Research on the Construction of Competency Model of Applied University Teachers

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Abstract: Competency methods and their applications have attracted more and more attention in China, but the research object is still limited to business leaders and some industry management groups, and the discussion on the competency of university teachers is not yet extensive and in-depth. As a large number of Application-oriented Colleges and universities that train practical and innovative talents, they must closely integrate school strategy with the needs of local economic and social development, and give full play to the functions of application-oriented talents training, knowledge and ability innovation, teaching and scientific research, and social and economic services. Teachers are the strategic resources of colleges and universities. The ability level and comprehensive quality of teachers are the key to the survival and development of colleges and universities. This paper uses the method of investigation analysis and empirical comparison, through the comparative analysis of teachers in research-oriented universities and higher vocational colleges, to explore the establishment of competency model of Applied University teachers, so as to provide guidance and basis for the post management and career development of such teachers.

1. Introduction

Scholars have constructed different models of teacher competency from different perspectives. Foreign scholars such as Danielson constructed a teacher competency model from four dimensions: planning and preparation, environmental monitoring of University teachers, teaching and professional responsibility. Bisschoff uses structured questionnaires to conduct factor analysis and survey, and draws a two-factor model of teachers'competence in education and collaboration [3]. Kabilan put forward the evaluation criteria of teachers'competence, such as motivation, skills and knowledge, self-learning, interactive ability and computer ability.

Domestic scholars also have different views on the competency model of teachers, such as Wang Yu's use of event interviews and literature review method to construct the structural dimensions of the competency characteristics of University teachers, which are composed of innovation ability, information acquisition ability, interpersonal understanding, responsibility, thinking ability, relationship building and achievement orientation. Hu Xiaojun, on the other hand, sets out from the teachers'post duties and constructs the competency structure model of teachers from three dimensions: knowledge quality, ability quality and personality quality. Zhou Xia and others used exploratory factor analysis and confirmatory factor analysis to construct a competency structure model of innovative talents, which consists of 27 competency characteristics items and consists of five competency dimensions: innovative knowledge, innovative moral character, innovative ability, innovative spirit and innovative personality. Based on the grounded theory, Li Xiaocong and Wang Hui constructed the model of teaching competence of local university teachers, which includes three aspects: role competence, post competence and development competence.

Although scholars at home and abroad have discussed the competency model of teachers in depth, the applicability of the competency model of teachers in applied universities is different. For example, previous studies mainly focus on the competency of teachers in teaching, while applied university teachers obviously need to take into account the multi-level requirements of theoretical application; therefore, it is necessary to take applied university teachers as the specific research object and build their competency model.

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2. Research methods and data collection

2.1 Grounded Theory Research Method

The grounded theory proposed by Glaser in 1989 is a special methodology for building theory from data. Grounded theory opposes putting forward hypotheses before the beginning of the study, and advocates the preconceived view of suspension. It constantly ponders, compares, analyses, classifies, conceptualizes, and correlates and constructs the data collected by researchers. It is a substantive theory rooted in social reality and context through the development of researchers'theoretical tactile sense. This method generally collects data after defining the object and literature review, and uses top-down coding method to deepen layer by layer, then Abstracts new concepts and ideas from empirical facts, excavates categories and attributes, and gradually constructs substantive theory.

Table 1 Analysis of in-depth interview content

Main category	Subcategory	Code sample
Teaching competence	**Post performance**	a32 carefully prepare the lesson, Complete the basic work of the post; a193 plan and implement the responsibility; a211 comply with the rules and regulations.
	Academic level	a166 enhance academic qualifications, learn academic vision; a179 strengthen theoretical study; a191 study professional knowledge; a203 obtain professional qualification certificate
	Teaching quality	a110 case teaching; al24 strengthen professional knowledge learning; a149 timely assessment of students' mastery; a185 teaching students in accordance with their aptitude
	Teaching skills	a15 classroom design; a77 teaching model innovation; a147 classroom teaching innovation; a159 teaching method reform and innovation; a171 through the demonstration class
	Title level	a120 publishes a paper, declares a subject; a196 learns as early as possible from an experienced colleague; a208 prepares for the title from teaching and research
Research competency	**Education and education reform**	a154 Teaching work combined with educational reform project; a197 actively declares teaching reform projects at the school level and district level;
	Scientific research	a127 actively declare the subject, publish the paper; a180 participate in academic activities; a199 learn from experts; a201 more reading literature scientific and technological achievements transformation
	Transformation of scientific and technological achievements	a186 such as “Investment Project Evaluation”; a206 software development project; a210 product development. Technology development and management model innovation
Practical competence	**Participate in school activities**	all teaching and research activities; a13 Peichuan; a60 competition; a117 participation in trade union activities; a143 participation in student activities
	Participate in social activities	a12 management consulting;a118 accounting services; a177 participation in social welfare activities; a195 participation in tourism service activities; a209 free consultation, training and teaching

	Practical teaching guidance	a54 participate in school custom class guidance; a78 training course; al55 case teaching; a173 task-driven guidance; a189 enterprise trainee; a192 theory practice combination
	Industry-University-Research Cooperation	a131 business practice; al56 gives students the opportunity to practice; a174 trains double-teachers; a202 on-campus training base respects students
Practical competence	**Respect students**	a96 enthusiastically answer student questions; a115 does not insult students; a182 encourages students; a189 gives students the opportunity to express
	Caring for students	a59 understand the current situation of students; a97 helps solve students' difficulties; a137 solves problems for students; a163 pays attention to students' physical and mental health; a190 relates students' lives
	Professional ethics	a129 strengthen teacher education; a49 honesty, no deception, no concealment; a207 will not do things that violate the scope of morality
Development competency	**Love education**	a3 loves dedication, is a teacher; a51 is highly motivated and contributes; a182 loves class; a188 regards education as an ideal career; a209 is proud of career
	Loyalty education	a181 is loyal to his profession; a194 will not go even if there is a better job opportunity; a204 loves his dedication; a205 twenty years of working time has not left education
	Other lifting ability	a158 teachers' quality ability improvement; a183 go out to study and study, a184 protect their own knowledge; a187 use cold summer vacation to learn to charge; a207 improve themselves in all aspects

2.2 Data collection

This research takes the teachers of College A, a pilot construction unit of applied universities, as the research object. Since 2014, A College has become one of the first pilot universities in G Province, which has realized the “two transformations” from specialized education to undergraduate education and from normal education to industrial service education, which meets the needs of this study.

The data collection period lasted for four months from April to July 2018. There are three main ways to collect data in the research process. One is observation. By participating in and observing teachers'specific classroom teaching, researchers record teachers' actions and students'reactions in detail, and record teachers' teaching link design, teaching process, teaching actions and students'classroom reactions in detail. At the end of the class, the teaching process is sorted out, the notes are recorded, and the factors of teachers'competence in teaching work and their action paths are explored. Second, in-depth interviews. According to the requirement of grounded theoretical qualitative research method, through theoretical sampling, 18 teaching pacesetters from different majors were selected as interviewees. The interview outline is as follows: How do you think of the present teaching work? What are the specific performances in the process of teaching development and practice? What qualities and abilities do you think application-oriented teachers need? After the interview, the researchers transcribe the words with on-site recordings to maximize the primitiveness of the discourse. Third, text analysis. According to the interview results, all the data were sorted out and 18 original materials were formed. Fifteen original data were randomly selected for grounded analysis and coding. The remaining three data were used for saturation test of the

model.

3. Categories Extraction and Model Construction

3.1 Data Encoding

This study collects raw data through semi-structured interviews, and then uses qualitative analysis software NVIVO 11.0 to analyze the results of interviews based on grounded theory, editing, coding, extracting and writing memos. According to the importance and reproducibility of association, 211 initial concepts were compared and classified into more Abstract categories. Their properties were described and 18 sub-categories were obtained. It includes: post performance, professional ethics, honesty and trustworthiness, love of education, loyalty to education, respect for students, care for students, participation in school activities, participation in social services, knowledge level, Title level, education quality, teaching skills, teaching research and reform, practical teaching guidance, scientific research, industry-university-research cooperation. . Then, through further induction and classification, five core categories are classified: teaching competence, scientific research competence, practical competence, role competence and development competence.

3.2 Model Construction

The theoretical saturation of the research results was tested with three reserved data. The results show that the new interview materials have not developed a new category, nor have new concepts derived from the main category. Therefore, it can be concluded that the grounded theory method has saturated the exploratory research results of teaching competence of Applied University teachers.

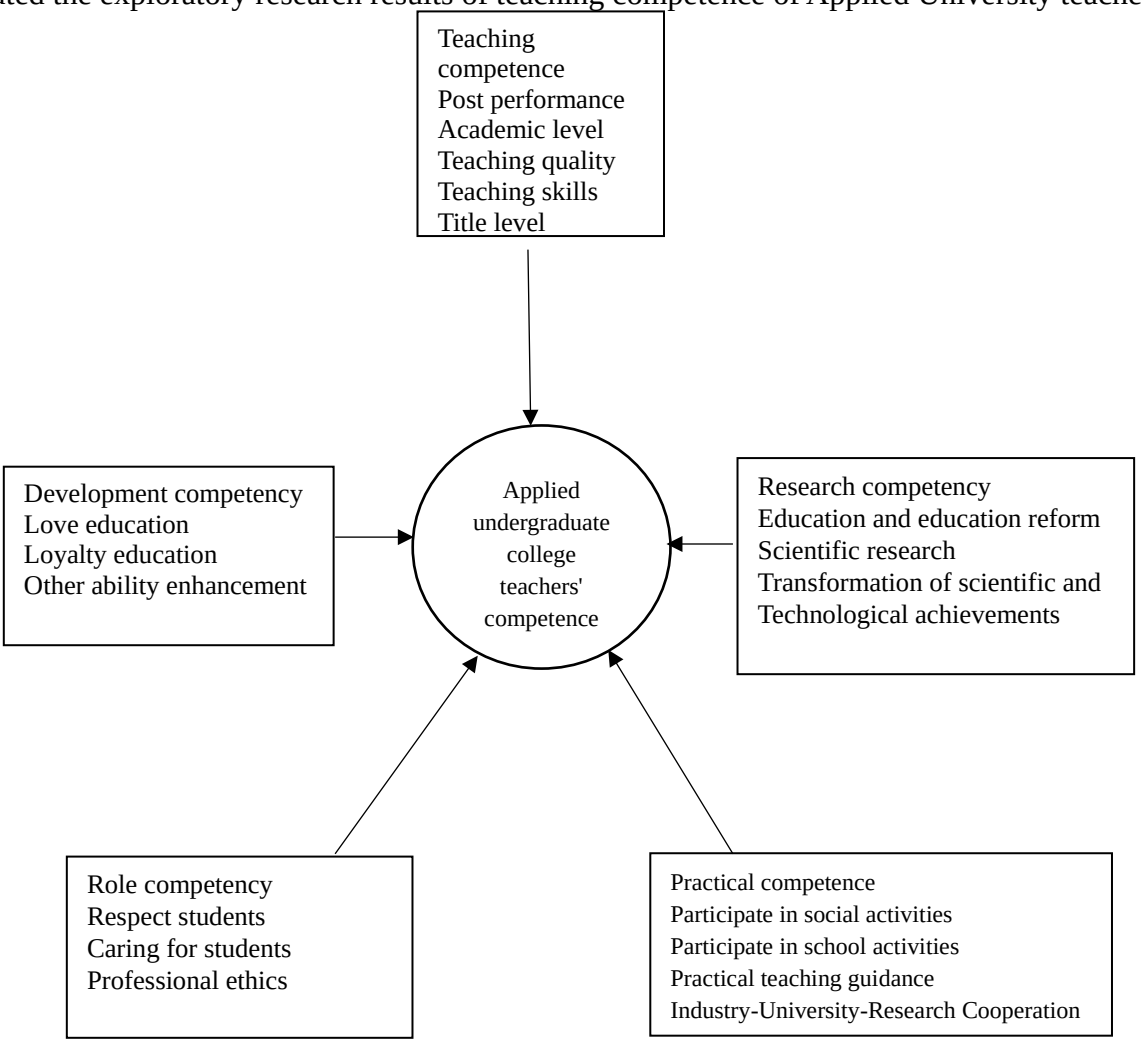

Figure.1 Application-oriented college teacher competency model

4. Research conclusions and significance

Based on the previous literature review, this study selected A college teachers as samples, and explored the competency model of Applied University Teachers by using grounded theoretical research methods. The model includes five main categories: teaching competence, scientific research competence, practical competence, role competence and development competence. In the process of category refining, according to the connection between categories and concepts, a general competency model of applied university teachers is constructed.

Teaching competency is the basic element in the competency model of Applied University teachers. It solves the problem that teachers know what they need to do in the competency model. It mainly embodies in post performance, knowledge level, teaching quality, teaching skills and professional titles. Scientific research competence is an auxiliary element in the competency model of Applied University teachers. It solves the problems of teachers'scientific research competence in the competency model, mainly in the aspects of research and teaching reform, scientific research and transformation of scientific and technological achievements. Practical competency is the key element in the competency model of Applied University teachers. It solves the problem of teachers'lack of practical ability in competency model, and can apply, sublimate and innovate theory in practice. It mainly embodies in participating in school activities, social activities, practical teaching guidance and cooperation between industry, University and research. Role competency is the core element in the competency model of Applied University teachers. It solves the problem that teachers know their positions and positions and who they are in the competency model. It mainly embodies in respecting students, caring for learning and professional ethics. Developing competency is the target element of teachers'competency model in applied universities. It solves the problems of why teachers should work hard in competency model and their future career planning, mainly through loving education, loyalty to education and other abilities. There is an interactive relationship among the elements in the competency model of Applied University teachers. Introducing the competency model into the construction of the teaching staff of applied university plays a practical guiding role in the construction and promotion of the current teaching staff of applied university.

Under the background of the transformation from general undergraduate universities to application-oriented universities, it is of great theoretical and practical significance to construct the competency model of teachers in Application-oriented universities. Firstly, based on the grounded theory research method, this study explores and constructs the competency model of Applied University teachers. Secondly, there is little research on the competency model of Applied University Teachers in domestic literature, and a general model of Applied University teachers'competency has not yet been formed. This research constructs a general competency model of Applied University teachers, which makes up for the deficiency of domestic research in this area. Finally, the research model provides guidance for improving the teaching, roles, responsibilities, development and performance evaluation of Applied University teachers.

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