

Summary of the Research Report “Research on Promotion of Public School Teachers to a Managerial Post – Monitoring the Current State through Secondary Analysis of the School Teachers Statistical Survey”

1. Summary of the Research Study

This report shows the research results of the “Team for Examination of Problems at the Time of Promotion to a Managerial Post” established to conduct research for the project, “Comprehensive Research on Pre-service Training, Placement and In-service Training of Teachers to Foster Children’s Competencies”. This team focused on the conditions of promotion to a school managerial post as a prerequisite for exploring the problems school teachers face when promoted to a managerial post. A secondary analysis was conducted of the information (information close to raw data) of the “School Teacher Statistical Survey”¹ conducted by the Ministry of Education, Culture, Sports, Science and Technology in order to gain a deeper and more comprehensive understanding of the current state.

Specifically, we analyzed the situation of public elementary schools, lower secondary schools, and upper secondary schools focusing on the following three points.

(1) Changes in the age group of public school managerial staff in recent years

An analysis was conducted comparing age distribution, and the age at which the teacher was promoted, etc. with a focus on the status of implementation of the system of senior teachers newly established in 2008.

(2) Regional differences in the status of promotion to a managerial post in public schools

Confirmation of the differences in the age at which the teacher was promoted by prefectural region, and classification of the situation by region.

(3) Attributes of teachers promoted to a school managerial post

Analysis of attributes possessed by teachers with a relatively high or low probability of being promoted to a managerial post with regard to the various attributes observable from the data.

Research period: 2015 - 2016, Research Representative: Akihide Osugi (Director of the Department for Elementary and Secondary Education Research)

2. Summary of the Research Outcomes

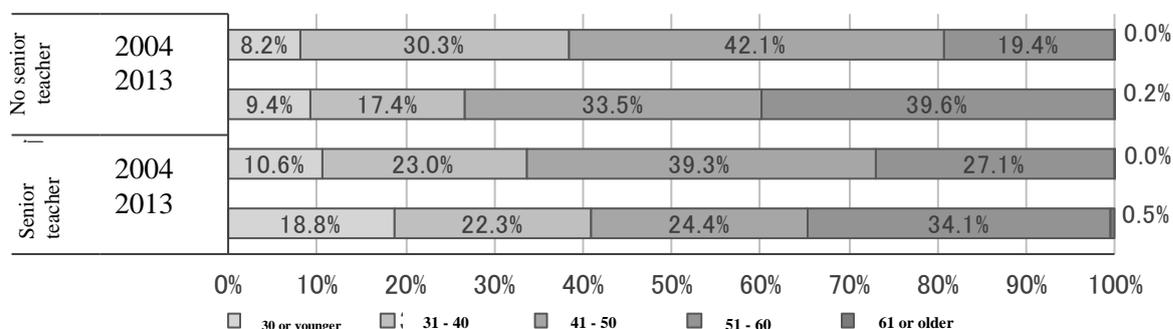
¹ This survey is conducted every three years, and this research used data from the surveys conducted in 2004, 2007, 2010 and 2013.

(1) Changes in the age groups of public school managerial staff in recent years

In recent years, while public school teachers as a whole are seeing an aging trend, there has also been a recent younger trend due to an increase in young teachers in all of the school types. Although this trend was observed regardless of whether or not a teacher had been appointed to the position of senior teacher, it was particularly notable in regions where a senior teacher had been appointed. The situation of elementary schools is shown as an example in Figure 1.

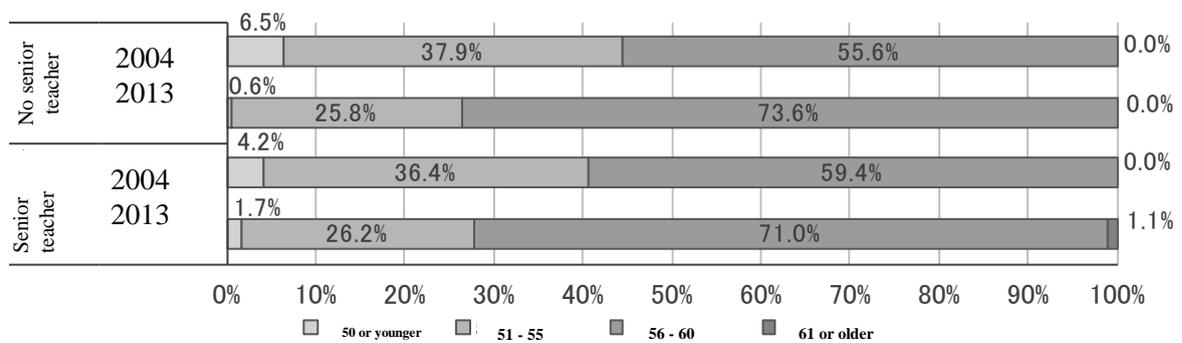
Correspondingly there has been an aging in the teachers in managerial posts in all of the school types. However, although the managerial staff are aging overall, in the elementary schools and upper secondary schools there has been a slight trend in the regions where a senior teacher has been appointed towards younger managerial staff leaving room for managers to be appointed from a relatively young generation. As an example of this trend, the age composition of the principals of elementary schools is shown in Figure 2, and the age composition of the vice-principals (deputy principals or vice-principals) is shown in Figure 3. Comparing the regions where a senior teacher had been appointed to regions where a senior teacher had not been appointed in 2013, the percentage of the youngest age group in each position (50 or younger with the principals and 45 or younger with the vice-principals) was higher. However, in the lower secondary schools, the situation did not suggest a trend towards younger managerial staff.

Figure 1 Changes in the age composition of all of the elementary school teachers (by status of appointment of a senior teacher)



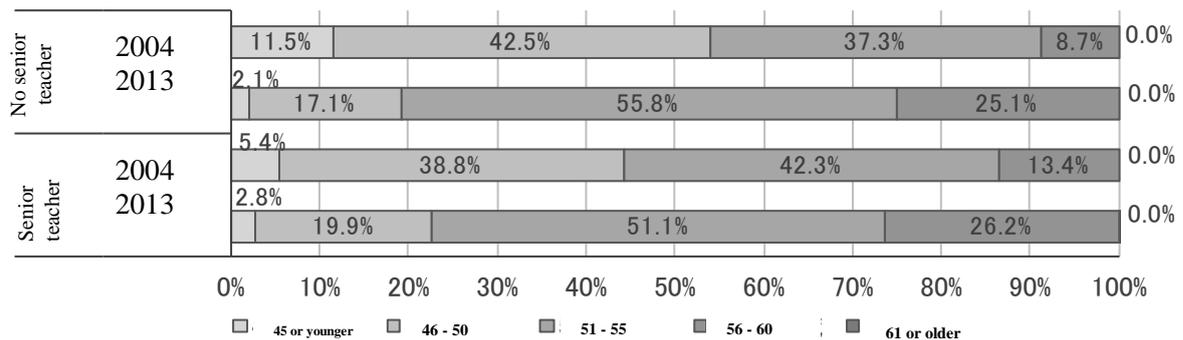
Source: Based on the “School Teachers Statistical Survey” of the Ministry of Education, Culture, Sports, Science and Technology

Figure 2 Changes in the age composition of elementary school principals (by status of appointment of a senior teacher)



Source: Based on the “School Teachers Statistical Survey” of the Ministry of Education, Culture, Sports, Science and Technology

Figure 3 Changes in the age composition of elementary school vice-principals (by status of appointment of a senior teacher)

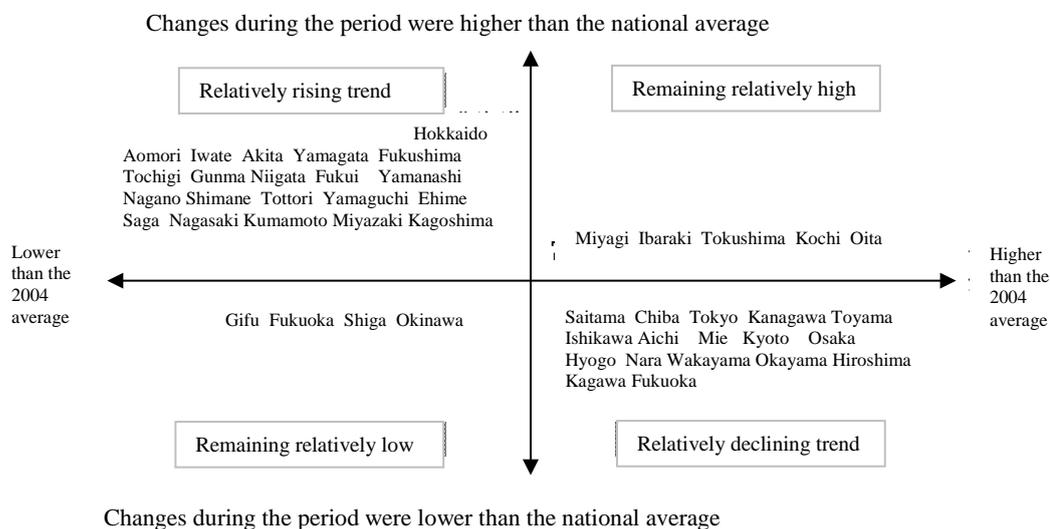


Source: Based on the “School Teachers Statistical Survey” of the Ministry of Education, Culture, Sports, Science and Technology

(2) Regional differences in the status of promotion to a managerial post in public schools

Looking at the situation of changes in the average age of all of the teachers which also affects the school managerial staff, although there are an increasing number of younger teachers in regions where there are a bigger number of large cities, this kind of generational change is not being seen in regions with a large number of depopulated areas. This applies to all of the school types, but for reference purposes, the region classifications (relative positioning) for elementary schools are shown in Figure 4.

Figure 4 Relative positioning of the average age of all teachers (elementary school)



Source: Based on the “School Teachers Statistical Survey” of the Ministry of Education, Culture, Sports, Science and Technology

Note: The relative positions based on the national average are shown in the four categories. The position of the prefecture names in each category is in no particular order.

In addition, the distribution of the average ages of the principals and vice-principals and the distribution of age groups (young teachers comprising 10% of the average age) where promotions to these posts start show various patterns depending on the region. Among them, it became clear that a common pattern can easily be seen between the average age of each post and the age group when promotions start.

(3) Attributes of teachers promoted to a school managerial post

A logistic regression analysis was conducted to look at the attributes of teachers promoted to a school managerial post at the time of 2013. From the results, the nationwide trend of attributes possessed by teachers with a relatively high probability or low probability of being promoted to a managerial post are shown in Table 1.

Table 1 Attribute trends of teachers promoted to a school managerial post

	Attributes where the rate of promotion is relatively high	Attributes where the rate of promotion is relatively low
Elementary schools	Seniority ** Graduated from a teacher training university Holding a specialized teacher's license * Concurrent holding of a lower secondary school license Concurrent holding of an upper secondary school license	Woman ** Experience of working elsewhere Possessing two qualifications
Lower secondary schools	Seniority ** Graduating from a teacher training university Holding a specialized teacher's license Concurrent holding of an elementary school license Holding of a social studies license Holding of a health and PE license	Woman ** Experience of working elsewhere Possessing two qualifications
Upper secondary schools	Seniority ** Holding a specialized teacher's license * Concurrent holding of a lower secondary school license Holding a mathematics license Holding a science license	Woman * Experience of working elsewhere

Note: ** means that the attribute was the same for almost all regions while * means that the attribute was seen in just over half of the regions

In addition, when a similar analysis was conducted by prefecture, there were some attributes where the trends tended to be consistent with national trends in almost all regions, but in general there were many attributes not consistent with the national trends.

Summary of the “Research Report on the Standards for Teacher Competence in Other Countries”

1. Purpose and Summary of the Research Study

(1) Purpose of the research study

In order to cultivate the competencies required in the future era, there is a need to rethink the teaching content and methods, and in order to be able to achieve this, one pressing issue is to reform the pre-service training, recruitment and in-service training of teachers who are to be responsible for fostering these competencies, and therefore in response, the Education Rebuilding Council released “The Competencies Required in the New Era, and the Education and Teachers Needed to Foster the Competencies” (Seventh Recommendations) (May 14, 2015). In response to these recommendations, the Central Council for Education set out in the “Report on Enhancing the Competencies of Teachers Responsible for Future School Education – Towards Building a Teacher-Training Community to Learn Together and Improve Together” (December 21, 2015) that with regard to the “teacher training indicators” which are commonly expected of teachers in their role as highly-qualified professionals, “each prefecture, etc. should develop teaching training indicators in order for teachers to be able to have an overall view of their entire teaching career in their role as a highly-qualified professional, and clarify the competencies that teachers should acquire according to the stage of their career”. Meanwhile, in other countries, there are many places where standards for teacher competence are being developed, and these are being used as indicators for pre-service training, recruitment, and in-service training, etc.

Therefore, the purpose of this research study is to obtain ideas which will be useful when forming teacher training indicators as standards for pre-service training, recruitment and in-service training by means of conducting comparative research on the current state and issues of the standards for teacher competence in other countries.

(2) Summary of the research study

In examining the standards for teacher competence in other countries, we conducted comparison and analysis utilizing the research studies of education experts in each country, and through study groups and e-mails. There were nine countries which took part in our research: the UK, Germany, France, Finland, the United States, Australia, New Zealand, Singapore and South Korea. We also gave an outline of early childhood education (in the United States, the UK, Germany and China).

Research period: 2015 - 2016, Research Representative: Akihide Osugi (Director of the Department for Elementary and Secondary Education Research)

2. Summary of the Research Outcomes

(1) International trends of the standards for teacher competence

We conducted a study into what kind of standards for teacher competence had been established in other countries and how they were being utilized. Table 1 shows the presence or absence of teacher competence standards in the target country. Competence standards had been developed for teachers in eight countries excluding Finland, while competence standards had been developed for teachers in managerial posts in six countries except Germany, France and Finland. In addition, with regard to the competence standards, broadly speaking, there were some countries that established standards for teachers in general while other countries had established standards according to the level of proficiency such as for novice teachers, ordinary teachers, and proficient teachers. Regarding managerial posts, there were countries which only had principals, and countries which set standards for each occupation rank or school type.

Table 1 Presence or absence of competence standards for teachers and managerial staff

	Competence standards for teachers	Competence standards for managerial staff
UK	Teachers	Principal
Germany	Teachers	No standards
France	Teachers and staff	No standards
Finland	No standards	No standards
United States	Teachers	Principal, teachers' leader
Australia	Teachers (new graduates, proficient teachers, highly proficient teachers, position of leadership)	Principal
New Zealand	Teachers (pre-service training, teacher registration, novice teachers, teachers, proficient teachers)	Principal (primary, secondary), vice-principal etc.
Singapore	Teachers (novice teachers – ordinary teachers [ranks], advanced, proficient teachers)	Principal, deputy principal, department head, subject / grade leader
South Korea	Teachers (including head teachers, nutrition instructors, health instructors, librarian teachers, special school teachers, counseling teachers, etc.)	Principal , vice-principal

Regarding use of the standards for teacher competence, diverse use was seen depending on the country as shown in Table 2. At the pre-service training stage, the standards were used as the criteria for teaching qualifications (UK, Australia, New Zealand), the criteria for teacher licenses (US), the criteria for the formation of teacher training programs (Germany), and as the criteria for certification (UK and US). At the recruitment stage, the standards were used as criteria for the teacher recruitment examination (France), and as criteria to determine skills at the time of completion of the examination (UK, Germany, New Zealand). At the in-service teacher stage, the standards were used as guidelines of professional development (UK, US, New Zealand, Singapore, Korea), the criteria for teacher evaluation (UK, USA, Australia, New Zealand, Singapore, Korea), and other uses were for school

audits (UK), to identify unfit teachers (UK), teacher registration certification (New Zealand), and teacher registration renewal (Australia). In particular, in the United Kingdom and the United States, standards are being developed which look over the entire teaching career from pre-service training, recruitment to in-service teachers.

Table 2 The role and functions of the standards for teacher competence

	Student teacher and recruitment level	In-service level
UK	Acquisition of teaching qualifications, teacher training program certification, evaluation at the end of an examination	Professional development, teacher evaluation, school audits, identification of unfit teachers
Germany	Teacher training program formation, evaluation at the end of an examination	
France	Teacher recruitment examination	
Finland		
US	Teacher training program certification, teacher's license	Professional development, teacher evaluation
Australia	Acquisition of teaching qualifications	Teacher evaluation, teacher registration renewal
New Zealand	Teacher registration certification, evaluation at the end of the examination	Professional development
Singapore		Professional development, teacher evaluation
South Korea		Professional development, teacher evaluation

(2) Form and content of the standards for teacher competence

(i) Form of the standards for teacher competence

With regard to the features in terms of the form, first of all, focusing on the number of competence standards set for teachers, the number of standards which were set as 1, 2, 3 and had six to fourteen items. Second, many countries indicated the standards for teacher competence divided into areas according to the content groups such as 1) educational guidance, 2) daily living guidance (South Korea), and so on, and showed the corresponding relationships. Third, in addition to the standards for teacher competence, there were some countries that set subcategories for each standard and prepared rubrics (evaluation criteria tables).

(ii) Content of the standards for teacher competence

Regarding the contents, there were 1) educational guidance, 2) student guidance and daily living guidance, and 3) attitudes and ethics as a teacher. 1) Educational guidance included learners and learning, the contents of the subjects, etc., lesson planning and implementation, evaluations, etc. 2) Student guidance and daily living guidance included character development, subjective decisions and judgments, handling of tasks and needs, information provision, regular lifestyle habits, and prevention of problem behavior, etc. 3) Attitudes and ethics as a teacher included understanding the teaching staff, obligations and responsibilities, performance of duties, participation in school-wide activities, cooperation and collaboration with the parents and local communities, self-study and professional development.

(3) Suggested examples of standards for teacher competence

(i) Examples of setting standards to cover the entire teaching career

The standards for teacher competence in the United Kingdom and the United States were designed to be widely used at the respective stages of pre-service training, recruitment, and in-service training with a view to the entire teaching career. The InTASC (Interstate Teacher Assessment and Support Consortium) standards in the United States give a concrete image of the path of proficiency of the teachers through an indication of “performances”, “knowledge”, “dispositions” and “learning development”. It can be said that it has been designed for broad use as a desired teacher image, criteria for evaluation, and guidelines for professional growth overlooking the entire teaching career.

(ii) Examples showing standards divided into proficiency levels

Case examples indicating criteria where the teachers are classified into several levels of proficiency include Australia (new graduates, proficient teachers, highly proficient teachers, positions of leadership), New Zealand (novice teachers, teachers, proficient teachers), Singapore (novice to ordinary teachers [3 ranks], advanced teachers, proficient teachers), and others. In this way, when the standards are shown in stages, it is possible to know the goals at the next stage such as what is required and to what degree in order to achieve proficiency at the higher levels, and the standards function as guidelines in terms of self-development and functional development.

(iii) Examples of revision to simplified standards

In the UK, the problem was that the original standards formulated in 2007 were far too detailed, and so the standards were revised in 2010 to create simplified standards. The standards comprehensively describe the knowledge and skills absolutely necessary for teachers through the setting of detailed items. However this tend tends to fall into elementalism, and therefore, it becomes hard to grasp an overall image of the competencies, and moreover, limits the degree of freedom in the teacher’s teaching practices narrowing down their range of discretion. In addition, due to the large number of items, excessive labor and work are required to conduct the evaluation. Owing perhaps to such factors, the number of standards for teacher competence were generally kept to about 10 in the target countries.

**Differences in the status of interactions between teachers depending on class size and grade /
school size**
Focusing on formative evaluations thought to have a great influence on academic ability
Summary of the research

1. Issues

Class composition and teacher cooperation

It is apparent that it is easier for teachers to pay attention to individual children if the class is small, but the relationship between the class size and the state of cooperation among the teachers is not as clear.

Formative evaluations and academic ability

Many previous studies have shown that even in formative evaluations, the implementation of evaluations where the results are fed back to the learner, and where the subject of the evaluation, the learner, is able to use these results to improve his or her learning has a huge effect on the learner’s academic ability. In order to make a formative evaluation, criteria to be used for interpretation in order to measure the learner’s level against the achievement goals should be prepared beforehand using the state of the learner’s efforts in the learning process and the state of the results of the achievements, and feedback should be given to the learner using these criteria. In addition, cooperation between teachers teaching the same subject is considered to be essential when deciding how to prepare the interpretation criteria and how to effectively conduct feedback.

Technology to monitor teacher cooperation

Teacher cooperation is often carried out within a few minutes such as between lessons in a short amount of time. In order to monitor the state of such communication, use of a wearable sensor which incorporates an infrared sensor that records face-to-face situations and an acceleration sensor that records physical movements in units of 1 second or less, which is one of the technologies used for immediate and continuous measurement, was considered to be effective.

2. Purpose

This depends on the size of the lower secondary school and the class size. The purpose of this research is to clarify the differences in the status of cooperation among teachers when preparing a formative evaluation. In addition, preparing a formative evaluation means preparing the interpretation criteria necessary for feedback to be given to the students and deciding on methods of effectively giving feedback to the students.

3. Method

Survey target and contents

For the three types of schools of the same size (12, 13, 15 classes), we surveyed two schools respectively with different average class sizes, totaling six schools (Table 1). We asked the managerial staff and teachers (excluding nursing teachers and nutrition teachers) of each surveyed school to wear wearable sensors from the time of arriving at work to the time of leaving work for three consecutive days (Tuesday, Wednesday, Thursday), and also asked the teachers to answer a questionnaire giving a report on the contents of meetings and discussions with other teachers every day for the three-day period.

Table 1 School size of the surveyed schools (number of classes in the regular grades), average class size, subjects of the survey and number of teachers analyzed

Schools	No. of classes	Average class size	No. of teachers surveyed	No. of teachers analyzed		
				1 st day	2 nd day	3 rd day
1 st school	12	33.9	25	6	7	5
2 nd school	12	34.8	24	9	8	7
3 rd school	14	34.2	26	6	7	4
4 th school	14	36.1	24	8	8	7
5 th school	15	34.3	26	9	6	8
6 th school	15	35.7	29	10	9	9

Analyzed teachers

Out of the surveyed teachers, only teachers who were in charge of teaching all of the lessons of all of the subjects for one grade were selected. This is because the state of cooperation among the teachers was thought to be different for those who were team teaching or teaching lessons for two grades, or where two teachers were teaching one grade. On this basis, we analyzed teachers who had been wearing a wearable sensor for two or more days during the three-day survey period for seven hours or more a day.

Communication data by face-to-face partner and content

The communication data by face-to-face partner and content was created through the following process. (1) We created face-to-face communication data for each day during the three-day survey period for each target teacher to be analyzed; (2) the target time was 11 hours in total from 8:00 am to 7:00 pm; (3) the face-to-face partner included all teachers who were wearing a wearable sensor at

each surveyed school; (4) of the data output by Hitachi's Human Big Data Service base station terminal, and of the matrix data of face-to-face situations and average frequency for every 2.5 seconds, which was face-to-face communication data; (5) the fact of face-to-face interaction was recorded using an infrared sensor, and if the body movements of the people having the interaction were synchronized at 1.0 Hz or more, it was judged that face-to-face communication had taken place; (6) the matrix data was divided according to the attributes of the face-to-face partner, and (7) the face-to-face communication time by face-to-face partner and content was calculated by multiplying the matrix data, which had been divided according to the attributes of the face-to-face partner, by the ratio of the content of the meetings and discussions by attributes of the face-to-face partner monitored through a questionnaire.

4. Results

Table 2 shows the averages and rates of face-to-face communication time according to the attributes of the face-to-face partner by school, and Table 3 shows the average times and rates by face-to-face communication content among teachers teaching the same subject.

Table 2 Average and rate by school of face-to-face communication by the attributes of the face-to-face partner

Face-to-face partners												
Schools	Teachers of the same subject			Teachers of same grade			Teachers of other subjects/grades			Managerial post		
	M	SD	Rate	M	SD	Rate	M	SD	Rate	M	SD	Rate
1 st school	19.23	10.14	0.04	230.42	70.09	0.49	179.05	128.47	0.38	43.81	37.82	0.09
2 nd school	23.89	22.38	0.04	413.56	223.35	0.75	94.68	38.41	0.17	19.63	16.54	0.04
3 rd school	79.46	104.28	0.19	267.38	221.25	0.66	58.27	43.44	0.14	2.62	3.14	0.01
4 th school	5.83	16.50	0.02	167.55	136.90	0.65	70.57	58.35	0.27	13.28	11.54	0.05
5 th school	26.76	38.52	0.08	214.63	70.79	0.64	55.88	62.88	0.17	35.56	36.56	0.11
6 th school	33.58	43.13	0.06	312.46	120.66	0.57	139.71	109.15	0.26	61.79	49.40	0.11

Table 3 Average time and rate by three-day contents of face-to-face communication with teachers teaching the same subject

Schools	Formative evaluation preparation		Lessons		Student guidance		School affairs		Others	
	Average time	Rate	Average time	Rate	Average time	Rate	Average time	Rate	Average time	Rate
1 st school	1.88	0.08	0.42	0.02	0.00	0.00	0.00	0.00	21.04	0.90
2 nd school	9.29	0.32	11.9	0.4	1.63	0.06	2.35	0.08	4.23	0.14
3 rd school	60.42	0.39	51.06	0.33	24.86	0.16	0.06	0.00	19.44	0.12
4 th school	0.00	0.00	26.67	0.57	0.00	0.00	0.00	0.00	20.00	0.43
5 th school	9.48	0.34	4.94	0.17	0.00	0.00	6.29	0.22	7.55	0.27
6 th school	1.58	0.04	6.79	0.18	4.50	0.12	17.14	0.46	6.86	0.19

5. Study

As shown in Figure 2, although this is not applicable to schools with 12 classes, the study suggests that if the size of the school is the same, it is more likely in schools with smaller classes that preparations for formative evaluations will have been made such as the interpretation criteria necessary to give feedback to the students being created through cooperation among teachers of the same subject, and methods determined to effectively give feedback to the students. However, as shown in Table 3, the average preparation time for formative evaluations through cooperation among teachers teaching the same subject by school was about 60 seconds for one school, 9 seconds for two schools, and 2 seconds or less for two schools, and the preparation time itself for formative evaluations through cooperation among teachers teaching the same subject is short. In addition, as shown in Table 2, the average face-to-face communication time among teachers teaching the same subject by school was about 6 seconds for the minimum value and about 80 seconds for the maximum value, and the time spent was also short.

Many previous studies have revealed that the implementation of formative evaluations has a great effect on academic ability. In addition, in order to conduct formative evaluations, it is necessary to prepare interpretation criteria in advance to judge the level of achievement of the target goals from the state of the learner's efforts in the learning process and the state of the achievements, and to provide feedback to the learners using these criteria. Based on the findings of these previous studies, it is considered that the ease with which these formative evaluations are implemented may lead to increasing the academic abilities of the students. Moreover, the results of this study suggest that these kinds of effective formative evaluations are easier to implement in smaller classes.

6. Issues of the research

The objective was to clarify the differences in the status of preparing formative evaluations through cooperation among teachers teaching the same subject depending on the size of the school and the size of the class, but the difference in the average class size through a combination of schools with 12 classes was 0.9, the average class size through a combination of schools with 14 classes was 1.9, and the average class size through a combination of schools with 15 classes was 1.4, and the problems remain that although comparisons were made depending on the size of the class, there was little difference, and face-to-face communication itself among the teachers fluctuated widely within the same school and with other schools. In addition, since the surveyed schools were six schools in a specific region, the results of this research can only be taken as examples.

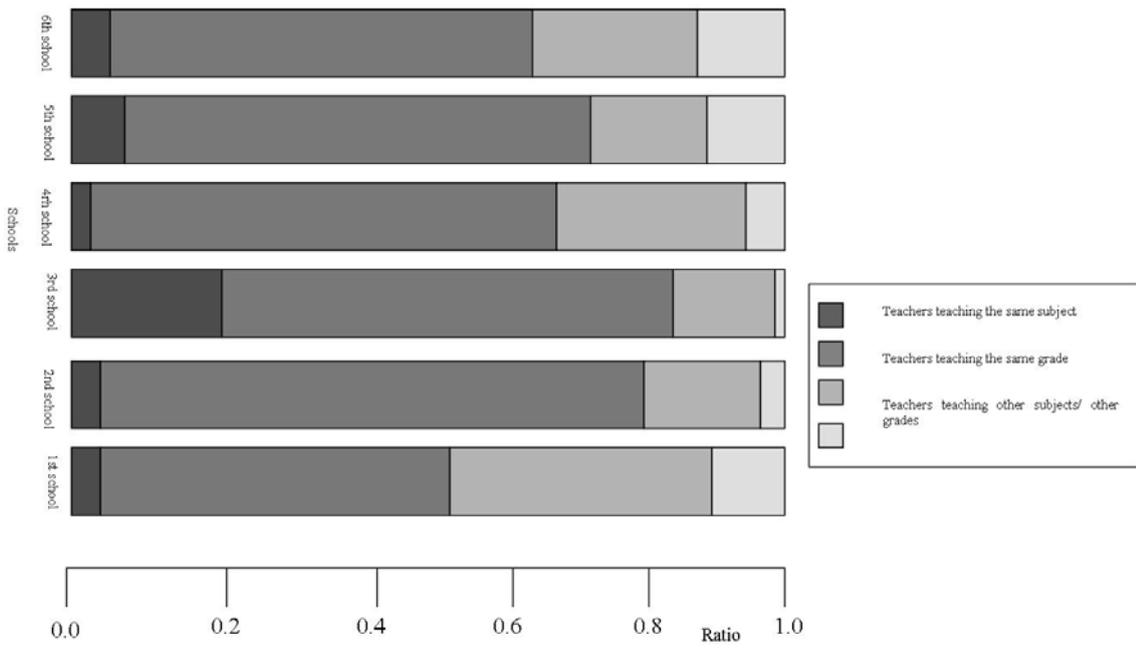


Figure 1 Percentages of face-to-face communication time by attributes of the face-to-face partner by school

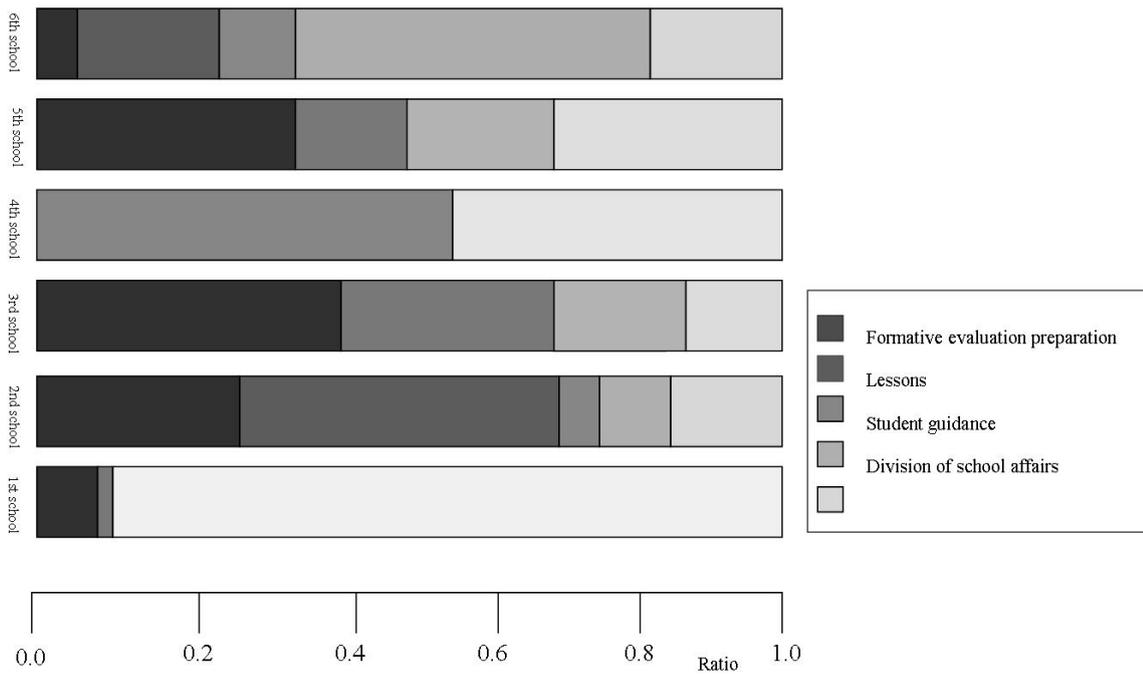


Figure 2 Percentages of face-to-face communication with teachers teaching the same subject

FY2015 -2016 Research Project of the National Institute for Educational Policy Research
Report on the Research Study “Comprehensive Study on Pre-service Training, Placement and
In-service Training of Teachers to Foster Children’s Competencies”

**The relationship between class size and the children’s orientation towards learning
objectives – focusing on fifth-grade elementary school children**

Summary of the research

1. Purpose

- To conduct further analysis of large-scale survey data and to clarify the relationship between children’s motivation and class size.
- To this end, we will focus on children’s orientation towards learning objectives and consider the relationship between the class size and the directionality of approaches to the issues of children using a multilevel structural equation.

2. Methods

- Further analysis of the data of the survey conducted of 5th grade students of elementary schools out of the data acquired in the FY2007 Ministry of Education, Culture, Sports, Science and Technology survey research project relating to teachers and staff, “Survey Relating to the Size and Educational Effects of Group-Living and Group-Learning” (one class of each school, 275 schools, 7,643 children).
- Self-improvement motivation thought to be similar to the orientation towards learning objectives in the subscale of the reading culture – “self-improvement support check” conducted as part of the children’s survey, the answers on class size of the classes subject to the survey out of the questions of the schools’ survey and the answers to whether there were “many parents with a keen interest in education” as a characteristic of the school were added as points for further analysis.
- We analyzed the differences in effects on the self-improvement willingness of children by class size according to a multilevel structural equation model as shown in Figure 1. Level 1 is the child’s level, and Level 2 is the class level.
- For self-improvement willingness, we estimated a multi-level item response model for each

level.

- The class size was centered on the median class size of the schools being analyzed, and the number of parents with a keen interest in education, which was one of the categories of the schools' survey, was treated as a covariate.

3. Results and Discussions

- The path from the Level 2 class size to motivation in Figure 1 is negative and significant (unstandardized coefficient is -0.016, $p = 0.36$). Based on this estimated value, if we show the predictive value of the factor score of the willingness for self-improvement based on class size, by degree (1 for a lot, 0 for not a lot) of parents with a keen interest in education as a covariate, the result is as shown in Figure 2.
- From the above results, based on the fact that the willingness for self-improvement targeted in this research is similar to the orientation towards learning objectives in the research on motivation, this suggests that the orientation towards children's learning objectives is higher if the class in which the child is enrolled is smaller, and lower if the class in which the child is enrolled is bigger.

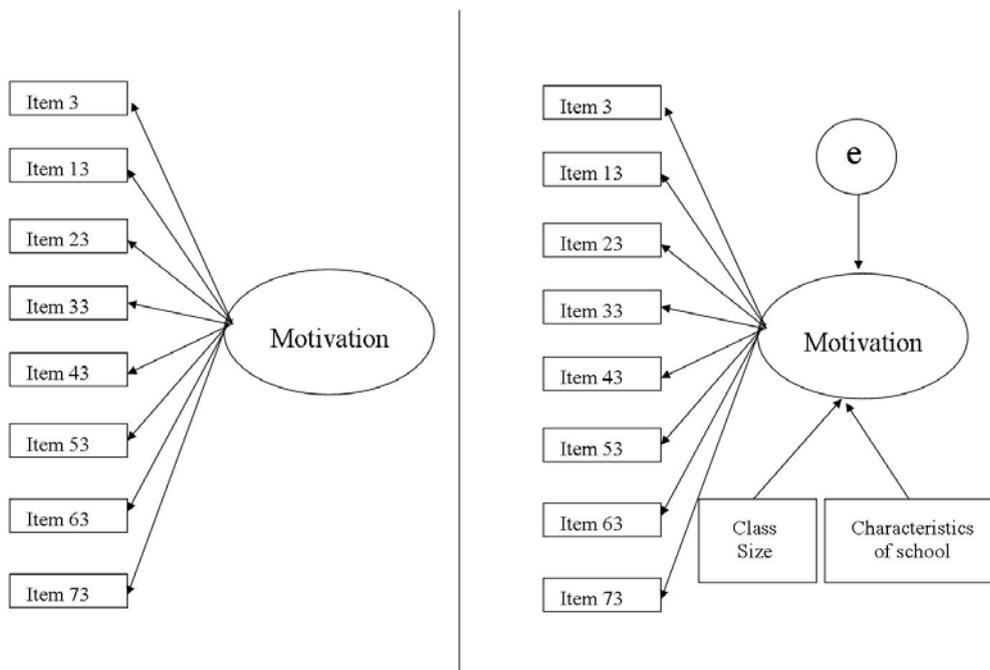


Figure 1 Model to examine the difference in effects on self-improvement willingness of children by class size

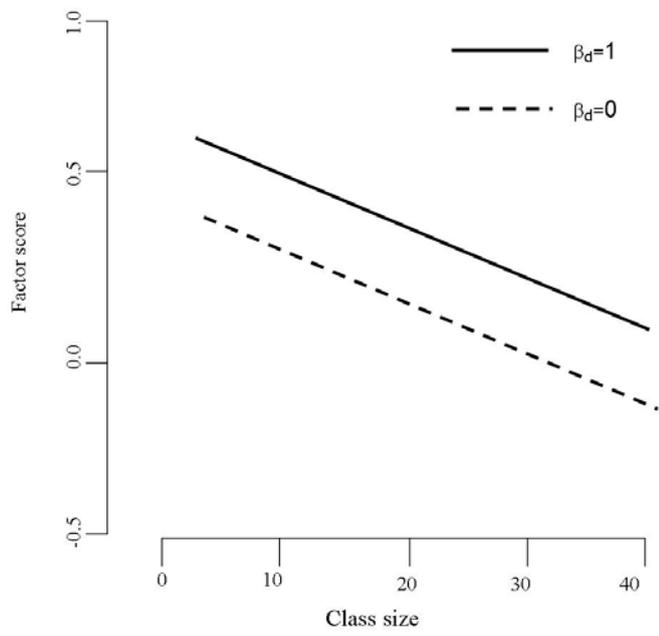


Figure 2 Predictive value of self-improvement willingness based on class size and school characteristics

Summary of the “Report of the Research Study on Teacher and Staff Placement and Management to Enhance the Overall Strength of the School Organization”

1. Purpose of the research study

(1) Purpose of the research study

As well as planning and implementing educational curricula that nurture the competencies required of a new era, “schools as teams” are required to solve more complicated and diverse issues, and to ensure enough time face-to-face time for the teachers and children. The Council for Central Education and other forums have stated that in order for schools to be able to function as a team, it is essential for the principals to further demonstrate their leadership skills for the functions of management to be reinforced, and for the teaching and guidance structure of teachers and staff to be reconstructed (placement of teachers and staff, and a system of division of duties and collaboration).

In order to solve these policy problems, what is required is evidence relating to the composition of the competencies of principals who promote “the school as a team”, how these competencies can be developed, how the beliefs of the principal that the school is open to change can be improved through the principal’s leadership (effective leadership) and the satisfaction level of the principal with respect to his or her job (degree of job satisfaction), as well as a need for proposals aimed at reconstructing the teaching and guidance structure of teachers and staff.

Therefore, for this research study, we conducted (1) a survey (domestic research) in order to study measures to increase the level of acquisition of the competencies, sense of effective leadership, and degree of job satisfaction of the principals, and to clarify the factors influencing them, and (2) a comparative study (overseas comparative study) on the role of schools in other countries and the teaching and guidance structure of teachers and staff in order to study measures aimed at reconstructing the teaching and guidance structure of teachers and staff.

This research study is one part of the “Comprehensive Study on Pre-service Training, Placement, and In-service Training for Teachers to Foster Children’s Competencies” (Representative researcher: Akihide Osugi (Director of the Department for Elementary and Secondary Education Research), research period: FY 2015 -2016”).

2. Summary of research outcomes

(1) Research study on the competencies and professional development of the principals

In the domestic research study, we developed a scale for the level of competency acquisition of principals who promote “schools as a team”, a scale to rate effective leadership, and a scale for the degree of job satisfaction, and utilizing these scales, we conducted research to find the factors affecting the level of competence of the principals, sense of effective leadership and degree of job satisfaction. In addition, we analyzed the perception of the usefulness (usefulness of growth opportunities) of diverse opportunities to acquire the necessary competencies as a principal and expectations of learning at graduate school for each career stage.

The period of the survey – the “Survey on the Competencies and Professional Growth of the Principals”, was from November 14, 2016 to December 9, 2016, targeting 1,795 principals throughout the country. In order to attain a reflection of the professional awareness of principals throughout all of Japan, the number of schools surveyed by prefecture was decided so as to be proportional to the ratio of elementary schools/lower secondary schools and prefecture by population. Then, after randomly choosing the first target school, we extracted target schools at regular intervals and asked the principals of the schools to cooperate with the research. The valid response number was 1,065 persons, and the valid response rate was 59.3%. The composition of the survey items was as is shown in Table 1.

Table 1 Composition of the survey items

Category	Contents of the survey	Background to the survey	Contents of the questions
(□)	Relationship between the acquired competencies (competencies acquired by the principal), and attributes and background of the principal, school organization / environment, cooperation and collaboration between schools.	Requirement of improving the competencies of principals promoting “schools as a team”	The competencies necessary for the principal, competencies which are acquired
(□)	Relationship between effective leadership (principal’s belief that leadership can be demonstrated or that schools can change through leadership) and attributes and background of the principal, school organization / environment, collaboration and collaboration between schools	Since what is needed for principals to be able to lead “schools as a team” is to review the current school culture and to promote school improvement, it is necessary to have a high level of effective leadership.	Sense of effective leadership

(□)	Relationship between the degree of job satisfaction (satisfaction towards the job), and attributes and background of the principal, school organization / environment, cooperation and collaboration between schools	An increase in job satisfaction is required in order to be able to secure excellent human resources for principals.	Degree of job satisfaction
(□)	Awareness of various opportunities to acquire the necessary competencies as a principal (the usefulness of growth opportunities) and expectations for learning at graduate school for each career stage	Interest in graduate school education is rising as one of the important opportunities for improving the competencies of principals	The timing and motive for wanting to become a principal, the usefulness of growth opportunities, expectations of learning at graduate school learning for each career stage

(i) Competencies of the principals

When considering measures to enhance the competencies of principals who promote “schools as a team”, it is necessary to clarify the composition of their competencies and to clarify the influencing factors. Therefore, we analyzed the variables (observable variables) that measure the competencies acquired by the principals through factor analysis, and as shown in Table 2, summarized the five elements: “educational policy implementation skills” (ability to appropriately manage schools based on educational policy trends), “ability to realize a vision” (ability to conceive and realize a vision), “ability to collaborate with assisting staff” (ability to collaborate with administrative staff, etc.), “ability to build relations of trust with outside people” (ability to collaborate with the local community and to build relations of trust) and “ability to foster a collaborative environment” (the ability to foster a cooperative, comfortable environment for teachers and staff to work).

Table 2 Elements of the level of competence acquisition

Elements	Observable variables
Educational policy implementation skills	“Knowledge of the educational measures of the national and local governments”, “knowledge of education laws (including duties and service), etc.
Ability to realize a vision	“Ability to conceive a school vision”, “ability to persuade others of the school vision”, etc.
Ability to collaborate with assisting staff, etc.	“Ability to collaborate with administrative staff”, “ability to cooperate with nursing teachers”, etc.
Ability to build relations of trust with outside people	“Ability to cooperate and collaborate with the local community and parents,” “ability to handle complaints from outside persons”, etc.

Ability to foster a collaborative environment	“Ability to create a comfortable environment for teachers and staff”, “ability to create a collaborative atmosphere inside the school”
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* Questions were posed on to what extent the principals had acquired the competencies in relation to each of the observable variables using five scale points: “1. Not at all”, “2. Not very much”, “3. Neither yes nor no”, “4. To a certain extent”, and “5. Very much”, and the results were analyzed using factor analysis.

Subsequently, out of the five elements, we focused on “educational policy implementation skills” and “ability to realize a vision”, and in order to grasp what kind of factors were affecting these elements, we performed a multiple regression analysis using the subscale scores (average value of the scores of the observable variables included in each respective element) as explanatory variables. As shown in Table 3, the four groups: “variables relating to the principal’s attributes”, “variables relating to the principal’s career history”, “variables relating to the school’s organization and environment” and “variables on school cooperation / collaboration”, and a total of 22 variables were incorporated as explanatory variables.

Table 3 Explanatory variables

<p>Variables on the attributes of the principals Ambitions of the principal up until the early 40s (dummy variable), elementary school work (dummy variable), female principal (dummy variable), age</p> <p>Variables on the background of the principals Experience of working as a social education director (dummy variable), board of education work experience (dummy variable), years of service as a principal, years of service as the principal at the current school, learning opportunities through self-motivating clubs or academic conferences, etc. (dummy variable), knowledge from books, etc. (dummy variable), graduate school dispatch training experience (dummy variable), experience of undergoing training at the National Institute for School Teachers and Staff Development (dummy variable) and long-term trainee experience at the National Institute for School Teachers and Staff Development (dummy variable).</p> <p>School organization and environmental variables Number of classes, number of education-related mentors, number of family/local community mentors, appointment of a senior teacher (dummy variable), sense of usefulness of administrative staff, sense of usefulness in supporting an education chief</p> <p>Variables relating to school cooperation and collaboration Collaboration between schools and the local community (dummy variable), regional coordinator (dummy variable), integrated elementary and lower secondary school education (dummy variable)</p>
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Table 4 shows the results of analysis using the “educational policy implementing skills” subscale scores as explanatory variables. The four estimation models were significant at a level of 1% level. In Model 1, the variables of the “ambitions of the principal up until the early 40s” and “elementary school work” were significant at a level of 1%. In Model 2, “learning opportunities at self-motivating clubs and academic conferences, etc.”, “knowledge from books, etc.” were

significant at a level of 1%. In addition, the “board of education work experience” was significant at a level of 10%. In Model 3, “usefulness in supporting an education chief” was significant at a level of 5%.

Through the four analytical models, the variables of “ambitions of the principal up until the early 40s”, “learning opportunities at self-motivating clubs and academic conferences, etc.”, and “knowledge from books, etc.” can all be confirmed to be significant at a level of 1%. (Only the conclusions are shown below.)

(i) Principal results relating to the level of competence of the principal

Regarding “educational policy implementation skills”, it was found that self-evaluation tended to be higher, the more aspiring principals up until their early 40s² recognized learning at self-motivating clubs and academic conferences, etc. to be beneficial as a growth opportunity, or recognized knowledge from books, etc. to be beneficial as a growth opportunity.

Regarding the “ability to realize a vision”, it was found that self-evaluation tended to be higher, the more aspiring principals up until their early 40s recognized learning at self-motivating clubs and academic conferences, etc. to be beneficial as a growth opportunity, or recognized knowledge from books, etc. to be beneficial as a growth opportunity.

Table 4 “Multiple Regression Analysis Results Taking “Educational Policy Implementation Skills” Subscale Scores as Explanatory Variables³

	Attributes		Background		Organization and environment			Cooperation and collaboration	
	Model 1		Model 2		Model 3			Model 4	
	B	Standard error	B	Standard error	B	Standard error	B	Standard error	
Aspiring principals up until their early 40s	.163	.030 *	.141 *	.031 **	.130	.037 **	.148	.043 **	
Work at an elementary school	.086	.030 *	.075 *	.031 *	.068	.037 +	.028	.043	
Women	.070	.043	.031	.044	.034	.051	.029	.059	
Age	-.001	.006	.009	.007	.006	.009	.008	.011	
Experience of a social education director			.026	.051	.006	.058	.065	.077	
Board of education work experience			.054	.030 +	.053	.037	.045	.044	

² Compared to other principals, aspiring principals up until the early 40s tend to cite as motivation for wanting to become a principal, “a sense of interest in school management from the time of being appointed chief of a division of work”, “encountering an ideal school manager” or “a desire to create their own ideal school”, and tended not to cite as motivation “recommended by a person in the vicinity” or “thinking someone had to take over the job”.

³ <Model 1> only inserted variables regarding the attributes of the principal. <Model 2> controlled the variables regarding the attributes of the principal and introduced variables on the background of the principal. <Model 3> controlled the variables regarding the attributes of the principal and the [variables on the background of the principal, and inserted variables on the organization / environment of the school. <Model 4> controlled the variables on the attributes of the principal, the [variables on the principal’s background, the variables on the organization and environment of the school, and inserted variables on school collaboration and cooperation. The same analysis was subsequently carried out.

Lesson improvement	“Able to advance lesson improvement based on the perspective of active learning”, “able to lead curriculum development”, etc.
Student guidance	“Able to build an organizational structure to address student guidance issues such as bullying and school attendance refusal”, “able to build an organizational structure to respond to special support education issues, etc.
Responses to diversity	“Able to build an organizational structure to improve the academic ability of children in poor families”, “able to create a system that organically links staff possessing diverse expertise”, etc.

* Questions were posed on to what extent the principals looked back to the day when they were appointed to their school to the present day in relation to each of the observable variables using five scale points: “1. Not at all”, “2. Not very much”, “3. Neither yes nor no”, “4. To a certain extent”, and “5. Very much”, and the results were analyzed using factor analysis.

Subsequently, out of the four elements, we focused on “local community collaboration” and lesson improvement”, and in order to grasp what kind of factors were affecting them, we performed a multiple regression analysis using the subscale scores (average value of the scores of the observed variables included in each factor) as explanatory variables.

(ii) Principal results relating to a sense of effective leadership

Regarding a sense of effective leadership with regard to “local community collaboration”, it was found that the sense of effectiveness tended to be higher, where the principal’s school was an elementary school and it was recognized that learning at self-motivating clubs and academic conferences was beneficial as a growth opportunity, where the principal’s school had a school support local community headquarters or school and local community collaborative headquarters, where the school was implementing integrated elementary and lower secondary school education, the smaller the size of the school, the larger the number of family or local community mentors (spouses, parents, friends, neighbours, etc.) and the greater the sense of usefulness of support from the education chief.

Regarding a sense of effective leadership with regard to “lesson improvement”, it was found that the sense of effectiveness tended to be higher, the more it was recognized by aspiring principals up until their early 40s and women that learning at self-motivating clubs and academic conferences was beneficial as a growth opportunity, it was recognized knowledge from books, etc. is useful as a growth opportunity, the greater the number of years of service as principal at the current school and the greater the sense of usefulness of support from the education chief.

(iii) Degree of job satisfaction

In order to be able to secure excellent human resources for the principal, what is needed is to improve the appeal of the job and to increase the degree of job satisfaction. For this purpose, it is necessary to clarify the composition of degree of job satisfaction and to clarify the influencing factors. Therefore, we analyzed the variables (observable variables) that measure the degree of job satisfaction through factor analysis, and as shown in Table 6, summarized the five elements: “work-related satisfaction” (satisfaction level of finding the job rewarding), “relationship satisfaction” (degree of satisfaction with regard to relationships with teachers and staff), “degree of satisfaction with the state of the school” (degree of satisfaction with the situation of the children at the school where the principal works), “degree of satisfaction with the work conditions” (degree

of satisfaction with a work life balance and treatment), and “degree of satisfaction with the relationship with administrative officials” (degree of satisfaction with the relationship with the chief of education and the board of education).

Table 6 Elements of job satisfaction

Elements	Specific items
Work-related satisfaction	“Able to demonstrate ability”, “able to demonstrate independence”, etc.
Relationship satisfaction	“Relationship with nursing teachers”, “relationship with administrative staff”, etc.
Satisfaction with the state of the school	“Calm atmosphere of the school”, “growth of the children”, etc.
Satisfaction with the work conditions	“Acquisition of annual paid leave”, “salary / benefits”, etc.
Satisfaction with the relationship with administrative officials	“Leadership of the chief of education”, “support of the board of education”

* Questions were posed on the extent to which the principal was satisfied to each of the observable variables using five scale points: “1. Very dissatisfied”, “2. Somewhat dissatisfied”, “3. Neither yes nor no”, “4. Somewhat satisfied” and “5. Very satisfied”, and the results were analyzed using factor analysis.

Subsequently, out of the four factors, we focused on “relationship satisfaction” and “satisfaction with the work conditions”, and in order to grasp what kind of factors were affecting them, we performed a multiple regression analysis using the subscale scores (average value of the scores of the observed variables included in each factor) as explanatory variables.

(iii) Principal results relating to degree of job satisfaction

Regarding “work-related satisfaction”, it was found that the degree of satisfaction tended to be higher, the more experience of training there was for aspiring principals up until the age of 40 and women at the National Institute for School Teachers and Staff Development, the higher the sense of usefulness of support from the administrative staff, and the higher the sense of usefulness of support from the chief of education.

Regarding “satisfaction with work conditions”, it was found that the degree of satisfaction tended to be higher, the more recognition there was by women of how learning at self-motivating clubs and academic conferences was an opportunity for growth, and if there was long-term trainee experience at the Institute, the higher the sense of usefulness of support from the administrative staff, and the higher the sense of usefulness of support from the chief of education.

(iv) Competencies to be learnt especially at graduate school for each career stage

Interest in graduate school education is increasing as an important opportunity for improving the competence of the principals. When considering the role that graduate school education plays in improving the competence of the principals, it is indispensable to consider the “timeliness” of

what kind of content is to be learnt at what career stage.

Therefore, 37 questions on the competencies required of principals were set, and where current teachers and staff at the three career stages of “principal”, “vice-principal/deputy principal”, “senior teacher/advanced skills teacher/chief teacher” were sent to a teacher education graduate school, etc. for the purpose of enhancing the competence of current and future principals, we asked them to choose five competencies to be learnt especially at graduate school for each respective career stage. The top six items for each position are summarized in Table 7.

(iv) Principal results relating to competencies to be learnt especially at graduate school by career stage
The results showed that there were differences in the competencies to be acquired at graduate school for each career stage, and in particular, there were large differences between what should be learnt at graduate school during the “senior teacher/advanced skills teacher/chief teacher” stage and what should be learnt at graduate school “before becoming vice-principal/deputy principal” and afterwards. It is thought that this is a reflection of the managerial position of the vice-principal/deputy principal which differs from the job responsibilities of the senior teacher/advanced skills teacher/chief teacher”.

Table 7 Competencies to be learnt particularly at graduate school by career stage (top six items)

	1 st	2 nd	3 rd	4 th	5 th	6 th
Principal	Ability to conceive a school vision	Crisis management skills	Beliefs and principles concerning education based on societal changes	Ability to promote curriculum management	Decision-making	Knowledge of educational measures of the national and local governments
Vice-principal / deputy principal	Crisis management skills	Ability to conceive a school vision	Ability to guide teachers and staff	Ability to create a collaborative atmosphere inside the school	Ability to collaborate with and cooperate with the local community and parents	Ability to promote curriculum management
Senior teacher / advanced skills chief teacher / chief teacher	Expertise in the curriculum, subject teaching, student guidance, etc.	Ability to improve lessons from the perspective of active learning	Ability to promote curriculum management	Ability to guide teachers and staff	Ability to create a collaborative atmosphere inside the school	Crisis management skills

(2) Overseas comparative study of the role of schools in other countries and teaching system of teachers and staff

Conducting an overseas comparative study is one way of obtaining knowledge that is helpful in terms of reviewing the teaching system of teachers and staff, etc. In the overseas comparative

study, we aimed to conduct comparative research from the perspective of clarifying (1) the characteristics of the role of schools in Japan, (2) the characteristics of the work for which the Japanese teachers are responsible, and (3) the characteristics of the workflow when helping Japanese children (for example, the flow when a violent incident occurs) in order to “visualize” the characteristics of the teachers and staff, etc. in Japan.

Two criteria were set as the criteria when selecting the target countries of the survey. That is the scope (broad - narrow) of the school educational activities and the content of the duties (clear - ambiguous).

Ninomiya (2014)⁴ presents a global school typology theory of “a memorable school” which incorporates the characteristics of “a school that focuses on the subjects” and “a school where interesting activities such as elective subjects, club activities, and special activities are available, and teachers and experts care and look after the students”. This “broad – narrow” scope of the school educational activities should connect to the teaching and guidance structure of teachers and staff, etc. In addition, the method of employment in the world, including the employment of teachers and staff, is divided into a “job system” in which the duties are made clear and the salaries are linked, and a “membership system” in which workers are employed without clarification of their duties. “The clear – ambiguous” nature of the duties is likely to greatly affect the teaching system of teachers and staff, etc.

In the overseas comparative study, the teaching and guidance structure of teachers and staff, etc. was divided, based on the above standards: (1) a school system type where teachers serve multiple functions but have restricted duties (first quadrant); (2) a school system type where teachers serve limited functions and have restricted duties (second quadrant); (3) a school system type where teachers serve limited functions and have ambiguous duties (third quadrant); and (4) a school system type where teachers serve multiple functions and have ambiguous duties (fourth quadrant) (however the school system type located in the third quadrant where the teachers serve limited functions but their duties are ambiguous does not, in reality, exist). In addition, taking into consideration regional balances, we conducted a survey using the target countries of the survey of the National Institution for Education Policy Research (2013): the United States, the United Kingdom, France, Germany, China, South Korea, with the addition of Singapore as the seventh country. The standpoint of each country is shown in Figure 8.

⁴ Authored and edited by Shozo Ninomiya, “New Edition Schools around the World - From the Education System to Everyday School Scenes”, Academic Journal Publication, 2014.

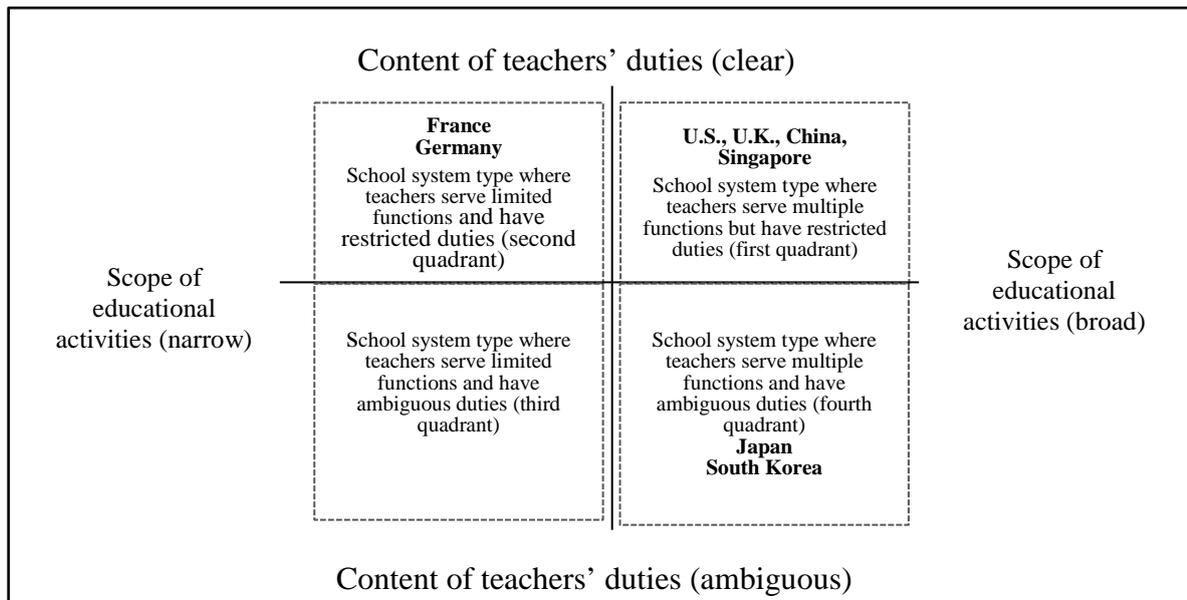


Figure 8 Types of teaching and guidance structures of teachers and staff, etc. in other countries

In order to visualize the characteristics of the duties for which Japanese faculty members are responsible, we established 40 duties that are generally performed in school, and conducted a survey on whether or not they are being performed in the school, and if they are, who is in charge.

When examining the content of the duties, the content of the work of the “Survey on the Actual Work of Teachers” conducted by the Ministry of Education, Culture, Sports, Science and Technology in FY2006 was used as reference, and the categories of “work related to guidance for the students”, “work related to managing the school” and “work related to responses to outside persons” were kept for the categories of work.

Out of the 40 duties, aside from the seven items that all teachers in all countries are in charge of: “checking attendance”, lessons”, “research of teaching materials”, “experiential activities”, “preparation, scoring, evaluation of exam questions”, “exam supervision”, and “evacuation drills, school safety guidance”, the work the teachers of each respective country were or were not in charge of is shown in Table 9. The symbol ○ shows the teacher was “in charge of the work”, the symbol Δ shows the teacher was “sometimes in charge of the work or some of the teachers were in charge of the work” while the symbol X shows the teacher is “not in charge of the work”. Work where teachers in three or more countries chose “sometimes in charge of the work or some of the teachers were in charge of the work” or “not in charge of the work” are shown in grey.

Principal results relating to overseas comparative research on the role of schools in other countries and the teaching system of teachers and staff, etc.

The results showed that in other countries teachers are not in charge of administrative tasks such as “work related to managing the school” and “work related to responses to outside persons” for which Japanese teachers are responsible, and that more Japanese teachers are in charge of “work related to

guidance for students” than teachers in other countries. This confirms what was already pointed out in the 2nd OECD Teaching and Learning International Survey.

In Japan, it is commonplace for teachers to be in charge of “guidance and monitoring absence from school”, “contacting absent children”, “morning homeroom”, “school lunches and nutritional guidance at lunchtime”, “guidance during break times”, “school cleaning guidance”, “health and sanitary guidance”, “counseling, psychological care”, “guidance for club activities not included in the classes”, which is not necessarily the case with teachers in other countries. This result backs up the suggestion that “in order to ensure Japanese teachers are less busy, it is important to lessen the need for Japanese teachers to be in charge of peripheral duties (handling of administrative work, etc.: note of the person citing the survey) as well as guidance for children such as counseling, guidance on academic paths, meal and cleaning guidance, guidance on club activities, which are taken on in addition to regular classes” as indicated in research based on further analysis of the 2nd OECD Teaching and Learning International Survey.

In Japan, there is a need in the future to consider how to categorize work, which is not a lesson but is related to school education, commonly taken on by teachers such as “guidance and monitoring absence from school”, “contacting absent children”, “morning homeroom”, “school lunches and nutritional guidance at lunchtime”, “guidance during break times”, “school cleaning guidance, and “guidance for club activities not included in the classes”.

France and Germany serve as informative examples for this point. In France, time is divided into three categories: “school time (temps scolaire)” where classes are conducted on the responsibility of the school, “peripheral school (temps périscolaire)” such as acceptance in the morning, lunch breaks, and acceptance and support after school, and “temps extrascolaire” on Saturday, Sunday, Wednesday afternoon, short vacations, the summer vacation, etc. In addition to “time outside of school”, the relationship of “peripheral school (temps périscolaire)” with school education is also emphasized, but is not categorized as school education, and the principal person responsible is not the teacher, but social welfare and education professionals referred to as “animatour”.

In Germany, all-day school is being expanded based on the results of the PISA survey in 2000, but this is also sometimes criticized from the viewpoint of social education, youth aid, and family education as “school education monopoly”. Also even in Germany, there are children’s activities such as social education and youth aid, which are specialized services provided by social welfare and education professionals.

As indicated from these examples in France and Germany, there is the possibility that there is a three-part theory of “school”, “peripheral school”, “outside of school” which differs from the two-part theory generally used in Japan of “school” and “outside of school”. Although the scope of school educational activities is certainly narrow in these countries, we can see from the examples that the educational activities are likely to be substantial if the time of the “peripheral school” is included, and that social welfare / education professionals are the ones in charge during this time

The current teaching system of teachers and staff, etc. in Japan is categorized in the school system type where teachers serve multiple functions and have ambiguous duties (fourth quadrant). Certainly, there are many points that we should continue in the future as there are basic merits using the conventional way. However, in order to plan and implement a curriculum that fosters the competencies required for a new era, there is a need to reconstruct the teaching system of teachers and staff, etc. in order to resolve the complicated and diverse issues, and to ensure sufficient face-to-face time for teachers and children. In such case, Japan will be moving closer to the school system type where teachers serve multiple functions but have restricted duties (first quadrant) or the school system type where teachers serve limited functions and have restricted duties (second quadrant).

In this research study, we were able to confirm that it is possible to take measures for a school system type where teachers serve multiple functions but have restricted duties (first quadrant) such as promotion of the placement of school counselors, club activities support staff and administrative staff as well as measures aimed at a school system type where teachers serve limited functions and have restricted duties (second quadrant) in the direction of placement of social welfare and education professionals in the “peripheral school” activities incorporating the three-part theory of “school”, “peripheral school” and “outside of school” as with France and Germany.

There were issues as well in this research study. When creating the list, we checked literature and websites, and then took the procedure of checking with multiple educational personnel of the relevant country and filling in the list, but the actual situation of each country is diverse, and further verification will be needed in the future.

Table 9 The role of teachers in other countries

	Quadrant	I				II		IV	
		U.S.	U.K.	China	Singapore	France	Germany	Japan	South Korea
	Work	Name of country							
Work related to guidance for the children	Guidance and monitoring school absenteeism	×	×	×	×	×	×	△	×
	Contacting absent children	×	×	○	○	×	○	○	○
	Morning homeroom	×	○	○	×	×	×	○	○
	Ordering and administrative handling to purchase teaching materials	×	×	△	×	×	×	△	×
	Grade information management	○	×	△	○	○	○	○	○
	Preparing teaching materials (printing and preparing objects)	○	×	○	○	○	○	○	○
	Individual guidance and supplementary guidance for children with issues	○	×	○	○	○	○	○	○
	Running and preparation of experiential activities	○	×	○	○	○	○	○	○
	School lunches and nutritional guidance at lunchtime	×	×	×	×	×	×	○	○
	Guidance during break times	○	×	○	△	×	○	○	○

	School cleaning guidance	×	×	○	×	×	×	○	○
	Athletic meets, cultural festivals, etc.	○	○	○	○	×	○	○	○
	Managing and preparing athletic meets, cultural festivals, etc.	○	○	○	○	×	○	○	○
	Academic path guidance and consultation	△	○	○	○	×	○	○	○
	Health and sanitation guidance	×	×	○	○	○	○	△	○
	Guidance for students who shows problematic behavior	△	○	○	○	○	×	○	○
	Counseling, psychological care	×	×	○	○	○	×	△	×
	Guidance for club activities not included in classes	△	×	○	△	×	△	○	△
	Children and student council guidance	○	○	○	×	×	○	○	○
	Organization of classroom environment, equipment management	○	×	△	○	○	○	○	○
Work related to managing the school	School patrols and safety inspection	×	×	○	×	×	○	△	×
	Answers to surveys and statistics of national and local governments	×	×	△	×	×	○	△	×
	Receipt and storage of documents	×	×	△	×	×	○	△	×
	Preparation and execution of budget proposal	×	×	×	×	×	○	×	×
	Facility management, inspection and repair	×	×	△	×	×	×	×	×
	Collection of academic payments	×	×	○	×	×	○	△	×
	Preparation of documents related to teachers' business trip	×	×	△	×	×	○	×	×
	School public relations (websites, etc.)	×	×	△	×	×	○	○	×
	Office work related to transfer and relocation of students	×	×	○	×	×	×	△	×
Work related to responding to outside persons	Home visits	×	×	○	×	×	×	○	△
	Cooperation with regional events	○	○	△	×	○	×	△	△
	Coordination with local volunteers	×	×	△	×	×	○	△	×
	Management of managing organizations in which local residents participate	△	×	×	×	×	△	△	×

* The symbol ○ has been added to “things the teacher is in charge of”, the symbol △ to “things the teacher is partially in charge of or thing only some of the teachers are in charge of” and the symbol x to “things the teachers is not in charge of”. The duties for which teachers in three or more countries chose △ or x are indicated in grey. Although 40 jobs were set in all, the seven categories of “checking attendance”, lessons”, “research of teaching materials”, “experiential activities”, “preparation, scoring, evaluation of exam questions”, “exam supervision”, and “evacuation drills, school safety guidance” have not been listed.