

Analysis of SCASD Survey of Parents/Guardians and Professional Staff Concerning the Fifth Special Class for Elementary Schools

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Introduction

This brief analysis examines the results of SCASD's survey of SCASD parents of K-5 students and SCASD K-5 School Professionals about the focus of the fifth special class to be offered in SCASD elementary schools.

Survey Development and Administration

The survey was developed by a number of individuals in the SCASD district administration in collaboration with Dr. Ed Fuller in his capacity as Executive Director of the Penn State Center for Evaluation and Education Policy Analysis. Dr. Fuller has over two decades of experience in developing, administering, and analyzing surveys. He also teaches an evaluation course in the Department of Education Policy Analysis at Penn State University.

The statements included in the survey as well as the form of the answers to the statements were reviewed multiple times by multiple individuals before the creation of the final survey form. Moreover, the survey was piloted with individuals in the SCASD team who represented by parents/guardians and K-5 professional staff to ensure that the survey statements were unbiased and understandable. The electronic form of the survey was also piloted to ensure that it worked appropriately and that each respondent could only complete the survey once. These efforts are consistent with best practice in survey development.

Statement Bias

Consistent with best practices in survey design, each statement was carefully reviewed for potential bias. Bias can arise if the statement leads the respondent to answer in a particular way by using non-neutral language in the survey. As seen from the survey, all statements are stated in a neutral manner such that statement provides no indication as to whether the district prefers a particular outcome.

Further, each statement was reviewed to ensure it was not “loaded” in such a way as to sway respondents in a particular direction. For example, if the survey had stated that, “Recent research has shown that the development of personal skills can increase the incomes of high school graduates” before asking them to communicate their support for personal development, the statement would have potentially swayed people to communicate stronger support than they would have without the introductory phrase.

Selecting Survey Respondents

Depending on the purpose, a survey may attempt to capture the responses of an entire population of individuals or of a random sample of the individuals in order to generalize the results from the sample to the entire population of individuals. In this case, the population was defined to be the combination of (1) all parents of children enrolled in grades K-5 in SCASD elementary schools and (2) all professional support staff serving grades K-5 in SCASD elementary schools. Using a sampling strategy is appropriate in certain situations, including when one or more of the following is present: (1) the population to be surveyed is extremely large; (2) the expense to survey the entire population is too expensive; and/or (3) the response rate for the entire population is expected to be extremely low. None of these three issues were of concern regarding this particular survey. Moreover, district administration strongly believed that each and every parent/guardian and professional staff should be afforded the opportunity to communicate their opinion in this matter. Thus, the decision was made to survey the entire population of parents of currently enrolled SCASD K-5 students and professional staff in each of the SCASD elementary schools (K-5 teachers and professional support personnel). Parents/guardians of 5th grade students were included in the survey because they have experience with the K-5 curriculum and have important perceptions about the strengths and weaknesses of their children’s educational experiences.

Validity and Reliability

There are different types of validity that must be addressed when conducting survey research. One type of validity that is important to this particular survey is “construct” validity. Construct validity refers to the ability of the survey to measure the underlying construct or, in this case, accurately assess respondents’ perceptions about the focus of the fifth special class for elementary students. To address this validity issue, the survey designers must address translation validity and face validity. Translation validity refers to the ability to translate, or operationalize, the construct into a set of survey statements. Face validity refers to the degree to which respondents perceive the survey is actually capturing the intended construct—in this case, the respondents’ perceptions about the fifth special.

To ensure translation and face validity, the survey statements were reviewed by SCASD employees who were parents/guardians of K-5 students and who had served as K-5 professional staff to ensure that the group of statements would adequately measure respondents’ preferences

about the focus of the 5th special class. We ensured translational validity, face validity, and construct validity by having both parents/guardians and educators review the survey multiple times before sending the survey to potential respondents.

In general, reliability refers to the degree of consistency in results across survey items that are intended to measure the same construct or the degree of consistency in results across multiple administrations of the survey at different times under similar circumstances. There are four general classes of reliability estimates with the most appropriate type of reliability for this particular survey being test-retest reliability. Using a test-retest reliability assessment, the survey would be administered at two different points in time under similar circumstances and an assessment would be made about the degree to which the results from the two administrations were similar. Given the time constraints of administering this survey more than once and the perception that administering the survey twice would be confusing to respondents, the decision was made to only administer the survey once. The other types of estimates of reliability are not appropriate to this particular survey because of the very small number of statements included in the survey.

The consistent results between the Likert scale statements and the ranking statements does suggest that our results are likely both valid and reliable in that the results are extremely consistent across both types of statements.

Response Rate

The survey was sent to 4,038 parents and guardians and 235 K-5 professional staff for a total of 4,273 potential respondents. We received a total of 2,074 responses for a response rate of 48.95%. With respect to parents/guardians, we received 1,936 responses for a response rate of 47.94%. With respect to K-5 professional staff, we received 225 responses for a response rate of 95.74%.

The response rate for parents/guardians was quite high for a survey of parents/guardians. For example, the last Strategic Plan parent/guardian survey had a response rate of approximately 27%. The question, however, remains as to whether the results from this survey are generalizable to all parents/guardians who were asked to respond. While we would be more confident in generalizing these results to the entire survey population if the response rate was greater, the sheer number of responses should make us quite confident that these results generalize to the entire survey population. I will discuss this issue in greater detail below.

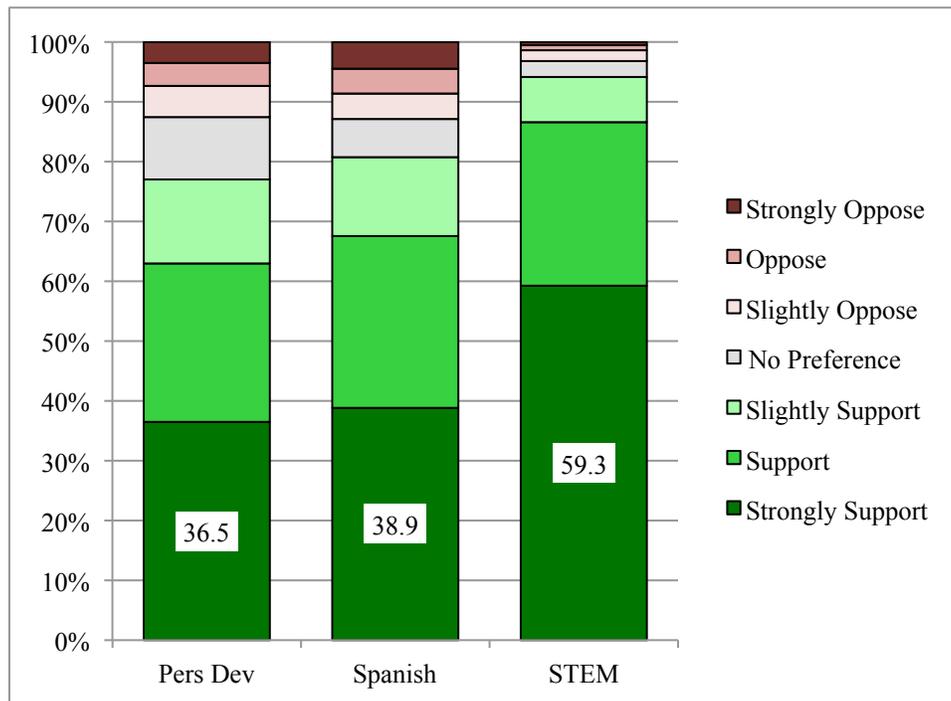
Results

All Respondents

The first set of statements asked respondents to identify their level of support for each of the three options. Respondents could answer identically or differently for the three options. The

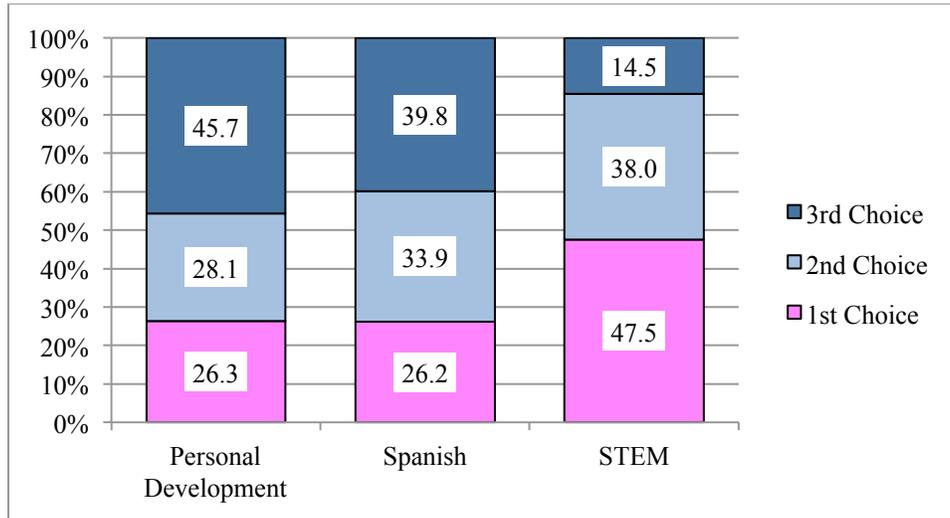
results for all respondents are shown below in Figure 1. Specifically, about 59% of respondents strongly supported the STEM option as compared to 39% for the Spanish Language and Culture option and about 37% for the Personal Development option. When combining the strongly support and support responses, almost 87% of respondents strongly supported or supported the STEM option as compared to almost 68% for the Spanish Language and Culture option and about 63% for the Personal Development option. Thus, the STEM option clearly garnered a much greater level of support than either of the other two options. The large differences between STEM and the other two options are both statistically significant and practically significant.

Figure 1: Degree of Support for the Three Options



As shown in Figure 2, the same pattern seen in the level of response analysis shown in Figure 1 was also evident in the results of the ranking analysis shown below in Figure 2. Specifically, almost 48% of respondents identified the STEM option as their first choice as compared to about 26% for the Spanish Language and Culture option and about 26% for the Personal Development option. Moreover, an additional 38% of respondents selected STEM as their second choice. Thus, the STEM option clearly garnered a much greater level of support than either of the other two options. The large differences between STEM and the other two options are both statistically significant and practically significant.

Figure 2: Respondent Rankings of the Three Options



Results by Respondent Type

In the following analyses, we disaggregate the respondents into three groups—parents/guardians of K-5 students in SCASD elementary schools, K-5 professional staff employed in SCASD elementary schools, and individuals who identified themselves as both parents/guardians of K-5 students in SCASD elementary schools and K-5 professional staff employed in SCASD elementary schools. The number of respondents included 1,849 K-5 parents/guardians, 133 K-5 professional staff, and 87 both K-5 parents/guardians and K-5 professional staff.

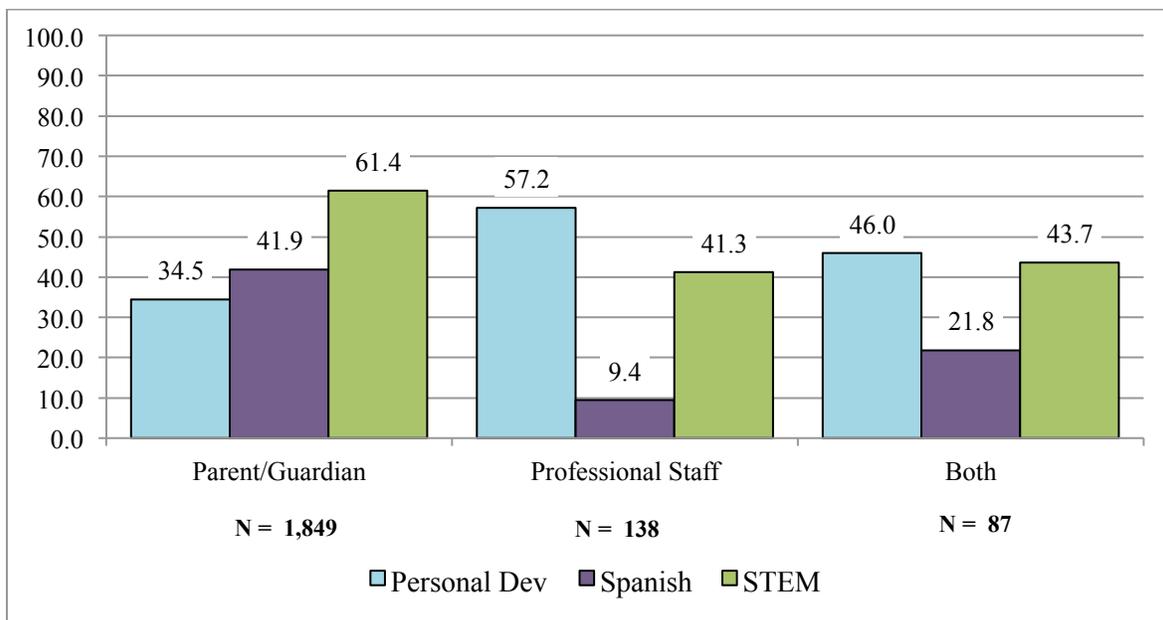
It is important to note that these numbers appear to differ from the numbers used in calculating the response rates on page 3 above. However, the numbers appear to not match because I did not calculate a response rate for the “Both parent/guardian and professional staff” category. I did not calculate the response rate for the “both parent/guardian and professional staff” category because the district does not know the actual number of people included in the email list who were in this particularly category. Thus, I calculated response rates for only K-5 parents/guardians and K-5 professional staff. Specifically, the numerator used in calculating the K-5 parent/guardian response rate was derived by adding the number of respondents in the K-5 parents/guardians category (1,849) to the number of respondents in the both K-5 parent/guardian and K-5 professional staff category (87) to arrive at a total of 1,936 respondents in this category. The numerator used in calculating the response rate for K-5 professional staff was derived by adding the number of K-5 professional staff (133) to the number of respondents in the both K-5 parent/guardian and K-5 professional staff category (87) to arrive at a total of 225 respondents for this category.

In the discussion below, I only discuss results that are statistically significant unless otherwise noted. Also, please note that the sample sizes are radically different across all three

groups of respondents. Simply averaging the percentages across the three groups shown in Figures 3 and 4 does NOT yield the correct overall percentage for all respondents. The correct overall percentages for all respondents are included in Figures 1 and 2 above.

As shown in Figure 3 below, 61% of parents/guardians strongly supported STEM as an option and STEM clearly received a much greater degree of support than the other two options. For professional staff, 57% strongly supported Personal Development while only 41% strongly supported STEM. For individuals who identified themselves as both parents/guardians and professional staff, the percentages of respondents strongly supporting Personal Development and STEM were 46% and 44% with the percentages being *not* statistically significantly different from one another.

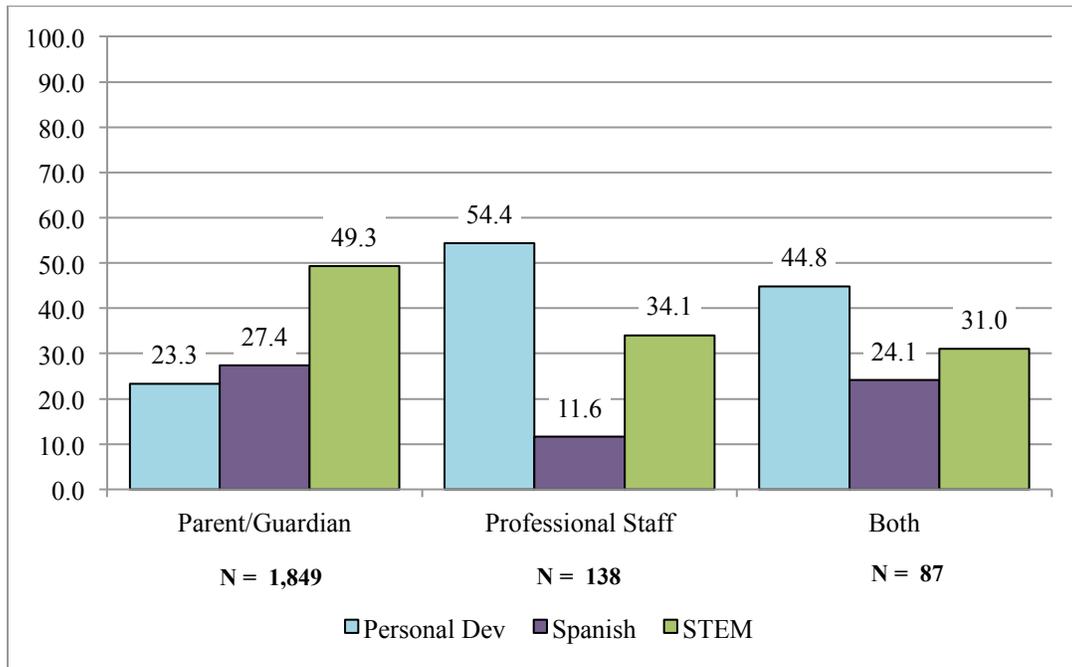
Figure 3: Percentage of Respondents Strongly Supporting Each Option by Type of Respondent



As shown in Figure 4, nearly one-half of parents/guardians ranked the STEM option as their first choice while only 27% of parents/guardians listed Spanish Language and Culture as their first choice and 23% listed Personal Development as their first choice. Thus, parents/guardians clearly identified the STEM option as their first choice. On the other hand, 54% of professional staff identified personal development as their first choice. A much lower percentage of professional staff identified STEM as their first choice and only about 12% identified Spanish Language and Culture as their first choice. Thus, professional staff clearly supported personal development as their first choice. Finally, 46% respondents who identified themselves as both parents/guardians and professional staff identified Personal Development as their first choice. Lower percentages of these respondents identified STEM and Spanish Language and Culture as their first choice with 31% selecting STEM and 24% choosing Spanish Language and Culture. Thus, when forced to choose, individuals who were both

parents/guardians and professional staff identified Personal Development as their first choice despite indicating strong support for both options as shown in Figure 3.

Figure 4: Percentage of Respondents with First Rank for Each Option by Type of Respondent



Conclusion

As noted above, slightly less than 50% of parents/guardians responded to the survey. In some cases, this response rate might cast doubt on the actual perceptions of all parents with children enrolled in grades K-5 in SCASD schools. Indeed, if the differences in the levels of support and rankings were much smaller, we might be very cautious in making conclusions about the outcomes. However, the results of this survey make abundantly clear that parents strongly preferred the STEM option over the other two options. Indeed, in terms of the rankings, approximately 375 additional parent/guardians would have needed to rank Personal Development as their first choice for the results to result in no statistically significant difference between the two options. Given the documented responses of the nearly 2,000 parents/guardians, the odds that 375 additional parents would respond and only select Personal Development is infinitesimally small. If all the non-responding parents/guardians subsequently responded to the survey, approximately two respondents would need to select Personal Development for every one respondent choosing STEM for there to be no statistically significant difference in the percentages of respondents choosing the STEM option and the Personal Development option. Again, this is highly, highly unlikely to be the case. Thus, I am extremely confident in my conclusion that parents/guardians prefer STEM to be the fifth special course.

This analysis was conducted and written by Dr. Ed Fuller, Director of the Penn State Center for Evaluation and Education Policy Analysis (CEEPA) under a contract between the State College Area School District and CEEPA. The views and conclusions do not necessarily represent the views of the College of Education or The Pennsylvania State University.

Appendix

Table A1: Number of Respondents Selecting Levels of Support by Respondent Type

Response	Parents/Guardians			Professional Staff			Both Parent/Guardian & Staff		
	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM
Strongly Support	638	774	1135	79	13	57	40	19	38
Support	495	524	491	31	45	46	24	27	30
Slightly Support	269	234	134	10	28	10	11	10	11
No Preference	201	121	45	11	7	9	5	6	2
Slightly Oppose	99	64	24	4	14	9	5	9	5
Oppose	75	65	12	3	12	5	1	10	1
Strongly Oppose	72	67	8	0	19	2	1	6	0
Total	1849	1849	1849	138	138	138	87	87	87

Table A2: Percentage of Respondents Selecting Levels of Support by Respondent Type

Response	Parents/Guardians			Professional Staff			Both Parent/Guardian & Staff		
	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM
Strongly Support	34.5	41.9	61.4	57.2	9.4	41.3	46.0	21.8	43.7
Support	26.8	28.3	26.6	22.5	32.6	33.3	27.6	31.0	34.5
Slightly Support	14.5	12.7	7.2	7.2	20.3	7.2	12.6	11.5	12.6
No Preference	10.9	6.5	2.4	8.0	5.1	6.5	5.7	6.9	2.3
Slightly Oppose	5.4	3.5	1.3	2.9	10.1	6.5	5.7	10.3	5.7
Oppose	4.1	3.5	0.6	2.2	8.7	3.6	1.1	11.5	1.1
Strongly Oppose	3.9	3.6	0.4	0.0	13.8	1.4	1.1	6.9	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table A3: Percentage of Respondents for Each Ranking by Respondent Type

Ranking	Parents/Guardians			Professional Staff			Both Parent/Guardian & Staff		
	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM
1st Choice	431	507	911	75	16	47	39	21	27
2nd Choice	524	651	674	33	36	69	25	17	45
3rd Choice	894	691	264	30	86	22	23	49	15
Total	1849	1849	1849	138	138	138	87	87	87

Table A4: Number of Respondents for Each Ranking by Respondent Type

Ranking	Parents/Guardians			Professional Staff			Both Parent/Guardian & Staff		
	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM	Pers Dev	Spanish	STEM
1st Choice	23.3	27.4	49.3	54.3	11.6	34.1	44.8	24.1	31.0
2nd Choice	28.3	35.2	36.5	23.9	26.1	50.0	28.7	19.5	51.7
3rd Choice	48.4	37.4	14.3	21.7	62.3	15.9	26.4	56.3	17.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

With respect to response rates, we do not know the population of individuals who are both parents/guardians and professional staff. Thus, we calculate the response rates only for parents and guardians and professional staff. The total response for parents/guardians is 1,936 (1,849 + 87) while the total number of professional staff respondents was 225 (138 + 87).