

A Questionnaire Investigation in the Viewpoint for Supporting High School Teachers by the School Social Worker

Daisuke Takeyasu¹, Tatsuya Oyanagi² and Kazuhiro Takeyasu³

Abstract

It is generally reported that High School teachers in Japan are sending very busy days on their daily works including teaching, support for the club activities and deskwork. Among them, they share a lot of time for managing the club activities of students compared with other countries. In that area, professionals can make instruction much better than teachers for the special sports like Judo and Kendo (Japanese fencing) etc. School Social Worker can coordinate the professionals out of school and can help teachers by decreasing their burden on that area. There are few related papers concerning the support of club activities by utilizing the professionals outside. In this paper, a questionnaire investigation for High School

¹ The Open University of Japan, e-mail: take1111@hotmail.co.jp

² Hachinohe Gakuin University, e-mail: oyanagi-t@hachinohe-u.ac.jp

³ Tokoha University, e-mail: takeyasu@fj.tokoha-u.ac.jp

teachers at Iwate Prefecture in Japan is executed in order to clarify their current condition and their consciousness, and to seek the possibility of utilizing school social worker for their support. Hypothesis testing was executed based on that. Some interesting and instructive results were obtained.

Mathematics Subject Classifications: 62H15

Keywords: School Social Worker; High school; teacher; hypothesis testing

1 Introduction

There are many reports recently that teacher at High school / Junior High School in Japan are sending very busy days in general on their daily works including teaching, support for the club activities and deskwork. Among them, they share a lot of time for managing the club actives of students compared with other countries. In particular, it takes time to manage the club activities for sports. In that area, professionals can make instruction much better than teachers for the special sports like Judo and Kendo (Japanese fencing) etc. School Social Worker can coordinate the professionals out of school and can help teachers by decreasing their burden on that area.

There are many researches made on School Social Workers' function. For example, H.Konyuba (2011) analyzed the teacher's sparing time for club activities and pointed out that there is a difference between the sports club and the culture club.

K.Yonekawa (2011) discussed the mental health support by school social worker. M.S.Kelly et al. (2010) made School Social work survey and derived instructive insight.

OECD (Organisation for Economic Co-operation and Development) has released the investigation report of “Teaching And Learning International Survey (TALIS)” on June 25/2014. It is reported that the teacher’s total working hours for a week in Japan were the most among 33 countries. Main data are as follows.

/Teacher’s total working hours for a week in Japan: 53.9 (Average: 38.3)

/ Teacher’s working hours of support for the club activities for a week in Japan: 7.7(Average: 2.1)

/Teacher’s working hours of deskwork for a week in Japan: 5.5 (Average: 2.9)

/Teacher’s teaching hours for a week in Japan: 17.7 (Average: 19.3)

Teacher’s working hours of support for the club activities were nearly triple, and those of deskwork double compared with the average, while the teaching hours were less than those of the average. They are too busy for the support of the club activities and deskwork, which causes bad influence on their teaching activities.

Although there are some related papers as these, but there are few related papers concerning the support of club activities by utilizing the professionals outside especially in the Japanese case.

In this paper, a questionnaire investigation for High School teachers at Iwate Prefecture in Japan is executed in order to clarify their current condition and their consciousness, and to seek the possibility of utilizing school social worker for

their support. Hypothesis testing was executed based on that.

Two main issues are set as follows.

- Teachers assistance for Junior High School is much more effective than for High School in introducing the School Social Worker.
- Teachers assistance for the middle ranked performance High School is much more effective that for other ranked performance High School.

We have made 13 Null hypotheses based upon these and hypothesis testing is executed.

Some interesting results were obtained.

The rest of the paper is organized as follows. Outline of questionnaire investigation is stated in section 2. Hypothesis Testing is carried out in section 3, which is followed by the Remarks of section 4.

2 Outline and the Basic Statistical Results of the Questionnaire Research

2.1 Outline of the Questionnaire Research

We make a questionnaire investigation in the viewpoint for supporting High School Teachers by the School Social Worker. The outline of questionnaire research is as follows. Questionnaire sheet is attached in Appendix.

- (1) Scope of : High School Teacher, 4 High Schools in Iwate

(Not filled in: 0.9%)

(3) Position (Q4-3)

Deputy Principal: 2.7%

A person in charge of educational affairs: 12.61%

Teacher: 69.37%

Lecturer: 11.71%

Assistant: 0.9%

Miscellaneous: 1.8%

(Not filled in: 0.9%)

(4) Experience as a teacher (Q4-4)

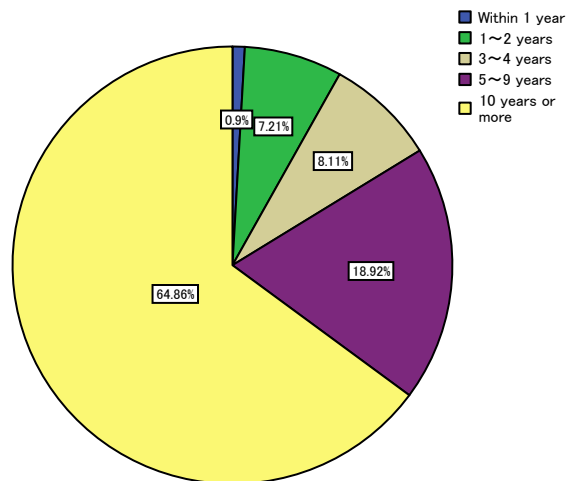


Figure 2-1: Experience as a teacher (Q4-4)

More than 10 years consists nearly 2/3.

(5) How many years are you working for the present school?

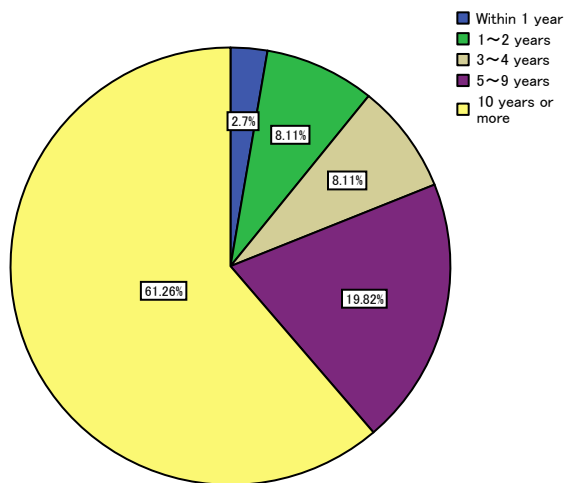


Figure2-2: How many years are you working for the present school?

5~9 years and more than 10 years consist of 81%.

2.2.2 Faculty Course (Q1-2)

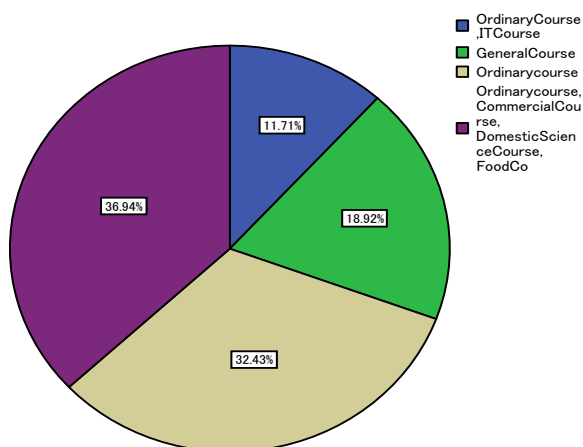


Figure 2-3: Faculty Course (Q1-2)

2.2.3 Club Activities

(1) Sports Club (Q 1-2-1)

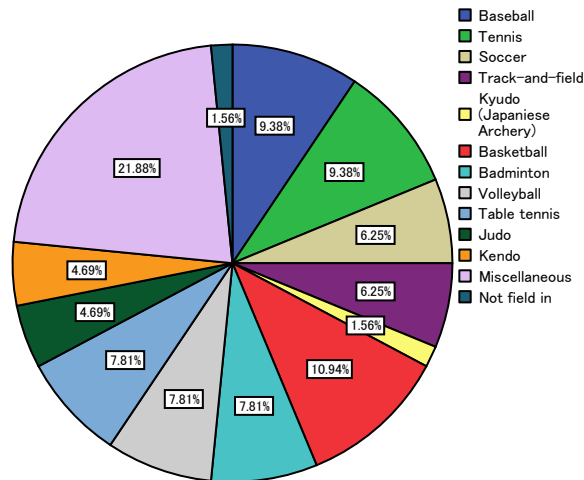


Figure 2-4: Sports Club (Q 1-2-1)

Large part one is Baseball (9.38%), Tennis (9.38%), Soccer (6.25%) and Track-and-field (6.25%).

(2) Culture Club (Q1-2-2)

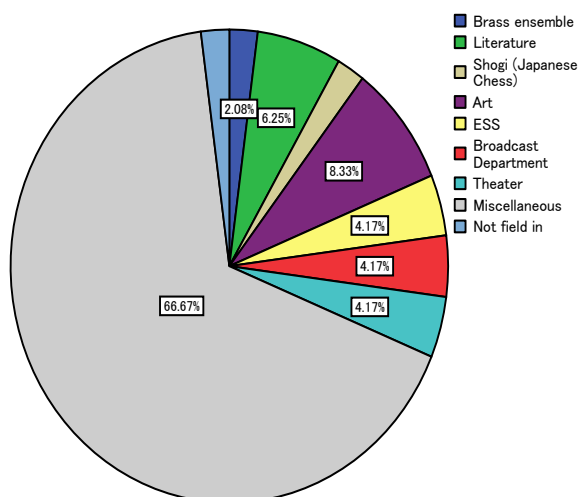


Figure 2-5: Culture Club (Q1-2-2)

Main items are as follows.

/ART: 8.33%, /Literature: 6.25%, /ESS: 4.17%, /Broadcast Department: 4.17%,
/Theater: 4.17%.

(3) How about the sort of job? (Q1-2-2-3)

/Adviser: 77.48%, /Deputy Adviser: 21.62%, Miscellaneous: 0.9%

Adviser takes the majority.

(4) Is the club strong enough to participate in the national sports match? (Q1-2-2-4)

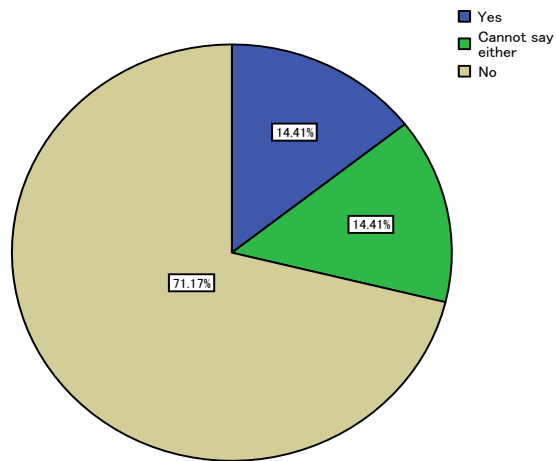


Figure 2-6: Is the club strong enough to participate in the national sports match?

(Q1-2-2-4)

Nearly 15% of them are the strong teams to participate in the national sports match.

(5) Is the club activity active? (Q1-2-2-5)

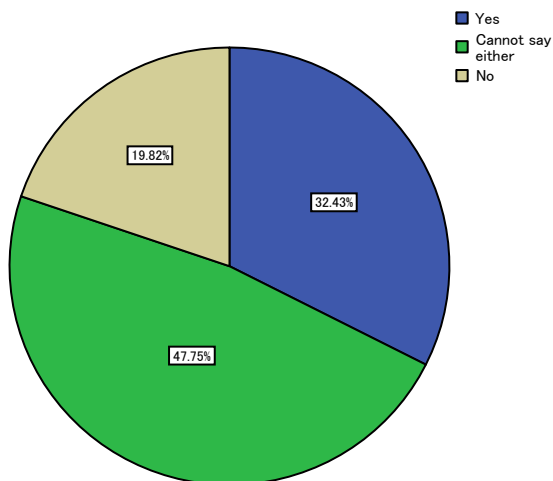


Figure 2-7: Is the club activity active? (Q1-2-2-5)

Nearly 1/3 of them have selected “Yes”.

(6) How long a time do you spare for the club activity (Include moving time) (Q1-2-2-6)

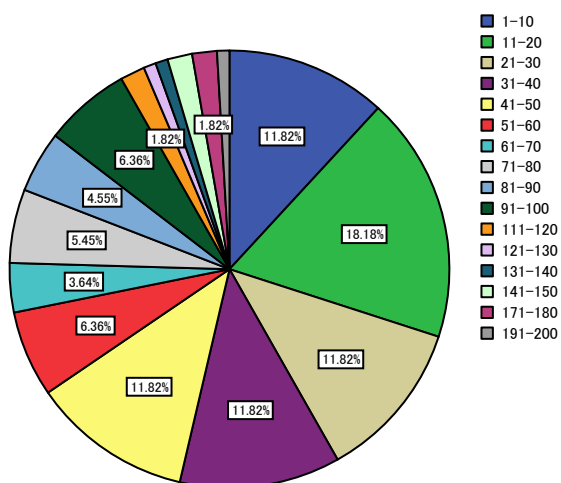


Figure 2-8: How long a time do you spare for the club activity
(Include moving time) (Q1-2-2-6)

60 hours in month exceeds 70% and 90 hours reaches 85% in the total.

2.2.4 Consciousness for the daily works (Q2)

(1) Feel it burden to teach (Q2-1)

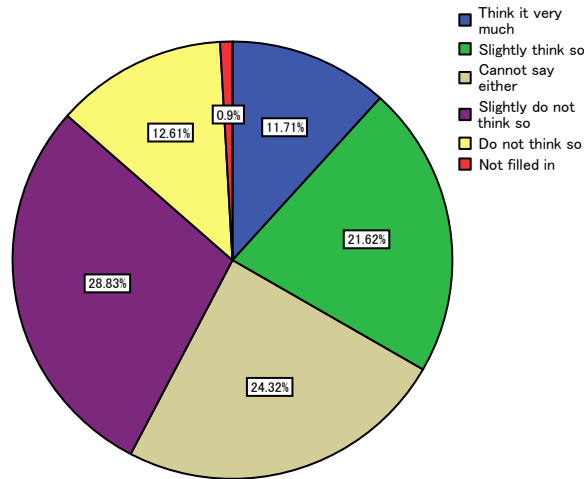


Figure 2-9: Feel it burden to teach (Q2-1)

Nearly 1/3 of the teachers feel it burden to teach.

(2) Feel it burden to prepare for teaching (Q2-2)

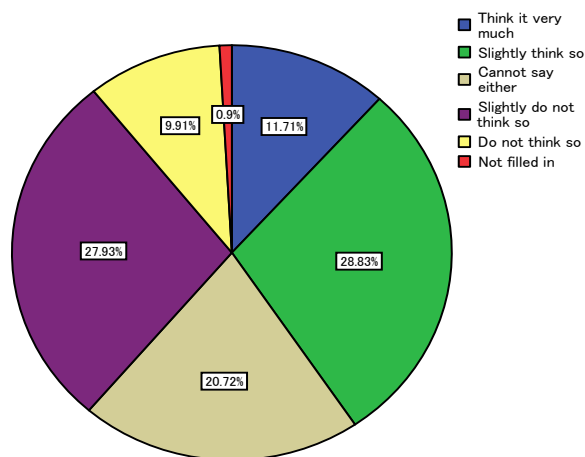


Figure 2-10: Feel it burden to prepare for teaching (Q2-2)

Over 40% of the teachers feel it burden to prepare for teaching.

(3) Feel it burden to instruct for learning(Q2-3)

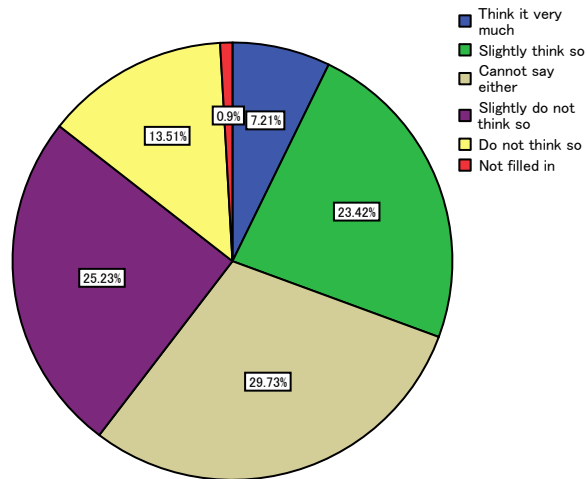


Figure 2-11: Feel it burden to instruct for learning(Q2-3)

Nearly 1/3 of the teachers feel it burden to instruct for learning.

(4) Feel it burden to handle the students' performance(Q2-4)

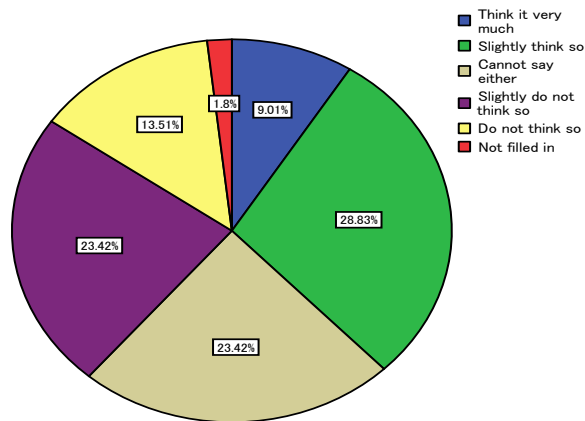


Figure 2-12: Feel it burden to handle the students' performance(Q2-4)

Nearly 38% of the teachers feel it burden to handle the students' performance.

(5) Feel it burden to guide students (Q2-5)

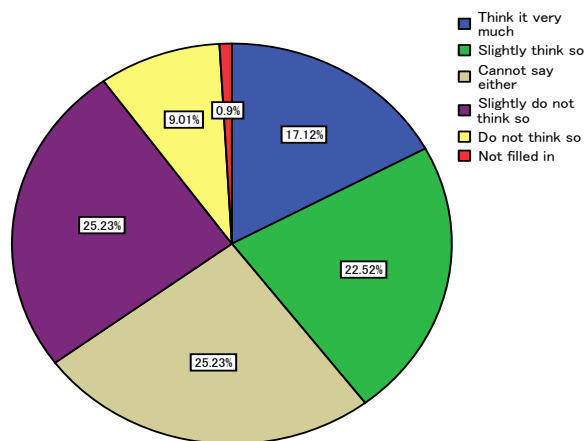


Figure 2-13: Feel it burden to guide students (Q2-5)

Nearly 40% of the teachers feel it burden to guide students.

(6) Feel it burden to guide club activities(Q2-6)

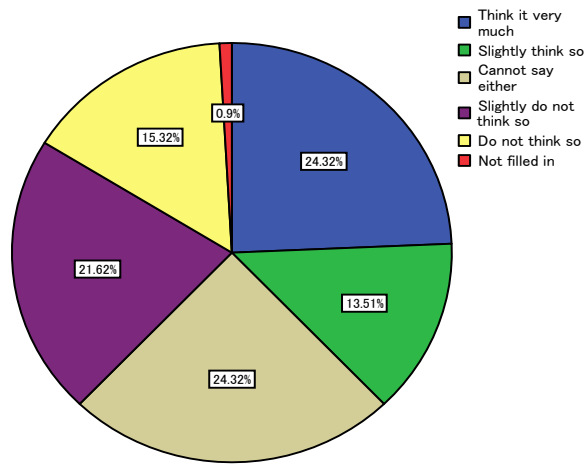


Figure 2-14: Feel it burden to guide club activities(Q2-6)

Nearly 38% of the teachers feel it burden to guide club activities.

(6) Feel it burden to guide committee (Q2-7)

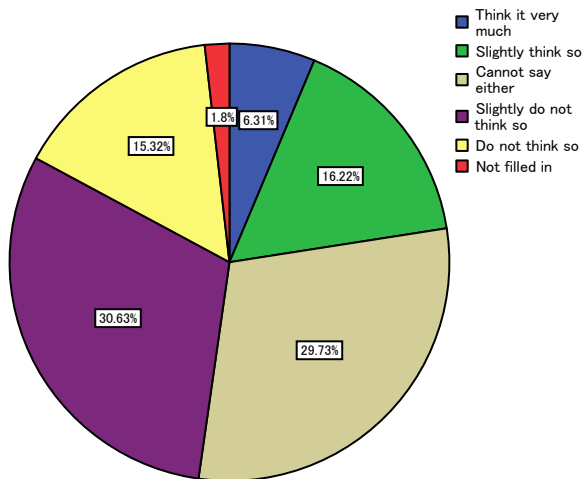


Figure 2-15: Feel it burden to guide committee (Q2-7)

(8) Feel it burden to manage the class(Q2-8)

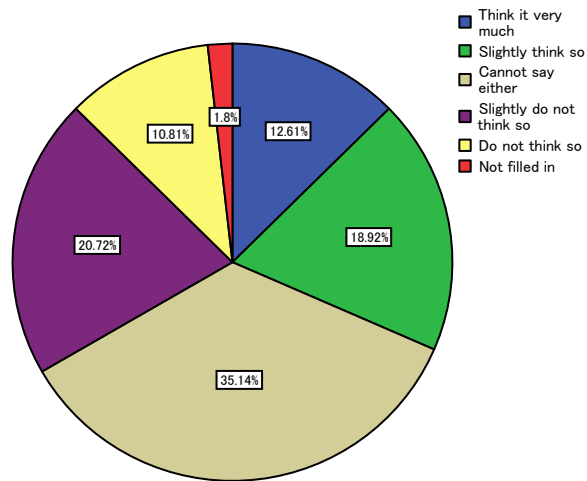


Figure 2-16: Feel it burden to manage the class(Q2-8)

Nearly 1/3 of the teachers feel it burden to manage the class.

(9) Feel it burden to deal with meeting, advance arrangement(Q2-9)

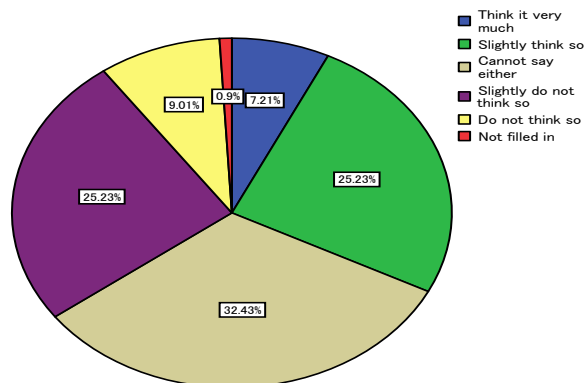


Figure 2-17: Feel it burden to deal with meeting, advance arrangement(Q2-9)

Nearly 1/3 of the teachers feel it burden to deal with meeting, advance arrangement.

(10) Feel it burden to deal with parents(Q2-10)

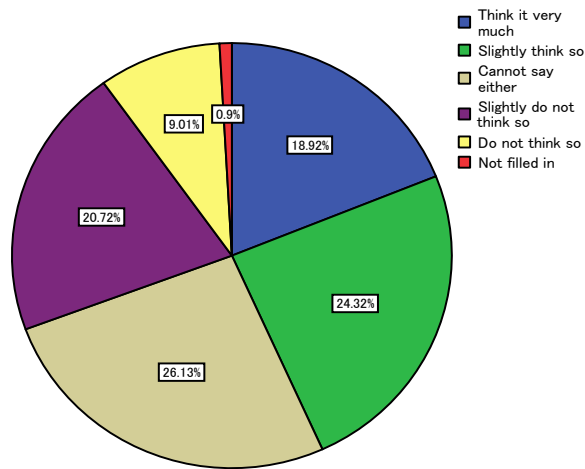


Figure 2-18: Feel it burden to deal with parents(Q2-10)

Nearly 43% of the teachers feel it burden to deal with parents.

1/3 through 40% of them feel it burden for the daily works on the whole.

2.2.5 Consciousness for guiding the club activities (Q3)

(1) Worthwhile to guide club activities (Q3-1)

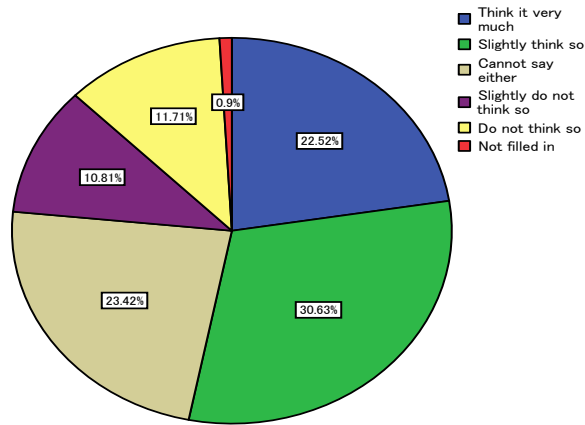


Figure 2-19: Worthwhile to guide club activities (Q3-1)

Positive attitude to this theme can be seen.

(2) It is better for the professionals to guide club activities (Q3-2)

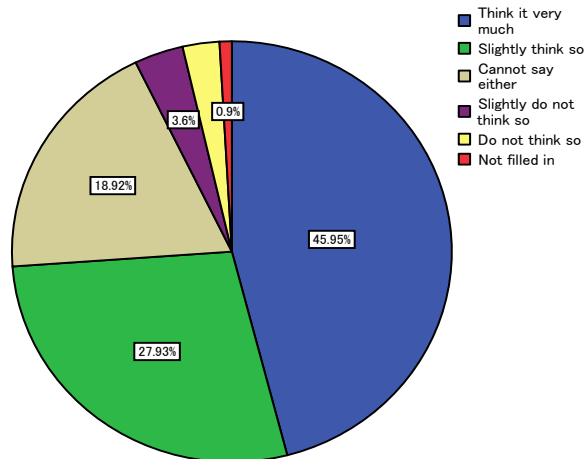


Figure 2-20: It is better for the professionals to guide club activities (Q3-2)

Strong positive attitude to this theme can be confirmed.

(3) I do not know the club field precisely that I take charge of (Q3-3)

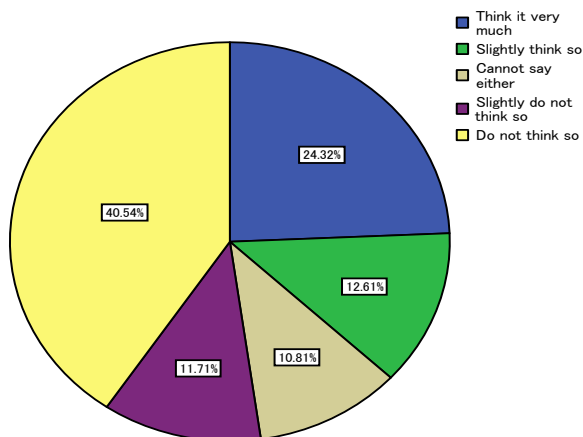


Figure 2-21: I do not know the club field precisely that I take charge of (Q3-3)

Rather many teachers (36.9%) feel anxiety for their expertise in their club field.

(4) I cannot share enough time to prepare for teaching because of the workload for the guidance of club activities (Q3-4)

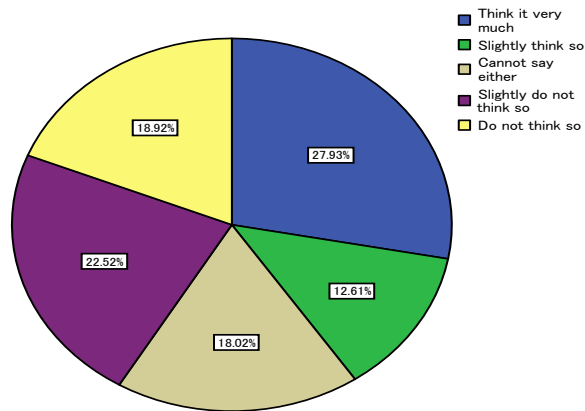


Figure 2-22: I cannot share enough time to prepare for teaching because of the workload for the guidance of club activities (Q3-4)

(5) Quite tired because of the activity on holiday (Q3-5)

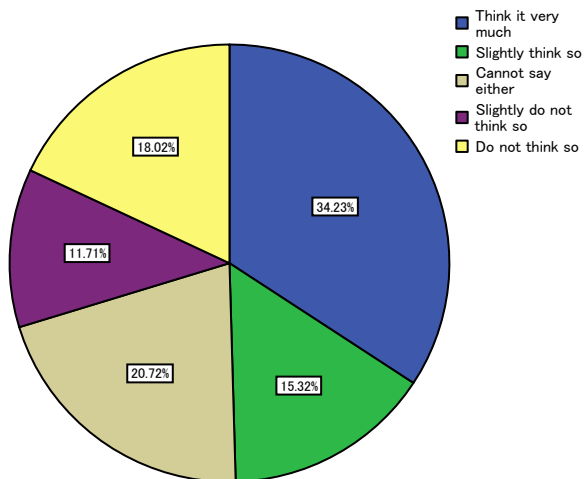


Figure 2-23: Quite tired because of the activity on holiday (Q3-5)

Nearly half of them feel tired because of the club activity on holiday.

(6) Have a hard time for the technical guidance (Q3-6)

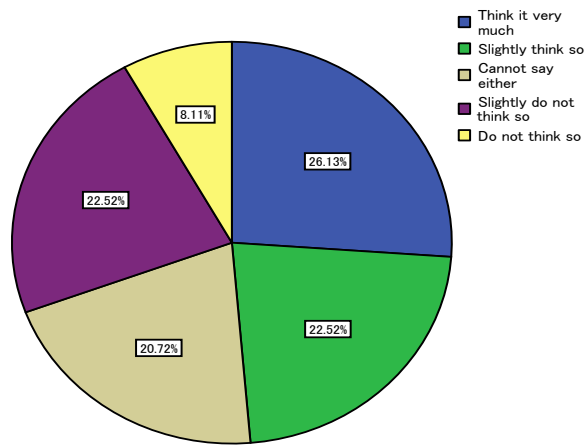


Figure 2-24: Have a hard time for the technical guidance (Q3-6)

Nearly half of them have a hard time for the technical guidance.

(7) Have a hard time for the mental guidance (Q3-7)

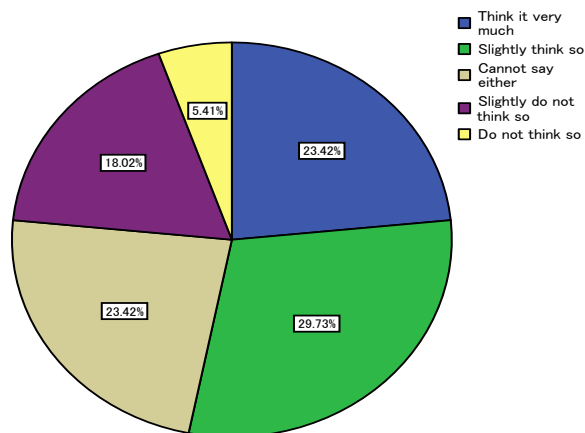


Figure 2-25: Have a hard time for the mental guidance (Q3-7)

Nearly 53% of them have a hard time for the mental guidance.

(8) Want to have a person to consult with in guiding club activities (Q3-8)

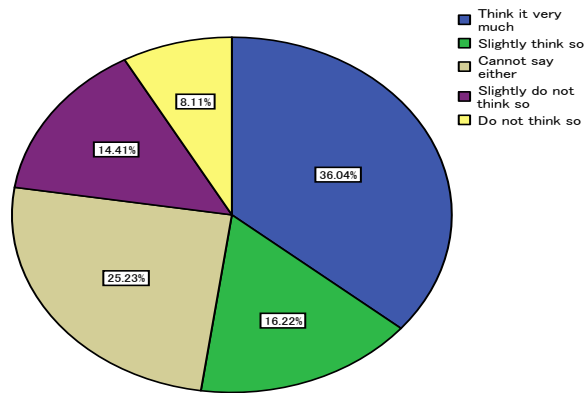


Figure 2-26: Want to have a person to consult with in guiding club activities

(Q3-8)

Nearly 52% of them want to have a person to consult with in guiding club activities.

3 Hypothesis Testing

Hereinafter we make hypothesis testing based upon the questionnaire investigation data.

(1) Setting Hypothesis

First of all, we start from the hypothesis testing.

Two main issues are set as follows.

A When they have a hard time in guiding club activities, they think that they want

to have a person to consult with or it is better for the professionals to guide club activities.

B When they feel worthwhile to guide club activities, they feel less burden for it.

Next, we set the following 14 themes (sub issues) before setting Null hypothesis.

A-1 When they want the person to consult with, they think that it is better for the professionals to guide club activities.

A-2 When they have the hard time for the technical guidance, they think that it is better for the professionals to guide club activities.

A-3 If they feel it burden to teach, they think that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities.

A-4 When they have a hard time for the technical guidance, they think that they want to have a person to consult with in guiding club activities.

A-5 When they have a hard time for the mental guidance, they think that they want to have a person to consult with in guiding club activities.

A-6 When they do not know the club field precisely, they think that they want to have a person to consult with in guiding club activities.

A-7 If they feel quite tired because of the activity on holiday, they think that it is better for the professionals to guide club activities.

A-8 If they feel that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities, they think that they want to have a person to consult with in guiding club activities.

A-9 If they feel quite tired because of the activity on holiday, they think that they

want to have a person to consult with in guiding club activities.

B-1 Where the club activities are active, teachers in charge of club activities spare a lot of time.

B-2 Where the club is strong enough to participate in the national sports match, they feel worthwhile to guide club activities.

B-3 Even when they feel worthwhile to guide club activities, they feel it burden to guide club activities

B-4 If the club activity is active, they feel worthwhile to guide club activities.

Now, we set the following 13 Null hypothesis.

Null Hypothesis

A-1 Even when they want the person to consult with, they do not think that it is better for the professionals to guide club activities.

A-2 Even when they have the hard time for the technical guidance, they do not think that it is better for the professionals to guide club activities.

A-3 Even if they feel it burden to teach, they do not think that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities.

A-4 Even when they have a hard time for the technical guidance, they do not think that they want to have a person to consult with in guiding club activities.

A-5 Even when they have a hard time for the mental guidance, they do not think

that they want to have a person to consult with in guiding club activities.

A-6 Even when they do not know the club field precisely, they do not think that they want to have a person to consult with in guiding club activities.

A-7 Even if they feel quite tired because of the activity on holiday, they do not think that it is better for the professionals to guide club activities.

A-8 Even if they feel that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities, they do not think that they want to have a person to consult with in guiding club activities.

A-9 Even if they feel quite tired because of the activity on holiday, they do not think that they want to have a person to consult with in guiding club activities.

B-1 Even if where the club activities are active, teachers in charge of club activities do not spare a lot of time.

B-2 Even if where the club is strong enough to participate in the national sports match, they do not feel worthwhile to guide club activities.

B-3 Even when they feel worthwhile to guide club activities, they do not feel it burden to guide club activities

B-4 Even if the club activity is active, they do not feel worthwhile to guide club activities.

(2) Hypothesis Testing

χ^2 hypothesis Testing is executed for about teachers' consciousness. χ^2

hypothesis Testing is to clarify the difference between the expected value and the observed data, which is shown in Eq.(1).

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i} \quad (1)$$

Where O_i is an observed data and E_i is an expected value.

The results of statistical hypothesis testing are as follows.

Null Hypothesis A-1 : Even when they want the person to consult with, they do not think that it is better for the professionals to guide club activities.

Summary table concerning Null Hypothesis 1 is exhibited in Table 3.1.

Table 3.1: Summary table concerning Null Hypothesis A-1

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-2	Think it very much	29	7	9	5	1	51
	Slightly think so	6	6	10	7	2	31
	Cannot say either	5	3	8	3	2	21
	Slightly do not think so	0	2	0	1	1	4
	Do not think so	0	0	0	0	3	3
	Not filed in	0	0	1	0	0	1
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	48	15	63
Do not think so	2	5	7
Total	50	20	70

Expectation	Think so	Do not think so	Total
Think so	45	18	63
Do not think so	5	2	7
Total	50	20	70

Statistic (χ^2 value)	7
Rejection region (1% significance level)	$Z > 6.6349$

(Rejection region is over 6.6349 for 1% significance level, 3.841 for 5% significance level, 3.537 for 6% significance level and 2.874 for 9% significance level by 1 degree of freedom.)

The null hypothesis is rejected with 1% significance level. It can be said that when they want the person to consult with, they think that it is better for the professionals to guide club activities.

Null Hypothesis: A-2 Even when they have the hard time for the technical guidance, they do not think that it is better for the professionals to guide club activities.

Table 3.2: Summary table concerning Null Hypothesis A-2

		Q 3-2						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filed in	
Q 3-6	Think it very much	21	5	2	0	1	0	29
	Slightly think so	12	8	4	1	0	0	25
	Cannot say either	7	7	8	0	0	1	23
	Slightly do not think so	10	5	6	3	1	0	25
	Do not think so	1	6	1	0	1	0	9
Total		51	31	21	4	3	1	111

Real number	Think so	Do not think so	Total
Think so	46	2	48
Do not think so	22	5	27
Total	68	7	75

Expectation	Think so	Do not think so	Total
Think so	43.52	4.48	48
Do not think so	24.48	2.52	27
Total	68	7	75

Statistic (χ^2 value)	4.2061
Rejection region (5% significance level)	$Z > 3.8415$

The null hypothesis is rejected with 5% significance level. It can be said that when

they have the hard time for the technical guidance, they think that it is better for the professionals to guide club activities.

Null Hypothesis: A-3 Even if they feel it burden to teach, they do not think that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities.

Table 3.3: Summary table concerning Null Hypothesis A-3

		Q 3-4					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 2- 1	Think it very much	8	4	1	0	0	13
	Slightly think so	12	2	7	2	1	24
	Cannot say either	6	4	5	8	4	27
	Slightly do not think so	3	4	6	14	5	32
	Do not think so	2	0	1	1	10	14
	Not filled in	0	0	0	0	1	1
Total		31	14	20	25	21	111

Real number	Think so	Do not think so	Total
Think so	26	3	29
Do not think so	9	30	39
Total	35	33	68

Expectation	Think so	Do not think so	Total
Think so	14.9264	14.0735	29
Do not think so	20.0735	18.9265	39
Total	35	33	68

Statistic (χ^2 value)	29.5158
Rejection region (1% significance level)	Z >6.6349

The null hypothesis is rejected with 1% significance level. It can be said that if they feel it burden to teach, they think that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities.

Null Hypothesis: A-4 Even when they have a hard time for the technical guidance, they do not think that they want to have a person to consult with in guiding club activities.

Table 3.4: Summary table concerning Null Hypothesis A-4

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-6	Think it very much	21	3	3	0	2	29
	Slightly think so	12	4	7	1	1	25
	Cannot say either	4	4	10	4	1	23
	Slightly do not think so	3	6	5	9	2	25
	Do not think so	0	1	3	2	3	9
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	40	4	44
Do not think so	10	16	26
Total	50	20	70

Expectation	Think so	Do not think so	Total
Think so	31.4286	12.5714	44
Do not think so	18.5714	7.4286	26
Total	50	20	70

Statistic (χ^2 value)	22.0280
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that when they have a hard time for the technical guidance, they think that they want to have a person to consult with in guiding club activities.

Null Hypothesis: A-5 Even when they have a hard time for the mental guidance, they do not think that they want to have a person to consult with in guiding club activities.

Table 3.5: Summary table concerning Null Hypothesis A-5

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-7	Think it very much	20	3	2	0	1	26
	Slightly think so	11	9	9	3	1	33
	Cannot say either	4	4	12	4	2	26
	Slightly do not think so	4	2	3	8	3	20
	Do not think so	1	0	2	1	2	6
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	43	5	48
Do not think so	7	14	21
Total	50	19	69

Expectation	Think so	Do not think so	Total
Think so	34.7826	13.2174	48
Do not think so	15.2174	5.7826	21
Total	50	19	69

Statistic (χ^2 value)	23.1649
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that when they have a hard time for the mental guidance, they think that they want to have a person to consult with in guiding club activities.

Null Hypothesis: A-6 Even when they do not know the club field precisely, they do not think that they want to have a person to consult with in guiding club activities.

Table 3.6: Summary table concerning Null Hypothesis A-6

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3.3	Think it very much	17	4	5	0	1	27
	Slightly think so	4	6	3	1	0	14
	Cannot say either	8	1	1	0	2	12
	Slightly do not think so	4	3	3	2	1	13
	Do not think so	7	4	15	13	5	44
	Not field in	0	0	1	0	0	1
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	31	2	33
Do not think so	18	21	39
Total	49	23	72

Expectation	Think so	Do not think so	Total
Think so	22.4583	10.5417	33
Do not think so	26.5417	12.4583	39
Total	49	23	72

Statistic (χ^2 value)	18.7750
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that when they do not know the club field precisely, they think that they want to have a person to consult with in guiding club activities.

Null Hypothesis: A-7 Even if they feel quite tired because of the activity on holiday, they do not think that it is better for the professionals to guide club activities.

Table 3.7: Summary table concerning Null Hypothesis A-7

		Q 3-2						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filed in	
Q 3-5	Think it very much	24	7	6	1	0	0	38
	Slightly think so	7	8	1	0	0	1	17
	Cannot say either	9	6	7	0	1	0	23
	Slightly do not think so	4	4	3	2	0	0	13
	Do not think so	7	6	4	1	2	0	20
Total		51	31	21	4	3	1	111

Real number	Think so	Do not think so	Total
Think so	46	1	47
Do not think so	21	5	26
Total	67	6	73

Expectation	Think so	Do not think so	Total
Think so	43.1370	3.8630	47
Do not think so	23.8630	2.1370	26
Total	67	6	73

Statistic (χ^2 value)	6.4911
Rejection region (2% significance level)	$Z > 5.4119$

The null hypothesis is rejected with 2% significance level. It can be said that if they feel quite tired because of the activity on holiday, they think that it is better for the professionals to guide club activities.

Null Hypothesis: A-8 Even if they feel that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities, they do not think that they want to have a person to consult with in guiding club activities.

Table 3.8: Summary table concerning Null Hypothesis A-8

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-4	Think it very much	28	2	1	0	0	31
	Slightly think so	7	1	3	3	0	14
	Cannot say either	3	7	8	1	1	20
	Slightly do not think so	0	6	10	8	1	25
	Do not think so	2	2	6	4	7	21
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	38	3	41
Do not think so	10	20	30
Total	48	23	71

Expectation	Think so	Do not think so	Total
Think so	27.7183	13.2817	41
Do not think so	20.2817	9.7183	30
Total	48	23	71

Statistic (χ^2 value)	27.8631
Rejection region (1% significance level)	$Z > 6.6349$

The null hypothesis is rejected with 1% significance level. It can be said that if they feel that they cannot share enough time to prepare for teaching because of the workload for the guidance of club activities, they think that they want to have a person to consult with in guiding club activities.

Null Hypothesis: A-9 Even if they feel quite tired because of the activity on holiday, they do not think that they want to have a person to consult with in guiding club activities.

Table 3.9: Summary table concerning Null Hypothesis A-9

		Q 3-8					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-5	Think it very much	27	6	4	1	0	38
	Slightly think so	4	5	5	3	0	17
	Cannot say either	7	1	10	4	1	23
	Slightly do not think so	1	4	2	4	2	13
	Do not think so	1	2	7	4	6	20
Total		40	18	28	16	9	111

Real number	Think so	Do not think so	Total
Think so	42	4	46
Do not think so	8	16	24
Total	50	20	70

of time.

Null Hypothesis: B-2 Even if where the club is strong enough to participate in the national sports match, they do not feel worthwhile to guide club activities.

Table 3.11: Summary table concerning Null Hypothesis B-2

		Q 3-1						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filed in	
Q 1-2-2-4	Yes	9	3	3	1	0	0	16
	Cannot say either	3	6	3	3	1	0	16
	No	13	25	20	8	12	1	79
	Not filled in	0	0	0	0	0	0	0
Total		25	34	26	12	13	1	111

Real number	Think so	Do not think so	Total
Yes	12	1	13
No	38	20	58
Total	50	21	71

Expectation	Think so	Do not think so	Total
Yes	9.15493	3.84507	13
No	40.84507	17.15493	58
Total	50	21	71

Statistic (χ^2 value)	3.6593
Rejection region (6% significance level)	$Z > 3.5374$

The null hypothesis is rejected with 6% significance level. It can be said that where the club is strong enough to participate in the national sports match, they feel worthwhile to guide club activities.

Null Hypothesis: B-3 Even when they feel worthwhile to guide club activities, they do not feel it burden to guide club activities

Table 3.12: Summary table concerning Null Hypothesis B-3

		Q 2-6						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filed in	
Q 3-1	Think it very much	3	5	7	4	8	0	27
	Slightly think so	5	5	2	2	1	0	15
	Cannot say either	1	8	10	4	3	1	27
	Slightly do not think so	5	10	6	2	1	0	24
	Do not think so	11	5	1	0	0	0	17
	Not filed in	0	1	0	0	0	0	1
Total		25	34	26	12	13	1	111

Real number	Think so	Do not think so	Total
Think so	18	15	33
Do not think so	31	3	34
Total	49	18	67

Expectation	Think so	Do not think so	Total
Think so	24.1343	8.8657	33
Do not think so	24.8657	9.1343	34
Total	49	18	67

Statistic (χ^2 value)	11.4366
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that even when they feel worthwhile to guide club activities, they feel it burden to guide club activities

Null Hypothesis: B-4 Even if the club activity is active, they do not feel worthwhile to guide club activities.

Table 3.13: Summary table concerning Null Hypothesis B-4

		Q 3-1						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filed in	
Q 1-2-2 -5	Yes	16	12	5	3	0	0	36
	Cannot say either	7	18	16	6	5	1	53
	No	2	4	5	3	8	0	22
	Not filled in	0	0	0	0	0	0	0
Total		25	34	26	12	13	1	111

Real number	Think so	Do not think so	Total
Yes	28	3	31
No	6	11	17
Total	34	14	48

Expectation	Think so	Do not think so	Total
Yes	21.9583	9.0417	31
No	12.0417	4.9583	17
Total	34	14	48

Statistic (χ^2 value)	16.0924
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that if the club activity is active, they feel worthwhile to guide club activities.

4 Remarks

The Results for Hypothesis Testing are as follows.

Main issue A consists of 9 sub issues (A-1~A-9). All of their Null Hypotheses were rejected and the main issue A was insisted clearly. 4 sub issues were set for the main issue B. All of their Null Hypotheses were rejected and the main issue B was insisted clearly.

5 Conclusion

High School teachers in Japan are sending very busy days on their daily works including teaching, support for the club activities and deskwork. Among them, they share a lot of time for managing the club activities of students compared with other countries. In that area, professionals can make instruction much better than teachers for the special sports like Judo and Kendo (Japanese fencing) etc. School Social Worker can coordinate the professionals out of school and can help teachers by decreasing their burden on that area. There are few related papers concerning the support of club activities by utilizing the professionals outside. In this paper, a questionnaire investigation for High School teachers at Iwate Prefecture in Japan

is executed in order to clarify their current condition and their consciousness, and to seek the possibility of utilizing school social worker for their support. Hypothesis testing was executed based on that. We have set two such main issues as:

A When they have a hard time in guiding club activities, they think that they want to have a person to consult with or it is better for the professionals to guide club activities.

B When they feel worthwhile to guide club activities, they feel less burden for it.

For the A part, it consists of 9 sub issues and all of their Null Hypotheses were rejected and the main issue A was insisted clearly. For the B part, 4 sub issues were set and all of their Null Hypotheses were rejected and the main issue B was insisted clearly.

Further study on this should be executed such as comparative analysis with another prefecture's case. Various cases should be investigated here after.

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Appendix

Questionnaire about the Club Activities at High School

1. Please select the appropriate item in each column

1	① Private	②Public		
2	① Ordinary course	② Technical course	③ Commercial course	④ Miscellaneous ()
(1) Select the club you are in charge of.				
Sports club	① Baseball ②Tennis ③Rugby ④Soccer ⑤Track-and-field ⑥Hockey ⑦Archery ⑧Golf ⑨Kyudo (Japanese Archery) ⑩ Horsemanship ⑪ Basketball ⑫ Badminton ⑬Heavy gymnastics ⑭Volleyball ⑮Table tennis ⑯Judo ⑰Kendo ⑱Alpine ⑲Skiing ⑳Swimming ㉑ Miscellaneous ()			
Culture club	①Human sciences ②Research section ③Living thing research section ④ Chemistry research section ⑤ Physics research ⑥ Mathematics research ⑦ Brass ensemble ⑧ Instrumental music ⑨Literature ⑩Shogi (Japanese Chess) ⑪Art ⑫Calligraphy ⑬Railroad research ⑭ ESS ⑮Newspaper ⑯ Broadcast Department ⑰ Classic ⑱ Theater ⑲ Debating ⑳Photo department ㉑Radio ㉒Movie research ㉓Miscellaneous ()			
(2) How about the she sort of job?				
3	① Adviser	② Deputy Adviser	③Miscellaneous ()	
Is the club strong enough to participate in the national sport meet?				
4	①Yes	②Cannot say either	③No	
It the club activity active?				
5	①Yes	②Cannot say either	③No	
How long a time do you spare for the club activity (Include moving time)				
6	() hours / month			

2. We ask you a consciousness for the daily works

1	2	3	4	5
Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so

1.	Feel it burden to teach	1	2	3	4	5
2.	Feel it burden to prepare for teaching	1	2	3	4	5
3.	Feel it burden to instruct for learning	1	2	3	4	5
4.	Feel it burden to handle the students' performance	1	2	3	4	5
5.	Feel it burden to guide students	1	2	3	4	5
6.	Feel it burden to guide club activities	1	2	3	4	5
7.	Feel it burden to guide committee	1	2	3	4	5
8.	Feel it burden to manage the class	1	2	3	4	5
9.	Feel it burden to deal with meeting, advance arrangement	1	2	3	4	5
10.	Feel it burden to deal with parents	1	2	3	4	5

3. We ask you a consciousness for guiding the club activities

1.	Feel worthwhile to guide club activities.	1	2	3	4	5
2.	It is better for the professionals to guide club activities.	1	2	3	4	5
3.	I do not know the club field precisely that I take charge of.	1	2	3	4	5
4.	I cannot share enough time to prepare for teaching because of the workload for the guidance of club activities.	1	2	3	4	5
5.	Quite tired because of the activity on holiday.	1	2	3	4	5
6.	Have a hard time for the technical guidance.	1	2	3	4	5
7.	Have a hard time for the mental guidance.	1	2	3	4	5
8.	Want to have a person to consult with in guiding club activities.	1	2	3	4	5

4. We ask questions about yourself

1	Sex	①Male	②Female					
2	Age	②20~29	③30~39	④40~49	⑤50~59	⑥More than 60		
3	Position.	①Principal	②Deputy Principal	③a person in charge of educational affairs	④Teacher	⑤Lecture	⑥Assistant	⑦Miscellaneous ()
4	Experience as a teacher.	①Within 1 year	②1~2 years	③3~4 years	④5~9 years	⑤10 years or more		
5	How many years are you working for the present school?	①Within 1 year	②1~2 years	③3~4 years	④5~9 years	⑤10 years or more		
6	Blood Type.	①A Type	②B Type	③O Type	④A B Type	⑤Unknown		
7	Are you married?	①Single	②Married					

8	How many children do you have?	① Member-of-society (daughter who got married) () people	② College student () people	③ High school student () people	④ Junior high school student () people	⑤ Schoolchild () people	⑥ Less than kindergarten () people	⑦ Nothing
9	Are you positive to do anything?	③ Positive	② Cannot choose either	① Not positive				
10	Do you like to be alone?	⑤ Think it so much	④ Slightly think it so	③ Cannot choose either	② Slightly do not think it so	① Not think it so		
11	How do you spend holidays?	① Outdoor	② Indoor	③ Cannot choose either				
12	What is most important to you? Choose only one.	① Affection	② Money	③ Honor	④ Clothes/Eating /House	⑤ Self-realization	⑥ Miscellaneous ()	
13	Do you have a	① Yes	② No					

	brother ?							
14	In what situation among brothers?	①The eldest son or the eldest daughter	②Between ① and ③	③Youngest child				
(1) We ask questions about your current condition.								
		⑤Very good	④Rather good	③Ordinary level	②Not so good	①Bad		
15	How about your physical condition?	⑤	④	③	②	①		
16	Is your work progressing smoothly?	⑤	④	③	②	①		
17	Do you living a full life?	⑤	④	③	②	①		