Research on the Critical Factors Affecting Taiwan Secondary School Teachers' Initial Acquisition of Formal Teaching Position

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Abstract

This research treated the secondary school teachers as the research scale and the research targets included the following: secondary school (employ unit), center of teacher education, and qualified teachers. In terms of these three groups of people, the topics of exploration focused on the perception of suitable teachers, perception of evaluation standard during the process of teacher examination and the relationship among teacher examination systems. The research was managed by two phases: the first phase referred to literature reorganization, expert interview, the qualities and conditions of suitable teachers, important evaluation standard during the process of teacher examination and teacher examination system used; the second phase included questionnaire survey, employ school acquisition, the perception of centers of teacher education and qualified teachers toward the suitability condition and examination evaluation standard in the first phase and teacher examination system used. This research found out that as to the perception of suitable teachers, through data collection, there were six factors reorganized. The levels of their importance were as follows: education devotion, teaching capacity, class management, capacity to guide special students, capacity to communicate with the parents and the will to undertake administrative works. Noticeably, employee unit and centers of teacher education apparently valued class management more, compared with trained teachers; as to evaluation standard of examination, the analytical result found out that the perception of three groups were different in terms of the views toward educational works, written examination data, candidate's age, club experience at school and ca-

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pacity to use multimedia support teaching materials. This research further proposed six suggestions for centers of teacher education and trained teachers: (1) employ schools considerably valued educational devotion; (2) trained teachers tended to neglect the importance of class management; (3) employee unit considerably cared about the new teachers' competence to use multimedia support teaching materials; however, trained teachers did not have the same view; (4) employee unit considerably cared about new teachers' views toward educational works as well as the candidates' ages; (5) generally speaking, trained teachers neglected the importance of club experience at school; (6) the data revealed that written examination data was not relatively important in terms of teacher examination.

Key Words: Suitable Teacher, Centers of Teacher Education, Secondary School, Teacher Examination, Trained teachers

1. Introduction

Under the environment in which the students' needs reduce and teachers' supply increase rapidly, it can be expected that qualified teachers will face more severe competitive pressure when seeking for employment; teacher cultivation in Taiwan means the teaching capacity and attitude training beyond the major knowledge of college. The cultivated students' chances to seek for teaching positions indirectly represent the educational result of an institution. Therefore, centers of teacher education also undertake this competitive pressure. In the fight of teaching positions, the real core characters are the secondary schools which hire teaching personnel; employ schools must select the most suitable candidate from plenty of qualified teachers. The decision-making process of selecting suitable teachers includes two key points: definition of suitable teacher and the evaluation standard of employ schools when proceeding with actual selection. The trained teachers at school must understand them and make their own characteristics to meet the above key points in order to succeed in the severe competition. The centers of teacher education in the universities also design the curriculum and activities by these two points for training the suitable and qualified teachers who meet the needs of employ schools; the trained teachers from the teacher education universities can thus control the situations of teacher examination more easily; the research purposes are respectively described as follows:
1. Understanding the perception of employ schools, centers of teacher education and qualified teacher toward suitable teachers.
2. Understanding the perception of employ schools, centers of teacher education and qualified teacher toward evaluation standard of new teachers.
3. Comparing the perception difference of employ schools, centers of teacher education and qualified teacher toward the importance of factors of suitable teachers.

4. Comparing the perception difference of employ schools, centers of teacher education and qualified teachers toward the importance of factors of evaluation standard of new teachers.

5. Comparing the relationship between employ schools, qualified teachers and teacher examination system and evaluation standard of new teachers.

2. Literature Review

2.1 Educational and Professional Capacities of Suitable Teachers

Are teachers competent instructors or professional educators? Apart from the educators' self-awareness, the public's high degree of identification with the educators is also the standard for judgment. The scholar Huang (1992) indicated that the basic conditions of specialty were: (1) systematic theory-based; (2) the authority is from knowledge and technique; (3) long-term professional training; (4) a set of specific principle and regulation; (5) strong professional organization; (6) loyalty to professional group; (7) requirement for professional autonomy. Chia (1979) proposed that the conditions of specialty are: (1) having excellent academic and prominent competence; (2) having altruistic spirit of service and devotion; (3) setting up professional moral regulation. In addition, the scholars Wang and Rao (1996) proposed four basic elements with respect to the teachers' professional quality: (1) Professional knowledge; (2) professional skill; (3) professional spirit and (4) after-reflection capacity.

Schon (1974) indicated that during the process of professional socialization of the teachers, there has been the problem of division of theory and practice. Wilson et al., (1987) pointed out that if educational and professional knowledge instruction was treated as a kind of specialty, the teachers must have possessed professional knowledge. In other words, it meant under certain teaching situation, in order to reach efficient instruction, the teachers must possess a series of understanding, knowledge, skill and quality. Jan (1992) indicated that the teachers are professional personnel of education and they can play many different roles at different level; in foreign countries, the teachers are called as following: (1) helmsman of knowledge; (2) executor of skills of teaching steps; (3) constructor of content relationship; (4) media of cultivation and (5) dialogue partner of situation instruction.

Complete cognition toward educational specialty and perception toward suitable teachers complement each other; thus, the evaluation standard of teachers' specialty must be explored profoundly as the professional evaluation standard with respect to suitable teachers. Evaluation standard of teachers' specialty refers to the evaluation standard relate to teachers' execution of professional activities. The evaluation standard of teachers' specialty in this research is based on the research findings of Chen (2003) and it mainly includes the follow-

ing 8 categories:

1. Instruction preparation: including the teaching goals with proper plans, teaching activities designed according to competence indicator, suitable teaching materials and related data prepared according to the requirements of instruction activities, understanding the content of learning field material, understanding the students' cognition level and the start behavior, stimulating the students' attention and learning interests, etc.

2. Instruction practice: Using various teaching media for instruction, operating various teaching strategies and methods, instructing the students' learning, reasonably arranging and flexibly using instruction time, proceeding with instruction activities, using diverse evaluation to examine the learning results, instructing the students' individual learning activities according to different needs and arranging proper support teaching measures to help the students with efficient learning.

3. Class management: including establishing lively and harmonious class air, creating safe and clean teaching environment, establishing class rules and activity process which are beneficial for the students' learning, executing class rules and activity process which are beneficial for the students' learning, discovering the students' potential and advantages, fully understanding the students' physical, psychological and interpersonal relationship development, paying attention on the teachers' words, acts and virtue to set up the model of words and acts, caring about individual students' learning and life situations, operating guiding skills and treating the students fairly.

4. Administrative cooperation: including actively participating in field instruction conference and school-related organizations (textbook examination committee, curriculum development association, reward and punishment commission, etc.), supporting the business related to teaching, actively providing the opinions with respect to reform of school affairs, self-examination and reviewing instruction situations.

5. Interpersonal relationship: including establishing good relationship with students, getting along well with colleagues, supporting and encouraging each other, constructing their own parent-teacher meetings of the class to communicate and contact with the parents, actively and objectively assisting and dealing with the conflicts among parents, teachers and students, having communication with colleague teachers, sharing instruction learning and proceeding with coordinating instruction, communicating with the parents in proper and sincere ways with regard to the students' learning and behavior and having efficient communication and cooperation with the administrative personnel.

6. Research and advanced studies: actively participating in advanced study learning and professional growth activities, proceeding with related studies with regard to instruction issues, actively presenting prominent instruction results (such as instruction inspection and learning and presentation of teaching works), reorganizing systematic instruction files, setting up personal life plan and making efforts to carry out the plan.

7. Training and guiding knowledge: including understanding the process of school's crisis dealing, having the knowledge to guide the teenagers, executing student safe education promotion and drilling in class, recognizing the dangers on campus and reminding the students of paying attention on safety at any time and constructing the urgent contact network between themselves and the students in class.

8. Professional attitude: being willing to treat educational work as the life career, following the contract of employment and not having part-time works out of the school, being on time in class, not leaving early, dealing with school affairs with professional knowledge and be familiar with the teachers' rights and obligations.

Based on instruction knowledge, Dwyer and Stufflebaem (1996) constructed the standards of four dimensions: (1) content and knowledge of subjects; (2) instruction methods and skills; (3) class environment; (4) teachers' specialty. Scriven (1994) constructed five categories of evaluation field and standard from the perspective of teachers' duties: (1) academic knowledge (including the knowledge of specific subjects and ordinary subjects); (2) instruction competence (including communication skills, classroom management, curriculum development and evaluation); (3) measurement (including test, scoring and the report related to evaluation result); (4) professional skills (including the teachers' career morality, attitude, advanced study, knowledge about the teachers' rights and obligations and knowledge related to school and school development); (5) other individual assistances for school and community. Holdzkom and Brandt (1995) indicated that North Carolina of the USA. adopted seven standards to evaluate the teachers of the said state. This article only presents the aspects related to instruction: (1) management of instruction time; (2) management of students' behavior; (3) presentation of teaching activities; (4) supervision and guidance of students' performance; (5) feedback of instruction; (6) promotion of instruction and (7) communication in the educational environment.

Based on the views of the above experts and scholars, the researcher believed that teacher evaluation standard can be treated as the employ schools' principle to measure new teachers and it can be generalized into 8 categories: (1) virtue and integrity: the teacher's personality, morality, virtue and behavior are the models learned by the students; (2) each academic knowledge: basic knowledge of each subject; (3) instruction competence of subjects: the knowledge to "manage" each subject well, including teaching plans; (4) instruction skills: operating various skills and methods to reach instruction goals during the process of teaching, including language use in class, oral expression and communication skills; (5) class management: including teacher-student relationship, control and management of classroom order, dealing of students' problems, etc.; (6) professional advanced study and research: including instruction-related researches and participation in advanced studies; (7) interpersonal relationship: including the communication with teachers at school, administrative personnel and parents; (8) administrative cooperation: cooperation and accomplishment as expected for the ad-

ministrative missions at school.

In this article, suitable teacher is treated as an important factor for exploration; thus, we must present the significant description through the experts' views of suitable teacher characteristics. Hsieh (1997) collected the domestic research targets' common consensus toward the characteristics of junior high school teachers by Delphi Method and generated the characteristics of excellent teachers into four categories: (1) mutual relationship between teachers and students; (2) instruction and learning environment; (3) instruction skills and (4) instruction attitude and standard. According to the view of Chang (1992), the characteristics of suitable teacher can be divided into 6 categories: (1) competence of instruction plan; (2) capacity to use various teaching skills; (3) teaching organization and development capacity; (4) competence of oral communication; (5) competence of written communication; (6) capacity of class management. However, the teachers must develop several kinds of knowledge for managing efficient instruction. Shulman (1987) indicated that the most important of all was "the knowledge of academic subject instruction". It meant to combine "content" and "instruction" into a kind of understanding and to recognize, in terms of certain specific subject, how to organize, express and adjust the teachers' academic knowledge according to the students' different interest and competence and further manage instruction; the teacher's academic knowledge will become more diverse and abundant because of the teachers' understanding of the students, curriculum, situations and teaching methods.

Based on the views of the above experts and scholars, the researcher believed that the characteristics of suitable teacher can be treated as the employ schools' evaluation standard with respect to suitable teachers and generated them into the following 4 categories: (1) instruction competence: operating various skills to trigger the student's learning motives; (2) class management capacity: properly controlling the air of classes and attracting the students' coherence and learning capacity; (3) training and guiding capacity: having the capacity to guide the special students and controlling the students' behavior at any time and correcting them immediately; (4) communication competence: communicating with the parents at any time without the obstacles in order to understand the students' thoughts and behavior out of school.

2.2 Characteristics of Teacher Education Act

The channels of cultivation are diverse. In the past, secondary school teachers were cultivated by the departments of education in three normal universities and National Chengchi University; at present, the cultivation institutions of secondary school teachers include the follows: the departments of education in national and private universities, centers of teacher education in national and private universities, three normal universities, etc. The second characteristic is the liberation of teacher cultivation. Due to the unified tendency of the past

teacher training education, the government and personnel units could cultivate the teachers with plans and efficiently control all of the employment market mechanisms which were considered a kind of monopoly; however, after the diversification of teacher cultivation, the universities have the opportunities to cultivate the teachers. Thus, the diverse channels cannot sophisticatedly control the market mechanism of employment. The people who intend to acquire teaching positions must face the free competition through the supply and demand function of the market and further adjust the supply and demand. In addition, teacher cultivation is based on the method at one's own expense. The tuition of trained teachers at public expense can be waived; besides, the said teachers have the subsidy at public expense and they are obliged to serve after graduation. The transformed teacher cultivation at present mainly refers to the expense on one's own. The subsidy of trained teachers at public expense is only limited to specific departments. Finally, the teacher qualification must be acquired through national examinations. In the past, after accomplishing education credits before employment and passing the initial test of teacher qualification, the trained teachers could participate in one-year educational practice. Once their grades met the requirements, they could participate in re-examination of teacher qualification. After passing the re-examination, they could acquire the certificate of qualified teacher; current transformed method is that the trained teachers must accomplish education credits and then participate in half-year educational practice courses. After meeting the requirements of grades, they can be given the teacher certificate before employment and join in national qualification test on Aprils every year. After passing the examination, they can acquire the certificate of qualified teacher.

For ten years from 1995 to 2005, the transformation of teacher cultivation policies has been extremely significant. It transformed from public expense system into one's own expense system; besides, it turned from planned teacher cultivation into the teacher supply and demand adjusted by market mechanism. In addition, as to educational practice, it transformed from one-year practice teacher identification with practice subsidies into half-year practice teacher without allowances and the later must pay the expense for four credits. The acquisition of qualified teacher certificate is transformed into the system of national qualification test. These changes result in brand-new look and severe challenge of domestic teacher cultivation which significantly influence the supply and demand of future teachers and the development of teachers' specialty.

2.3 Current Teacher Examination System

According to Li (2002) and actual operation, the researcher developed four different kinds of selection system plan of secondary school teachers as the selection method of secondary school teachers which included: engagement system on the principal's agreement, unified examination employment system, school private examination system and authorized examination system.

1. Engagement system on the principal's agreement: The engagement of teacher is based on the selection of principal at each school for qualified personnel and employment. As to the teacher employment measure from 1960~1970s, the high school teachers during the time were hired by the principals. The high school teachers of Taiwan province were selected and assigned by the governments of counties and cities. The measure was often applied in private high schools.

2. Unified examination employment system: the engagement of teachers is unified by educational institutions for public selection. After selecting the suitable personnel, the teachers will be assigned to the schools with needs and engaged by the schools. After distribution, the schools cannot refuse and the principals of employ schools should hire the teachers by laws and cannot employ new teachers on their own. The method is not easy to select the teachers suitable for the schools.

3. School private examination system: The employment of teachers is based on the ideal of school-based professional autonomy. As to the authorization, each school establishes teacher judgment committee and examination committee and selects the teachers from the qualified personnel recommended by the principal. Besides, according to Article 26 of educational personnel employment regulations announced on March 19, 1997: "the engagement of teachers at different levels of schools should be based on the principles of equity, justice and publicity. As to the teachers at school below high schools, apart from the ones distributed according to laws, the principal recommends the teachers from the qualified personnel in public selection to teacher judgment committee. After passing the examination, the teachers are engaged by the schools" (Ministry of Education, 2000). Currently, the junior high school teacher selections in Taipei city and most of the cities are based on the regulations of this Act. By this method, the schools spend more costs and human resources because of self-management; however, most important of all, they can select the teachers suitable for their own schools.

4. Authorized examination system: authorized teacher selection system means that the educational governmental units of counties and cities ask for the schools' will according to the schools' needs. The schools can actively authorize the educational governmental units to manage unified teacher selection and distribute the teachers collectively. At present, some of the counties and cities provide this system to serve the schools at different levels. In this system, the school will authorize part of the selection works to educational institutions so that the schools would not spend too many costs and human resources.

The selection methods of the above authorized examination system and school private examination system generally refer to written test, oral test and demonstration. The content of selection includes professional subjects, teaching materials and methods of different subjects, Chinese, math, educational professional subjects, teaching plan making, instruction presenta-

tion, written background examination, etc. The methods of the examinations hosted by each school are mostly oral test and demonstration. However, if there are too many candidates for selection, the schools would screen the teachers by written test and then proceed with demonstration and oral test. In addition, some schools also involve aptitude and psychological tests.

2.4 Comparison between the General Situations of Trained Teachers and Students

2.4.1 Numbers of Trained Teachers

According to the information of Department of Secondary Education, Ministry of Education, the cultivation of secondary school teachers include traditional normal universities, center of teacher education after educational curriculum as well as credit courses after bachelor degree. From 1995 to 2004 academic year, there are 76,976 people cultivated which are much more than the trained teachers at other phases in the same period. It was 47.4% of the total numbers of teachers of teacher cultivation in the same period. In other words, the numbers of people in secondary school teacher cultivation are more than those of other phases. Noticeably, according to the numbers of teachers in secondary school teacher cultivation from 1995 to 2004 academic year, we find out that the recruitment of teacher schools from 1995 to 1997 academic year exceed the numbers ratified by educational curriculum. However, from 1998 to 2004 academic year, the numbers of recruitment ratified in educational curriculum exceed the numbers of recruitment in teacher schools. During this period, the numbers of secondary school teacher cultivation were more than the number of people cultivated in teacher schools. However, the numbers of secondary school teachers grew from 1995 academic year to 76,000 in 2004 academic year. There were around 45,000 people accomplishing before-employment courses, passing educational practice in the practice school and then acquiring secondary school qualified teacher certificates. Around 60% of trained teachers acquired qualified teacher certificates and they can participate in teacher examination for teaching position. Using secondary school teachers in 2004 academic year as an example, there were totally around 9,100 secondary school teachers cultivated; however, there were 5,600 people (about 61%) acquiring the qualified teacher certificates of the year.

Based on the above, after the diversification of teacher cultivation channels, the teacher supply rapidly increased in ten years, from 9,700 people in 1995 academic year to 19,000 people in 2004 academic year (the growth was around one time). The qualified secondary school teachers cultivated increased from 794 people in 1997 academic year to 5,673 people in 2004 academic year (the growth was around 7 times).

2.4.2 General Situation of Numbers of Students

In recent years, the birth rate in Taiwan has gradually reducing. The numbers of secon-

dary school students dropped from 1.95 million people to 1.69 million people in 2004 (reduced by about 13%); the reduction of 260,000 students means the loss of 13,000 teaching positions (based on the standard of elementary school and junior high school class organization and numbers of teacher organization: 40 students in one class and two teachers for each class) (modified on Dec. 10, 1999).

2.4.3 General Situation of Secondary School Teachers

The numbers of secondary school teachers in 1999 academic year was 9,800 people and reduced to 9,700 people in 2004 academic year (the reduction was by around 1,000 people). It means that the demands of secondary school teachers did not increase; instead, it was reduced; noticeably, secondary school teachers started to reduce in 2002 academic year. The researcher found out that the demands of junior high school and vocational school teachers were reduced; however, the demands for senior high school teachers were increased by 5,000 people. The phenomenon was in that current policies of Ministry of Education do not encourage the cultivation of professional technique talents at the stage of vocational school; they expect the level of professional technique talents can be upgraded and the talents can be trained by technology colleges or universities. Thus, the recruitment numbers in vocational schools are reduced. The government also encourages the transformation of vocational schools into combined high schools which is the reason triggering the rapid increase of general department teachers in senior high schools.

In recent year, the reduction of birth rate results in the gradual declination of people attending schools in the future. Each school thus has to reduce the classes or execute small-class instruction. The declination of people relatively leads to the reduction of needs for teachers; the needs for secondary school teachers are also reducing. Although overall demands for secondary school teachers are declined, we can find out that the teachers in senior high schools increase and the demand for vocational school teachers is reduced.

2.5 Definitions of Terms

1. Teacher cultivation universities: according to the definition of Article 3.2 of Teacher Education Act, president Hua-tsung-yi-yi-tsu 09300088031 order on May 5, 2004: teacher cultivation universities mean teacher schools and the universities with related departments of teacher cultivation or center of teacher education.

2. Center of teacher education: center of teacher education is short for center of teacher education. According to the definition of Article 5 of Teacher Education Act, president Hua-tsung-yi-yi-tsu 09300088031 order on May 5, 2004: teacher cultivation refers to teacher schools and the universities with related departments of teacher cultivation or center of teacher education which are granted by central executive institutions. The centers of

teacher education established in universities should be ratified by central executive institutions; central executive institutions set up the regulations of affairs related to establishment conditions, process, teachers, facilities, recruitment, curriculum, year of study and suspension.

3. Before-employment teacher education courses: According to the definition of Article 3.3 of Teacher Education Act, president Hua-tsung-yi-yi-tsu 09300088031 order on May 5, 2004: before-employment teacher education courses: only participating in the related courses accepted by this Act before the teacher qualification test. The definition of Article 7 in Teacher Education Act: teacher cultivation includes before-employment teacher education and teacher qualification test. Before-employment teacher education courses include general courses, professional courses, educational specialty courses and educational practice courses.

4. Examination system: this article will mention 4 examination systems as follows.

   (1) Engagement system on the principal's agreement: the engagement of teachers is based on the principal's selection and engagement of qualified personnel in each school.

   (2) Unified examination employment system: the engagement of teachers is based on the unified and public selection of educational executive institutions. After selecting the suitable personnel, these teachers are distributed to the schools with needs collectively and engaged by the schools. The schools cannot host teacher examinations on their own.

   (3) School private examination system: the engagement of teachers is based on the ideal of school-based professional autonomy. The schools are authorized to establish teacher review committee and examination committee. The selection is based on the qualified personnel recommended by the principals. The schools can select the suitable teachers who meet their needs.

   (4) Authorized examination system: the engagement of teachers is based on the authorization to educational executive institutions or unified selection of several schools.

5. Trained teachers: the people who study in universities with teacher cultivation and participate in before-employment teacher education courses are called trained teachers.

6. Suitable teachers: According to the definition of Article 3 of Educational Personnel Employment Regulations (modified by Ministry of Education on Dec. 17, 2003): The engagement of educational personnel should focus on their virtue and loyalty to the country; their knowledge, experience, talent, physique should be equal to properties of the positions they intend to undertake. The engagement of principals at schools of different levels and executive personnel in social education and academic research institutions should focus on the leadership and comply with Article 13 of Educational Personnel Engagement Regulations: secondary school teachers should possess one of the following qualifications:

(1) Graduated from normal university and departments of teacher colleges.

(2) Graduated from departments of education colleges or universities.

(3) Graduated from universities or departments of independent colleges and accomplishing the educational subjects and credits regulated.

(4) Before the implementation of this article, having the qualified certificate of secondary school teachers with the valid term.

7. Secondary school teachers: "secondary school teachers" in this research refer to the qualified teachers in public and private senior high schools, vocational schools and junior high schools, not including practice and substitute teachers.

8. Practice guiding teachers: Practice guiding teachers in this research mean the teachers teaching in centers of teacher education and are currently guiding the secondary school practice teachers.

9. Qualified teachers: According to Article 8 of Teacher Education Act announced by Ministry of Education in 2004: the people acquiring the qualification of practice teacher should experience one-year educational practice. After fulfilling the grades and passing the re-examination of teacher qualification, they can become qualified teachers.

3. Research Method

3.1 Data Collection

In order to access to the perceptions of three groups (employ schools, centers of teacher education and qualified teachers) toward suitable teacher, evaluation standard of new teachers and teacher examination system and select and suggest the most proper aspects, this research collected the data in three stages: literature review, expert interview and questionnaire survey for the collection and reorganization of opinion data.

3.1.1 Literature Review

In order to collect the factors of suitable teacher perception and evaluation standard of new teachers and various teacher examination systems, this research looked for the related issues studied by other researchers or experts and intended to find out the issues, factors and systems associated with this research from plenty of related literatures; understand more about the development of this research by reading the literatures and attempt to find out the common parts of various factors and systems from the reference as the materials for the expert interview of the next step.

3.1.2 Expert Interview

According to the reading result of literature in the last stage, the researcher reorganized

the data needed by this research and transformed the data into written documents which were not only beneficial for expert interview, but also to ensure that the interview content every time would not deviate from the subjects of the researcher. The interview targets include: secondary school principals, directors, directors of teacher education centers, practice guiding teachers, supervisors of educational institutions, and trained teachers. When proceeding with expert interview, the research recorded the content and reorganized it after the interview. The researcher attempted to find out the same factors affecting suitable teacher perception, evaluation standard of new teachers and current classification of teacher examination system from the above expert interview. The researcher reorganized the data collection in the second stage for the editing content of the questionnaire survey of the third stage.

3.1.3 Questionnaire Survey

The research reorganized the same factors affecting suitable teacher perception, evaluation standard of new teachers and classification of teacher examination system for editing questionnaire and the collection of plenty of samples. The investigation of this stage intended to examine and support the result of expert interview in the second stage by the data from large samples.

3.2 Data Dealing and Statistical Analysis

This research used expert interview, descriptive statistics, variable analysis and t test and described the data collection and analytical methods as the follows:

3.2.1 Expert Interview

The research interviewed employ school principals, supervisors of educational institutions, practice guiding teachers in teacher education centers, qualified teachers who undertake teaching positions for the first time and reorganized the shared items toward suitable teacher perception and evaluation standard of new teachers; during the interview process, the researcher reorganized the current examination systems for new teachers in secondary schools.

3.2.2 Descriptive Statistics

This research would analyze the basic information of questionnaire in three groups by descriptive statistics. The types of data included qualitative data and quantitative data; with regard to qualitative data, the researcher presented it by frequency distribution table for analyzing the basic information and location and properties of employ schools of people filling out the questionnaires in three groups; the researcher divided the data into several clusters and calculated the numbers of data in each cluster which revealed the distribution of data. As to quantitative data: the researcher respectively presented it by frequency distribution table and

contingency table. Apart from calculating the numbers of data in each cluster for showing the distribution of data, the researcher also used contingency table to present the connection between two variables so that we have further understanding toward the connected variables in the basic information.

3.2.3 One-Way ANOVA and T Test

The researcher used One-Way ANOVA to analyze the questionnaires of three groups with respect to the importance of suitable teacher perception and evaluation standard of new teachers. The method was the statistical analysis to examine if over two averages were equal or if there was the influence of certain factors. Thus, after collecting the data of this part, this research would use One-Way ANOVA to examine if there was difference of importance perception in three groups with respect to suitable teacher perception and evaluation standard of new teachers. Subsequently, the researcher used t test to analyze if there was importance perception difference between two groups with regard to the item with perception difference of importance in three groups.

This research treated secondary school teachers as the research scale. The related groups were secondary schools (short for employ school), centers of teacher education and qualified teachers. The subjects for exploration were the three groups' perception toward suitable teacher and the perception toward evaluation principle during the process of teacher examination. The research was managed by two stages: the first stage: expert interview; in the second stage, the researcher used questionnaire survey to obtain the perception toward shared suitable conditions and examination evaluation standard in the first stage of employee unit, centers of teacher education and qualified teachers. The researcher edited the questions of questionnaire and treated 10 points as the score of the answer "very important" to the question and 1 point as the score of the answer "not important".

4. Data Analysis and Results

4.1 Data Description

4.1.1 Data of Expert Interview

This research empirically interviewed three groups: 3 people, 5 people and 5 people (13 people in total).

1. The first group: the background of personnel in employ schools who received the interview was shown in Table 1. The representatives of the employ schools in the interview all have undertaken the jobs as supervisors of educational and administration institutions and committee members of teacher examination and are currently the principals and su-

pervisors of secondary schools. The people with this kind of background have served in the education circle for over ten years and are considerably helpful for the data collection of this research. For example, their abundant administration experience as experts could provide the concrete factors for the exploration in this research.

Table 1. Background of the personnel in employ schools who received interviews

Code	Background information
A1	Have been the supervisor, principal of elementary school, committee member of teacher qualification test, passing the high-level examination of educational administrator, having doctor degree and currently undertaking the position as the principal of certain junior high school in central Taiwan.
A2	Have been the supervisor, committee member of teacher examination, teacher in teacher education center and currently undertaking the position as the principal of certain junior high school in central Taiwan.
A3	Have been the teacher in elementary school, committee member of teacher examination and currently undertaking the position as the supervisor of educational bureau of certain county in central Taiwan.

2. The second group: the background of the personnel in teacher education centers was shown in Table 2. The personnel in this group all have been the teachers of high schools and elementary schools, including the directors of teacher education centers, senior professors who have served in teacher schools for over 40 years and practice guiding teachers in teacher education centers.

Table 2. background of personnel in teacher education centers who received the interview

Code	Background information
B1	Have been the teacher of secondary school, committee member of school affair examination in secondary school and elementary school, teacher in teacher education center, director of consulting center and currently undertaking the job as the director of teacher education center.
B2	Have been the teacher of secondary school, guiding teacher of teacher education center and currently undertaking the job as the professional teacher of teacher education center.
B3	Have been the teacher of secondary school, teacher of special education school, committee member of school affair examination in secondary school and elementary school, secretary of college research development and currently undertaking the job as the professional teacher of teacher education center.
B4	Have been the teacher of secondary school, professor in teacher college, director of computer center in teacher college and currently undertaking the job as the practice guiding teacher of teacher education center.
B5	Have been the teacher of secondary school, director of discipline and currently undertaking the job as the practice guiding teacher of teacher education center.

3. The third group: the background of the qualified teachers who received interview was shown in Table 3. The personnel in this group formally acquired teaching positions in July, 2004 and were cultivated by the teacher education centers in colleges. One of them acquired teaching position by participating in only one teacher examination and the rest have participated in many tests. The subjects taught by the personnel in this group were: two in general department and three in vocational department.

Table 3. Background of the qualified teachers who received interview

Code	Background information
C1	Graduated from certain teacher education center in central Taiwan and acquiring qualified teacher certificate of information dealing department of secondary school in July, 2004 and acquiring formal teaching position and teaching in certain combined high school in northern Taiwan in the same year.
C2	Graduated from certain teacher education center in central Taiwan and acquiring qualified teacher certificate of math department of secondary school in July, 2004 and acquiring formal teaching position and teaching in certain high school in southern Taiwan in the same year.
C3	Graduated from certain teacher education center in central Taiwan and acquiring qualified teacher certificate of English department of secondary school in July, 2004 and acquiring formal teaching position and teaching in certain junior high school in central Taiwan in the same year.
C4	Graduated from certain teacher education center in central Taiwan and acquiring qualified teacher certificate of food management department of secondary school in July, 2004 and acquiring formal teaching position through only one teacher examination and teaching in certain senior high school in central Taiwan.
C5	Graduated from certain teacher education center in central Taiwan and acquiring qualified teacher certificate of tourism business department of secondary school in July, 2004 and acquiring formal teaching position and teaching in certain senior high school in central Taiwan in the same year.

Based on the above interview, the researcher reorganized the results of three groups and edited the 6 results in the second part of the questionnaire, including: (1) total devotion to educational works; (2) good instruction skills; (3) having the class management competence; (4) having guiding capacity for special students; (5) having good communication competence with the parents; (6) the will to undertake the administrative works. There were 11 common points of evaluation standard for selecting new teachers and the researcher edited the result in the third section of questionnaire, including: (1) oral expression competence; (2) devotion to the undertaking of administrative works; (3) having views toward educational works; (4) written examination data of candidates for teaching positions; (5) candidates' age; (6) student club experience at school; (7) the teaching position the candidates apply for is not the major in college; (8) the academic reputation of candidate's teacher cultivation institution; (9) candidate's social and economic positions of family; (10) capacity to use multimedia support teaching materials; (11) candidate's household register.

4.1.2 Editing the Content of Questionnaire Survey

The content of questionnaire included three sections. The first section (basic information): this questionnaire is distributed to three different groups including: (1) employ schools: employ school property, teaching level, name of position, experience value of judge member of teacher examination and teacher examination system; (2) centers of teacher education: employ school properties, teaching years of guiding teachers and experience value of judge member of teacher examination; (3) qualified teacher: employ school properties, times of examination, grades of written test, oral test and demonstration.

The second section: suitable teacher perception: the questions of three groups were the same, including 6 questions: education devotion, instruction competence, class management, guiding capacity, communication competence with parents and the will to undertake administrative works. The questions treated 10 points as the score of the answer "very important" and 1 point as the score of the answer "not important".

The third section: the evaluation standard for selecting new teachers: the questions of three groups were the same, including 11 questions: oral expression competence, devotion to administrative works, view toward educational work, written examination data, candidates' age, club experience at school, the positions applied for are not the majors at colleges, academic reputation of the teacher cultivation institutions, candidate's social and economic positions of family, capacity to use multimedia support teaching materials, the school applied for is at household register. The questions treated 10 points as the score of the answer "very important" and 1 point as the score of the answer "not important".

4.1.3 Process of Questionnaire Editing

As to the first draft of "key factors for the qualified secondary school teachers to acquire the initial formal teaching position," the researcher invited 6 people (including teachers and principals of teacher education centers to provide the simulation answers to the first draft of the questionnaire, point out the unclear aspects and offered the opinions of modification. After modifying the first draft of questionnaire, the formal questionnaire of "key factors for the qualified secondary school teachers to acquire the initial formal teaching position" was established; in addition, according to the research purposes, the researcher selected administrative executives of secondary school (70 samples), directors of teacher education centers, centers of teacher education practice guiding teachers (52 samples) and trained teachers (95 samples) to participate in questionnaire survey.

4.2 Investigation of Questionnaire

After this research accomplishing the editing of "key factors for the qualified secondary school teachers to acquire the initial formal teaching position," the researcher then sent the

questionnaires to the research targets of sampling in the middle of Dec., 2004 and set Jan. 31, 2004 as the formal deadline for the questionnaire return. This research has distributed 217 questionnaires and there were totally 161 valid questionnaire returned. The return rate was 74.1%.

4.2.1 Basic Data Analysis

1. Data analysis of employ schools

The questionnaires were distributed by mails. The researcher respectively distributed the questionnaires to three different groups: employee units, centers of teacher education and trained teachers. As to employee units, the researcher treated the administrative executives (such as principals and educational administration directors) at school which received practice teachers and the administrative executives who led the process of teacher examination as the sampling population of questionnaire. The questionnaires were sent to 35 schools, including 2 secondary schools in the north, 28 in the center, 3 in the south and east in the east. Each school received two copies; there were 52 questionnaires returned from 33 schools and the return rate was 74%.

There were 52 employ schools returning the questionnaires, including 5 public schools and 7 private schools in Taichung city; 11 public schools and 13 private schools in Taichung county; 2 private schools in Taipei city; 2 private schools in Taipei county; one public and one private school respectively in Tainan city and county; two public and two private schools respectively in Hualien county and Ilan county; two private schools in Miaoli county; four public schools in Changhua county. There were 53 schools in total. As to the sampling, 4 samples in the north, 42 samples in the center, 2 samples in the south and four samples in the east. The sampling personnel filling out the questionnaires included 19 educational administration directors, 13 principals, 8 school affair directors (discipline directors), 6 consulting directors and 3 personnel affair directors. There were 49 people in total and 3 of them did not undertake the administrative positions listed in the questionnaire.

As to the participation in teacher examination, the principals and educational administration directors had more changes than the directors in other offices; during the process of participating in teacher examination, there were 57.7% having over 5 times of experiences participating in teacher examination. It showed that the principals and educational administration directors played extremely important roles during the process of teacher examination. The samples of this research were filled out by the administrative executives; besides, half of them have participated in over 5 times of teacher examination. They were really the executives with abundant experience of being teacher examination committee members.

2. Data analysis of teacher education centers

Some of teacher education centers treated the practice professors in secondary school as

the sampling population. There were totally 14 teacher education centers and 52 question-naires distributed; among the samples, there were 25 questionnaires returned from 10 teacher education centers and the return rate was 50%. There were totally 25 questionnaire returned including one sample from teacher education center in public university of Kaohsiung city, five samples from teacher education centers in private university of Taichung city, 7 samples from teacher education centers in private university of Taichung county, one sample from teacher education center in public university and three samples from private universities of Taipei city, one sample from teacher education center in private university of Taipei county, 6 samples from teacher education centers of private universities in Tainan county and one sample from public teacher education centers in Taoyuan county. There were totally 25 sam-ples from teacher education centers in ten teacher education universities.

Since the teacher education institutions were distributed around the island, the focus was on the samples in centers of teacher education which cultivated secondary school teachers and Ministry of Education opened the numbers of people for secondary education curriculum (about 100 people for each school), the full-time teachers arranged were relatively less than those in traditional normal universities. Thus, it was more difficult to acquire the samples of this aspect. According to description, we can realize that among the people who filled out the questionnaire samples, there were 18 people who undertook the jobs as practice guiding teachers for over three years. It meant that the personnel filling out the questionnaires pos-sessed abundant experience of guiding practice teachers. In other words, the experienced practice guiding teachers had more understanding toward suitable teacher perception.

3. Qualified teacher analysis

The sampling population included the qualified teachers who were graduated in June, 2004, obtained before-employment teacher education certificate, participated in educational practice for one year, received secondary school qualified teacher certificate in July, 2004 and have found the teaching positions. The distribution targets of questionnaire included the following two: graduating students in teacher education centers of two universities in central Taiwan, obtaining qualified teacher certificates and acquiring the teaching positions. The sec-ond were the qualified teachers cultivated by other centers of teacher education who also obtained the teaching positions for the first time in the schools served by new teachers in the first item. There were 95 questionnaires distributed and 83 returns. The return rate was 87% and all of the returned questionnaire were valid samples. The sample collection focused central Taiwan. The employment samples in central region included 21 samples in public school and 22 in private schools; 3 samples in public schools and 7 private schools in north; 17 samples in public schools and 12 private schools in south; there were 41 samples respectively in public and private schools (82 samples in total). According to the above data, there were 41 samples teaching in central region (including Taichung city and county, Nantou and Changhua). Therefore, the initial teaching position opportunities of the teacher

cultivated in centers of teacher education would focus on the places near the teacher education universities they have studied in.

The teachers with over 5 times of teacher examination experience were 29.6%. In other words, in order to acquire the teaching positions, there were about 30% of qualified teachers having the examination at schools around the island for over five times; most of them passing the examinations in public schools instead of private schools with over 5 times of experiences. It showed that the more times of examinations they participated in, the more experience they gained. They could master more in the later tests. The 50% of the teachers passing teacher examination had over 80 points in terms of written test, oral test and demonstration. It means that written test was still the extremely important factor in teacher examination; as to the meaning of other 31 samples, through the researcher's inquiry, the personnel were not willing to expose their grades and the employ schools also did not announce the grades.

4.3 Suitable Teachers' Perception Analysis

The analytical process of suitable teacher data was as follows. The researcher first obtained the averages and standard errors of each suitable condition in the three groups by the data acquired. The result was shown in Table 6: for education devotion, three groups respectively gave high scores: 9.79, 9.68 and 9.34; the perceptions of employ schools and centers of teacher education toward suitable teacher were generally consistent; only some of the orders of qualified teachers were different from those of other two groups. Through data analysis, we found out that qualified teachers placed the capacity of class management in the second place which was higher than the third place in the other two groups. In addition, qualified teachers placed communication competence with parents in the fourth place which

Table 4. Average and standard error analysis of three groups' perceptions on suitable teachers

Perception of suitability	Employ school	Teacher education center	Trained teachers	Sum
Educational devotion	9.79 (0.61)	9.68 (0.75)	9.34 (1.18)	9.54 (0.98)
Teaching competence	9.21 (1.04)	9.16 (0.85)	8.84 (1.10)	9.01 (1.05)
Class management	9.35 (0.90)	9.00 (1.00)	9.13 (1.04)	9.18 (1.00)
Guiding competence	8.73 (1.19)	8.00 (1.22)	8.35 (1.65)	8.42 (1.46)
Communication with parents	8.60 (1.36)	7.92 (1.38)	8.61 (1.40)	8.50 (1.40)
Administrative works	6.60 (1.97)	6.20 (2.06)	5.80 (2.59)	6.12 (2.34)

Note: numbers in brackets were standard errors

was also higher than the fifth place in the other two groups. With regard to the above analysis, we can find out that three groups treated education devotion as the most important factor of suitable teacher; secondly, they intended to modify qualified teachers' suitable teacher perception orders with respect to instruction competence and communication competence with parents as Table 4.

According to the data, the researcher used variable analysis on three groups to examine if the perceptions toward suitable teacher were consistent. The result showed that apart from education devotion which revealed significance, the other five suitable teacher perceptions were the same for three groups. In other words, three groups had different perceptions toward the importance of education devotion. The rest 5 suitable teacher perceptions were the same for the three groups (See Table 5).

Table 5. Variable analysis of three groups' perceptions on suitable teacher

Perception of suitability	F test	Significance
Educational devotion	3.804	0.024**
Teaching competence	2.285	0.105
Class management	1.229	0.295
Guiding competence	2.334	0.100*
Communication with parents	2.593	0.078*
Administrative works	1.908	0.152

Note: *means P <0.1, **means P <0.05, ***means P <0.01.

Table 6. T test analysis of three groups on suitable teacher perception

Perception of suitability	Group comparison		Average difference	standard error	Significance
Educational devotion	employ school	teacher education center	0.11	0.24	0.889
	employ school	trained student	0.45	0.17	0.033**
	teacher education center	trained student	0.34	0.22	0.302
Teaching competence	employ school	teacher education center	0.05	0.25	0.980
	employ school	trained student	0.37	0.18	0.140
	teacher education center	trained student	0.32	0.24	0.415
Class management	employ school	teacher education center	0.35	0.24	0.362
	employ school	trained student	0.21	0.18	0.480
	teacher education center	trained student	-0.13	0.23	0.843
Guiding competence	employ school	teacher education center	0.73	0.35	0.121
	employ school	trained student	0.38	0.26	0.335
	teacher education center	trained student	-0.35	0.33	0.575
Communication with parents	employ school	teacher education center	0.68	0.34	0.138
	employ school	trained student	-0.02	0.25	0.997
	teacher education center	trained student	-0.69	0.32	0.093*
Administrative works	employ school	teacher education center	0.40	0.57	0.784
	employ school	trained student	0.80	0.41	0.155
	teacher education center	trained student	0.40	0.53	0.749

Note: *means P <0.1, **means P <0.05, ***means P <0.01.

According to the above analytical result, the researcher used statistical t test on the difference parts of education devotion and compared between two groups; the result examined in education devotion: employ schools, centers of teacher education and trained teachers had the same importance perception. The researcher found out that employ schools and trained teachers had inconsistent importance perception on education devotion (See Table 6).

4.4 Analysis of Evaluation Standard of New Teachers

According to Table 6, the order of examination principle was: ten points were the most. First of all, three groups treated the importance of oral expression competence in the first place and the averages were respectively: 9.25, 9.16, 9.05 (over 9). Therefore, oral expression competence played extremely important role when evaluating examination principle. The three groups had extremely high scores for oral expression competence. It means that the three groups clearly recognized the extreme importance of this capacity in evaluation principle of teacher examination. Subsequently, the principle orders of view toward educational work were the same and only second to oral expression competence. Thus, no matter at school or participating in educational practice, a trained teacher must learn how to thoroughly

Table 7. Average and standard error analysis of three groups on evaluation standard of new teachers

Evaluation principle of new teachers	Employ school	Teacher education center	Trained teachers	Sum
Oral expression	9.25(0.12)	9.16(0.17)	9.05(0.12)	9.13 (0.08)
Administrative devotion	7.13(0.21)	6.84(0.40)	6.53(0.28)	6.78 (0.17)
Views to education	8.69(0.16)	8.48(0.28)	7.81(0.20)	8.20 (0.13)
Written examination	7.02(0.22)	7.08(0.28)	6.25(0.24)	6.63 (0.15)
Age of application	6.44(0.27)	5.60(0.50)	5.48(0.25)	5.81 (0.18)
Club experience	6.60(0.24)	5.80(0.42)	5.58(0.24)	5.94 (0.16)
Non-major	7.35(0.31)	6.84(0.41)	6.96(0.21)	7.07 (0.16)
Academic reputation	6.12(0.35)	5.52(0.42)	6.23(0.26)	6.08 (0.19)
Social and economic status	3.73(0.35)	2.60(0.40)	3.36(0.24)	3.36 (0.18)
Multimedia	7.88(0.18)	6.72(0.33)	6.41(0.25)	6.94 (0.16)
Household register	5.00(0.40)	4.16(0.52)	4.23(0.28)	4.47 (0.21)

Note: numbers in brackets were standard errors

understand the educational work and had the educational service attitude for the overall education ecology or students and parents. With this self-discipline, they can master the teaching position in the future.

As to written examination data, in three groups, employ schools and trained teachers both placed its importance in the sixth place. However, centers of teacher education placed written examination data at the third. It meant that centers of teacher education intended to modify the importance of this perception. During the process of teacher examination, written examination data was not as important as expected. It seemed to imply that written examination data had become a kind common data of something should be prepared.

Another conventional idea in the past was that the candidates' social and economic background of the family was very important. In current evaluation standard of teacher examination, the researcher found out that social and economic positions of family was only at the last place; the averages of three groups were 3.73, 2.60 and 3.36 (10 points were the most). The averages showed that the importance of social and economic positions of family was not as important as said by the public. The reasons of the result were in that: on the one hand, current teacher examination has been publicized and present examination systems are based on the unified exemption of educational bureaus of county and city government. The teachers must pass the unified examination of written test hosted by city and county governments for having the changes of interview and demonstration. Thus, the past importance of social and economic positions of family was not as significant at present. According to this research, the factor was also an extremely unimportant factor in the three groups. On the other hand, due to the popularity of education, the educational resources no only seized in the

Table 8. Variable analysis of three groups on evaluation standard of new teachers

Evaluation principle of new teachers	F test	Significance
Oral expression	0.639	0.529
Administrative devotion	1.229	0.295
Views to education	5.505	0.005**
Written examination	3.334	0.038**
Age of application	3.194	0.044**
Club experience	4.146	0.018**
Non-major	0.745	0.477
Academic reputation	0.852	0.429
Social and economic status	2.120	0.123
Multimedia	9.402	0.000***
Household register	1.547	0.216

Note: *means $P < 0.1$, **means $P < 0.05$, ***means $P < 0.01$.

hands of few people with political resources. The present vacancy of teaching positions is publicized and the information of teacher vacancy is transparent so that the teachers can know the vacancy at any time. Besides, there are also the messages of teacher recruitment publicly on internet.

According to the analytical result of Table 8, the researcher used statistical t test on evaluation principles of views toward educational works, written examination data, candidate's age, club experience, multimedia support materials in terms of the importance difference and

Table 9. t Test analysis of three groups toward evaluation standard of new teachers

Evaluation principle of new teachers	Group comparison		Average difference	Standard error	Significance
Oral expression	employ school	teacher education center	0.09	0.25	0.936
	employ school	trained student	0.20	0.18	0.535
	teacher education center	trained student	0.11	0.23	0.891
Administrative devotion	employ school	teacher education center	0.29	0.53	0.859
	employ school	trained student	0.60	0.39	0.299
	teacher education center	trained student	0.31	0.50	0.825
Views to education	employ school	teacher education center	0.21	0.38	0.858
	employ school	trained student	0.89	0.28	0.008***
	teacher education center	trained student	0.67	0.36	0.177
Written examination	employ school	teacher education center	-0.06	0.47	0.992
	employ school	trained student	0.77	0.34	0.083*
	teacher education center	trained student	0.83	0.44	0.174
Age of application	employ school	teacher education center	0.84	0.53	0.292
	employ school	trained student	0.96	0.39	0.050
	teacher education center	trained student	0.12	0.50	0.973
Club experience	employ school	teacher education center	0.80	0.49	0.271
	employ school	trained student	1.02	0.36	0.019
	teacher education center	trained student	0.22	0.46	0.891
Non-major	employ school	teacher education center	0.51	0.50	0.597
	employ school	trained student	0.38	0.36	0.573
	teacher education center	trained student	-0.12	0.47	0.965
Academic reputation	employ school	teacher education center	0.60	0.58	0.594
	employ school	trained student	-0.11	0.42	0.965
	teacher education center	trained student	-0.71	0.55	0.432
Social and economic status	employ school	teacher education center	1.13	0.55	0.123
	employ school	trained student	0.37	0.40	0.652
	teacher education center	trained student	-0.76	0.51	0.337
Multimedia	employ school	teacher education center	1.16	0.47	0.051
	employ school	trained student	1.47	0.34	0.000***
	teacher education center	trained student	0.31	0.44	0.783
Household register	employ school	teacher education center	0.84	0.65	0.432
	employ school	trained student	0.77	0.47	0.263
	teacher education center	trained student	-0.07	0.61	0.994

Note: * means $P < 0.1$, ** means $P < 0.05$, *** means $P < 0.01$

compared between two groups; the rest 6 evaluation principles oral expression competence, devotion toward administrative works, non-major at colleges, academic reputation of teacher education centers, social and economic positions of family, candidate household register did not reveal perception difference on the importance of evaluation standard of new teachers.

According to Table 9, the researcher used statistical t test to examine the importance of evaluation standard of new teachers: as to the results of views toward educational works, written examination data, candidate's age, club experience, multimedia support materials, employ schools and trained teachers have the importance perception difference on evaluation standard of new teachers. The rest for employ schools, centers of teacher education and trained teachers toward evaluation standard of new teachers did not reveal perception difference of importance.

4.5 Evaluation Standard of New Teachers and Analysis of Teacher Examination System

This section used the questionnaire data of two groups (employ schools and trained teachers) to respectively manage variable analysis on teacher examination system and evaluation standard of new teachers to examine if each evaluation standard of new teachers reveals different perception on four different teacher examination systems. The analysis was as follows.

4.5.1 Teacher Examination System of Employ Schools and Analysis of Evaluation Standard of New Teachers

Since there was only one piece of data related to engagement system on the principal's agreement, we will not discuss the aspect in this section. The researcher only discussed the importance of three different kinds of teacher examination system for evaluation standard of new teachers. The data is reorganized in Table 10. For views toward educational works, authorized examination system and unified examination employment system treated it as the first important aspects; for oral expression, school private examination system treated it the first important aspect. In addition, noticeably: school private examination system and unified examination employment system all treated social and economic positions of family as the least important aspect. Authorized examination treated candidate's household register as the least important factor for evaluation standard of new teachers. In addition, according to the sum of the last column, we find out that in any teacher examination systems, the important perception of oral expression competence was the first; the importance perception of view toward educational work was the second; finally, we realize that in any teacher examination systems, the importance perception of social and economic positions of family was the last.

Subsequently, the researcher managed variable analysis with respect to three different teacher examination systems toward evaluation standard of new teachers. The result revealed

Table 10. Contingency analysis of examination system used by the school and evaluation standard of new teachers

Evaluation principle of new teachers	Authorized examination system	Examination system managed by the school	Unified examination and engagement	Sum
Oral expression	8.33(1.37)	9.33(0.80)	9.36(0.63)	9.13(0.89)
Administrative devotion	6.50(1.22)	7.10(1.60)	7.43(1.40)	7.12(1.51)
Views to education	8.50(1.05)	8.47(1.22)	9.43(0.51)	8.74(1.12)
Written examination	6.00(1.55)	7.23(1.61)	7.00(1.41)	7.02(1.57)
Age of application	6.33(1.51)	6.83(1.46)	5.93(2.56)	6.52(1.84)
Club experience	5.83(0.98)	6.70(1.73)	6.64(1.95)	6.58(1.72)
Non-major	7.33(1.51)	7.40(2.70)	7.36(1.28)	7.38(2.23)
Academic reputation	6.00(2.53)	6.07(2.56)	6.21(2.67)	6.10(2.53)
Social and economic status	4.33(2.16)	3.53(2.43)	3.79(2.83)	3.70(2.48)
Multimedia	8.17(1.33)	7.70(1.44)	8.00(0.96)	7.84(1.30)
Household register	3.83(3.13)	5.47(2.87)	4.64(2.73)	5.04(2.86)

Note: (1) numbers in brackets are standard errors; (2) there was only one piece of data related to engagement system on the principal's agreement; thus, it was not included in this table.

Table 11. Variable analysis of examination systems used by employ schools and evaluation standard of new teachers

Evaluation principle of new teachers	F test	Significance
Oral expression	3.796	0.030[**]
Administrative devotion	0.797	0.457
Views to education	4.137	0.022[**]
Written examination	1.578	0.217
Age of application	1.194	0.312
Club experience	0.642	0.531
Non-major	0.003	0.997
Academic reputation	0.021	0.980
Social and economic status	0.263	0.770
Multimedia	0.460	0.634
Household register	1.000	0.376

Note: [*]means $P < 0.1$, [**]means $P < 0.05$, [***]means $P < 0.01$.

(as Table 11) that only oral expression competence and view toward educational work showed different importance perceptions and the rest had the same important perceptions. Therefore, the importance perception of oral expression competence was the first in unified examination

employment system, the second was school private examination system and the last was au-
thorized examination system. The importance perception of view toward educational work
was still the first place in unified examination employment system, the second place was au-
thorized examination system and the last was school private examination system.

4.5.2 Teacher Examination System of Trained Teachers and Analysis of Evaluation Standard of New Teachers

The researcher would discuss the importance of four different teacher examination systems
for evaluation standard of new teachers. The data was reorganized as Table 12. With regard
to oral expression competence, four teacher examination systems all treated it in the first
place; secondly, only engagement system on the principal's agreement treated view toward
educational work in the third place and the other three teacher examination systems treated
it in the second place; noticeably, four teacher examination systems treated social and eco-
nomic positions of family as the least important aspect.

Table 12. Contingency analysis of qualified teacher participating in examination systems and
evaluation standard of new teachers

Evaluation principle of new teachers	Authorized examination system	Examination system managed by the school	Engagement system on the principal's agreement	Unified examination and engagement	Sum
Oral expression	9.00(1.13)	9.17(1.03)	9.33(1.15)	8.77(1.36)	9.09(1.10)
Administrative devotion	6.08(2.54)	6.60(2.65)	8.67(1.15)	6.15(2.70)	6.53(2.61)
Views to education	7.75(2.22)	7.96(1.82)	7.67(0.58)	7.23(1.79)	7.80(1.84)
Written examination	5.08(2.78)	6.70(2.07)	6.67(2.08)	5.62(1.94)	6.28(2.22)
Age of application	4.50(2.11)	5.47(2.35)	5.33(1.53)	6.31(1.84)	5.46(2.24)
Club experience	4.25(2.22)	5.89(2.20)	5.67(2.52)	5.54(1.85)	5.58(2.20)
Non-major	5.67(2.02)	7.43(1.58)	7.00(1.00)	6.15(2.73)	6.95(1.96)
Academic reputation	5.67(2.53)	6.53(2.31)	6.00(2.00)	5.62(2.87)	6.23(2.42)
Social and economic status	2.50(1.73)	3.57(2.29)	3.00(1.73)	3.15(1.82)	3.32(2.13)
Multimedia	4.67(2.23)	6.87(2.20)	5.67(0.58)	6.23(2.49)	6.40(2.32)
Household register	3.75(2.99)	4.49(2.51)	3.67(2.52)	3.62(2.26)	4.21(2.53)

Note: (1) numbers in brackets are standard errors; (2) two pieces of loss value.

The researcher managed variable analysis with respect to four teacher examination systems
on the evaluation standard of new teachers. The result revealed that (see Table 13) only
non-major at colleges and capacity to use multimedia support teaching materials showed dif-
ferent importance perception and the rest revealed the same importance perceptions. Therefore,

the importance perception of non-major at colleges was the first place in school private examination system, the second place was engagement system on the principal's agreement, the third place was unified examination employment system and the last place was authorized examination system. Importance perception of capacity to use multimedia support teaching materials was still the first in school private examination system, the second place was in unified examination employment system, the third place was in engagement system on the principal's agreement and the last was school authorized examination system.

Table 13. Variable analysis of qualified teacher participating in system & evaluation standard of new teachers

Evaluation principle of new teachers	F test	Significance
Oral expression	0.530	0.663
Administrative devotion	0.889	0.451
Views to education	0.551	0.649
Written examination	2.315	0.082
Age of application	1.376	0.257
Club experience	1.875	0.141
Non-major	3.910	0.012**
Academic reputation	0.767	0.516
Social and economic status	0.872	0.460
Multimedia	3.338	0.024**
Household register	0.627	0.600

Note: *means $P < 0.1$, **means $P < 0.05$, ***means $P < 0.01$

5. Conclusions

5.1 Conclusions

According to literature review and investigation result of questionnaire, the researcher generalized 5 conclusions:

5.1.1 Perception Importance Order of Suitable Teachers

As to suitable teachers' perception, through literature reorganization, expert interview and questionnaire survey, there are 6 factors reorganized. The importance orders of the three groups are respectively as follows :

1. Employ schools: education devotion, class management competence, instruction competence, capacity to guide special students, capacity to communicate with the parents and the will to undertake administrative works.

2. Centers of teacher education: education devotion, instruction competence, class management competence, capacity to guide special students, capacity to communicate with the parents, and the will to undertake administrative works.

3. Qualified teacher: education devotion, class management competence, instruction competence, capacity to communicate with the parents, capacity to guide special students, and the will to undertake administrative works.

The above are the orders of three groups' importance perception toward suitable teacher; we can find out that the orders of education devotion were the first in three groups. In addition, noticeably: obviously, comparing with centers of teacher education and qualified teachers, employ schools valued more on class management and capacity to guide special students. The results of importance orders in three groups were generally the same.

5.1.2 Comparison of Perception Difference of Suitable Teachers

Through the above result and variable analysis, we find out that apart from education devotion, the personnel in three groups have the same perception toward the importance of the other 5 factors. Through the in-depth analysis by t test with respect to education devotion, we find out that there were different perceptions of employee unit and trained teachers; however, there was no difference between centers of teacher education and trained teachers.

5.1.3 Perception Importance Order of Evaluation Standard of New Teachers

As to the perception of evaluation standard of new teachers, through literature reorganization, expert interview and questionnaire survey, the researcher reorganized 11 factors. The importance orders in three groups are respectively as follows:

1. Employ schools: oral expression competence, view toward educational work, capacity to use multimedia support teaching materials, candidate's teaching position is not the major at university, devotion toward administrative works, written examination data, club experience at school, candidate's age, academic reputation of teacher cultivation institution, candidate's household register, candidate's social and economic positions of family.

2. Centers of teacher education: oral expression competence, view toward educational work, written examination data, devotion toward administrative works, candidate's teaching position is not the major at university, capacity to use multimedia support teaching materials, club experience at school, candidate's age, academic reputation of teacher cultivation institutions, candidate's household register, candidate's social and economic positions of family.

3. Qualified teacher: oral expression competence, view toward educational work, candidate's teaching position is not the major at university, devotion toward administrative works, capacity to use multimedia support teaching materials, written examination data, academic reputation of teacher cultivation institutions, club experience at school, candidate's age, candidate's household register, candidate's social and economic positions of family.

The above are the orders of importance perception in three groups with respect to evaluation standard of new teachers; we can find out that oral expression competence and view toward educational work were the first and second places in three groups, candidate's household register and candidate's social and economic positions of family were in 10th and 11th places; in addition, noticeably: apparently, comparing with centers of teacher education and qualified teacher, employ schools valued more on capacity to use multimedia support teaching materials; comparing with employ schools and qualified teachers, centers of teacher education valued more on written examination data. The results of importance orders in three groups were generally the same.

5.1.4 Perception Difference Comparison of Evaluation Standard of New Teachers

According to variable analysis, we find out that there were different importance perceptions of the personnel in three groups with respect to five factors: view toward educational work, written examination data, candidate's age, club experience at school and capacity to use multimedia support teaching materials. Through the in-depth analysis by t test, we find out that the 5 factors can be divided into two clusters: as to the first three factors, the qualified teacher's importance perception was different from those of employ schools and centers of teacher education. Thus, according to the analytical result, the perception of centers of teacher education was consistent with employ schools but not consistent with trained teachers; as the later two factors, the perceptions between centers of teacher education and employ schools were different.

5.1.5 Comparison and Analysis of Teacher Examination System and Evaluation Standard of new Teachers

1. Employ schools: Authorized examination system and unified examination employment system both treated views toward educational works as the first important aspect; school private examination system treated oral expression as the first important aspect. In addition, noticeably: school private examination system and unified examination employment system both treated social and economic positions of family as the least important aspect; in addition, authorized examination treated candidate's household register as the least important factor of evaluation standard or new teachers.

2. Qualified teachers: As to qualified teachers, the researcher would discuss four kinds of teacher examination systems. The result of data revealed that four teacher examination systems treated oral expression competence as the most important factor; the second important factor was view toward educational work. The importance perception was generally consistent with that of employ schools. Noticeably: its order of social and economic positions of family was the same as that of employ schools: the last one. It showed that social and economic positions of family were not as important as diverse and open teacher cultivation nowadays.

5.2 Suggestion

Based on the above conclusion, this section will provide the respective suggestions for centers of teacher education and qualified teachers in the following two parts.

5.2.1 Suggestions Related to Centers of Teacher Education

According to the conclusion that comparing with centers of teacher education and qualified teacher, employ schools apparently valued more on class management and capacity to guide special students, centers of teacher education should pay more attention on class management and capacity to guide special students than current situation; they should also modify the importance perception toward education devotion to comply with employ schools and teach trained teachers about the perception of this factor in the courses of instruction so that they can understand the importance of this factor and meet the perception of the employ schools. Comparing with centers of teacher education and qualified teachers, employ schools apparently valued more on the conclusion~ "capacity to use multimedia support teaching materials". The centers of teacher education should strengthen the trained teachers' capacity more to use multimedia support teaching materials than current situation. The centers of teacher education should convey the importance of views toward educational works, written examination data and candidate's age to the trained teachers and strengthen the curriculum arrangement to involve three factors in the instruction so that the trained teachers can pay attention on these aspects at the stage of cultivation and their perception can be modified to meet the standard of employ schools.

As to club experience at school and capacity to use multimedia support teaching materials, the perceptions of centers of teacher education and employ schools were different from this analytical result. The centers of teacher education should adjust its acts to meet the require- ments of employ schools since the centers of teacher education undertake the significant re- sponsibility of cultivation. However, the later have different perception from that of the em- ploy schools. Therefore, the centers of teacher education should modify the perception differ- ence and encourage the trained teachers to participate in club activities at school to accumu-

late the experience. In addition, they should involve the information in the curriculum of teacher cultivation and enhance the trained teachers' competence to use more multimedia support tools to meet the needs of employ schools.

5.2.2 Suggestions Related to Qualified Teachers

Due to the conclusion~ "comparing with centers of teacher education and qualified teachers," employ schools apparently valued more on class management and capacity to guide special students, when participating in teacher examination, the qualified teachers should strengthen more on the presentation of class management and capacity to guide special students. Besides, comparing with qualified teachers, employ schools valued more on education devotion. When participating in teacher examination, the qualified teachers should present more about education devotion. As to qualified teachers' participation in teacher examination, if the examination schools adopt authorized examination or unified examination employment system, the said teachers should particularly show their complete understanding on "views toward educational works" when having the oral test. The factor is particularly valued by these two kinds of examination; school private examination system treated oral expression competence as the most important factor. In addition, noticeably: all of the teacher examination systems treated the importance of social and economic positions of family as the least order as that of evaluation standard of new teachers. The result breaks the myth that the past teachers with interpersonal relationships or social and economic statuses had the advantages to acquire the teaching positions. However, this result did not consider the engagement system on the principal's agreement.

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