

The Professional Quality and Competency Factors among Double-qualified Teachers

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Abstract: At present, the construction of the "double-qualified" teacher team in higher vocational education in China is still not perfect, and it is necessary to comprehensively optimize the teacher team system through educational practice. The researchers use that the analysis of the professional quality and competency scale will calculate the mean and standard deviation to gain a sense of the practices demonstrated by "double-qualified" teachers in higher vocational colleges, including the process of collaborative efforts, and the use of talents and perspectives to achieve outstanding results in teaching and research, and suggestions for the development plan of "double-qualified" teachers were proposed. The finding is reflective of the theoretical framework of McClelland summarized to pay careful attention to what to achieve success rather than based on intelligence-based assumptions but to let the test subject reflect the important points of the competency you intend to test, rather than to evaluate and estimate the underlying characteristics and properties through a test.

Keywords: Professional Quality, Competency Factor, Double-Qualified Teachers.

1. Introduction

1.1. Introduction

Since the beginning of the 21st century, competition among countries around the world in terms of economy and comprehensive national strength has become increasingly fierce. The scientific and technological competition is the core of economic strength and comprehensive national strength competition, and scientific and technological competition is fundamentally a competition for talents and education. With the rapid development of science and technology, new knowledge, theories, and disciplines have emerged one after another.

Meet the requirements of talent specifications required by society. The Higher vocational education is the focus of vocational education in China, with the educational goal of cultivating high-quality vocational and technical talents, shouldering the task of delivering high-end technical talents for regional economic development. The purpose of higher vocational education is to cultivate qualified talents for society in production, construction, service and other fields. The mission of schools is to cultivate talents, so teaching is the key to cultivating talents. In order to ensure that this goal is achieved, higher vocational education should establish a curriculum system with competency education as the core, strengthen skills training and cultivation of students, so that students can directly work after graduation and shorten the adaptation period. Obviously, if you want to achieve this training goal you must rely on a team of teachers with high overall quality who are "able to speak and do".

1.2. Background of the Study

The development of higher vocational education in my country is still in its infancy and the development of most colleges and universities lacks strong faculty and superior training conditions. Moreover, the economic and technological development of today's society is getting faster and faster, and the existing teaching team can no longer meet

the development needs of higher vocational education. the teaching force of higher vocational colleges in my country mainly comes from two parts: First, teachers who have been transformed and upgraded from technical secondary schools. They generally have solid professional skills and teaching skills, but their knowledge structure and teaching methods are too old and they lack the understanding of new knowledge and Update of new theories; The second is from college graduates. They generally have strong computer application abilities and strong adaptability to modern teaching methods, but they are relatively lacking in basic skills.

Therefore, establishing a high-quality "double-qualified" teacher team is the key to improving the quality and level of teaching in higher vocational colleges.

1.3. Scope and Delimitation of the Study

This study will be carried out in-depth research based on the research path of "raising questions - clarifying issues - research design-model construction- model application", and systematically analyzed the competency of "double-qualified" teachers in higher vocational colleges through a quantitative analysis.

The reviews domestic and foreign literature, and defines the important core concepts of "competence", "higher vocational 'double-qualified' teachers", and "higher vocational 'double-qualified' teacher competency models", and starts from the perspective of competency Theory, and teacher professional development theory respectively elaborate on the theoretical basis for constructing the "double-qualified" teacher competency model in higher vocational colleges. In the methodology, the research will be carried out based on the in depth research process of comparative and correlational analyses, for higher vocational "double-qualified" teachers, and verifies and explains the competency areas.in the two Universities in Hunan.

1.4. Definition of Terms

Competency. It is the ability required for teachers to be qualified for a certain job in a certain work field, and can

differentiate between workers with outstanding performance, excellent performance and mediocre performance ,and certain elements of ability that can be improved through corresponding training and can improve workers' work performance.

Professional quality. Refers to a high standard of performance, competence, or craftsmanship in a particular field or occupation. It implies that the work or services provided meet or exceed the expectations and standards commonly accepted within that profession or industry.

"Double-qualified" teachers. The term refers to the new requirement for the teachers to demonstrate abilities both theory and practice. It emphasizing that "double- qualified" teachers should not only have professional teaching abilities, but also have good practical teaching abilities.

1.5. Significance of the Study

The following individuals will benefit from this study in several contexts:

Teachers. The double-qualified teachers who are qualified in both academic and vocational fields can use research findings to improve their teaching methods and adapt their instructional approaches to better meet the needs of vocational students.

Vocational Students. They can lead to better teaching practices, more relevant curriculum, and improved learning outcomes for vocational students. It can also help identify the most effective double-qualified teachers who can provide valuable insights and skills.

Vocational Colleges. These institutions can benefit by identifying the strengths and weaknesses of their double-qualified teachers. Research can help colleges improve the selection, training, and support of such teachers, ultimately enhancing the quality of education they provide.

Government and Policymakers. Government bodies responsible for education can use research findings to inform policies related to teacher qualifications, professional development, and the alignment of vocational education with industry needs.

2. Methodology

2.1. Purpose of the study

The purpose of this study is to cultivate professional quality and the competency elements of double-qualified teachers in higher vocational colleges, and to establish and apply development program for double-qualified teachers in higher vocational colleges in Hunan Province, in China.

2.2. Research Design

Quantitative research methods are preferred in this context due to their ability to produce objective and numerical data that can be statistically analyzed to draw valid conclusions.

A research design is the framework or guide used to plan,conduct ,and analyze a study. Therefore ,it serves as a plan for answering the research questions and hypotheses. The design to be used in this study will be a quantitative research approach using a descriptive comparative and correlational research design.

Based on the quantitative research design according to Sousa. Most often reflect a deep-seated philosophy of determinism within the post positivist paradigm or school of thought. This means examining a cause and how different causes interact and/or are also observed to influence outcomes.

This paradigm adopts the philosophy that reality can be discovered, but only imperfectly and in a probabilistic sense.

In addition, quantitative methods use objective, rigorous, and systematic methods to generate and refine knowledge strategies. The approach is usually deductive where most ideas or concepts are reduced to variables and the relationships between them are tested. Deductive reasoning is a process in which researchers begin with an established theory or framework in which concepts have been reduced to variables and then gather evidence to evaluate or test whether the theory or framework is supported.

2.3. Research sample

The study derived its samples through purposive sampling techniques. The focus of this study is to conduct a questionnaire survey on double -qualified teachers in two higher vocational colleges, Hunan Automotive Engineering Vocational College (700)and Hunan Commercial Technician College(300),establish a competency model for dual qualified teachers, and propose a training plan.

Using Qualtrics calculator it obtained 278 samples that predicts with 95% confidence at 5% margin of error , where 185 teachers will be taken from Hunan Automotive Engineering Vocational College out of 700 vocational teachers and 93 from out of 300 from Hunan Commercial Technician College will be taken as samples. predicts with 95% confidence and 5% margin of error.

2.4. Data collection tool

The study utilized the main data gathering tools: Questionnaire survey method. Under the guidance of experts and tutors,a competency questionnaire for "double-qualified" teachers in higher vocational colleges was adopted from the study of Huo Mengyu in 2022 on the construction and application of competency model of"dual qualified" teachers to measure the professional quality and competency structure and scores of "double-qualified" teachers. To determine the trustworthiness of the data, both validity and reliability of the instrument was calculated . For ensuring validity, the instrument was content validated by a panel of experts in education, and teaching pedagogy.For insuring reliability, the Cronbach alpha was conducted for consistency as indicated below:

Table A

Mean Reliability Analysis of a Four–Point Likert Scale Instrument on the Assessment of Double-Qualified Teacher-Respondents in terms of Professional Quality

Variable	No. of Items	Cronbach's Alpha	Interpretation
Career Requirements	5	.906	Excellent
Professional Quality	6	.923	Excellent
Professional Development	3	.810	Good
Personal Qualities	4	.879	Good
Mean Reliability		.880	Good

The above data were analyzed using the rule of thumb given by George and Mallery (2003) indicating the following criteria such as: ≥ 0.9 – Excellent; ≥ 0.8 – Good; ≥ 0.7 – Acceptable, ≥ 0.6 – Questionable; ≥ 0.5 – Poor and ≤ 0.5 – Unacceptable. The mean reliability analysis showed that the instrument was good enough to measure what it intends to measure.

Table B

Mean Reliability Analysis of a Four–Point Likert Scale

Instrument on the Assessment of Double-Qualified Teacher-Respondents in terms of Competency Factors

Variable	No. of Items	Cronbach's Alpha	Interpretation
Thought Guidance Ability	11	.949	Excellent
Education and Teaching Abilities	9	.925	Excellent
Practical Teaching Ability	10	.947	Excellent
Teaching Management and Social Service Capabilities	6	.905	Excellent
Abilities to Teach and Research	4	.882	Good
Vocational Education Literacy	6	.930	Excellent
Mean Reliability		.923	Excellent

The above data were analyzed using the rule of thumb given by George and Mallery (2003) indicating the following criteria such as: ≥ 0.9 –Excellent; ≥ 0.8 –Good; ≥ 0.7 –Acceptable, ≥ 0.6 – Questionable; ≥ 0.5 –Poor and ≤ 0.5 –Unacceptable. The mean reliability analysis showed that the instrument was excellently developed by the researcher through the assistance of her validators in order to measure what.

The survey questionnaire has three parts. Part 1 collected data from the profile variables that ask about; sex, age, years of teaching experience, professional title, highest educational level and double-qualified type. Part 2 The Likert scales was designed to assess statements meticulously developed to evaluate the Professional quality of teaching practice of

double-qualified teachers. It surveyed the professional quality practices, that responded to rating scales that ranged from "Strongly Disagree" to "Strongly Agree". Part 3 responded to the items that ask about the competency level, ranging from "incompetent" to "Very Competent".

2.5. Data analysis

Statistical tests will be performed on the data so that researchers can evaluate and interpret the data easily and understandably. In order to make full use of data, it is crucial to statistically process the data with purpose. All numerical data organized were treated using Statistical Products for Service Solution (SPSS).

For quantitative analysis, the Frequency count and Percentage will be used for the nominal data, such as sex, age, professional title, highest educational level and years of teaching experience. Researchers will use this information to evaluate the profile "double-qualified" teachers in higher vocational colleges in terms of gender, age, professional title, and professional qualities.

The analysis of the professional quality and competency scale will calculate the mean and standard deviation, the researchers will use this feeling to gain a sense of the practices demonstrated by "double-qualified" teachers in higher vocational colleges, including the process of collaborative efforts, and the use of talents and perspectives to achieve outstanding results in teaching and research. Based on the Likert scale as indicated:

Table C

Number	Mean Range	Description	Interpretation
4	3.51-4.00	Strongly Agree	Completely Consistent/Highly competent
3	2.51-3.50	Agree	Consistent/Competent
2	1.51-2.50	Disagree	Fairly Consistent /Less competent
1	1.00-1.50	Strongly	Not at all/Incompetent Disagree

In-depth quantitative analysis, will employ the t-test independent samples, analysis of variance (ANOVA)/ F-test, these are to observe whether there are significant changes in "double-qualified" teachers' assessments of their teaching practices and competencies when considering their profile.

The Pearsonr, coefficient correlation for rigorous statistical testing of the independent and dependent variables. These are to observe whether there are significant changes in "double-qualified" teachers' assessments of their professional quality and competencies. A decision criteria determined the acceptance and rejection of null hypothesis to indicate a significant or non-significant result.

3. Conclusion and Recommendations

3.1. Conclusion

Based on the findings of the study the following conclusions are drawn:

The demographic profile provide personal information that are align to the a double-qualified profile. The assessment that uses several indicators to measure qualities of double-qualified teachers are qualities found evident among the purposely selected respondents.

The assessment that uses several indicators to measure qualities of double-qualified teachers are qualities found evident among the purposely selected respondents. The assessment of qualities of double-qualified placed greater

weight to have consistently manifested advanced educational concepts.

The lack of significant difference in the perceptions of the respondents across varied demographic profile suggest that effective qualities is found universally among teachers and may not have bearings on the professional qualities exclusive to double-qualified teachers.

The competency performance that was evident in the respondents reflect the standard measure for competency factors.

The lack of significant difference in the statistical findings in the comparative assessment of the competency factors is assumed to have been possess universally by teachers wanting to teach.

Now it can be said that the findings can contribute to the growing evidence that teachers' professional qualities should be consistently cultivated essential to develop competencies to support in rendering effective performance for instruction. The finding is reflective of the theoretical framework of McClelland summarized to pay careful attention to what to achieve success rather than based on intelligence-based assumptions but to let the test subject reflect the important points of the competency you intend to test, rather than to evaluate and estimate the underlying characteristics and properties through a test.

3.2. Recommendations

Based on the findings highlighted by the conclusions the following recommendations are offered:

Since findings on the surveyed demographic profile did not register varying results to influence professional qualities that should be cultivated, training teachers should be selective and responsive to individual needs of the respondents.

Revisit the dimensions of professional quality and reinforce aspects of the qualities that will be more responsible to the needs of times.

Competency factors should be appropriated and enhance its elements to contribute to the growing needs of broader, diverse, and discriminating learner.

The adoption of this program is endorsed for adoption initially among school management of the participating schools.

4. Proposed Development Program

4.1. Rationale

Enhancing the professional qualities of teachers is essential for fostering a dynamic, well-rounded teachers where they can grow personally, professionally, socially. A robust development program can be cultivated for enhancement and foster the lifelong habits of delivering quality instruction.

The assessment of professional quality dimensions and competency factors revealed several findings that need strengthening and sustained.

4.2. General objectives

(1) To institute a program in continuous enhancement of teaching practices.

(2) To foster leadership skills teachers for collaborative efforts to nurture innovations for continuous improvement.

(3) To cultivate positive and inclusive collegial environments that encourage shared knowledge.

4.3. Plan of implementation

(1) Upon approval of the endorsed program, a courtesy call with the University official and the personnel -designate will be arranged.

(2) Organize organization meeting, and present initial agenda for implementation of program.

(3) Planning session with representatives of the school will be suggested with identified personnel to confer with.

(4) A budget allocation should be cleared and verified.

(5) Evaluation of the program and the eventual results and feedback shall be reported.

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