

Analysis of Education Satisfaction in Small Schools Using the CIPP Model

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Abstract As the population in Korea decreases, the schools become smaller and are closing down. However, small schools need to be maintained to function consistently in the local area. This study aims to investigate the educational satisfaction of stakeholders by studying the small schools known to have been successfully operating. Education satisfaction of stakeholders of the small schools, such as the teachers, the students, and the parents, was investigated by using the CIPP (context, input, process, and product) model. The same questionnaire questions for their curricular and extra-curricular programs were used with open-ended questions. Although the groups did not show statistically significant differences in the extra-curricular programs, significant differences were found for the curricular programs, which suggests a need to expand the autonomy in the operation of programs in small schools in the future.

Keywords small school · education satisfaction · CIPP model · curricular program · extra-curricular program

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Introduction

The rapid decline of the population in Korea is causing many social problems. Concerning education issues, as the school-age population decreases, the existing schools gradually become smaller and are even closing down. These problems occur intensively in rural areas, which causes more significant concerns because, when schools close, people have to move to urban areas to receive education. The population decline in rural areas is further accelerated by urban concentration.

Acceleration of small schools and school closures are inevitable as the population declines. There is also an argument that small schools should be eliminated due to their inefficiency. In the United States in the 1830s, for example, some school reformers raised the issue of the inefficiency of small schools and argued that small schools should be closed to improve student achievement and reduce costs (Rich, 2008).

If the population decline is a temporary phenomenon or a problem that only appears in a specific area, we may not intervene in the problem of school closures. However, the number of students decreases due to a rapid population decline in Korea. If schools start to close, it may lead to a problem of national survival beyond the disappearance of the region. Therefore, small schools need to be maintained to function consistently in the local area.

Small schools are not just needed for policy reasons. Some studies show that the larger the school size, the lower the educational performance (Peater, Paul, & Penelope, 2011). Large schools make it difficult to meet students' individual needs from diverse backgrounds, and individual interactions between students and teachers are limited. The analysis also shows that the larger the school, the lower the students' graduation rate. In addition, there are positive evaluations that small schools have various educational and social ripple effects as they often act as the focal point in the local community to which the school belongs. As a result, some policies to split large schools into small schools have been adopted in some regions (Walberg, 2010).

Small schools are inevitable due to a decrease in the population. It is also necessary to actively explore how to maintain and operate them to increase the educational performance at the national level. Therefore, this study aims to investigate the educational satisfaction of stakeholders by investigating the small schools known to have been successfully operating. Through the analysis, we intend to find a model for small schools that will inevitably increase in the future and suggest implications for their operation.

In order to obtain implications for the effective operation of small schools, educational satisfaction should not be investigated only in terms of performance or results but should also be investigated in context and process by using the CIPP (context, input, process, and product) model (Stufflebeam, 1983; Stufflebeam & Shinkfield, 1985). The CIPP model can be used for both formative and summative purposes by analyzing qualitative and quantitative data. Using the CIPP model is to improve an organization or a program by providing feedback to stakeholders and decision-makers (Stufflebeam & Shinkfield, 1985). We thus found the CIPP model as an optimal tool for this study.

The CIPP model consists of context evaluation that provides information for planning decisions, input evaluation that aids decision-making, process evaluation that guides implementation decisions, and product evaluation that aids recycling decisions. The CIPP model is sometimes

criticized for its limitations in approaching the complex and dynamic organizational decision-making structure and its oversimplification of various entangled processes in modern society (Weiss & Mark, 2006). However, the CIPP model can promote improvement and accountability simultaneously and is particularly suitable for evaluating innovative efforts that are difficult to evaluate using methods such as experimental design that focus only on goal achievement (Mathison, 2005).

In this study, a CIPP model-based survey was conducted on four local small schools (two elementary schools and two middle schools) that were evaluated to be successfully operating were selected. This study aimed to investigate the educational satisfaction of their stakeholders – the teachers, the students, and the parents. Same questionnaire questions for their curricular and extra-curricular programs were presented to students, the parents, and the teachers in the four areas of the CIPP model, and their responses were compared with each other. In addition, responses to open-ended questions were classified and qualitatively analyzed.

Method

Subjects

Two elementary schools (S and H Elementary Schools) and two middle schools (D and G Middle Schools) were selected as case schools. The researchers handpicked them an successfully operating small schools representing Korea's southeast and southwest regions. In the case schools, 55 teachers, 126 students, and 104 parents participated in the survey. Their background information is shown in Table 1. In the case of teachers, elementary school and middle school accounted for almost half, with more than 30 years of teaching experience, followed by 10-15 years. In terms of position, more than half were teachers (i.e., neither principals nor headteachers). In the case of parents, their children were more likely to attend middle school, which is very similar in the ratio of students.

Instrument and Procedure

First, we analyzed the respondents' background information and then investigated the satisfaction of the students, the parents, and the teachers concerning the curricular and extracurricular activities. Satisfaction was investigated in the four areas—context, input, process, and product—according to Stufflebeam's (1983) CIPP model. In order to compare the groups, the same questions were asked to the students, the parents, and the teachers. Table 2 shows the areas and sub-areas the survey explored and the questions.

Table 1 Background of Respondents

		Respondents	Freq.	Perc. (%)
Teachers	Level	Elementary	27	49.09
		Middle School	28	50.91
	Teaching Experience	less than 5 yrs	9	16.36
		5 to less than 10 yrs	7	12.73
		10 to less than 15 yrs	11	20.00
		15 to less than 20 yrs	7	12.73
		20 to less than 25 yrs	6	10.91
		25 to less than 30 yrs	3	5.45
		30 yrs and above	12	21.82
	Position	(Vice) Principal	6	10.91
Head Teacher		15	27.27	
Teacher		34	61.82	
Total			55	100
Parents	Level	Elementary	36	34.62
		Middle School	68	65.38
Total			104	100
Students	Level	Elementary 4	4	3.17
		Elementary 5	24	19.05
		Elementary 6	20	15.87
		Middle School 2	42	33.33
		Middle School 3	36	28.57
Total			126	100

Table 2 Survey areas and questions based on the CIPP model

Area	Sub-Area	Questions
Context	1. Clarity of Purpose	The purpose of this program is clear.
	2. Degree of Responding to Social Demand	This program helps to develop the competencies required in our society.
	3. Degree of Reflecting Student Needs	This program faithfully reflects the needs of the students.
Input	1. Substantiality of Educational Content	The content of this program is substantial.
	2. Appropriateness of Teaching Methods	The program uses appropriate teaching methods.
	3. Appropriateness of Educational Condition	Our school is well equipped to run this program.
Process	1. Teachers' Expertise	Our teachers have the expertise needed to run this program.
	2. Appropriateness of Student Evaluation	In this program, students were evaluated appropriately.
	3. Interaction with Students	In this program, exchanges between instructors and students were active.
Product	1. Satisfaction	As an instructor, I am satisfied with this program.
	2. Goal Achievement	The program faithfully achieved its educational goals.
	3. Application	The educational outcomes of this program will appear in a variety of areas.

Results

Analysis on Curricular Programs

Education satisfaction in curricular programs was investigated using 12 items in context, input, process, and product, and its results are as follows, depending on the teachers, the students, and the parents.

Teachers

The teachers responded most positively to the item “the exchange between teachers and students was active in the program” in the process area, with an average of 4.73. In contrast, their response marked the lowest to the item “the program faithfully reflects the needs of the students” in the context area, with an average of 4.42 (see Table 3).

Table 3 Teacher’s responses by area on curricular programs

Area	Q	SD	D	NDNA	A	SA	<i>n</i>	<i>M</i>	<i>SD</i>
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	2 (3.64)	0 (0.00)	1 (1.82)	7 (12.73)	45 (81.82)	55	4.69	0.84
	2	2 (3.64)	0 (0.00)	1 (1.82)	7 (12.73)	45 (81.82)	55	4.69	0.84
	3	2 (3.64)	0 (0.00)	3 (5.45)	18 (32.73)	32 (58.18)	55	4.42	0.90
I	1	2 (3.64)	0 (0.00)	1 (1.82)	14 (25.45)	38 (69.09)	55	4.56	0.86
	2	2 (3.64)	0 (0.00)	2 (3.64)	17 (30.91)	34 (61.82)	55	4.47	0.88
	3	2 (3.64)	0 (0.00)	3 (5.45)	14 (25.45)	36 (65.45)	55	4.49	0.90
P	1	2 (3.64)	0 (0.00)	0 (0.00)	12 (21.82)	41 (74.55)	55	4.64	0.82
	2	2 (3.64)	0 (0.00)	1 (1.82)	16 (29.09)	36 (65.45)	55	4.53	0.86
	3	2 (3.64)	0 (0.00)	0 (0.00)	7 (12.73)	46 (83.64)	55	4.73	0.80
P	1	2 (3.64)	0 (0.00)	1 (1.82)	10 (18.18)	42 (76.36)	55	4.64	0.85
	2	2 (3.64)	0 (0.00)	2 (3.64)	11 (20.00)	40 (72.73)	55	4.58	0.88
	3	2 (3.64)	0 (0.00)	1 (1.82)	13 (23.64)	39 (70.91)	55	4.58	0.85

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Students

Next, Table 4 shows the descriptive statistics of the student's responses to each questionnaire item. The students generally showed lower satisfaction than the teachers. "Our school is equipped with appropriate conditions to operate this program in the input area." The process area, "Our school teachers, have the necessary expertise to operate this program," showed the highest response with an average of 4.40. Also, in the context area, the lowest response was given to the item "Programs are helpful to develop the competencies required in our society" and "The program faithfully reflects the needs of students," with an average of 4.25.

Table 4 Student's responses by area on curricular programs

Area	Q	SD	D	NDNA	A	SA	<i>n</i>	<i>M</i>	<i>SD</i>
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	3 (2.38)	0 (0.00)	12 (9.52)	50 (39.68)	61 (48.41)	126	4.32	0.84
	2	2 (1.59)	3 (2.38)	13 (10.32)	51 (40.48)	57 (45.24)	126	4.25	0.86
	3	1 (0.80)	3 (2.40)	20 (16.00)	41 (32.80)	60 (48.00)	125	4.25	0.87
I	1	3 (2.40)	2 (1.60)	7 (5.60)	52 (41.60)	61 (48.80)	125	4.33	0.85
	2	2 (1.60)	1 (0.80)	8 (6.40)	53 (42.40)	61 (48.80)	125	4.36	0.78
	3	4 (3.17)	0 (0.00)	12 (9.52)	39 (30.95)	71 (56.35)	126	4.40	0.79
P	1	1 (0.79)	1 (0.79)	12 (9.52)	45 (35.71)	67 (53.17)	126	4.40	0.76
	2	1 (0.79)	2 (1.59)	11 (8.73)	50 (39.68)	62 (49.21)	126	4.35	0.77
	3	1 (0.79)	4 (3.17)	11 (8.73)	45 (35.71)	65 (51.59)	126	4.34	0.83
P	1	0 (0.00)	3 (2.40)	6 (4.80)	56 (44.80)	60 (48.00)	125	4.38	0.69
	2	2 (1.59)	1 (0.79)	10 (7.94)	50 (39.68)	63 (50.00)	126	4.36	0.79
	3	3 (2.38)	1 (0.79)	12 (9.52)	39 (30.95)	71 (56.35)	126	4.38	0.88

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Parents

Finally, Table 5 shows descriptive statistics of the parents' responses to each questionnaire item. The parents generally showed lower satisfaction than teachers but higher than students. In the process area, the highest response was given to the item "The exchange between teachers and students was active in the program." The average score was 4.63. It was the same result in the case of the teachers. Also, in the context area, they produced the lowest response to the item "The program faithfully reflects students' needs," with an average of 4.46. It was the same in the case of the teachers.

Table 5 Parent's responses by area on curricular programs

Area	Q	SD	D	NDNA	A	SA	<i>n</i>	<i>M</i>	<i>SD</i>
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	1 (0.96)	0 (0.00)	5 (4.81)	39 (37.50)	59 (56.73)	104	4.49	0.68
	2	1 (0.96)	0 (0.00)	6 (5.77)	34 (32.69)	63 (60.58)	104	4.52	0.70
	3	1 (0.96)	0 (0.00)	8 (7.69)	36 (34.62)	59 (56.73)	104	4.46	0.72
I	1	1 (0.96)	0 (0.00)	5 (4.81)	32 (30.77)	66 (63.46)	104	4.56	0.68
	2	1 (0.96)	0 (0.00)	4 (3.85)	35 (33.65)	64 (61.54)	104	4.55	0.67
	3	1 (0.96)	0 (0.00)	4 (3.85)	31 (29.81)	68 (65.38)	104	4.59	0.66
P	1	1 (0.96)	0 (0.00)	3 (2.88)	33 (31.73)	67 (64.42)	104	4.59	0.65
	2	1 (0.96)	0 (0.00)	9 (8.65)	31 (29.81)	63 (60.58)	104	4.49	0.74
	3	1 (0.96)	0 (0.00)	3 (2.88)	29 (27.88)	71 (68.27)	104	4.63	0.64
P	1	1 (0.96)	0 (0.00)	5 (4.81)	35 (33.65)	63 (60.58)	104	4.53	0.68
	2	1 (0.96)	0 (0.00)	6 (5.77)	34 (32.69)	63 (60.58)	104	4.52	0.70
	3	1 (0.96)	0 (0.00)	7 (6.73)	30 (28.85)	66 (63.46)	104	4.54	0.71

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Table 6 ANOVA results on curricular programs

Area	Respondents	Descriptive Statistics			F-test <i>F</i> (<i>p</i>)	Post-Hoc Analysis (Bonferroni)
		<i>n</i>	<i>M</i>	<i>SD</i>		
Context	Teacher	55	4.60	0.81	4.16* (.017)	Parents > Students
	Student	125	4.29	0.77		
	Parent	104	4.49	0.64		
Input	Teacher	55	4.51	0.81	2.33 (.101)	-
	Student	125	4.37	0.76		
	Parent	104	4.56	0.62		
Process	Teacher	55	4.63	0.78	3.83* (.023)	Teachers > Students
	Student	126	4.36	0.72		
	Parent	104	4.57	0.62		
Product	Teacher	55	4.60	0.83	2.11 (.124)	-
	Student	125	4.39	0.70		
	Parent	104	4.53	0.65		

Note. As a result of subject ANOVA analysis, the input area does not satisfy the assumption of equal variance, so the Welch F result is presented to correct this.

Comparison by area

Next, an analysis of variance (ANOVA) was performed to analyze whether there was a difference in the mean between the teacher, the student, and the parent groups by the context, input, process, and product areas. The results are shown in Table 6, which shows statistically significant differences in the context and process areas. Bonferroni's post hoc analysis shows that the parents had significantly higher averages than the students in the context area. The difference between the teachers and the students was statistically significant in the process area.

Analysis on Extra-Curricular Programs

Satisfaction with extra-curricular programs was investigated using 12 items in the context, input, process, and product areas, and the results are as follows, depending on the teachers, the students, and the parents.

Teachers

The teachers' responses to each questionnaire item are summarized in Table 7. The teachers showed the highest responses to the item "The goal of this program is clear" in the context area and the item "Exchange between teachers and students in the program was active" in the process area, with an average of 4.75. On the other hand, in the input area, the answer to the question "Our school has the appropriate conditions to operate this program" was the lowest, with an average of 4.56 points.

Table 7 Teacher's responses by area on extra-curricular programs

Area	Q	SD	D	NDNA	A	SA	<i>n</i>	<i>M</i>	<i>SD</i>
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	2 (3.64)	0 (0.00)	1 (1.82)	4 (7.27)	48 (87.27)	55	4.75	0.82
	2	2 (3.64)	0 (0.00)	1 (1.82)	5 (9.09)	47 (85.45)	55	4.73	0.83
	3	2 (3.64)	0 (0.00)	2 (3.64)	10 (18.18)	41 (74.55)	55	4.60	0.87
I	1	2 (3.70)	0 (0.00)	0 (0.00)	10 (18.52)	42 (77.78)	54	4.67	0.82
	2	2 (3.64)	0 (0.00)	0 (0.00)	12 (21.82)	41 (74.55)	55	4.64	0.82
	3	2 (3.64)	0 (0.00)	2 (3.64)	12 (21.82)	39 (70.91)	55	4.56	0.88
P	1	2 (3.64)	0 (0.00)	1 (1.82)	11 (20.00)	41 (74.55)	55	4.62	0.85
	2	2 (3.64)	0 (0.00)	0 (0.00)	12 (21.82)	41 (74.55)	55	4.64	0.82
	3	2 (3.64)	0 (0.00)	0 (0.00)	6 (10.91)	47 (85.45)	55	4.75	0.80
P	1	2 (3.64)	0 (0.00)	0 (0.00)	9 (16.36)	44 (80.00)	55	4.69	0.81
	2	2 (3.64)	0 (0.00)	0 (0.00)	8 (14.55)	45 (81.82)	55	4.71	0.81
	3	2 (3.64)	0 (0.00)	2 (3.64)	5 (9.09)	46 (83.64)	55	4.69	0.86

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Students

Descriptive statistics on the student's responses to the extra-curricular programs are presented in Table 8. The highest response lies 'on the item "I am satisfied with the program as a student" in the product area, with an average of 4.55. Also, in the context area, the lowest response was given to "Programs are helpful to develop the competencies required in our society," with an average of 4.38. Student satisfaction was lower than that of the teachers.

Parents

Descriptive statistics of the parents' responses to each questionnaire item are presented in Table 9. As in their responses to the curriculum, parents generally showed lower satisfaction than teachers but higher than the students. In the input area, the highest response was "The program's content is faithful," with an average of 4.65. In the process area, "The program evaluated students appropriately" showed the lowest response with an average of 4.55.

Table 8 Student's responses by area on extra-curricular programs

Area	Q	SD	D	NDNA	A	SA	n	M	SD
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	3 (2.38)	0 (0.00)	9 (7.14)	38 (30.16)	76 (60.32)	126	4.46	0.83
	2	2 (1.59)	1 (0.79)	14 (11.11)	39 (30.95)	70 (55.56)	126	4.38	0.84
	3	3 (2.38)	1 (0.79)	12 (9.52)	38 (30.16)	72 (57.14)	126	4.39	0.88
I	1	2 (1.59)	2 (1.59)	7 (5.56)	39 (30.95)	76 (60.32)	126	4.47	0.81
	2	2 (1.59)	1 (0.79)	8 (6.35)	37 (29.37)	78 (61.90)	126	4.49	0.79
	3	1 (0.79)	3 (2.38)	6 (4.76)	40 (31.75)	76 (60.32)	126	4.48	0.77
P	1	2 (1.59)	2 (1.59)	5 (3.97)	38 (30.16)	79 (62.70)	126	4.51	0.79
	2	3 (2.38)	2 (1.59)	8 (6.35)	38 (30.16)	75 (59.52)	126	4.43	0.87
	3	2 (1.59)	1 (0.79)	9 (7.14)	38 (30.16)	76 (60.32)	126	4.47	0.80
P	1	3 (2.38)	1 (0.79)	7 (5.56)	42 (33.33)	73 (57.94)	126	4.44	0.83
	2	2 (1.59)	2 (1.59)	9 (7.14)	38 (30.16)	75 (59.52)	126	4.44	0.83
	3	2 (1.59)	2 (1.59)	8 (6.35)	27 (21.43)	87 (69.05)	126	4.55	0.82

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Table 9 Parent's responses by area on extra-curricular programs

Area	Q	SD	D	NDNA	A	SA	<i>n</i>	<i>M</i>	<i>SD</i>
		Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)			
C	1	1 (0.96)	0 (0.00)	6 (5.77)	28 (26.92)	69 (66.35)	104	4.58	0.69
	2	1 (0.96)	0 (0.00)	3 (2.88)	29 (27.88)	71 (68.27)	104	4.63	0.64
	3	1 (0.96)	0 (0.00)	6 (5.77)	29 (27.88)	68 (65.38)	104	4.57	0.69
I	1	1 (0.96)	0 (0.00)	3 (2.88)	26 (25.00)	74 (71.15)	104	4.65	0.64
	2	1 (0.96)	0 (0.00)	4 (3.85)	31 (29.81)	68 (65.38)	104	4.59	0.66
	3	1 (0.96)	0 (0.00)	4 (3.85)	32 (30.77)	67 (64.42)	104	4.58	0.66
P	1	1 (0.96)	0 (0.00)	4 (3.85)	31 (29.81)	68 (65.38)	104	4.59	0.66
	2	1 (0.96)	0 (0.00)	6 (5.77)	31 (29.81)	66 (63.46)	104	4.55	0.70
	3	1 (0.96)	0 (0.00)	3 (2.88)	27 (25.96)	73 (70.19)	104	4.64	0.64
P	1	1 (0.96)	0 (0.00)	4 (3.85)	29 (27.88)	70 (67.31)	104	4.61	0.66
	2	1 (0.96)	0 (0.00)	6 (5.77)	28 (26.92)	69 (66.35)	104	4.58	0.69
	3	1 (0.96)	0 (0.00)	6 (5.77)	28 (26.92)	69 (66.35)	104	4.58	0.69

Note. SD: strongly disagree, D: disagree, NDNA: neither disagree nor agree, A: agree, SA: strongly agree

Table 10 ANOVA results on extra-curricular programs

Area	Respondents	Descriptive Statistics			F-test <i>F</i> (<i>p</i>)	Post-Hoc Analysis (Bonferroni)
		<i>n</i>	<i>M</i>	<i>SD</i>		
Context	Teacher	55	4.69	0.81	2.87 (.060)	-
	Student	126	4.41	0.81		
	Parent	104	4.59	0.64		
Input	Teacher	54	4.62	0.81	1.12 (.329)	-
	Student	126	4.48	0.76		
	Parent	104	4.61	0.61		
Process	Teacher	55	4.67	0.79	1.51 (.224)	-
	Student	126	4.47	0.78		
	Parent	104	4.59	0.62		
Product	Teacher	55	4.70	0.80	1.82 (.163)	-
	Student	126	4.48	0.79		
	Parent	104	4.59	0.64		

Note. As a result of subject ANOVA analysis, the context, input, and process areas do not satisfy the assumption of equal variance, so the Welch F result is presented to correct this.

Comparison by area

An ANOVA was conducted to see statistically significant differences between the teacher, the student, and the parent groups in each area of context, input, process, and product. Table 10 shows no statistically significant differences in the four areas.

Analysis of Open-Ended Answers

For the curricular and extra-curricular programs, the open-ended answers were categorized for the teachers, the students, and the parents, and their responses are shown in Tables 11 through 13. Some of the categories extracted from the open-ended responses overlap while others do not.

Table 11 Teacher's open-ended responses on education programs

Programs	Category	Contents
Curricular	Diversity	<ul style="list-style-type: none"> It would be nice if more diverse curriculum programs were opened (D MS)
	Student Autonomy	<ul style="list-style-type: none"> For more student-led classes, continuous self-development such as participation in training and reading must be made (H ES)
	Budget & Teacher Recruitment	<ul style="list-style-type: none"> To vitalize the curricular programs, human resource should be more efficiently utilized. (H ES)
	Reorganization of Curriculum	<ul style="list-style-type: none"> It would be nice to have a variety of curriculum-linkage programs. For example, it would be good to have some practice and intellectual activities. (G MS)
	Linkage to Extra-Curricular Activity	<ul style="list-style-type: none"> Reinforcement of linkage with extra-curricular programs as a special program) (G MS)
	Parent Participation	<ul style="list-style-type: none"> Active participation of parents to be encouraged (G MS)
	Others	<ul style="list-style-type: none"> Hope substantial programs to be operated (D MS)
Extra-Curricular	Program Improvement	<ul style="list-style-type: none"> Instead of following the previous program, development of a new program or a more advanced program (S ES)
	Student/Parent Needs	<ul style="list-style-type: none"> Development and application of extra-curricular programs to meet the needs of students and parents (D MS)
	Career	<ul style="list-style-type: none"> I wish career-related programs could be operated more systematically (D MS)
	Student Autonomy/Teacher Companionship	<ul style="list-style-type: none"> We have laid the foundation for the autonomous activities of the student council this year, so I hope that the next year they will be more systematic (G MS)
	Linkage with Local Community	<ul style="list-style-type: none"> Development and application of creative experiential activity programs linked to local communities (D MS)
	Expanding Cultural Experiences	<ul style="list-style-type: none"> Because of the geographical location, it is hard to enjoy cultural experiences. (H ES)
	Regarding COVID 19	<ul style="list-style-type: none"> As the overall extra-curricular programs are highly active and face-to-face, there is a limit to its implementation in situations such as COVID-19. (G MS)

Note. ES stands for Elementary School and MS stands for Middle School.

Two common themes in the categories are ‘satisfaction’ and ‘diversity,’ which shows the small direction schools should take. Similar concepts related to ‘diversity’ are ‘student autonomy,’ ‘reorganization of curriculum,’ ‘needs,’ ‘activity-focused programs,’ and ‘one-on-one instruction.’ These categories show in what aspects small schools have strengths and how their education can lead to stakeholders’ satisfaction.

Their answers also show where small schools have weaknesses; that is, ‘budget,’ ‘cultural experiences,’ and ‘facilities’ are the areas where small schools have difficulty. Moreover, LTI refers to a specific program available only in one of the schools (G Middle School). Another interesting category is ‘COVID-19’ because the pandemic was striking everything, including education, in the last two years.

Table 12 Student’s open-ended responses on education programs

Programs	Category	Contents	
Curricular	Teachers’ Satisfaction	• I hope for more interesting classes than now (e.g., game-related class) (G MS)	
	Class Time	• I wish the teaching hours were extended (G MS)	
	Evaluation	• I wish math problems were easier (G MS)	
	Classes by Levels	• A guitar class (one instrument per person) has a similar level of difficulty for 3 years of learning, so a program of different levels that are tailored to individual students’ skills are required (G MS)	
	Diversity	• I wish there were more diverse activities (G MS)	
	LTI Program	• It would be better to set the content of the LTI within a more clearly defined framework. E.g., one of last year’s LTI themes (improving body acuity through rhythm games, etc.) (G MS)	
	Satisfaction	• Curriculum programs are good because they are useful and fun (H ES)	
	Others	• I hope that my friends will actively participate in the programs (G MS)	
	Extra-Curricular	Classes by Levels	• I wish there was more in-depth content (G MS)
		Diversity	• I wish there were more activities and more new activities (G MS)
Facilities (Environment)		• The dance room is cold (G MS)	
One-on-One Instruction/Attention		• I hope the teacher will pay attention to each student. (G MS)	
Satisfaction		• They became really good memories for me (G MS)	
Others		• I think it would be good to continue teaching the guitar (G MS)	

Note. ES stands for Elementary School and MS stands for Middle School.

Table 13 Parent's open-ended responses on education programs

Programs	Category	Contents
Curricular	Students' Preference	<ul style="list-style-type: none"> I want a curriculum that is more practically useful for students... the classes preferred by students such as guitar and drums should be organized (S ES)
	Evaluation	<ul style="list-style-type: none"> I want children's skills to be verified through appropriate tests (e.g., Chinese character level test, software.) (S ES)
	Activity-Focused Programs	<ul style="list-style-type: none"> I wish there was an active program (e.g., music skipping rope) (S ES)
	Student Autonomy	<ul style="list-style-type: none"> Operation of self-directed learning programs that improve students' academic achievement. (D MS)
	Career & University Admission	<ul style="list-style-type: none"> I want more specific and detailed student management or specialized classes other than basic classes, which can help students advance into arts high school. (G MS)
	LTI Program	<ul style="list-style-type: none"> It is desirable that the presentation on the LTI project be made once a year. Having the presentation every semester is too tight and does not allow sufficient time from preparation to presentation (G MS)
	Satisfaction	<ul style="list-style-type: none"> I am satisfied with the program and its contents. (H ES)
Extra-Curricular	Regarding COVID 19	<ul style="list-style-type: none"> Unless it is an unavoidable situation due to COVID-19, I am extremely satisfied (G MS)
	One-on-One Instruction	<ul style="list-style-type: none"> Please pay attention to arouse each child's interest (H ES)
	Activity/Experience-Focused Programs	<ul style="list-style-type: none"> I am also very satisfied with the extra-curricular program. As a working mom, I am thankful to S Elementary School. In this situation where the population is shrinking, I think such a good program will contribute to population increase by benefiting all the children. (S ES)
	Diversity	<ul style="list-style-type: none"> Various extra-curricular programs (D MS)
	Satisfaction	<ul style="list-style-type: none"> I think that the extra-curricular program is H Elementary School's uniqueness and strength. Year after year the program is complemented and well maintained. (H ES)
	Regarding COVID 19	<ul style="list-style-type: none"> It is an unavoidable situation due to the corona virus, but I think such a program that no other school has will be really useful for children. (G MS)

Note. ES stands for Elementary School and MS stands for Middle School.

Discussion and Conclusion

A survey was conducted, and the results were analyzed for teachers, students, and parents of the four case schools. The questionnaire was prepared for the curricular and extra-curricular programs. Also, the same questions were used for the teachers, the students, and the parents for the comparison between groups. Program satisfaction was investigated in the four different areas—context, input, process, and product—based on Stufflebeam's (1983) CIPP model.

The number of the teachers, the students, and the parents who participated in the survey were 55, 126, and 104, respectively. In the case of the teachers, elementary school and middle school accounted for almost half, and those who had the amplest teaching experience had taught for more than 30 years. In the case of parents, their children were more likely to attend middle school. The ratio of the students by school level was similar to that of the parents.

The teachers gave a high score to the teacher-student interaction that belongs to the process area but a low score to the item of reflecting student needs in the context area. In general, the students were less satisfied than the teachers. They gave high marks to educational conditions and teacher expertise in the input area but low marks on the items such as the development of competencies required by the society or reflection of student's needs. The parents generally showed lower satisfaction than the teachers but higher than the students. As with the teachers, they highly valued the teacher-student exchanges but gave low scores to reflect the student needs.

We also compared the differences between the teacher, the student, and the parent groups in their satisfaction with the curricular programs—in the context, input, process, and product. The analysis reveals statistically significant differences in the context and process areas. In this context, parents' satisfaction was higher than that of the students. Furthermore, in the process, the teacher's satisfaction was higher than that of the students.

For the extra-curricular programs, the teachers showed high satisfaction with the clarity of educational goals and the exchanges between the teachers and the students, but low satisfaction with the educational conditions in the input area. Although the overall satisfaction level of the students was high, the satisfaction level concerning the development of competencies required by society was low. In the case of the parents, they gave a high score to the fidelity of the content in the input area and showed a low response to the student's evaluation in the process area. The mean differences between the teacher, the student, and the parent groups for the extra-curricular programs were not statistically significant.

The responses to the open-ended items were categorized by the teacher, the student, and the parent groups for each of the curricular and extra-curricular programs. The teachers gave the opinions such as reinforcement of student-focused activities, expansion of budget and teachers, the linkage between curricular and extra-curricular activities, and the need for linkage with career paths and local communities. Students were mostly satisfied with the education and demanded classes by level, diversity, and individual instruction. The parents' opinions were similar to those of the students, but they requested career advancement additionally.

We investigated teacher, student, and parent satisfaction with curricular and extra-curricular activities, drawn upon the CIPP model. The groups did not show statistically significant differences in each area of the extra-curricular programs, but statistically significant differences were found for the curricular programs. Although an overall pattern was not evident, there were areas in which each group showed high or low satisfaction.

Extra-curricular programs become more important in education to raise students' competencies (Cortellazzo, Bonesso, Gerli, & Pizzi, 2021). Moreover, schools often take the initiative in implementing extra-curricular programs. The fact that the stakeholders showed differences in satisfaction with the curricular programs but not the satisfaction with the extra-curricular programs suggests a need to expand the autonomy in the operation of programs in small schools in the future.

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