the competency indicators. The work expands the theoretical research on the ITC of TCSOL. Just as a compass orients travelers, TCSOL's ITC framework indicates how teachers can navigate through an uncertain and rapidly changing ecosystem to help evaluate their status quo competency. The framework defines TCSOL's ITC in 5 first-level dimensions and 20 second-level indicators. The framework orients TCSOL of all ages.

6.2 Features of the Development of Informationalized Ecosystem

As an ecological system, International Chinese Education and each component interacts and influences each other according to certain principles to jointly maintain the stable development of the system.

(1) Sustainable Development of the Ecosystem

First of all, as a sustainable development system, the International Chinese Education ecosystem should aim at cultivating the sustainable development of individuals. Secondly, from the perspective of sustainable development, the ecosystem of International Chinese Education not only includes the transmission and acquisition of Chinese knowledge, but also the healthy development of international students. Thirdly, teachers, students, environment and other ecological factors are all necessary components for the sustainable development of the ecosystem.

(2) Integrity of the Ecosystem

Integrity, as one of the most basic and prominent features of an ecosystem, refers to the fact that the various elements within the ecosystem are not independent of each other, but are inextricably linked, and they are interconnected and mutually restrictive.

(3) Openness of the Ecosystem

Ecosystems are essentially open, because any ecosystem must maintain open condition to continuously exchange materials, energy and information, to realize the survival and development, and to maintain its vitality.

(4) Dynamic Balance of the Ecosystem

Ecosystem balance refers to a relatively stable state of ecosystem structure and function under

certain time and conditions. Ecosystems are always in the process of balance-unbalance-balance development. Balance is a process of dynamic development.

6.3 Suggestions for Sustainable Development of TCSOL 's ITC

Through the above analysis of this thesis, the research conclusions drawn by the author include: the TCSOL 's ITC deviates from the ideal state ($M=3.74$), TCSOL 's experience in carrying out informationalized teaching practice is insufficient, the construction of online teaching resources is inadequate, and there is still a gap in ICT services on education, etc. On the basis of the problems and challenges faced by teachers in the process of informationalized teaching, this part will discuss the sustainable development suggestions and strategies from the following three levels: macro (CLEC), meso (university) and micro (TCSOL), in total of nine perspectives.

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