Implementing and Testing the Standard Response Protocol:

Final Report

May 2019

Report Prepared By

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Final Report

A Report Presented To

Syracuse City School District

by

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PROJECT OVERVIEW

Following the February 2018 shooting at Marjory Stoneman Douglas High School in Parkland, FL, the Syracuse City School District (SCSD) and SUNY Oswego's Department of Criminal Justice joined together in an initiative to provide emergency response training to students, faculty, and staff alike. Through this grant-funded project, the research team implemented the Standard Response Protocol (SRP-X) from the I Love U Guys Foundation, which provides emergency preparedness training for five different situations: Lockout, Lockdown, Evacuate, Shelter, and Hold. These five scenarios also reflect the functional annexes that schools are required to train for by the State of New York.

As depicted in Figure 1, the project was conducted over the course of the 2018-2019 academic year. Planning in conjunction with SCSD's Department of Public Safety (DPS) was conducted during the summer months prior to the start of the school year. This included (but was not limited to) constructing the survey instrument for both students and faculty/staff, securing necessary approvals from SUNY Oswego's Institutional Review Board, crafting a project timeline, and identifying goals for each phase. Additionally, a presentation outlining the project was made to the principals and other members of the district at a meeting held at PSLA at Fowler on August 20, 2018.

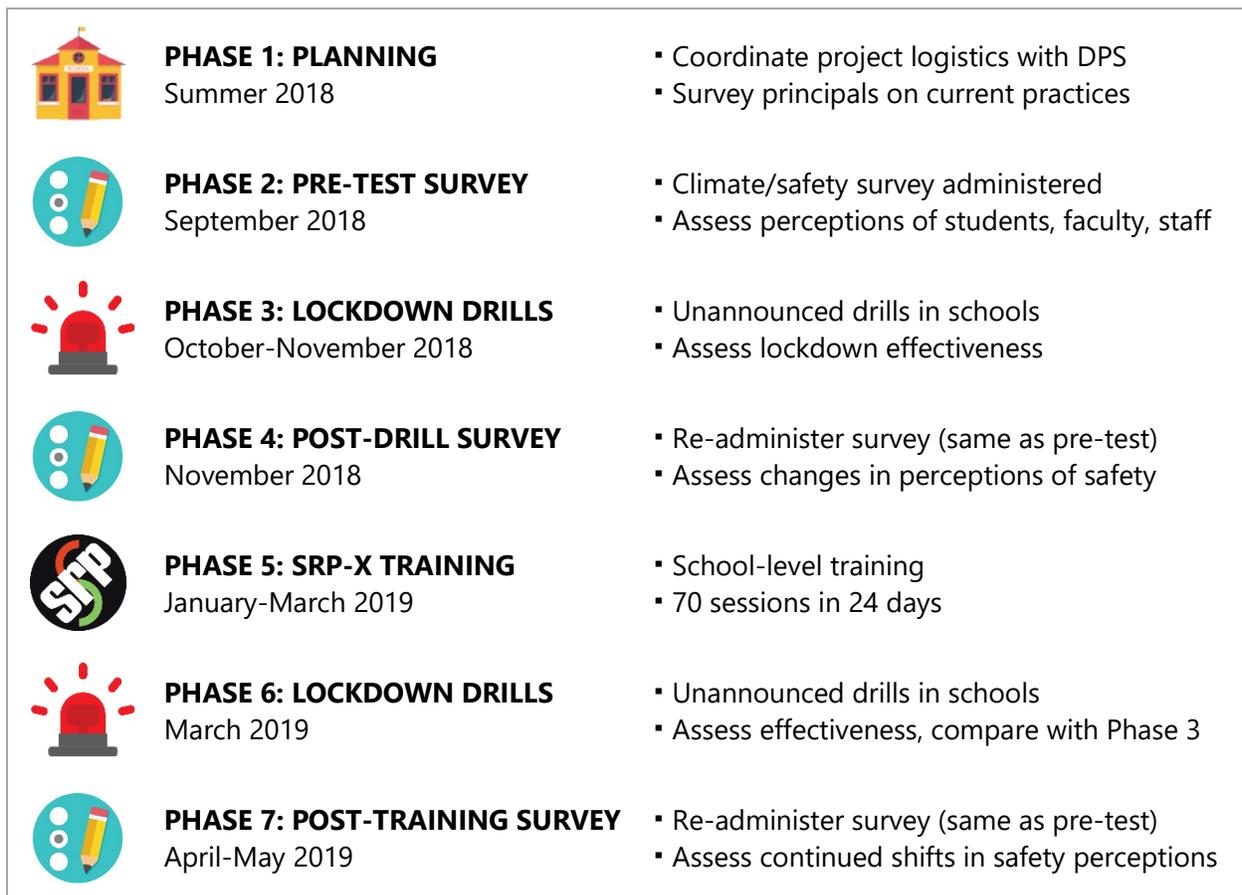|		
	PHASE 1: PLANNING Summer 2018	▪ Coordinate project logistics with DPS ▪ Survey principals on current practices
	PHASE 2: PRE-TEST SURVEY September 2018	▪ Climate/safety survey administered ▪ Assess perceptions of students, faculty, staff
	PHASE 3: LOCKDOWN DRILLS October-November 2018	▪ Unannounced drills in schools ▪ Assess lockdown effectiveness
	PHASE 4: POST-DRILL SURVEY November 2018	▪ Re-administer survey (same as pre-test) ▪ Assess changes in perceptions of safety
	PHASE 5: SRP-X TRAINING January-March 2019	▪ School-level training ▪ 70 sessions in 24 days
	PHASE 6: LOCKDOWN DRILLS March 2019	▪ Unannounced drills in schools ▪ Assess effectiveness, compare with Phase 3
	PHASE 7: POST-TRAINING SURVEY April-May 2019	▪ Re-administer survey (same as pre-test) ▪ Assess continued shifts in safety perceptions

Figure 1. Project Timeline and Phase Overview

In addition to the presentation given at PSLA at Fowler, a survey also was administered to SCSD's principals (including the alternative programs) to better understand their current practices ahead of the initiation of the project. Of the 36 principals who were emailed, 27 completed the survey, representing a response rate of 75%. Responses varied with regard to what protocol was presently being used, with one-third of schools indicating that they were currently using the Run Hide Fight strategy. Further, all schools indicated that they had a plan in place for a Lockdown; 96.3% confirmed procedures for Lockouts, Evacuations, Shelter, and Hold.

The majority of principals (74.1%) reported that they practiced their lockdown drills once per quarter. While nearly all (96.3%) of the principals indicated that their schools had a pre-identified emergency response team, a lesser number (66.7%) confirmed that they specifically utilized a lockdown drill team to conduct their exercises. Further, a smaller proportion (40.7%) indicated that they debriefed the students upon the completion of the drills. Finally, nearly 8 out of every 10 principals indicated that they did not conduct any of their drills with outside agencies such as police, fire, or EMS.

As further indicated in Figure 1, surveys were disseminated to middle and high school students (via paper-and-pencil documents) and faculty and staff (via online / email invitation) at three different points. Each survey instrument was identical to allow the researchers to assess changes in attitudes of participants based on the introduction of different stimuli (e.g., drills, training). It bears noting, however, that the surveys for all participants were anonymous; therefore, responses could not be matched to a specific individual across all three points. Accordingly, for the purpose of this report, these are treated as independent samples. The surveys for both groups included questions about perceptions of safety at their institutions, feelings of preparedness, awareness / experiences with weapons and violence on their campuses, and familiarity with the five annexes of SRP-X. Each survey also included demographic questions for further analysis. The pre-test survey (Phase 2) allowed for baseline measures on the different questions. The post-drill survey (Phase 4) enabled the researchers to assess how the drill shifted such perceptions, as did the final survey (Phase 7). The survey disseminated in Phase 7 also provided the opportunity to assess the potential impact of training ahead of the drills by comparing responses from that point with responses in Phase 4.

Two separate lockdown drills were conducted – once in the fall (Phase 3) and once in the spring (Phase 6). (It should be noted that these drills were utilized by most, if not all, of the schools as two of their required four drills per school year.) The drills conducted in Phase 3 provided a baseline assessment of the four components of SRP-X's Lockdown drill – locks (is the door secured?), lights (are they off?), out of sight (can room occupants be seen or heard?), and door knock (will occupants answer when prompted?). The drills conducted post-training in Phase 6 allowed for comparison to assess the effectiveness of the training and potential improvement in these four check criteria. The specific procedures for the survey and drill phases are discussed later in this report accompanying the results of each.

The final phase of the project (Phase 5) involved the training on SRP-X at the school level. Each training session was coordinated with the school principals and delivered by the principal investigator of the project with the assistance of her research team. The training sessions utilized a

pre-prepared training presentation from the I Love U Guys Foundation as part of the resources available with the SRP-X program. The PowerPoint includes informative points, accompanying videos, and audience check-ins. The full training (approximately 45 minutes) was administered to students grades 3 through 12. Given the shorter attention spans of students in grades Pre-K to 2, a pared down version of the training (approximately 20 minutes) comprising just the basics of each of the five response annexes. Additional training sessions were held for the Central Office staff using the SRP-BIZ model (which adapts SRP-X to an office setting).

Each school also was provided a copy of the SRP-X operations manual, which contains information on each annex's procedures, applicable signage, and additional guidance (e.g., information on running drills, do's and don'ts of response protocols, etc.). The research team also put applicable signage (posters with tasks for students and their teachers) in all classrooms and common areas within each school.

About the Standard Response Protocol

The original version of the Standard Response Protocol (SRP) was introduced in 2009 by the I Love U Guys Foundation and underwent revision in 2015. The initial protocol included response strategies for Lockout, Lockdown, Evacuate, and Shelter. The extended version of the program, SRP-X, was introduced in 2017 and included the addition of the Hold action (see Figure 2).

| LOCKOUT | LOCKDOWN | EVACUATE | SHELTER | HOLD |

Figure 2. SRP-X Scenarios with Imaging

There are a number of benefits to the SRP/SRP-X (herein SRP-X) programs. Most importantly, unlike other strategies (e.g., Run Hide Fight), SRP-X is action based rather than being contingent upon an individual scenario. It also provides clear directives for students and faculty / staff in emergencies so that they know both what the situation is and how they need to respond to it. Such directives can serve as both a noun ("We are in a lockdown") or a verb ("Lockdown!"), depending on how they are being used, which ensures uniformity and consistency of language in emergencies. In the same vein, the accompanying public address protocols are prewritten or "canned," which also ensures consistency in the delivery of messaging in times of crisis and minimizes the possibility of error or delay by administrators in notifying building occupants of emergencies.

Equally as important is the fact that SRP-X standardizes the vocabulary of emergency response. SRP-X is based off language used by the National Incident Management System (NIMS) from the Federal Emergency Management Agency (FEMA) to standardize emergency management. NIMS language is used by first responders, including police, fire, and EMS, so using consistent language within school buildings can lead to greater predictability for these individuals during an incident. The standardized vocabulary also is easier to train with students, faculty, and staff and to drill, and is easily understandable for parents, who can help to reinforce the protocol at home (it should be noted that during Phase 1 of the current project, DPS sent a letter home with a copy of the SRP-X parental handout to all families with students enrolled in the district). Finally, as noted, since all of the messaging is prewritten, it facilitates rapid response determination in times of crisis.

In This Report

The current project was guided by two overarching research questions:

(1) Does SRP-X increase feelings of safety and preparedness?
(2) Does SRP-X improve lockdown effectiveness?

The remainder of this report presents the findings of the current study aimed at answering these questions. Specifically, the results are organized into three sections. The first two sections are focused on answering the first research question. The results of the student surveys are first analyzed, followed by those of the faculty / staff surveys. The remaining section compares the results of the two lockdown drills in order to answer the second research question. Supporting documents, including the drill schedules and results by school, are included in the appendices of this report.

KEY FINDINGS

The following are key takeaways from the findings of the different phases of the project, as well as recommendations for future efforts by SCSD related to emergency response preparations.

Student Survey

- Feelings of safety at school and within various areas of their campuses differed significantly by survey time, with respondents expressing less favorable attitudes as the project wore on.

- Respondent groups differed in their perceptions about whether their teachers could protect them during an emergency.

- Respondents were significantly more likely to express familiarity with SRP-X's five annexes after training than at either of the other two survey points.

- Respondents reported strong disagreement that they would stay home at least one day out of the year out of fear of being attacked or harmed at school, though these attitudes lessened slightly following the initial survey time point.

Faculty / Staff Survey

- Respondents generally feel safe at their institution and these attitudes did not significantly differ in most contexts (excluding outside on school grounds) over the different survey points.

- By the end of the project, respondents were significantly more likely to express agreement that they knew what to do in an emergency and had received adequate training on the district's adopted protocols. They also indicated greater familiarity with their school's threat assessment protocols and where such concerns should be reported.

- Like students, faculty and staff respondents were significantly more likely to report awareness of how to respond to emergencies using SRP-X's five annexes after training than at either of the other two survey points.

- Comparing perceptions following the two lockdown drills, respondents expressed less agreement that someone could harm them on their way to or from school after the training (at the final survey point) as compared to after the initial drill.

Lockdown Drills

- Overall lockdown effectiveness improved following the training sessions.

- Specifically, more occupied rooms had their doors locked, lights off, and occupants out of sight (could not be seen nor heard). Considerably fewer rooms responded to the door knocks by the research team.

- The proportion of doors locked did decrease slightly for elementary schools between the two drills, due (in part) to a reliance by teachers on administrators to secure rooms for them.

- More than half of the rooms checked met all four criteria, and nearly 84% met at least three. The proportion of rooms that did not meet any of the checked criteria also decreased after the training.

- Marked improvement in lockdown effectiveness was found across the board for all schools. Ed Smith, Franklin, and ITC remained in the top five across both drills.

Recommendations

- Continue conducting and assessing lockdown drills to achieve further improvement across all four check criteria.

- Continue to incorporate school-based staff (including visitors or individuals from outside agencies who work within the institutions) in trainings and drills in addition to students and faculty.

- Conduct drills (at least one per academic year) at inconvenient times, including during lunches and class changes and at arrival and dismissal times.

- Conduct other types of SRP-X drills (Lockout, Evacuate, Shelter, and Hold) to improve proficiency among building occupants.

- Adopt the Standard Reunification Method (SRM) for after-action needs of emergencies.

STUDENT SURVEYS

Paper surveys, a copy of which is in Appendix A, were disseminated to 10,015 middle (including grades 6-8 at the Pre-K-to-8 schools) and high school students at three different points during the course of the project. SCSD's DPS provided the researchers with a list of teachers per school with their respective second period student counts. This was done to allow for late arrivals to school to still be able to participate. Copies of the surveys were placed in each teacher's mailbox approximately one week ahead of the intended completion date to allow for time to be retrieved by the educator.

Surveys were to be taken around October 9, 2018 (Time 1), November 13, 2018 (Time 2), and April 9, 2019 (Time 3). Completed surveys were collected from each school by the research team and subsequently coded for analysis. Table 1 highlights the distribution of returned surveys at each point. As indicated, the response rates varied by time, ranging from 30.9% to 45.6%.

Table 1. Distribution of Student Responses by Building Level and Time

BUILDING LEVEL	T1 (PRE-TEST)	T2 (POST-DRILL)	T3 (POST-TRAINING)
Pre-K-to-8 (6-8 Only)	907	743	902
Middle School	1,313	810	770
High School	2,343	1,538	1,600
TOTALS	**4,563**	**3,091**	**3,272**
Response Rate	45.6%	30.9%	32.7%

Respondent Snapshot

Across the three time points, a total of 10,926 student surveys were returned completed. A breakdown of the demographics of the respondents at each time point is presented in Table 2. As was noted, since the surveys were completely anonymous, it is impossible for the researchers to match respondents' answers across the three different surveys. Accordingly, for the purpose of the following analyses, each time's sample is treated as independent. Moreover, given that participation was voluntary and respondents could skip questions as they chose, missing data are present (varying between 3.7% and 19.9% per demographic question).

Both overall and at Times 1 and 3, more males than females completed the surveys. Respondents ranged in age from 10 to 21. The mean age of respondents at Times 1 and 2 were 13.83 and 13.88 years, respectively. The mean age of respondents at the third survey point was 14.21 and statistically significantly different ($F = 30.233$, $p < .001$) from the other two time points according to the Scheffé post-hoc analysis.

Table 2. Distribution of Demographic Characteristics of Student Respondents

	T1 (PRE-TEST) N = 4,563	T2 (POST-DRILL) N = 3,091	T3 (POST-TRAINING) N = 3,272
Sex			
Male	2,539 (55.6%)	1,493 (48.3%)	1,501 (45.9%)
Female	1,932 (42.3%)	1,531 (49.5%)	966 (29.5%)
Age			
10	81 (1.8%)	14 (0.5%)	9 (0.3%)
11	754 (16.5%)	437 (14.1%)	327 (10.0%)
12	43 (0.9%)	547 (17.7%)	522 (16.0%)
13	583 (12.8%)	412 (13.3%)	480 (14.7%)
14	667 (14.6%)	466 (15.1%)	462 (14.1%)
15	518 (11.4%)	355 (11.5%)	454 (13.9%)
16	478 (10.5%)	314 (10.2%)	356 (10.9%)
17	482 (10.6%)	281 (9.1%)	310 (9.5%)
18+	176 (3.9%)	143 (4.6%)	248 (7.6%)
Grade			
6	869 (19.0%)	522 (16.9%)	618 (18.9%)
7	700 (15.3%)	560 (18.1%)	480 (14.7%)
8	551 (12.1%)	407 (13.2%)	498 (15.2%)
9	738 (16.2%)	501 (16.2%)	488 (14.9%)
10	509 (11.2%)	347 (11.2%)	430 (13.1%)
11	455 (10.0%)	306 (9.9%)	245 (7.5%)
12	522 (11.4%)	274 (8.9%)	335 (10.2%)
Race/Ethnicity			
White	636 (13.9%)	426 (13.9%)	474 (14.5%)
Black	1,533 (33.6%)	1,009 (32.6%)	1,171 (35.8%)
Hispanic	417 (9.1%)	267 (8.6%)	304 (9.3%)
Native American	115 (2.5%)	88 (2.8%)	74 (2.3%)
Asian	372 (8.2%)	264 (8.5%)	258 (7.9%)
Bi-/Multi-racial	746 (16.3%)	503 (16.3%)	376 (11.5%)
Other	480 (10.5%)	347 (11.2%)	346 (10.6%)
Transportation			
Walk	724 (15.9%)	458 (14.8%)	421 (12.9%)
Bicycle	34 (0.7%)	18 (0.6%)	19 (0.6%)
Car	846 (18.5%)	585 (18.9%)	672 (20.5%)
School Bus	1,501 (32.9%)	1,050 (34.0%)	1,065 (32.5%)
Public Transportation	524 (11.5%)	336 (10.9%)	354 (10.8%)
Other	47 (1.0%)	47 (1.5%)	50 (1.5%)

NOTE: Results presented as raw counts with frequency percentages in parentheses. Frequency percentages are based on the total number of surveys collected at each time and may not round to 100.0% due to missing data.

Across all three time points collectively, the majority of respondents were in sixth grade, followed by seventh and ninth grades respectively. Eleventh grade had the fewest total respondents among those who indicated their education level.

Collectively, the majority of respondents identified as Black / African American. Biracial / multiracial was the next most common category identified, followed by White. Students identifying as Native American were the least common.

Finally, respondents were asked how they commuted to their school. Transportation by school bus was the most common option selected, followed by use of a car (either self-driven or driven by someone else) and walking. Riding a bicycle to school was the least common mode of transportation for the respondents.

Results: Feelings of Safety and Preparedness

Students first were asked to indicate their level agreement with a series of statements related to feeling safe at various locations within their school building. Responses were indicated on a Likert scale with categories ranging from Strongly Disagree (1) to Strongly Agree (5), meaning that higher mean scores indicate greater agreement with the statements. Analyses of variance (ANOVAs) were computed for each question with Scheffé's post hoc analyses used to determine which groups specifically differed from one another. The results of these tests are presented in Table 3.

Table 3. Means of Student Perceptions of School Safety by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I feel safe at my school.	3.50	3.47	3.41	6.708***	T3 < T1
I feel safe in my classroom(s).	3.75	3.68	3.65	9.782***	T3 < T1
I feel safe in the cafeteria.	3.43	3.38	3.26	19.809***	T3 < T1, T3 < T2
I feel safe in the hallways.	3.32	3.30	3.23	5.012**	T3 < T1

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*p < .05, **p < .01, ***p < .001.

As the findings indicate, the differences in means across all three time points were significant for each statement. Thus, at each survey point, respondents differed significantly in their feelings of safety within various areas of their schools. Looking at the Scheffé post hoc analyses, the findings indicate that, more specifically, respondents at the post-training survey (following the second lockdown drill) were significantly less likely to express feeling safe at their school and in classrooms,

cafeterias, and the hallways than those students at the first survey point (the pre-test). Additionally, the respondents at the third survey point also reported feeling significantly less safe in the cafeteria than those students who were surveyed following the initial lockdown drill. While it is impossible to say for certain, it is possible that the continued drilling over the course of the school year served to highlight perceived vulnerabilities by the students, leading them to express feeling significantly less safe at school and within the buildings at the end of the project as compared to the beginning.

Two additional questions, also measured on a Likert scale ranging from Strongly Disagree to Strongly Agree, related to general feelings of preparedness were asked of respondents. As indicated in Table 4, respondents averaged higher levels of agreement to the statement "I know what to do in an emergency," indicating that they generally felt prepared at their school. The ANOVA was not significant, meaning that the groups did not vary considerably based on time. Conversely, when asked to rate their agreement about whether their teachers were able to protect them, the groups did significantly differ based on the ANOVA. No conclusion, however, could be drawn about which groups differed from one another based on the post hoc analysis for this statement.

Table 4. Means of Student Perceptions of Preparedness by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I know what to do in an emergency.	4.13	4.11	4.14	.602	
My teacher(s) know how to protect me.	3.40	3.39	3.46	3.404*	

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*$p < .05$, **$p < .01$, ***$p < .001$.

Table 5. Means of Student Familiarity with SRP-X Annexes by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I know what to do during a lockout.	3.54	3.69	4.04	26.352***	T1 < T3, T1 < T2, T2 < T3
I know what to do during a lockdown.	4.11	4.16	4.27	5.723**	T1 < T3, T1 < T2, T2 < T3
I know what to do if told to evacuate.	4.08	4.07	4.15	157.673***	T1 < T3, T2 < T3
I know what to do if told to shelter.	3.65	3.75	3.94	57.556***	T1 < T3, T1 < T2, T2 < T3
I know what to do if told to hold.	3.89	3.98	4.14	48.368***	T1 < T3, T1 < T2, T2 < T3

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*$p < .05$, **$p < .01$, ***$p < .001$.

Respondents also were asked to rate their agreement, along a Likert scale, regarding their familiarity with SRP-X's five emergency scenarios. As indicated in Table 5, for each scenario – Lockout, Lockdown, Evacuate, Shelter, and Hold – the mean responses differed significantly based on when the survey was taken. More specifically, across all five categories, respondents expressed greater familiarity with knowing the protocol at the final survey time than at either the pre-test (Time 1) or following the first drill but prior to training (Time 2). This indicates that the training is specifically is responsible for increasing awareness of the district's emergency response plan. Significant differences also were identified between the first and second survey points for each scenario except evacuation, but the cause is less readily identifiable.

Finally, respondents were asked to rate their agreement to a series of statements regarding violence in their school. Their responses, again recorded on Likert scales, are presented in Table 6. As the findings indicate, the respondent groups did not vary significantly across the majority of the questions based on the time at which they took the survey. In fact, only one statement – that respondents stayed home at least one day during the school year out of fear of harm – was found to differ significantly by group based on the ANOVA and, given the low mean score, were likely to actually express disagreement with such a statement. Specifically, those individuals who took the initial survey had a lower mean score than respondents in both of the other groups, indicating that they actually expressed greater disagreement with such a sentiment.

Table 6. Means of Student Perceptions of Violence at School by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I am afraid someone will harm me at school.	2.36	2.37	2.32	1.485	
I am afraid someone will harm me on my way to school and/or on the way home.	2.30	2.28	2.26	1.014	
I avoid at least one class because someone might attack or harm me.	1.73	1.73	1.71	.413	
I have stayed home at least one day because someone may attack or harm me.	1.62	1.69	1.69	6.304**	T1 < T2, T1 < T3
I think a school shooting could happen at my school.	2.85	2.85	2.78	2.839	

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*p < .05, **p < .01, ***p < .001.

FACULTY AND STAFF SURVEYS

Internet surveys (see Appendix B for a copy) were distributed to school-level faculty and staff, including administrators, using the Survey Monkey platform. Like the students, these individuals were surveyed at three different points: prior to the start of the project, after the first drill, and following the training and second drill. A list of district email addresses for each person was received from DPS. Personalized emails were sent to each recipient notifying them of the release of the survey, with follow-up reminders sent weekly to any individual who had not yet completed their survey.[1] Each survey was open for a total of three full weeks.

Survey invitations were sent to 3,221 potential recipients on September 17, 2018 (Time 1), November 13, 2018 (Time 2), and April 29, 2019 (Time 3). The distribution of responses by position and time is reported in Table 7. The response rates varied by time but remained close, averaging just over 31%.

Table 7. Distribution of Faculty and Staff Responses by Position Type and Time

BUILDING LEVEL	T1 (PRE-TEST)	T2 (POST-DRILL)	T3 (POST-TRAINING)
Invitations Sent	3,221	3,221	3,221
Surveys Received	999	990	1,011
Response Rate	31.0%	30.7%	31.4%

Respondent Snapshot

Collectively across the three time points, a total of 3,000 surveys were returned completed by school-based faculty, staff, and administrators. A breakdown of the demographics of the respondents at each time point is presented in Table 8. As with the student survey, each time's sample is treated as independent due to the researchers' inability to match answers by respondent as a result of the anonymous nature of the instrument. Additionally, missing data also are present for each demographic item (ranging from 3.8% to 12.6%) as question response was voluntary, meaning that individuals could choose not to answer a question.

At all three survey points, more females completed the surveys than males, nearly three to one. Respondents ranged in age from 19 to 83. The mean age of respondents at all three time points was approximately 44 years old and the groups did not significantly differ according to the ANOVA test performed. Further, more than 7 out of 10 respondents at each survey point identified as White.

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[1] Though the surveys were anonymous (including that no IP addresses were tracked nor identifying information collected from recipients), Survey Monkey generates unique links for each recipient when the initial invitation is sent. The platform then is able to track click-through completion rates based on that link and generate the reminders, despite that the researchers do not have access to it.

Table 8. Distribution of Demographic Characteristics of Faculty and Staff Respondents

	T1 (PRE-TEST) N = 999	T2 (POST-DRILL) N = 990	T3 (POST-TRAINING) N = 1,011
Sex			
Male	234 (23.4%)	242 (24.4%)	221 (21.9%)
Female	732 (73.3%)	715 (72.2%)	741 (73.3%)
Age Range			
Under 30	119 (11.9%)	108 (10.9%)	93 (9.2%)
30-39	195 (19.5%)	220 (22.2%)	203 (20.1%)
40-49	267 (26.7%)	263 (26.6%)	267 (26.4%)
50-59	227 (22.7%)	224 (22.6%)	228 (22.6%)
60 and Older	63 (6.3%)	67 (6.8%)	74 (7.3%)
Race/Ethnicity			
White	736 (73.7%)	738 (74.5%)	727 (71.9%)
Black	95 (9.5%)	103 (10.4%)	101 (10.0%)
Hispanic	44 (4.4%)	38 (3.8%)	41 (4.1%)
Native American	7 (0.7%)	7 (0.7%)	6 (0.6%)
Asian	5 (0.5%)	6 (0.6%)	10 (0.1%)
Bi-/Multi-racial	24 (2.4%)	22 (2.2%)	24 (2.4%)
Other	26 (2.6%)	22 (2.2%)	18 (1.8%)
Position			
Faculty	452 (45.2%)	428 (43.2%)	437 (43.2%)
Staff	461 (46.1%)	416 (42.0%)	410 (40.6%)
Administration	43 (4.3%)	52 (5.3%)	43 (4.3%)
Other	6 (0.6%)	62 (6.3%)	67 (6.6%)
Years Employed at SCSD			
Less than 5	256 (25.6%)	257 (26.0%)	226 (22.4%)
5-9 Years	100 (10.0%)	121 (12.2%)	133 (13.2%)
10-14 Years	151 (15.1%)	158 (16.0%)	144 (14.2%)
15-19 Years	164 (16.4%)	152 (15.4%)	162 (16.0%)
20-24 Years	109 (10.9%)	108 (10.9%)	128 (12.7%)
25-29 Years	71 (7.1%)	72 (7.3%)	59 (5.8%)
30+ Years	51 (5.1%)	48 (4.8%)	52 (5.1%)

NOTE: Results presented as raw counts with frequency percentages in parentheses. Frequency percentages are based on the total number of surveys collected at each time and may not round to 100.0% due to missing data.

Approximately the same number of individuals identifying as either faculty or staff members completed the survey at each interval. Just under 5% of respondents, on average, identified as administrators. Finally, respondents were asked to report the number of years they have worked for SCSD. Responses ranged from 1 year (or being within the first year) to 46 years. Respondents

averaged approximately 13 years of employment with the district, a figure that did not vary significantly based upon the survey time.

Results: Feelings of Safety and Preparedness

Respondents first were asked to indicate their level agreement with a series of statements related to feeling safe at various locations within their school building and their perception that their school is safe. Akin to the student surveys, responses to each statement were indicated on a Likert scale, with categories ranging from Strongly Disagree (1) to Strongly Agree (5). Thus, higher mean scores indicate greater agreement with the statements. ANOVAs again were computed for each question with Scheffé's post hoc analyses used to determine which groups specifically differed from one another. The results of these tests are presented in Table 9.

As the results indicate, the groups did not vary significantly in their opinions about safety at their schools in most of the contexts presented. Feeling safe on the external school grounds was the only item to show a statistically significant difference in the ANOVA tests. In assessing the post hoc analysis more specifically, it shows that respondents at the second survey point (after the first lockdown drill but prior to any training) indicated less agreement with this statement than those surveyed after the training and second lockdown drill were completed.

Table 9. Means of Faculty and Staff Perceptions of School Safety by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I feel safe at my school.	3.80	3.82	3.84	.348	
I feel safe in my classroom(s).	3.94	3.95	3.97	.270	
I feel safe in the hallways.	3.77	3.76	3.76	.082	
I feel safe outside on the school grounds.	3.53	3.48	3.60	3.614*	T2 < T3
Overall, I feel this school is a safe school.	3.79	3.76	3.80	.397	

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
$*p < .05, **p < .01, ***p < .001$.

A panel of additional questions, also measured on a Likert scale ranging from Strongly Disagree to Strongly Agree, were asked of respondents that related to general feelings of preparedness (Table 10). As indicated, respondents were significantly more likely to express that they know what to do in

an emergency, were aware of their school's threat assessment protocols, and had received adequate training on the schools' active shooter and emergency response plans following the training sessions and second lockdown drill as compared to both the start of the project and first lockdown exercise. At the third survey point, respondents also were significantly more likely than those at the second, following the initial lockdown, to agree that they knew where to report a threat of violence.

Table 10. Means of Faculty and Staff Perceptions of Preparedness by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I know what to do in an emergency.	4.07	4.09	4.20	7.909***	T1 < T3, T2 < T3
I am aware of my school's threat assessment protocols.	3.33	3.23	3.48	9.445***	T1 < T3, T2 < T3
I know where to report a threat of violence.	4.07	4.00	4.13	5.826**	T2 < T3
I have received adequate training on my school's active shooter plan.	3.23	3.23	3.57	27.573***	T1 < T3, T2 < T3
I have received adequate training on my school's emergency response plan.	3.37	3.34	3.68	30.241***	T1 < T3, T2 < T3

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*p < .05, **p < .01, ***p < .001.

Table 11. Means of Faculty and Staff Familiarity with SRP-X Annexes by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I know what to do during a lockout.	3.85	3.91	4.23	43.167***	T1 < T3, T2 < T3
I know what to do during a lockdown.	4.23	4.27	4.36	8.674***	T1 < T3, T2 < T3
I know what to do if told to evacuate.	4.08	4.06	4.21	8.038***	T1 < T3, T2 < T3
I know what to do if told to shelter.	4.05	4.04	4.23	14.895***	T1 < T3, T2 < T3
I know what to do if told to hold.	4.02	4.03	4.27	24.335***	T1 < T3, T2 < T3

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*p < .05, **p < .01, ***p < .001.

As with the students, faculty and staff respondents were asked to rate their agreement regarding their familiarity with SRP-X's five emergency scenarios. Their responses were recorded along a Likert scale ranging from Strongly Disagree to Strongly Agree. As reported in Table 11, the mean responses for each scenario – Lockout, Lockdown, Evacuate, Shelter, and Hold – differed significantly based on when the survey was taken. More specifically, across all five categories, respondents expressed greater familiarity with knowing the protocol at the final survey time than at either the pre-test (Time 1) or following the first drill but prior to training (Time 2). This again suggests that the increasing awareness of the district's emergency response plan and preparing school-based personnel for these key emergency situations can be attributed to the training sessions, given that all other actions (e.g., surveying, drills) remained constant prior to this final inquiry.

Table 12. Means of Faculty and Staff Perceptions of School Violence by Time with Post Hoc Analyses

Statement	T1	T2	T3	F	Post hoc analyses (Scheffé)
I am afraid someone will harm me at school.	2.21	2.22	2.19	.204	
I am afraid someone will harm me on my way to school and/or on the way home.	2.09	2.13	2.01	4.961**	T3 < T2
I am afraid someone will harm my students at school.	2.52	2.55	2.52	.258	
I am afraid someone will harm my students on the way to school and/or on the way home.	2.93	2.98	2.90	1.429	
I think a school shooting could happen at my school.	2.87	2.93	2.82	2.697	

NOTE: T1 = Pre-Test Survey; T2 = Post-Drill Survey; T3 = Post-Training/Drill Survey.
*p < .05, **p < .01, ***p < .001.

Finally, respondents were asked to rate their agreement to a series of statements regarding violence in their school. Their responses, presented in Table 12, were again recorded on Likert scales. As reported, respondents did not differ significantly in their perceptions of fearing for themselves or their students being harmed at school (and, for the students, being harmed while commuting to campus) or that a school shooting could happen at their institution based on when they completed their surveys. Further, given the low mean scores, respondents typically disagreed, on average, that they were fearful of these situations or that such an incident was possible. Only one statement was found to have significant differences in the mean response scores based on the timing of the survey.

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Specifically, respondents who completed the survey at the final point (post-training and second lockdown drill) were less likely to agree that someone would harm them while commuting to or from school as compared to those who completed it following the first lockdown drill.

LOCKDOWN DRILLS

Lockdown drills were conducted at two different points during the course of the project. The initial drills were conducted in the schools between Monday, October 22, 2018 and Friday, November 9, 2018. The post-training drills were conducted between Monday, March 11, 2019 and Friday, March 29, 2019.[2]

Accompanied by members of SCSD's DPS and with the assistance of the schools' sentries, the SUNY Oswego research team made unannounced visits to each of the schools. A script was provided to the principal or administrator in charge and they were asked to read it over the loudspeaker to initiate the drill. The drill call for the initial lockdown was as follows:

> *We are in a lockdown. This is a drill.*
> *We are in a lockdown. This is a drill.*

At the second lockdown drill, the call, adjusted to accommodate the language of SRP-X provided during the trainings, was as follows:

> *Lockdown! Locks, Lights, Out of Sight!*
> *This is a drill.*
> *Lockdown! Locks, Lights, Out of Sight!*

Once the lockdown drill was initiated, members of the SUNY Oswego research team, accompanied by members of the SCSD security department (including members of DPS and each building's sentries) assessed each room based on the following criteria:

1. Was the door locked?
2. Were the lights in the room off?
3. Were the room's occupants out of the line of sight of the researchers from the hallway (e.g., could they be seen through the classroom window and/or heard by the researchers)?
4. When the door was knocked on, did anyone respond?

As each room was checked, occupants were notified that their room had been cleared and were asked to continue to remain in lockdown until a further announcement was made. Once all of the rooms were checked, the principal / administrator in charge was asked to read a short debrief script to let the school community know why the researchers were there and what to expect if the lockdown had been a real-world situation rather than a drill:

> *What you just participated in was a lockdown drill. This drill is to help you be prepared in case there is a real emergency so that you know what to do to stay safe. For the next couple of minutes,*

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[2] For a list of the final drill schedules for each set of lockdowns, please see Appendix C. Lockdown drills were not conducted at alternative locations (e.g., Johnson Center, CORE) or UPK programs.

talk within your classrooms and with your teachers about any questions that you might have or ideas you can share to help keep yourself, your teacher, and your classmates safe.

Schools then were asked to provide a brief, two-minute break for these discussions to take place before concluding the lockdown drill and resuming regularly scheduled activities. The research team remained on site for any further questions and also addressed concerns by email.

The following summary of findings presents the data collected as an aggregate for the full district as well as disaggregated by school level (e.g., elementary, Pre-K to 8, middle, and high school). Reports for each individual school for both lockdown drills can be found in Appendix D.

During the course of the first lockdown drill, a total of 1,860 rooms were checked across 30 school buildings. Of these, 398 (or 21.4%) were deemed to be vacant by the research team. At the second set of drills, 485 (or 26.0%) of 1,868 checked rooms also were vacant. The following summary statistics are based upon the proportion of rooms that were occupied and provide a comparison of results between the first and second set of lockdown drills conducted (see also Appendix E).

Drill Check Statistics

As noted, each of the rooms checked was assessed across four criteria. The first of these was whether the doors were locked, thereby blocking easy access to the location. During the first lockdown drill, 1,254 (85.8%) of the 1,462 occupied rooms were found to have their doors locked. At the second set
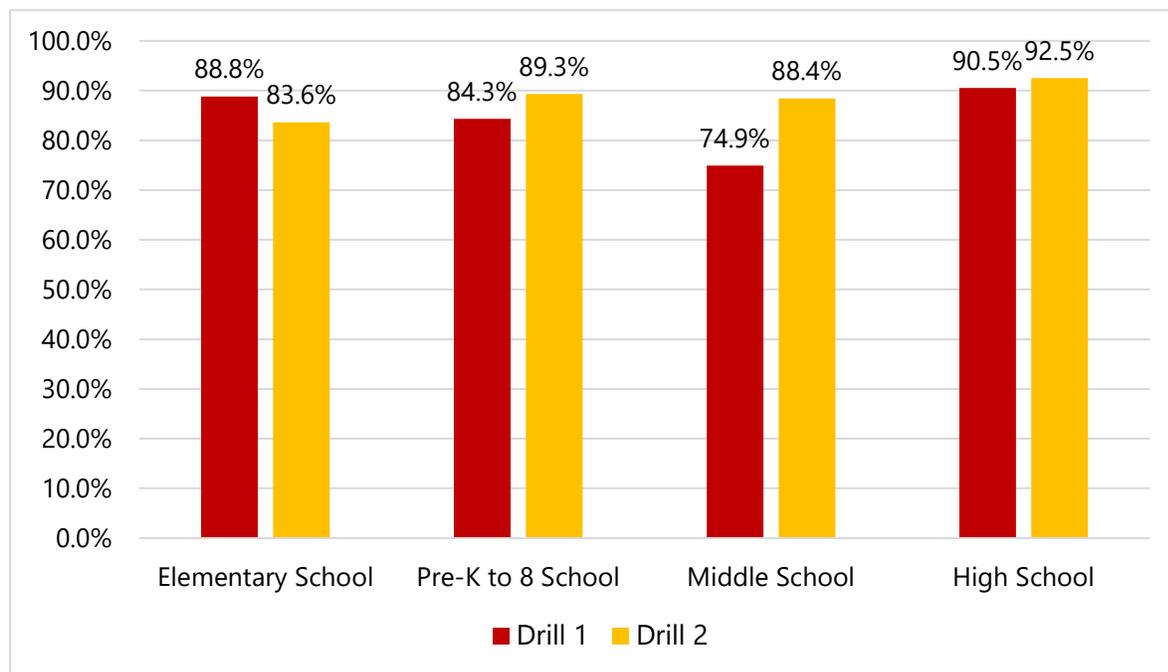

Figure 3. Distribution of Proportion of Occupied Rooms with Locked Doors by School Level

of drills, this total increased nearly 2% with 1,210 (87.5%) of the 1,383 occupied rooms having their doors locked. The distribution of the proportion of locked doors by school level and time is presented in Figure 3.

While three out of the four groups increased in their effectiveness in locking doors during the drill since the first assessment, elementary schools dropped slightly in this category. One potential explanation for this change is that during the first round of lockdown drills, the lead researcher observed that at many of the elementary schools, administrators ran ahead of the research team to secure the rooms. During the second drill, however, they were specifically asked not to do so in order for the research team to be able to assess at face value how well the training took.

For many (not all) schools, this drop may suggest a reliance by the teachers on the administrators to secure the doors for them. Conversations were had with administrators at the building level about this possibility, and they were encouraged to reinforce with their staff the need to perform all steps in the lockdown protocol without the assistance of administration as they may not always be available. Another possible explanation is the presence of substitute teachers or teaching assistants who may not have the necessary key to secure the room. Where this is the case, alternate procedures (e.g., barricading the door with furniture) should be discussed.
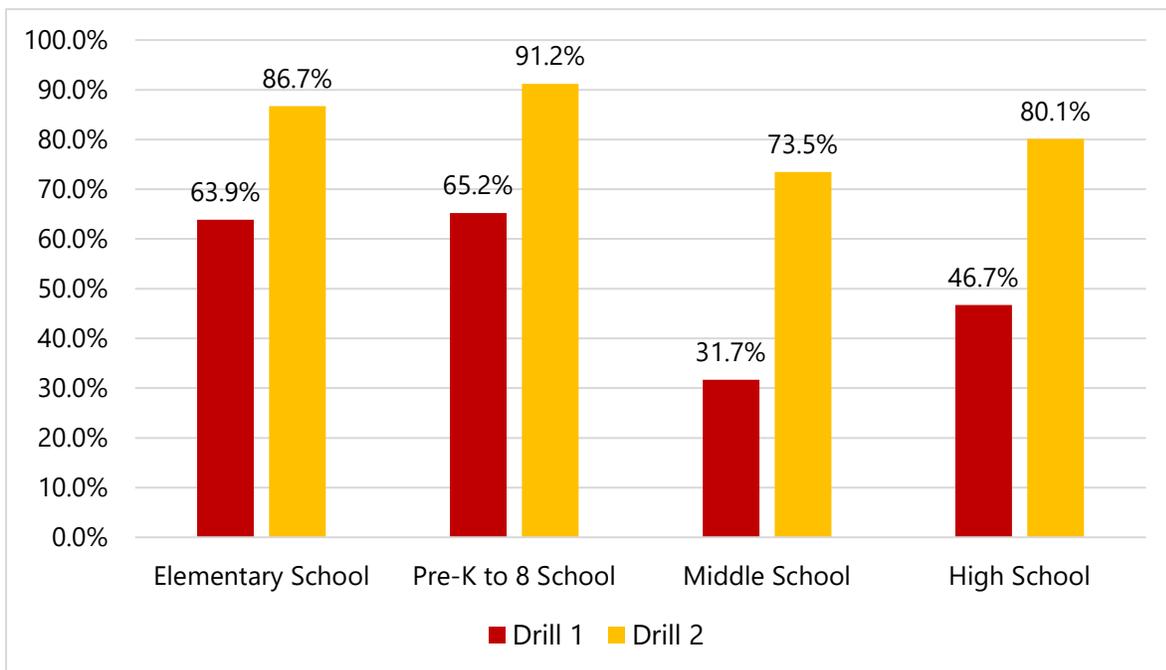

Figure 4. Distribution of Proportion of Occupied Rooms with Lights Off by School Level

The second criteria assessed was whether the light in the room was left on during the drill. In order to help reduce the visibility for any threat outside the room and conceal occupants within it, lights

should always be turned off during lockdown. It was found that, collectively during the second set of drills, 1,162 rooms (84.0% of those occupied) had turned their lights off, up from 54.9% at the first check (an improvement of 29.1% of rooms). The distribution of the proportion of rooms with their lights off by school level is presented in Figure 4. As depicted, all school levels showed considerable improvement (with increases ranging from 22.8% to 41.8%) over the first round of drills. The middle school level, which had the lowest proportion of rooms with their lights off during the first drills, subsequently displayed the greatest gain in this area in the second assessment.

The third criteria examined was whether occupants inside the room were "out of sight" of the research team. Specifically, a visual sweep was conducted of each room through the corridor window to determine whether any occupants could be seen. Additionally, the research team listened to determine if any noise that would alert someone of the room occupants could be heard.
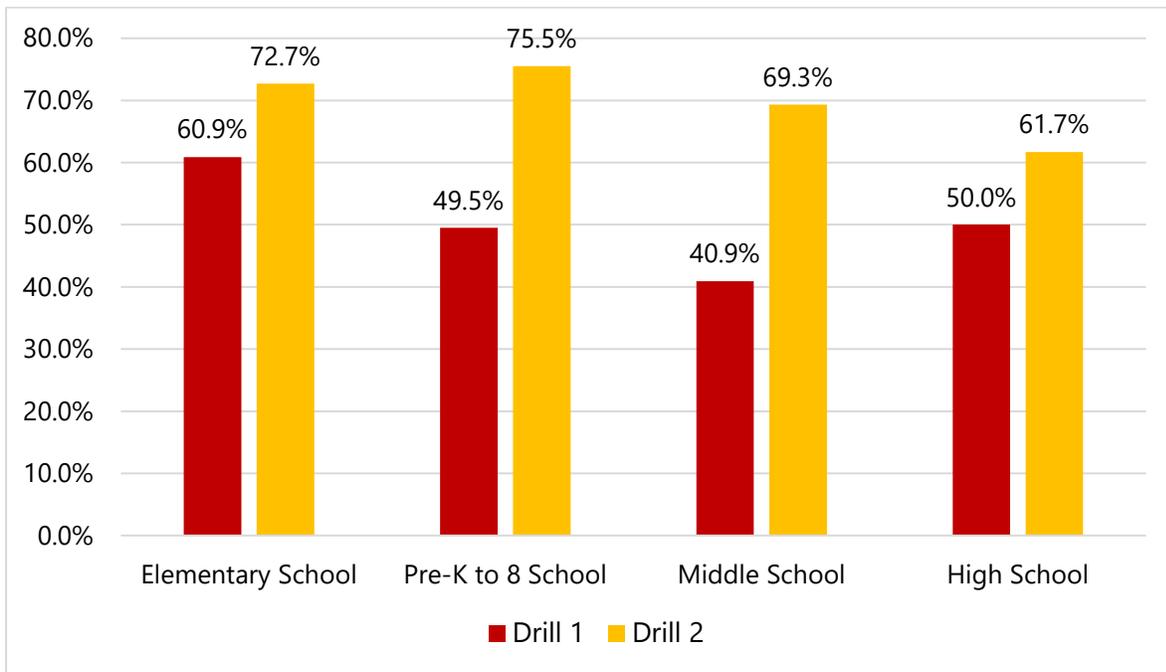

Figure 5. Distribution of Proportion of Occupied Rooms with Occupants Out of Sight by School Level

Collectively, 970 rooms, representing 70.1% of those occupied (an increase of 17.3%), were "out of sight" of the research team during the second lockdown drill. The distribution of the proportion of rooms with occupants out of sight by school level is presented in Figure 5. Improvements in this area ranged from 11.7% to 28.4% since the first drill. As with the lights check, the middle school level, which was the lowest at the first check, showed the greatest gains during the second drill.

Finally, the research team assessed whether occupants within each room would respond to a door knock. In lockdown drills, it is important not to respond to door knocks as it could be an assailant attempting to draw occupants into harm's way. When tested during the second set of lockdown

drills, 129 rooms (or 9.3% of those occupied, down from 34.7%) responded to the door knock, either by opening the door and meeting with the research team or yelling through the door to communicate with them.

The distribution of the proportion of rooms who responded to the door knock test by school level is presented in Figure 6. In this instance, the decrease from the first drill to the second drill is favorable, showing that fewer rooms were responding to the door knocks and thereby showing a greater avoidance of this vulnerability. The recorded change between drills ranged from 19.4% to 39%, with middle schools again exhibiting the greatest improvement. This level also had the highest proportion of answered doors during the first drill check.
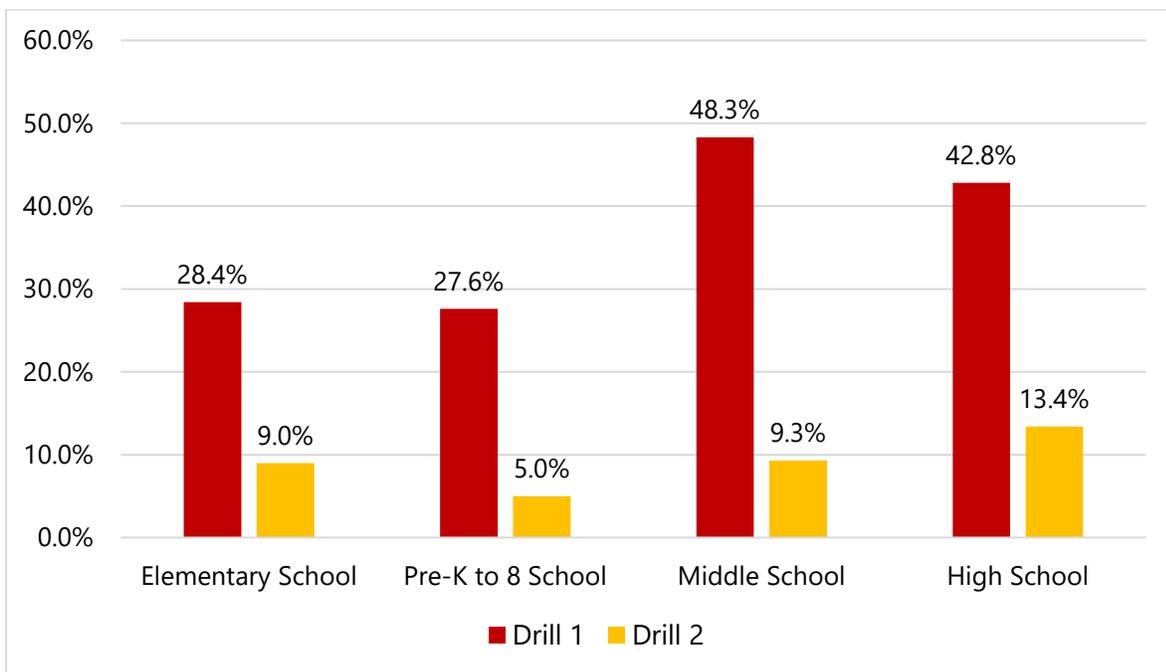

Figure 6. Distribution of Proportion of Occupied Rooms Who Answered Door Knock by School Level

Combined Drill Check Statistics

After each of the criteria were examined separately, they then were aggregated to determine what proportion of rooms scored perfect checks – that is, how many rooms had their doors locked, their lights off, their room occupants were out of sight of the research team, and they did not respond to the door knock. Similarly, the proportions of rooms that met one, two, or three of the criteria (or none, as it were) also were calculated. The distribution of the proportion of the combined room check scores for the district at large is presented in Figure 7.

As the results indicate, more than 5 out of every 10 rooms scored perfect checks during the second lockdown drill, meaning that they met all four of the criteria assessed. This is just more than double the rooms with perfect checks at the first drill series. More than one in every four rooms met three of the criteria, an increase of nearly 5% over the first round of drills. Further, while 48.7% of rooms checked met two or fewer criteria during the first assessment, this figure decreased to just 16.3% at the second round of drills.
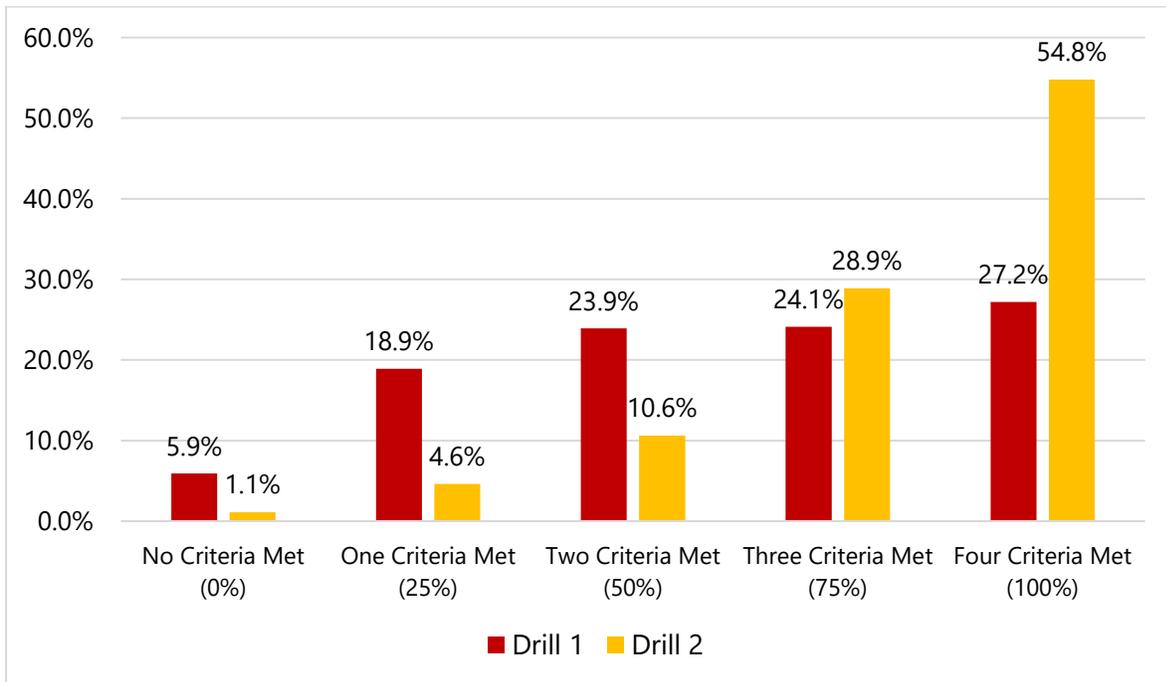

Figure 7. Distribution of Proportion of Rooms and Number of Criteria Met Districtwide

Figure 8 displays the proportion of rooms and number of criteria met districtwide by school level for the first drill. As illustrated, both elementary and Pre-K to 8 schools were most likely to achieve perfect scores or meet three out of the four criteria. Conversely, approximately half of the middle school rooms checked either met just one criteria or none at all. High school rooms were most likely to meet half of the criteria assessed.

Figure 9 replicates this distribution using the data collected during the second drill. As illustrated, all four school levels were most likely to achieve perfect checks by meeting all four criteria. This differs from the first round of drills where only two of the four levels achieved this. Moreover, the proportion of schools meeting three or more criteria ranged from 78.1% to 88.9%, a considerable increase over the earlier drill checks. For all school levels, fewer than 2% of rooms checked at each met none of the criteria during the second drills.
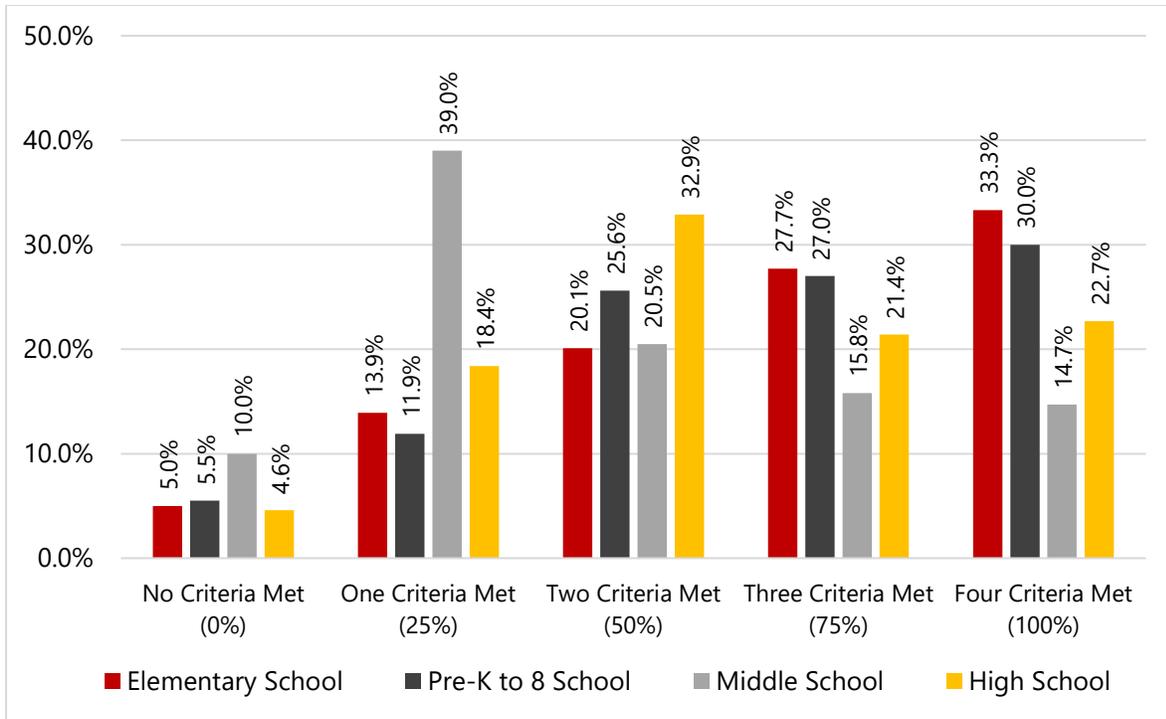
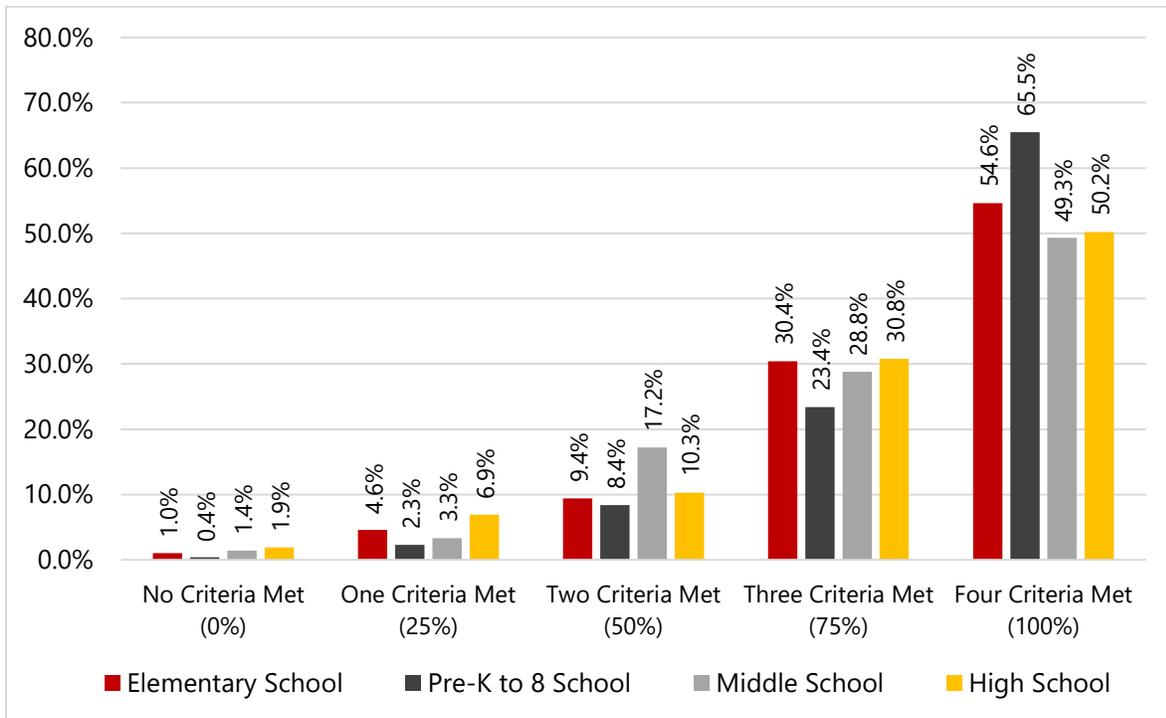Figure 8. Distribution of Proportion of Rooms and Number of Criteria Met by School Level (Drill 1)

Figure 9. Distribution of Proportion of Rooms and Number of Criteria Met by School Level (Drill 2)

Figure 10 displays the proportion of rooms and number of criteria met districtwide by school during the first drill. In respect to which schools had the greatest proportion of perfect room checks, ITC had the most (69.8%), followed by Salem Hyde (67.7%), Ed Smith (56.6%), Franklin (49.1%), and Webster (48.7%). In regard to those rooms that met none of the criteria assessed, Grant had the greatest proportion of rooms (24.2%) that scored in this range, followed by Dr. King (16.4%), Blodgett (15.6%), Roberts (12.2%), and Nottingham (8.6%).

Finally, Figure 11 presents the same distribution as Figure 10 for the results of the second drill. Three of the schools who had the greatest proportion of room checks during the first drill – Ed Smith, Franklin, and ITC – were again in the top five. At the time of the second drill, Ed Smith had the greatest proportion of perfect room checks (80.8%), followed by Franklin (77.1%). ITC had 66.7% perfect checks at the second drill. The top five was rounded out by H.W. Smith (71.4%) and Huntington (71.2%). All five schools improved considerably since the first drills.

In regard to those rooms that met none of the criteria assessed, Grant again had the greatest proportion of rooms (5.5%) that scored in this range, followed by Dr. Weeks (3.9%), Salem Hyde (3.2%), Nottingham (3.1%), and ITC (2.8%), though it bears noting that these proportions are significantly lower than at the first lockdown drill. Appendix E provides the percent change in each of the four criteria by schools between the first and second lockdown drills, as well as the percent change in the number of criteria met between the two checks.
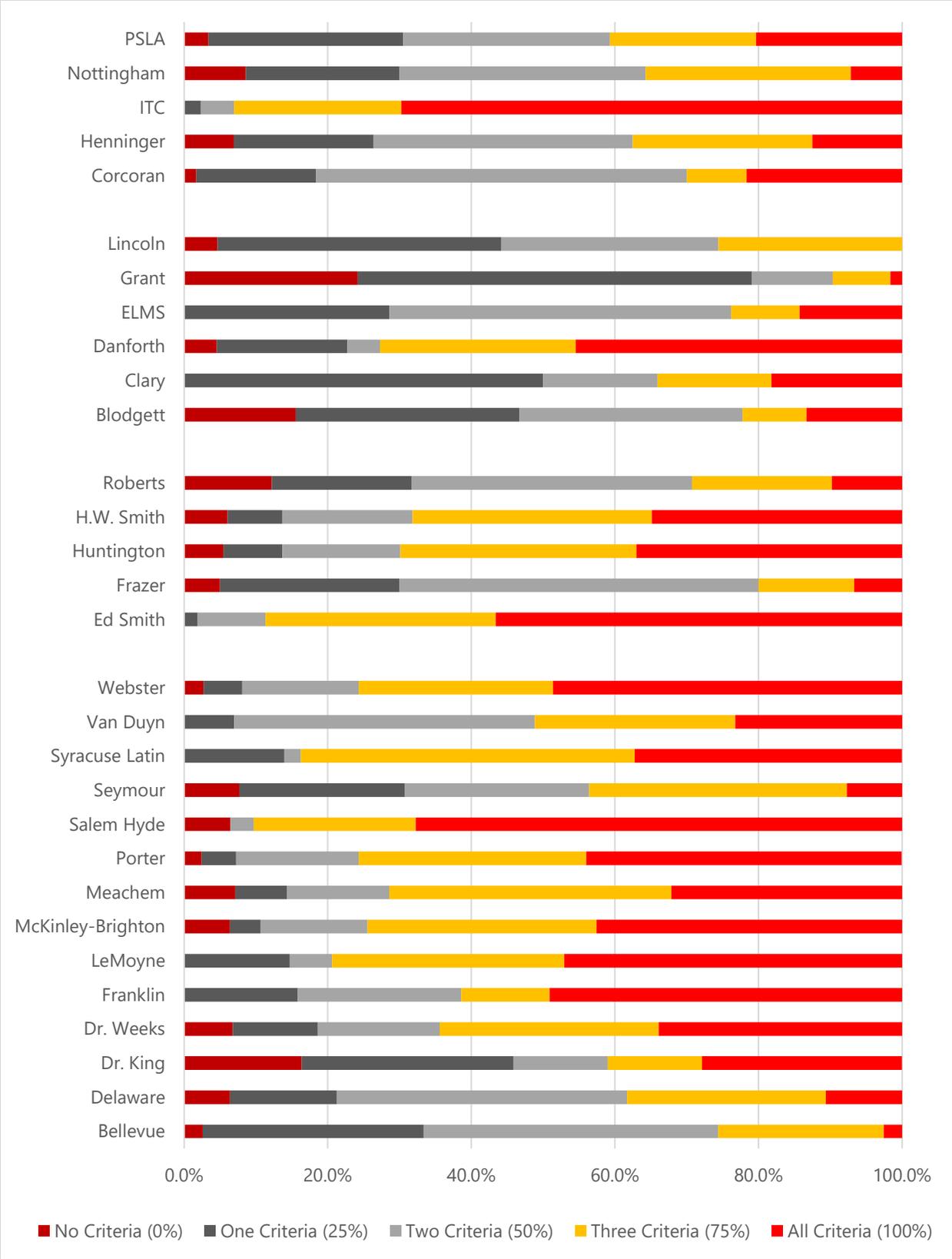
Figure 10. Distribution of Proportion of Rooms and Number of Criteria Met by School (Drill 1)
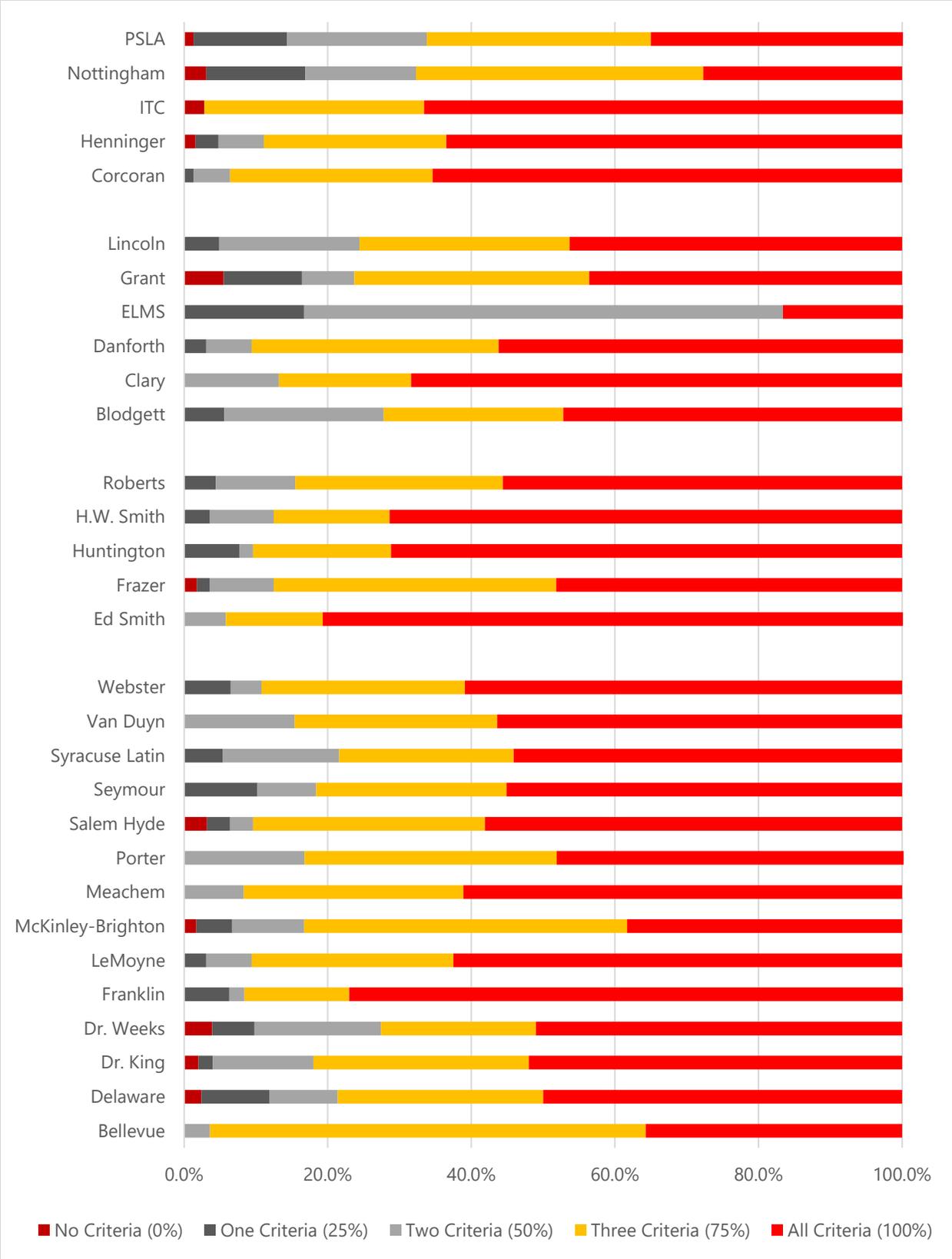
Figure 11. Distribution of Proportion of Rooms and Number of Criteria Met by School (Drill 2)

RECOMMENDATIONS AND CONCLUSION

The implementation and testing of SRP-X in Syracuse City School District highlights important takeaways with regard to emergency response planning and preparation. Specifically, the survey results for both students and faculty / staff highlight the role of training in knowing how to respond to various types of emergency situations that may occur at their schools. Faculty and staff members also were more likely to indicate that they had been properly trained on their institution's emergency response plan following the SRP-X training than before it. This standardization will be crucial in ensuring uniform deployment in times of crisis. Thus, specifically relating back to the initial research question, SRP-X did increase feelings of preparedness for both students and faculty / staff (based on familiarity with the five functional annexes of the protocol); the program did not, however, appear to impact perceptions of safety at school.

The role of training was further underscored by examining the effectiveness – or, more specifically, the change in effectiveness between the two exercises – of lockdown drills. As the results of the drills indicate, there were considerable gains at all levels related both to the individual criteria pertaining to the lockdowns (locks, lights, out of sight, and refusing to answer door knocks) as well as in the proportion of criteria that were met during the checks. By standardizing the language used in conjunction with lockdown calls, schools are now able to meet the demands of these situations more effectively. This also ensures greater predictability during times of crisis.

Even with such gains, there remain identifiable areas for improvement. These include, but certainly are not limited to:

1) Working to achieve 100% door lock and lights off rates.
2) Identifying more spaces in classrooms and common areas to ensure people are out of sight.
3) Maintaining silence so that attention is not called to one's location during the drills.
4) Continuing to integrate staff within the school into drills in addition to students and faculty.
5) Conducting drills at inconvenient times, including lunch, bell changes, and start / end of day.
6) Reminding participants to remain in place until the all clear is given and the drill ends.

Using the SRP-X model and all available tools, schools in the district now should be better equipped to continue to work to improve the effectiveness of their lockdowns by building on the momentum they have generated since their initial training. Continuing to not only conduct drills but also assess them for effectiveness, identify areas of improvement, and hold conversations with all stakeholders is imperative to keeping SCSD schools safe.

In sum, there are several key takeaways for SCSD from this project. First, plain, standardized language is critical to emergency response planning and preparedness. Second, SRP-X provides important streamlining to this process by assigning tasks to all key stakeholders (e.g., students, faculty, staff), who then work together to improve the effectiveness of their responses. Moreover, while lockdown

effectiveness did improve between the two sets of drills, continued training and assessment is necessary to continue to foster a culture of preparedness.

Moving forward, schools must continue to train and practice using SRP-X. A train-the-trainer model is used with the program and the research team will be working with DPS to identify and train school-level drill teams to be able to continue this momentum. Further, while the focus of the present study was largely on lockdowns, the schools should continue to practice the other drills (e.g., Lockout, Evacuate, Shelter, Hold) to improve awareness and execution in times of crisis. It bears noting that, as indicated during training, fire drills are a specific extension of the Evacuation call; therefore, when these exercises occur, the SRP-X specific language for this annex should be used. Finally, SCSD should consider the adoption of the Standard Reunification Method (SRM) for after-action needs in the event that an emergency was to occur in the district.