

Questionnaire Investigation for the Support of High School Teachers by the School Social Worker

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Abstract

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, questionnaire investigation is executed in order to clarify their current condition

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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

Key Words: School Social Worker; High school; teacher; hypothesis testing

1. Introduction

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, questionnaire investigation 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 19 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 for the Support of 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 investigation : High School Teacher, 7 High Schools in Aomori Prefecture, Japan
- (2) Period : January ~March 2014

- (3) Method : Leave until called for
- (4) Collection : Number of distribution 231
Number of collection 170(collection rate 73.6%)
Valid answer 170

2.2 Basic Statistical Results

Now, we show the main summary results by single variable.

2.2.1 Characteristics of answers (Q4)

(1) Sex (Q4-1)

Male: 64.12%

Female: 31.76%

(Not filled in: 4.12%)

(2) Age (Q4-2)

20~29: 16.47%

30~39: 28.82%

40~49: 22.35%

50~59: 29.41%

More than 60: 1.76%

(Not filled in: 1.19%)

(3) Position (Q4-3)

Deputy Principal: 3.53%

A person in charge of educational affairs: 8.24%

Teacher: 74.71%

Lecturer: 9.41%

Assistant: 1.18%

Miscellaneous: 2.93%

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

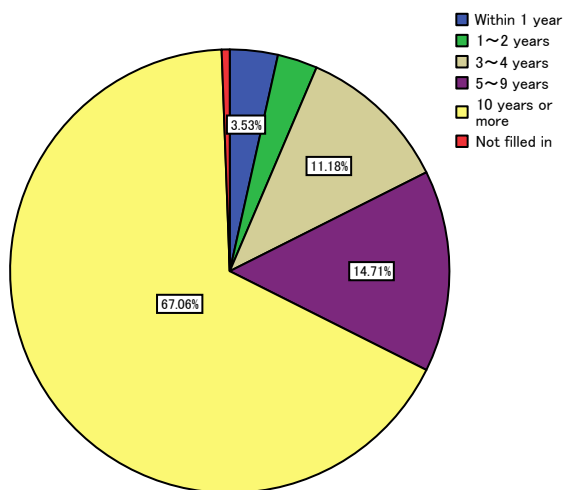


Figure 2-1: Experience as a teacher (Q4-4)

More than 10 years consists 2/3.

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

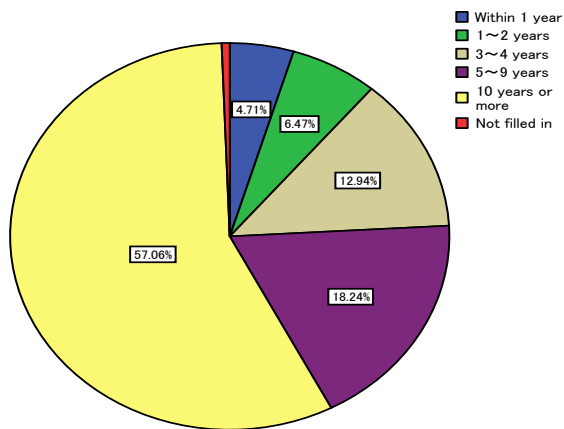


Figure 2-2: How many years are you working for the present school?

5~9 years and more than 10 years consist nearly 3/4.

2.2.2 Faculty Course (Q1-2)

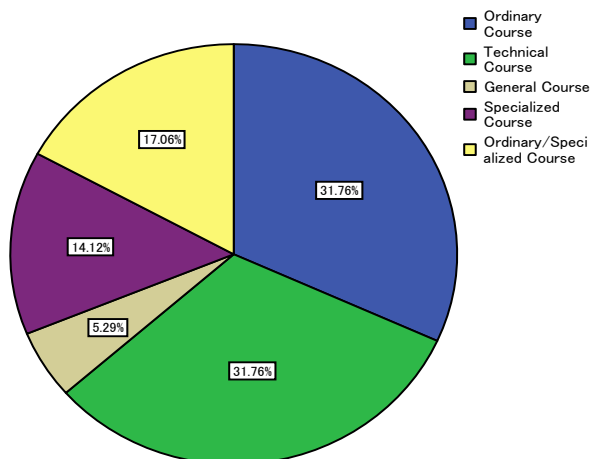


Figure 2-3: Faculty Course (Q1-2)

Ordinary Course and Technical Course consist of nearly 2/3 in the total.

2.2.3 Club Activities

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

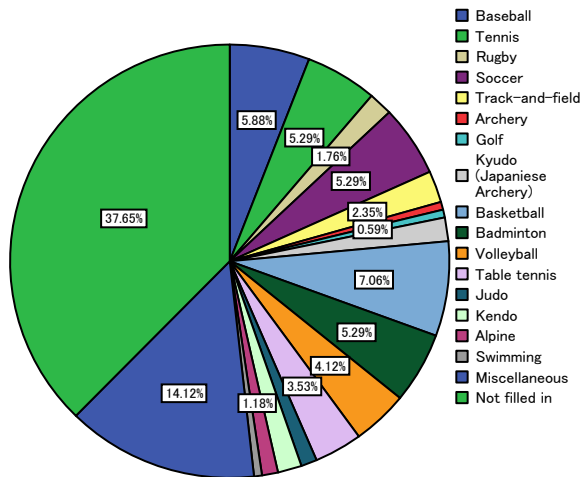


Figure 2-4: Sports Club (Q 1-2-1)

Large part one is Basketball (7.06%), Baseball (5.88%), Soccer (5.29%) and Badminton (5.29%).

Miscellaneous (14.12%) includes Ice hockey, Softball, Bowling, Boxing, Karate etc. “99” means “Else”.

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

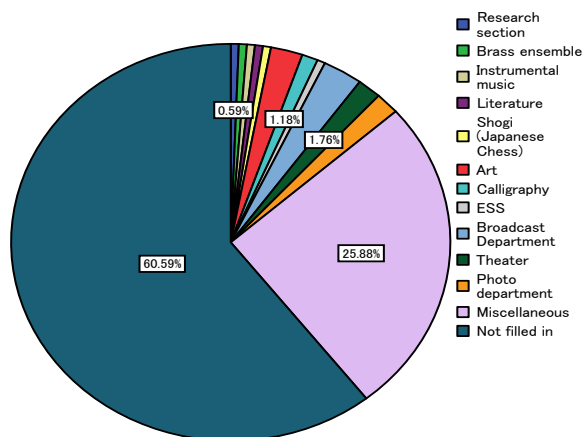


Figure 2-5: Culture Club (Q1-2-2)

Main items are as follows.

/ART: 2.35%, /Broadcast Department: 2.94%, /Theater Photo Department: 1.76%,

23(25.29%) consists by the following clubs with small number % ratio.

/Housing Research, /PC, /Manufacturing, /Baton etc.

On the whole, sports clubs consist nearly 60% and culture clubs 40%.

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

/Adviser: 86.47%, /Deputy Adviser: 11.18%, Miscellaneous: 2.35%

Adviser takes the majority.

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

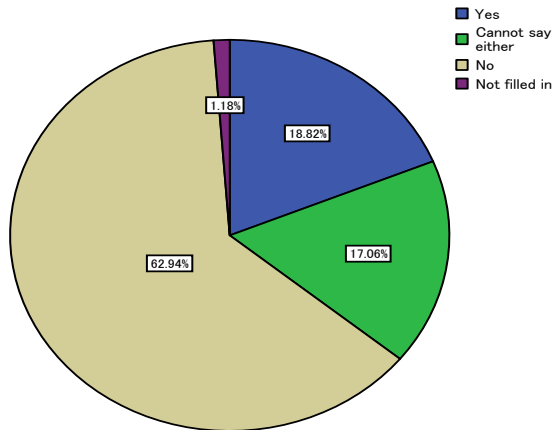


Figure 2-6: Is the club strong enough to participate in the national sports match? (Q1-2-2-4)

Nearly 1/5 of them are the strong teams to participate in the national sports match.

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

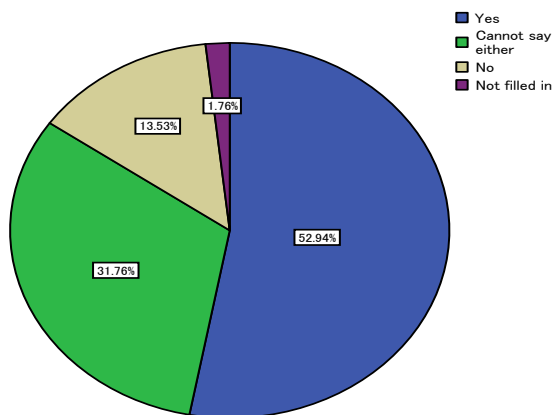


Figure 2-7 Is the club activity active? (Q1-2-2-5)

More than half of them have selected “Yes”.

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

(Q1-2-2-6)

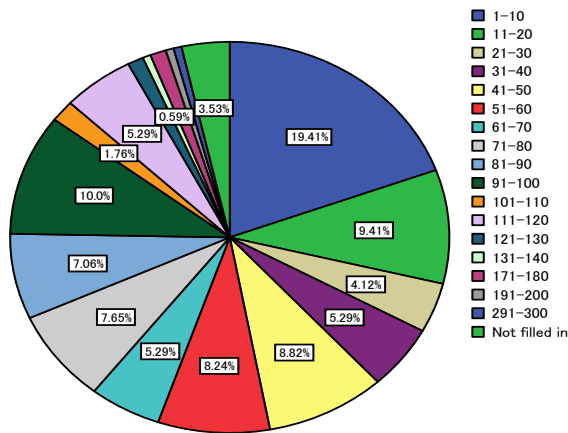


Figure 2-8: How long a time do you spare for the club activity (Include moving time) (Q1-2-2-6)

60 hours in month exceeds half and 90 hours reaches 3/4 in the total.

2.2.4 Consciousness for the daily works (Q2)

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

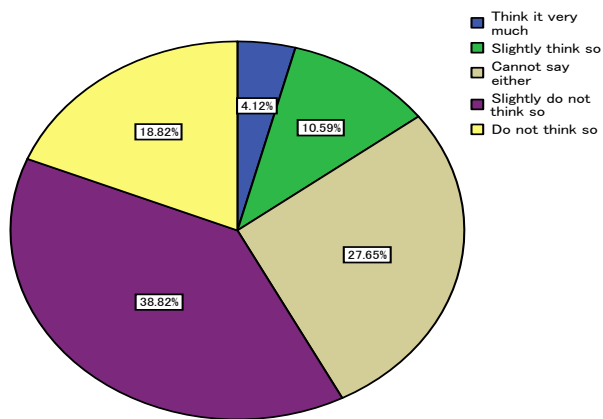


Figure 2-9: Feel it burden to teach (Q2-1)

Nearly 15% of the teachers feel it burden to teach. This is rather a small value.

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

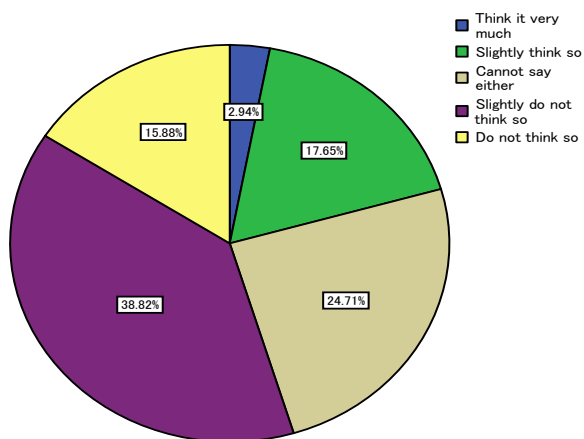


Figure 2-10: Feel it burden to prepare for teaching (Q2-2)

Nearly 21% of the teachers feel it burden to prepare for teaching. This is rather a small value.

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

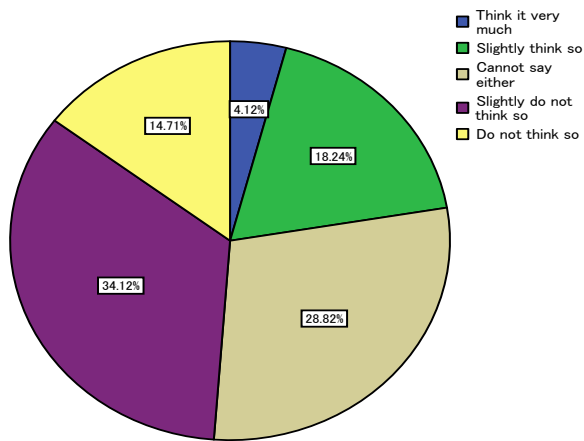


Figure 2-11: Feel it burden to instruct for learning(Q2-3)

Nearly 22% of the teachers feel it burden to instruct for learning.

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

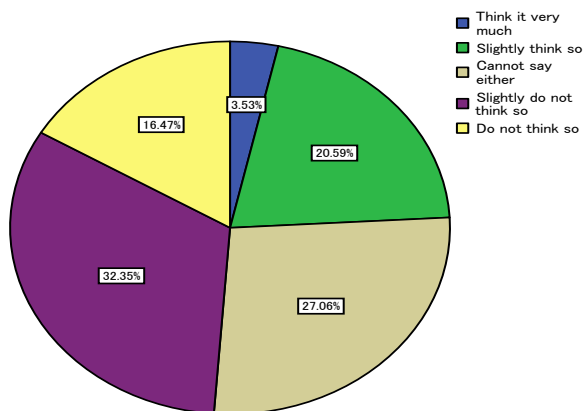


Figure 2-12: Feel it burden to handle the students' performance(Q2-4)

Nearly 24% of the teachers feel it burden to handle the students' performance.

The value is slightly increasing compared with above.

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

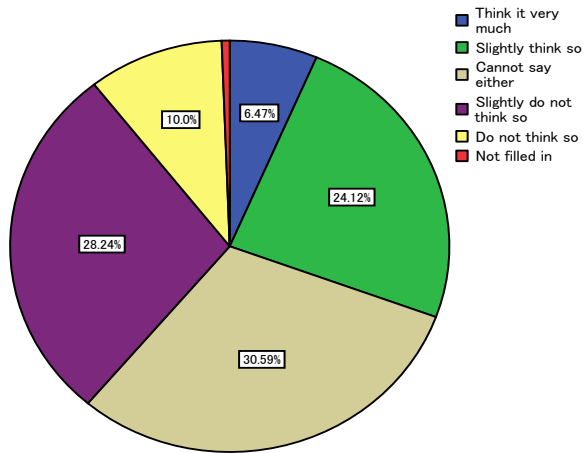


Figure 2-13 Feel it burden to guide students (Q2-5)

Nearly 31% of the teachers feel it burden to guide students. This value is rather big compared with before.

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

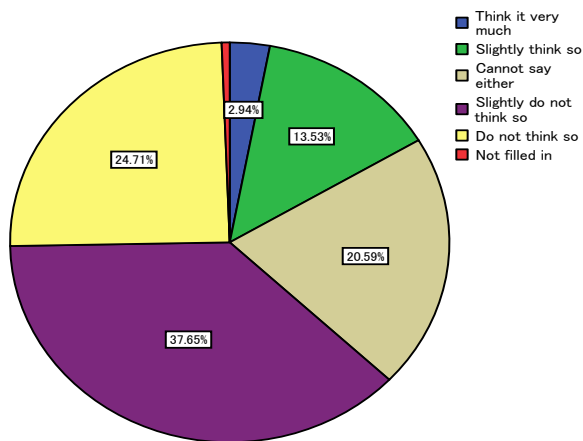


Figure 2-14: Feel it burden to guide club activities(Q2-6)

Nearly 17% of the teachers feel it burden to guide club activities.

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

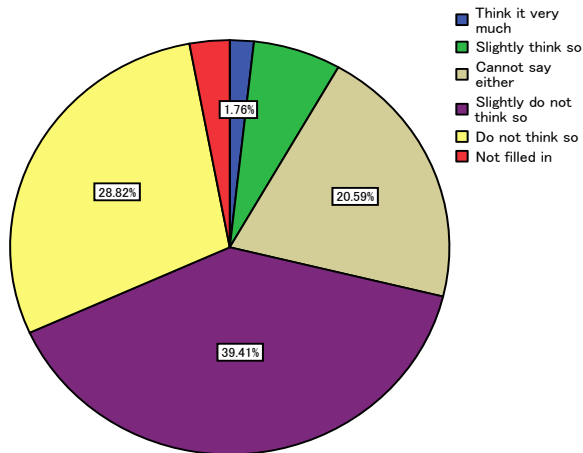


Figure 2-15: Feel it burden to guide committee (Q2-7)

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

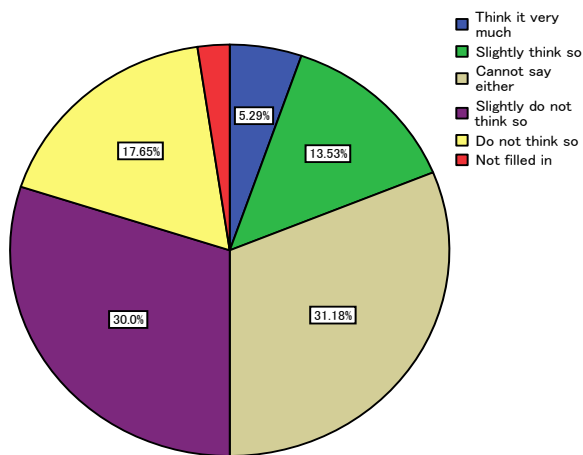


Figure 2-16: Feel it burden to manage the class(Q2-8)

Nearly 19% of the teachers feel it burden to manage the class.

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

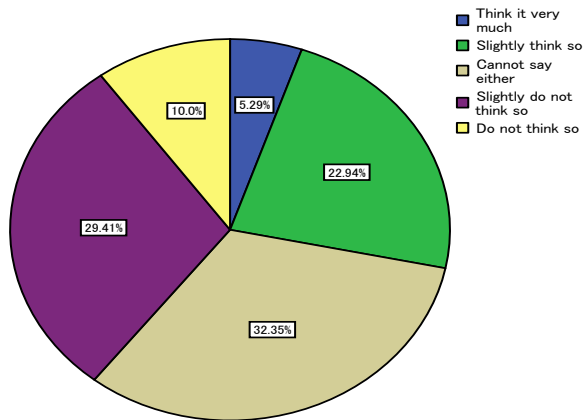


Figure 2-17: Feel it burden to deal with meeting, advance arrangement(Q2-9)

Nearly 28% of the teachers feel it burden to deal with meeting, advance arrangement. This value is rather big compared with before.

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

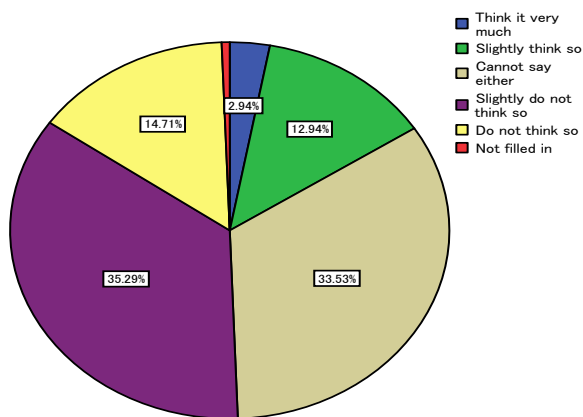


Figure 2-18: Feel it burden to deal with parents(Q2-10)

Nearly 17% of the teachers feel it burden to deal with parents.

2.2.5 Consciousness for guiding the club activities (Q3)

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

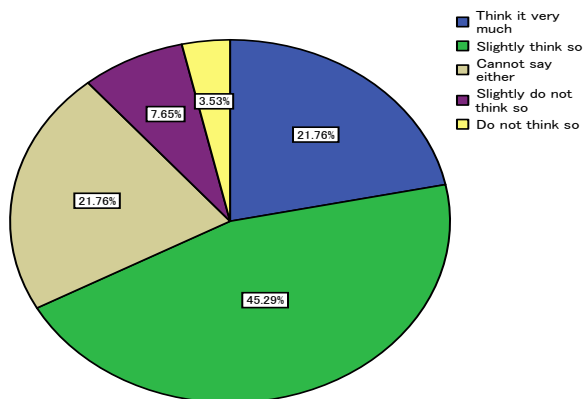


Figure 2-19: Worthwhile to guide club activities (Q3-1)

Positive attitude to this theme can be seen.

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

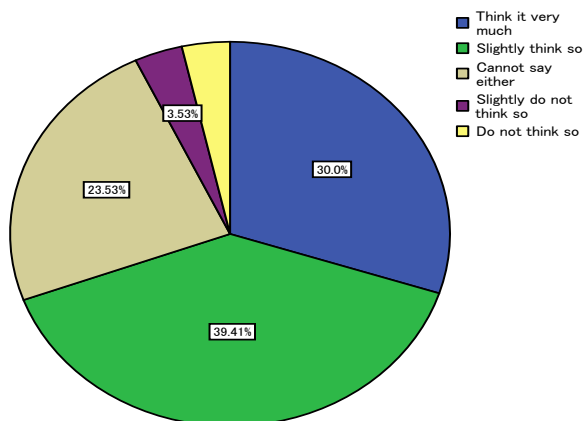


Figure 2-20: It is better for the professionals to guide club activities (Q3-2)

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)

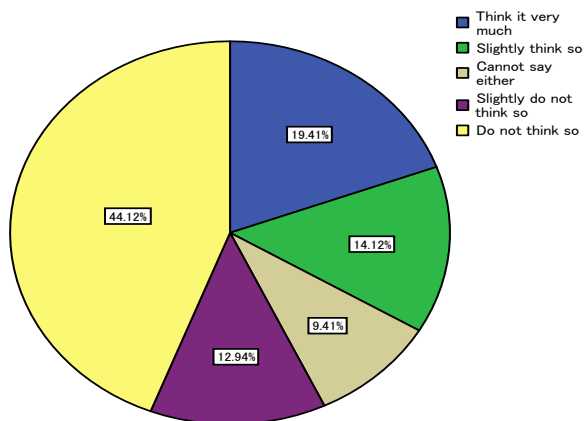


Figure 2-21: I do not know the club field precisely that I take charge of (Q3-3)

Rather many teachers (33.5%) 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)

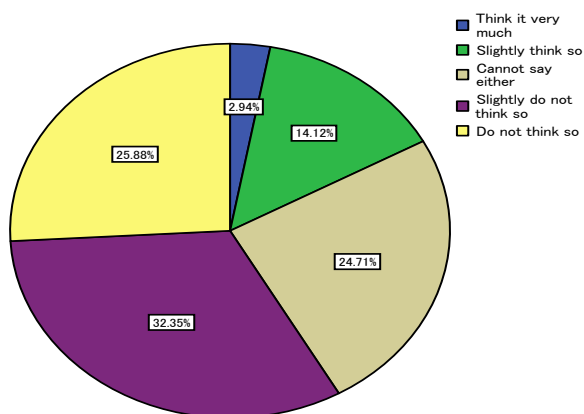


Figure 2-22: I cannot share enough time to prepare for teaching because of the workload for the guidance of club activities (Q3-4)

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

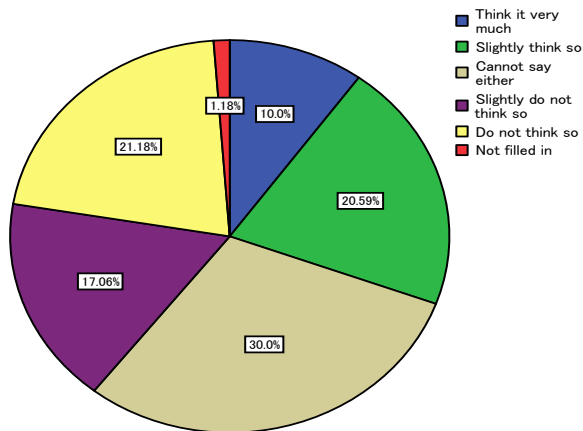


Figure 2-23: Quite tired because of the activity on holiday (Q3-5)

Nearly 1/3 of them feel tired because of the club activity on holiday.

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

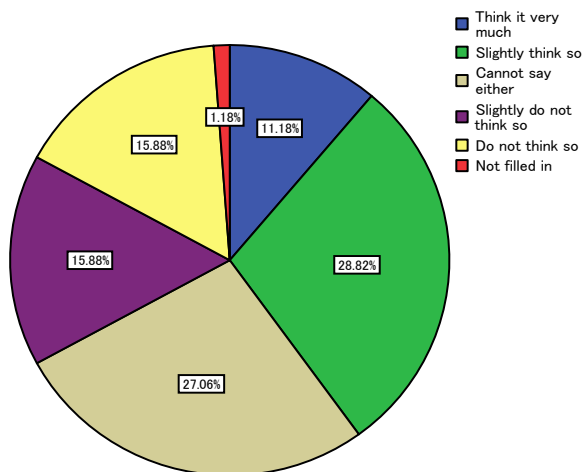


Figure 2-24: Have a hard time for the technical guidance (Q3-6)

40% of them have a hard time for the technical guidance.

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

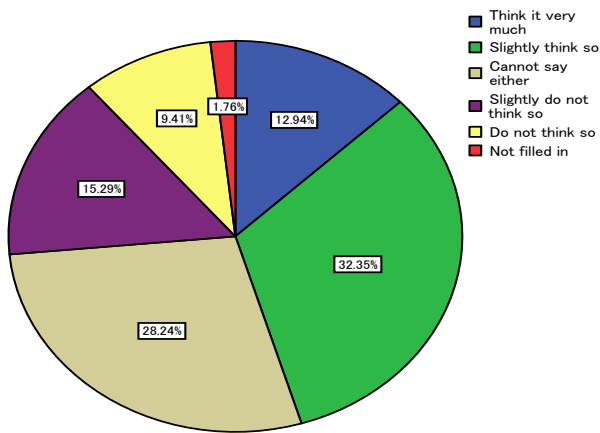


Figure 2-25: Have a hard time for the mental guidance (Q3-7)

Nearly 45% 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)

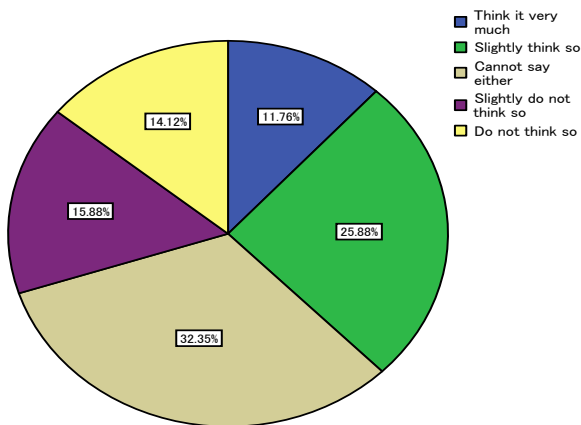


Figure 2-26: Want to have a person to consult with in guiding club activities (Q3-8)

Nearly 38% 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 13 themes (sub issues) before setting Null hypothesis.

A-1 If they feel it burden to teach, they think that it is better for the professionals to guide club activities.

A-2 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-3 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-4 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-5 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-6 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-7 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 In the technical course, teachers in charge of club activities spare a lot of time.

B-2 Where the club activities are active, teachers in charge of club activities spare a lot of time.

B-3 Where the club is strong enough to participate in the national sports match, they feel worthwhile to guide club activities.

B-4 Even when they feel worthwhile to guide club activities, they feel it burden to guide club activities

B-5 Even when they feel worthwhile to guide club activities, they think that it is better for the professionals to guide club activities.

B-6 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 if they feel it burden to teach, they do not think that it is better for the professionals to guide club activities.

A-2 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-3 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-4 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-5 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-6 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-7 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 In the technical course, teachers in charge of club activities do not spare a lot of time.

B-2 Even if where the club activities are active, teachers in charge of club activities do not spare a lot of time.

B-3 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-4 When they feel worthwhile to guide club activities, they do not feel it burden to guide club activities

B-5 When they feel worthwhile to guide club activities, they do not think that it is better for the professionals to guide club activities.

B-6 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 if they feel it burden to teach, 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 3-2					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	5	2	0	0	0	7
	Slightly think so	8	9	1	0	0	18
	Cannot say either	8	26	12	1	0	47
	Slightly do not think so	25	23	16	1	1	66
	Do not think so	5	8	11	4	4	32
Total		51	68	40	6	5	170

Real number	Think so	Do not think so	Total
Think so	24	0	24
Do not think so	61	10	71
Total	85	10	95

Expectation	Think so	Do not think so	Total
Think so	21.47368	2.526316	24
Do not think so	63.52632	7.473684	71
Total	85	10	95

Statistic (χ^2 value)	3.777962
Rejection region (6% significance level)	Z > 3.5374

(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 6% significance level. It can be said that if they feel it burden to teach, they think that it is better for the professionals to guide club activities.

Null Hypothesis: A-2 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 3.2: Summary table concerning Null Hypothesis A-2

		Q 3-4					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 2-1	Think it very much	2	1	1	0	3	7
	Slightly think so	1	5	4	3	5	18
	Cannot say either	0	10	17	11	9	47
	Slightly do not think so	2	4	13	34	13	66
	Do not think so	0	4	7	8	13	32
Total		5	24	42	56	43	170

Real number	Think so	Do not think so	Total
Think so	9	11	20
Do not think so	10	68	78
Total	19	79	98

Expectation	Think so	Do not think so	Total
Think so	3.877551	16.12245	20
Do not think so	15.12245	62.87755	78
Total	19	79	98

Statistic (χ^2 value)	10.54698
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-3 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 3.3: Summary table concerning Null Hypothesis A-3

		Q 3-8					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 3-6	Think it very much	7	4	6	1	1	19
	Slightly think so	5	18	15	8	3	49
	Cannot say either	4	11	22	6	3	46
	Slightly do not think so	2	5	7	12	1	27
	Do not think so	1	4	5	1	16	27
	Not filled in	1	1	0	0	0	2
Total		20	43	55	28	24	170

Real number	Think so	Do not think so	Total
Think so	34	13	47
Do not think so	12	30	42
Total	46	43	89
Expectation	Think so	Do not think so	Total

Think so	24.29213	22.70787	47
Do not think so	21.70787	20.29213	42
Total	46	43	89

Statistic (χ^2 value)	17.01547
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-4 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 3.4: Summary table concerning Null Hypothesis A-4

		Q 3-8					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 3-7	Think it very much	5	5	8	2	2	22
	Slightly think so	4	22	20	6	3	55
	Cannot say either	4	9	20	8	7	48

Slightly do not think so	3	4	6	12	1	26
Do not think so	2	2	1	0	11	16
Not filled in	2	1	0	0	0	3
Total	20	43	55	28	24	170

Real number	Think so	Do not think so	Total
Think so	36	13	49
Do not think so	11	24	35
Total	47	37	84

Expectation	Think so	Do not think so	Total
Think so	27.41667	21.58333	49
Do not think so	19.58333	15.41667	35
Total	47	37	84

Statistic (χ^2 value)	14.64152
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-5 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 3.5: Summary table concerning Null Hypothesis A-5

		Q 3-8					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 3-3	Think it very much	10	6	14	3	0	33
	Slightly think so	3	12	5	3	1	24
	Cannot say either	1	5	6	2	2	16
	Slightly do not think so	3	8	4	4	1	20
	Do not think so	3	12	26	16	20	77
Total		20	43	55	28	24	170

Real number	Think so	Do not think so	Total
Think so	31	7	38
Do not think so	26	41	67
Total	57	48	105

Expectation	Think so	Do not think so	Total
Think so	20.62857	17.37143	38
Do not think so	36.37143	30.62857	67
Total	57	48	105

Statistic (χ^2 value)	17.87601
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-6 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 3.6: Summary table concerning Null Hypothesis A-6

		Q 3-8					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 3-4	Think it very much	2	0	3	0	0	5
	Slightly think so	3	10	8	2	1	24
	Cannot say either	5	13	15	7	2	42
	Slightly do not think so	7	15	18	15	1	56
	Do not think so	3	5	11	4	20	43
Total		20	43	55	28	24	170

Real number	Think so	Do not think so	Total
Think so	15	3	18
Do not think so	30	40	70
Total	45	43	88

Expectation	Think so	Do not think so	Total
Think so	9.204545	8.795455	18
Do not think so	35.79545	34.20455	70
Total	45	43	88

Statistic (χ^2 value)	9.387966
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-7 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 3.7: Summary table concerning Null Hypothesis A-7

		Q 3-8					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 3-5	Think it very much	4	2	7	3	1	17
	Slightly think so	4	16	9	5	1	35
	Cannot say either	8	14	22	6	1	51
	Slightly do not think so	1	5	9	11	3	29
	Do not think so	2	5	8	3	18	36
Total		19	42	55	28	24	168

Real number	Think so	Do not think so	Total
Think so	26	10	36
Do not think so	13	35	48
Total	39	45	84

Expectation	Think so	Do not think so	Total
Think so	16.71429	19.28571	36
Do not think so	22.28571	25.71429	48
Total	39	45	84

Statistic (χ^2 value)	16.85185
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 quite tired because of the activity on holiday, they think that they want to have a person to consult with in guiding club activities.

Null Hypothesis: B-1 In the technical course, teachers in charge of club activities do not spare a lot of time.

Table 3.8: Summary table concerning Null Hypothesis B-1

		Q 3-8																			N	T
		1	2	3	4	5	6	7	8	9	10	11	12	13	17	19	29	o	t			
Q 1 - 2	Ordinary Course	13	6	2	2	5	7	6	4	2	2	1	1	0	0	0	0	1	2	54		
	Technical Course	4	3	3	4	7	3	0	5	5	7	0	6	1	1	2	0	0	3	54		
	General Course	0	3	1	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	9		
	Specialized	7	2	0	2	1	3	1	1	4	2	0	1	0	0	0	0	0	0	24		

Course																				
Ordinary/Specialized Course	9	2	1	1	2	1	2	2	1	5	1	0	0	0	0	1	0	1		29
Total	33	16	7	9	15	14	9	13	12	17	3	9	2	1	2	1	1	6		170

Real number	1-80	81-200	Total
Technical Course	29	22	51
Other	87	25	112
Total	116	47	163

Expectation	1-80	81-200	Total
Technical Course	36.29448	14.70552	51
Other	79.70552	32.29448	112
Total	116	47	163

Statistic (χ^2 value)	7.399583
Rejection region (1% significance level)	Z > 6.6349

The null hypothesis is rejected with 1% significance level. It can be said that in the technical course, teachers in charge of club activities spare a lot of time.

Null Hypothesis: B-2 Even if where the club activities are active, teachers in charge of club activities do not spare a lot of time.

Table 3.9: Summary table concerning Null Hypothesis B-2

		Q 3-8																	N o t f i e l d i n	T o t a l
		1 - 1 0	1 - 2 0	2 - 3 0	3 - 4 0	4 - 5 0	5 - 6 0	6 - 7 0	7 - 8 0	8 - 9 0	9 - 10 0	10 - 11 0	11 - 12 0	12 - 13 0	13 - 14 0	17 - 18 0	19 - 20 0	29 - 30 0		
Q 1 - 2	Ye s	3	4	4	6	9	9	7	7	9	14	3	7	2	1	2	1	0	2	9 0
	C a n o t s a y e i t h e r	1 7	9	3	1	5	5	1	6	1	3	0	2	0	0	0	0	1	0	5 4
	N o	1 3	3	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	3	2 3
	N o t f i e l d i n	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3
Total		3 3	1 6	7	9	1 5	1 4	9	1 3	1 2	17	3	9	2	1	2	1	1	6	1 7 0

Real number	1-80	81-200	Total
Yes	49	39	88
No	19	1	20
Total	68	40	108

Expectation	1-80	81-200	Total
Yes	55.40741	32.59259	88
No	12.59259	7.407407	20
Total	68	40	108

Statistic (χ^2 value)	10.80325
Rejection region (1% significance level)	Z >6.6349

The null hypothesis is rejected with 1% significance level. It can be said that where the club activities are active, teachers in charge of club activities spare a lot of time.

Null Hypothesis: B-3 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 3.10: Summary table concerning Null Hypothesis B-3

		Q 3-1					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 1-2-2 -4	Think it very much	14	14	2	0	2	32
	Slightly think so	10	15	2	0	2	29
	Cannot say either	13	47	32	13	2	107
	Not filled in	0	1	1	0	0	2
Total		37	77	37	13	6	170

Real number	Think so	Do not think so	Total
Important	28	2	30
Not important	60	15	75
Total	88	17	105

Expectation	Think so	Do not think so	Total
Important	25.14286	4.857143	30
Not important	62.85714	12.14286	75
Total	88	17	105

Statistic (χ^2 value)	2.807487
Rejection region (9% significance level)	Z > 2.8744

The null hypothesis is not rejected with 9% significance level. It cannot be said that even if where the club is strong enough to participate in the national sports

match, they feel worthwhile to guide club activities.

Null Hypothesis: B-4 When they feel worthwhile to guide club activities, they do not feel it burden to guide club activities

Table 3.11: Summary table concerning Null Hypothesis B-4

		Q 2-6						Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Not filled in	
Q 3-1	Think it very much	2	1	4	12	18	0	37
	Slightly think so	2	10	16	35	13	1	77
	Cannot say either	0	8	13	11	5	0	37
	Slightly do not think so	1	3	1	6	2	0	13
	Do not think so	0	1	1	0	4	0	6
Total		5	23	35	64	42	1	170

Real number	Think so	Do not think so	Total
Important	15	78	93
Not important	5	12	17
Total	20	90	110

Expectation	Think so	Do not think so	Total
Important	16.90909	76.09091	93
Not important	3.090909	13.90909	17
Total	20	90	110

Statistic (χ^2 value)	1.704617
Rejection region (9% significance level)	Z > 2.8744

The null hypothesis is not rejected with 9% significance level. It cannot be said that even when they feel worthwhile to guide club activities, they feel it burden to guide club activities

Null Hypothesis: B-5 When they feel worthwhile to guide club activities, they do not think that it is better for the professionals to guide club activities.

Table 3.12: Summary table concerning Null Hypothesis B-5

		Q 3-2					Total
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	
Q 3-1	Think it very much	19	8	7	2	1	37
	Slightly think so	14	39	22	2	0	77
	Cannot say either	11	16	7	2	1	37
	Slightly do not think so	4	5	4	0	0	13
	Do not think so	3	0	0	0	3	6
Total		51	68	40	6	5	170

Real number	Think so	Do not think so	Total
Important	80	5	85
Not important	12	3	15
Total	92	8	100

Expectation	Think so	Do not think so	Total
Important	78.2	6.8	85
Not important	13.8	1.2	15
Total	92	8	100

Statistic (χ^2 value)	1.704617
Rejection region (9% significance level)	$Z > 2.8744$

The null hypothesis is not rejected with 9% significance level. It cannot be said that even when they feel worthwhile to guide club activities, they think that it is better for the professionals to guide club activities.

Null Hypothesis: B-6 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-6

		Q 3-1					
		Think it very much	Slightly think so	Cannot say either	Slightly do not think so	Do not think so	Total
Q 1-2-2 -5	Think it very much	29	47	9	2	3	90
	Slightly think so	8	25	16	5	0	54
	Cannot say either	0	5	10	6	2	23
	Not filled in	0	0	2	0	1	3
Total		37	37	77	37	13	170

Real number	Think so	Do not think so	Total
Important	76	5	81
Not important	5	8	13
Total	81	13	94

Expectation	Think so	Do not think so	Total
Important	69.79787	11.20213	81
Not important	11.20213	1.797872	13
Total	81	13	94

Statistic (χ^2 value)	28.81431
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 7 sub issues (A-1~A-7). All of their Null Hypotheses were rejected and the main issue A was insisted clearly. 6 sub issues were set for the main issue B. Three of their Null Hypotheses were rejected (B-1,B-2,B-6). Three of them were not rejected. But the statement of B-4 and B-5 are inversely expressed. Therefore, that it is not rejected means the consistency to the main issue B. Thus, it means that 5 out of 6 coincide with the main issue B substantially.

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, questionnaire investigation 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 7 sub issues and all of their Null Hypotheses were rejected and the main issue A was insisted clearly. For the B part, 6 sub issues were set and three of their Null Hypotheses were rejected. Three of them were not rejected. But the statement of B-4 and B-5 are inversely expressed. Therefore, that it is not rejected means the consistency to the main issue B. Thus, it means that 5 out of 6 coincide with the main issue B substantially.

Further study on this should be executed such as multivariate analysis.

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 ⑦ Archery ⑧ Golf ⑨ Kyudo (Japanese Archery) ⑩ Horsemanship ⑪ Basketball ⑫ Badminton ⑬Heavy gymnastics ⑭Volleyball ⑮Table tennis ⑯Judo ⑰Kendo ⑱Alpine ⑲Skiing ⑳Swimming ㉑Miscellaneous ()		
Culture club		①Human sciences ②Research section ③Living thing research section ④Chemistry research section ⑤Physics research ⑥Mathematics research ⑦Brass ensemble ⑧Instrumental music ⑨ Literature ⑩ Shogi (Japanese Chess) ⑪ Art ⑫ Calligraphy ⑬ Railroad research ⑭ ESS ⑮ Newspaper ⑯ Broadcast Department ⑰ Classic ⑱ Theater ⑲ Debating ⑳ Photo department ㉑Radio ㉒Movie research ㉓Miscellaneous ()		
(2) How about the she sort of job?				
3	①Adviser	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	①Within 1 year	②1~2 years	③3~4 years	④5~9 years	⑤10 years or more		

	school ?							
6	Blood Type.	① A Type	② B Type	③ O Type	④ A B Type	⑤ Unknown		
7	Are you married?	① Single	② Married					
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				

1 2	What is most important to you? Choose only one.	① Affection	② Money	③ Honor	④ Clothes/Eating/House	⑤ Self-realization	⑥ Miscellaneous ()	
1 3	Do you have a brother?	① Yes	② No					
1 4	In what situation among brothers?	① The eldest son or the eldest daughter	② Between ① and ③	③ Youngest child				
(1) We ask questions about your current condition.								
		⑤ Very good	④ Rather good	③ Ordinary level	② Not so good	① Bad		
1 5	How about your physical condition?	⑤	④	③	②	①		

1 6	Is your work progre ssing smoot hly?	⑤	④	③	②	①		
1 7	Do you living a full life?	⑤	④	③	②	①		