

Study on the Sustainable Development of College Teachers' Competency

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Abstract: With the application of Behavioral Event Interview and questionnaire survey, this article scientifically confirms the components of college teacher's competency from analysis to screening, conclusion and demonstration; comprehensively explains personality, necessary knowledge and working skills; elaborates from the establishment of advanced idea, advocacy of teacher's noble ethics, study of exquisite business, and cultivation of healthy body; and proposes an approach to realize the sustainable development of college teacher's competency.

With the advance of science and technology and more and more knowledge of materialization in product, requirement on workers who engage in production and management are significantly growing. The implementation of college functions, in the final analysis, relies on teacher's quality^[1]. A college teacher is the subject and typical representative of knowledge worker, who plays an important role in talent cultivation, scientific research, social service and cultural heritage. With special historical mission, college teacher must be qualified to work in college.

Confirmation of College Teacher's Competency

Competency, emerged at the end of 19th century and the beginning of 20th century, was universally thought to be enlightened by "Management and Competency Movement", written by Taylor, "Father of Scientific Management". Currently, the "competency" concept, proposed by Spencer's couple, is generally recognized and applied by the industry. According to this concept, competency refers to potential and in-depth characteristics that can distinguish excellent performer and normal performer from certain job. Such characteristics can be something measurable and calculable, such as motivation, specialty, self-image, attitude or value, knowledge, cognition or behavioral skill of certain area, and can significantly distinguish personal feature of outstanding performance and general performance^[2]. College teachers' competency is embodied in teaching and scientific research, which directly and significantly influences teachers' physical and mental development.

Behavioral Event Interview. Behavioral event interview, an essential tool to reveal competency, defines teacher's competency, compares the quality difference and extracts excellent teacher's quality from excellent performance group and general performance group composed by college teachers.

Confirmation of teacher performance standard. The requirement of competency should be formulated according to Behavioral Event Interview and divided into excellent performance group and general performance group when confirming college teacher performance standard. An eleven-expert group, which is composed of division director of educational administration, scientific research, personnel, discipline inspection, shall be set up for discussing the mission, responsibility, performance standard of teachers' position, as well as the competency behavior and characteristics presented by excellent teachers. After three rounds of careful consultation, screening,

conclusion, three standards for excellent performance group have been confirmed: 1. The teacher shall have at least three years of working experience; 2. The teacher shall be awarded with annual outstanding or above school-level awards, and shall not have unqualified record in performance appraisal; 3. The teacher shall not have any disciplinary sanction.

Select samples of teacher performance standard. According to the teacher performance standard, take 20 teachers as performance standard examples, and divide it into excellent performance group and general performance group according to the performance standard; and randomly select 5 teachers from two groups as interviewees.

| | Performance | | Gender | | Age | | | Position Time | | | Education | | |
|--------|-------------|---------|--------|--------|----------|-------|----------|---------------|------|----------|---------------|--------|-----|
| | Excellent | General | Male | Female | Below 35 | 35-55 | Above 55 | Below 35 | 5-10 | Above 10 | Undergraduate | Master | PhD |
| Number | 5 | 5 | 7 | 3 | 1 | 5 | 4 | 6 | 2 | 2 | 3 | 4 | 3 |

Implementation of Behavioral Event Interview. First, carrying out behavioral event interview. The interviewee is required to talk about three things that are most successful and unsuccessful at work in the past one or two years. After obtaining five complete key events, analyze the interview content, and evaluate the competency presented by the interviewee; second, extracting the features of required quality. By directly inquiring the interviewee's understanding on the quality needed in his work, some key event information related to competency can be obtained; third, material sorting and analysis. Extract and arrange the material obtained from interview, and convert the record material into text file timely. Though comparing and distinguishing the difference of competency provided by excellent performers and general performers, confirm teachers' key competency combination.

Questionnaire and Analysis. Likers 5 class sorting standard is adopted in this questionnaire on elements of teacher's competency ensured in Behavioral Event Interview. The interviewee will be asked to score the importance of teaching and scientific research.

Questionnaire Recovery. 300 questionnaires are delivered to in-service teachers of five colleges, such as Jilin University, Northeast Normal University and Changchun University. 211 questionnaires are effective, with a recovery rate of 70.33%, equal to 70% of the empirical data and suggesting that the validity of this questionnaire is reliable. The structures of specific sample are as below:

| Classification Indicator | | Number | Effective Proportion (%) |
|--------------------------|----------------|--------|--------------------------|
| Gender | Male | 111 | 52.6 |
| | Female | 100 | 47.4 |
| Professional Title | Advanced | 102 | 48.34 |
| | Middle | 65 | 30.81 |
| | Primary | 44 | 20.85 |
| Years of Teaching | Below 5 years | 34 | 16.11 |
| | 5-10 years | 75 | 35.55 |
| | Above 10 years | 102 | 48.34 |
| Subject | Engineering | 99 | 46.92 |
| | Science | 50 | 23.70 |
| | Arts | 62 | 29.38 |
| Total | | 211 | |

Result of Scoring on the Importance of Teacher's scoring. Carry out effective analysis on the stability and reliability of questionnaire, and statistically analyze the significant survey result of teacher's competency factor on teaching and scientific research. Specific scoring result is as follows (Options of Mean Value Ranking Top Four, N=211)

| Competency Factor | | Scientific Research | | Teaching | | Mean Value |
|---------------------|-------------------------|---------------------|---------------------------|------------|---------------------------|------------|
| | | Mean Value | Sample Standard Deviation | Mean Value | Sample Standard Deviation | |
| Personality | Moral Accomplishment | 4.84 | 0.397 | 4.79 | 0.520 | 4.82 |
| | Body Adaptation Ability | 4.44 | 0.883 | 4.54 | 0.690 | 4.49 |
| | Responsibility | 4.49 | 0.503 | 4.13 | 0.829 | 4.31 |
| | Independence | 4.27 | 0.988 | 3.94 | 0.977 | 4.11 |
| Necessary Knowledge | Professional Knowledge | 4.82 | 0.388 | 4.80 | 0.451 | 4.81 |
| | Theoretical Knowledge | 4.53 | 0.690 | 4.28 | 0.980 | 4.405 |
| | Environmental Knowledge | 3.40 | 0.727 | 3.68 | 0.924 | 3.54 |

| | | | | | | |
|----------------|-------------------------------|------|-------|------|-------|-------|
| | Organization Knowledge | 3.05 | 0.578 | 3.04 | 0.570 | 3.045 |
| Working Skills | Learning Ability | 4.74 | 0.465 | 4.72 | 0.554 | 4.73 |
| | Language Competence | 4.52 | 0.502 | 4.60 | 0.638 | 4.56 |
| | Teaching and Research Ability | 4.56 | 0.658 | 4.36 | 0.897 | 4.46 |
| | Innovation Ability | 4.54 | 0.501 | 4.40 | 0.880 | 4.47 |

Verification and Improvement of Teacher Competency. First, carry out the second round questionnaire survey. Confirm the scope and focus of teacher competency, add up definition to competency factor, and require the respondent to provide relevant behavior description through open-ended questionnaire, so as to verify teacher competency. 500 questionnaires are delivered to teachers of 10 colleges in Jilin Province, among which 473 are effective. It can be found from the first round and second round statistical analysis that the results of these two surveys are well consistent with each other, and can be regarded as an important reference and verification to construct teacher competency; 2. second, carry out interview and consultation again. Invite two professors, two associate professors, one lecturer, and one assistant of the college being interviewed for discussion, and consult in eleven-expert group for comprehensive comparison. If the result is quite in conformity, it shows that the validity of this questionnaire is reliable.

Connotation of Factor in Constituting College Teacher's Competency

Personality. Personality, which refers to teacher's internal competency, such as quality, attitude, image and value, is teachers' potential behavior. Its connotation and expression behavior is as below:

| Personality | Connotation | Expression Behavior |
|-----------------------|---|--|
| Moral Accomplishment | Evaluate teachers' morality to education and educational target | Dedicate in education, care about students, impart knowledge and educate people, serve as a model for others, and abide by teacher's professional ethical standard |
| Body Adaption Ability | Evaluate teacher's physical function embodied in environment | Healthy and can adapt to the changes of environment and is qualified in teaching and scientific research |
| Responsibility | Evaluate teachers' dedication spirit and labor attitude | Dedicated and honest, cautious and conscientious, willingly bear the burden of hard works, have the courage to undertake the responsibility |
| Independence | Evaluate teachers' tendency in work, study and life | Independently accomplish and address problem, make scientific and reasonable choice and decision, and promote teaching and research |

| | | |
|--|--|----------------|
| | | scientifically |
|--|--|----------------|

Necessary Knowledge Factor: knowledge in basic and professional theory, environment and organization, etc^[3], which is of great importance for teacher to obtain high performance. Its connotation and expression behavior is as below:

| Necessary Knowledge Factor | Connotation | Expression Behavior |
|----------------------------|---|--|
| Theoretical Knowledge | Evaluate teachers' knowledge that is summarized from practice, and master degree of systematic conclusion | Has higher theoretical level, and obtain theoretical knowledge required in higher education and teaching research institute |
| Professional Knowledge | Evaluate teachers' mastering degree on the required knowledge and specialized skill | Has profound professional background, on top of professional knowledge of the subject, and can apply flexibly |
| Environmental Knowledge | Evaluate teachers' mastering degree on objective factor under the college environment | Be familiar with various laws and regulations of higher education, follow up the development trend, cutting-edge and tendency of the major |
| Organization Knowledge | Evaluate teachers' mastering degree on the constitution and activity principle of college | Learn of the college policy and system, be familiar with the workflow, and accurately understand the organizational culture and be a member of it. |

Working Skill Factor. Working skill is a necessary operating skill for a teacher to be qualified in teaching and scientific research. Its connotation and expression behavior are as below

| Working Skill Factor | Connotation | Expression Behavior |
|-------------------------------|---|--|
| Learning Ability | Ability in Learning new knowledge and skill, accepting new concept, and obtaining new information | Has strong requirement, ability and habit in continuous learning; set up a thought to carry out lifelong study |
| Language Expression Ability | Ability in presenting the scientific nature, logic and visualization of language | Express knowledge in oral form and written form with rigorous thought and logic. |
| Teaching and Research Ability | Ability in turning idea into practical teaching and research achievement | Constantly explore teaching and research pattern, method and mode; master various skill, has abundant scientific achievements. |
| Innovation Ability | Ability in creating new ideas, new | Has unique opinion, innovative teaching method, |

| | | |
|--|--|---|
| | concepts, new innovation, and in realizing value of new object | idea and spirit in exploration, creatively carry out science and research |
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Approach of Sustainable Development for College Teachers' Competency

Set up advanced idea. A college teacher should set up scientific learning strategy, correct achievement motivation and modern view of education; establish the concept of lifelong learning, and learn in working environment so as to turn learning demand into practical learning behavior, to turn learning motivation from potential state into active state, and to turn traditional view of education into modern view of education. Try to integrate study with work; set up and improve a course system that is suitable for the student in their whole life.

Advocate teachers' noble ethics. A college teacher should set up correct moral idea, noble ideal and faith, and strong professional ethics. He should be loyal to the cause of education, teach with his own example, and dedicated to work; care about students with strong responsibility and entrepreneur spirit, cultivate student's sentiment, pure student's heart, and teach them with way of thinking, life concept, value, so that they can become modern person who can develop morally, intellectually, physically and aesthetically.

Study profound professions. A college teacher should constantly improve knowledge structure, practice basic skill and improve innovation ability; enrich knowledge of particular subject, education and psychology knowledge; pay attention to the cultivation of practice ability and innovation; emphasize on experience and learning; and improve the practical knowledge that is needed in teaching and research. In order to be a compound teacher, the teacher should possess more profound knowledge and skill, fully embodying the logic and art of teaching, forming distinct style of teaching, realizing a benign integration between teaching and research.

Possess healthy body and heart. College teachers should always maintain a healthy body; cultivate healthy mentality and temperament; maintain vigorous energy and sound emotion; actively cultivate justice, love, firm, calm, patient, and independent psychological quality; cultivate noble esthetic sentiment; shape a nice heart and perfect personality; pursue, recognize, identify, and create beauty in natural and social experience, and perfectly adapt to the needs of teaching and scientific research.

Conclusion

With the application of Behavioral Event Interview, questionnaire survey and relevant analysis, this article confirms that college teachers' competency is composed of personality, necessary knowledge, working skills in the three categories, as well as 12 elements. Through its normal phase relation with teaching and scientific research, this article puts forward approaches for college teachers to realize sustainable development, and summarizes that college teacher competency is a system connected by multi-factors and multilayer, and the competency embodied by a college teacher is the synergistic result among competency factors.

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