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***School COP:
A Software Package
for Enhancing
School Safety***

Final Report

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Executive Summary¹

Recent shootings at our Nation's schools have heightened the need to document and track incidents occurring in schools. Incidents include not only criminal acts (e.g., theft, robbery, vandalism) but also bullying, defiance, and other non-criminal acts that violate school behavior and discipline rules. Unfortunately, few schools systematically collect comprehensive data on these incidents. School information systems generally capture these data if a student is suspended, expelled, or receives some other sanction, but incidents with unknown perpetrators and information about victims are typically not entered in these systems. As a result, schools typically proceed without a complete and accurate depiction of the nature and extent of schools incidents when (1) prioritizing safety problems, (2) selecting from among the myriad strategies for improving school safety (e.g., limiting accessible entrances to the school, video cameras, metal detectors, conflict resolution classes), and (3) determining whether implemented strategies are improving school safety.

A well-designed incident tracking and analysis system could facilitate school-based crime prevention and problem solving effort in a number of ways, including by:

- helping ensure consistency in the information recorded;
- simplifying the task of reporting information about incidents to school superintendents and school committees;
- keeping easily retrieved records regarding each student's disciplinary and criminal history in terms of types of misconduct and crimes, and actions taken in response to each previous incident;
- identifying students and teachers who appear to be repeatedly victimized by other students;
- documenting misconduct and crime by type of incident, location, month, school, and other variables, and displaying the information in tabular and graphic reports; and,
- identifying "hot spots" that may benefit from increased adult presence, electronic surveillance, environmental changes, or other preventive measures.

In addition, the utility that similar mapping and crime analysis systems have demonstrated in other settings, such as law enforcement agencies and community crime prevention organizations, suggests that such systems could be useful in schools. The primary value of these systems comes from providing 'local data consumers' with access to both heretofore unavailable databases and easy-to-use tools to analyze those databases, which enables these local data consumers to produce the maps and other reports that meet their own specific needs. Under the old model in which access to information is limited to, for example, only the central office (but not the district offices) or supervisory staff (but not line personnel), local data consumers are provided with maps and reports that somebody else thinks would meet their needs.

In response to this need for improved incident data collection and analysis in schools, the National Institute of Justice (NIJ) provided funding to Abt Associates Inc. to develop a software package that

¹ This Executive Summary provides an overview of the National Institute of Justice- funded project "Development of a Software Tool for Enhancing School Safety" (NIJ cooperative agreement 1999-LT-VX-K017) awarded to Abt Associates Inc. in November 1999. This project is one of several funded under the June 1999 NIJ Office of Science and Technology's "Safe Schools Technologies" solicitation, which requested proposals for developing technologies that could make our Nation's schools safer.

persons responsible for safety at elementary and secondary schools could use to enter, analyze, and map these incidents. These persons include school administrators (e.g., principals, district-level administrators, and regional- or state-level administrators), school district security staff, and law enforcement officers assigned to schools, such as School Resource Officers (SROs).

Software Overview

The name of the software package developed during the project is the School Crime Operations Package, or *School COP*. The package runs on Windows 95, 98, NT, and 2000 personal computers, and was designed so that it could be widely distributed – it is usable without formal training and requires no other software to run. The package’s database follows the model recommended by the U.S. Department of Education’s National Center for Education Statistics Crime, Violence, and Discipline Reporting Task Force; it includes data related to the incident (e.g., date, time, type, location) and to persons involved in the incident (e.g., name, grade, action taken). Users can pre- enter choices for many data elements, which speeds data entry and improves data quality, and define special categories of incidents or persons they especially want to track (e.g., hate crimes, gang-related incidents).

School COP balances ease-of-use and functionality by offering a variety of techniques for analyzing school incidents, including tabular reports, bar graphs, pie charts, and maps. Users will generally conduct analyses in one of three ways:

- The easiest method is to run one of the many ‘canned’ reports and graphs – for example, a bar graph showing the number of incidents by location over a particular date range.
- A single ‘build-a-map’ screen enables users to create a multi-layer graduated symbol map – for example, a map showing the building floor plan could include, for a particular date range, separate layers for drug, alcohol, and tobacco offenses.
- The most useful analysis method is first to search for a subset of incidents and then analyzing that subset. Users can search on any single field (e.g., all incidents involving a weapon) or combination of fields (e.g., all incidents occurring inside the building in which girls were victimized). Incidents meeting the search criteria can be browsed, printed in tabular form, graphed, or mapped.

A key project goal was to introduce computer mapping, a technology widely used for crime prevention and control purposes by law enforcement agencies, to schools. However, because the package was to be widely distributed, users could not be assumed to have access to a commercial geographic information systems (GIS) package or GIS-produced maps, much less have any experience working with a GIS package. As a result, the approach to mapping in *School COP* is different than the typical approach that law enforcement agencies take, which involves purchasing commercial GIS software and streets maps that have been linked to precise latitude and longitude coordinates:

- The primary map format with which *School COP* works is scanned bitmap images of building floor plans, school grounds, and other areas of concern to schools. By contrast, law enforcement agencies rarely if ever do computer mapping with bitmap images. While this limits the types of incident maps that can be produced and the types of analyses that can be performed (e.g., because two separate bitmap images cannot be linked geographically, as

GIS-produced street and neighborhood maps can), it also makes mapping more broadly accessible because nearly all schools will have access by sketches of building floor plans and school grounds.

- Users create a geographic description of their school(s) in *School COP*. Users divide each school into one or more areas, with a specific map associated with each area. For example, a modest sized two-story school might have four areas – one for each floor, one for the school grounds, and one for the bus routes. Next, users can define specific point locations within each area by clicking specific points on the associated map in *School COP*.
- When new incidents are entered, the incident location is selected from the list of pre-entered locations. Thus, once users have defined their areas and locations, geocoding, the process by which geographic coordinates are assigned to incident locations, occurs automatically.

Development and Dissemination

The initial design for *School COP* was based on input from a number of sources, including informal telephone interviews with police and school officials at 13 jurisdictions that received School-Based Partnership grants from the Office of Community Oriented Policing Services (COPS Office), on-site interviews with school administrators and safety officials at two urban school districts in New England, a review of existing articles on incident data collection in schools, and project staff's own experience designing and evaluating similar systems. An initial test version of *School COP* was then developed over a six-month period from January through June 2000. Ten sites, including six school districts, two state and regional school agencies, and two law enforcement agencies, provided feedback on the application's features, functionality, ease-of-use, and reliability. Based on feedback from these test sites, enhancements were made to the software during November and December 2000. Most of the requested enhancements were incorporated into *School COP*, although some, such as multi-user capabilities and data analysis via an Intranet, were not possible to make within the project time and budget constraints.

A fully-functioning version of *School COP*, including on-line help and a sample database containing 100 incidents at a fictitious school, was available in mid-January 2001. Soon after, project staff began disseminating the package to school safety officials who requested the package. Requests for *School COP* were received in two different ways:

- *Direct requests.* Through March 2001, project staff received 66 direct requests for *School COP* via e-mail or telephone from school administrators, school security or security support staff, and school resource officers (SROs). Persons directly contacting project staff were sent the *School COP* compact disk (CD), which includes the installation kit, the *School COP* application, and the on-line *School COP* user manual. Direct requesters heard about *School COP* from either one of four project staff conference presentations, a brief article on the beta test version of *School COP* that appeared in the newsletter "Managing Safe Schools," or referrals from other users.

The 66 direct requesters varied widely in terms of position held, location, and jurisdiction size, suggesting that *School COP* may have broad appeal. Requesters work in 31 different states and in jurisdictions that range in population from 5000 to 1,000,000. In terms of position and job category, the largest single category is school department security staff,

constituting 26 percent of the requesters, followed by school district administrators with 21 percent. Overall, school administrators (including those working at single school, school district, and state/regional administrators) constitute slightly more than half the direct requesters, with school department security staff and law enforcement officials representing the balance.

- *COPS In Schools Training Conference series.* Under a separate contract signed in late 2000 with the Office of Community Oriented Policing Services (COPS Office), Abt Associates is participating in the COPS In Schools Training Conference Series, which is one component of the agency's COPS In Schools grant program. As of early 2001, approximately 1,110 jurisdictions have received COPS In Schools grant funds, and all are required to send a school administrator and all School Resource Officers (SROs) assigned to schools under the grant program to one of the conferences. Attendance at each conference is limited to 160. *School COP* is featured in the 'Problem Solving' session at the conferences. During this session, attendees are shown the application and explained how it can facilitate school-based problem solving. At the end of the session, attendees have the option of taking with them the *School COP* CD. An estimated 130 and 110 attendees elected to take the CD at the Seattle and Albuquerque conferences, respectively, the first two conferences in which project staff participated. Eighteen more conferences are scheduled over the period March 2001 to September 2002.

Preliminary Assessment Approach

A final project task involved a limited assessment of *School COP*. Recognizing that it is common to request software, especially free software, but never actually use it, the key goal of the assessment was to determine the extent to which *School COP* is actually being used. Assuming that some requesters had completed their evaluation of *School COP*, had decided to use it, and had been entering and analyzing incidents, a second goal was to learn from these persons why they were using the package, and what benefits it brought them and their school(s).

Telephone interviews were conducted in March 2001 with 56 persons who received *School COP* by early February 2001, including direct requesters and Seattle COPS In School attendees:

- *Direct requesters.* By early February 2001, 57 individuals had telephoned or e-mailed project staff requesting the *School COP* software package. The preliminary assessment involved attempting to telephone all of these individuals. *Thirteen* of these requesters did not return at least two phone messages and six, it was discovered, were not potential users of the software. As a result, the assessment results reported below include the responses of 38 individuals who requested a copy of the software.
- *Seattle COPS In Schools Conference attendees.* Project staff attempted to conduct telephone interviews with the first 39 conference participants whose names were listed alphabetically on the roster of conference attendees. Nineteen of these participants did not return at least two phone messages; two others reported they did not take a copy of the software home with them from the conference. As a result, the survey results reported below include the responses of 18 of the 39 conference participants project staff attempted to reach.

Combining the two groups, a total of 56 persons were interviewed during the assessment. The 56 represent a fairly balanced mix of school administrators (38%), school security / security support staff (36%), and SROs (27%). Nevertheless, caution should be exercised in using the survey results to estimate future *School COP* use patterns. In particular, it is not logical to extrapolate the number of individuals in the Nation who will ultimately request or use *School COP* based on the individuals who have already learned about, requested, and used the software, particularly because the large proportion of requesters (one quarter) and conference participants (one half) whom project staff were unable to interview may disproportionately represent individuals who do not intend to use the software. Finally, many of the individuals who received a copy of *School COP* reported they had not yet had time to test it. There is no method of estimating what percentage of these individuals may eventually use the software.

Findings on Overall Level of Use

With the preceding caveats in mind, the 56 interviewed individuals reported they were in the following stages with regard to using *School COP*:

- 15 (27%) were already using it – 2 school administrators, 8 SROs, and 5 security staff;
- 7 (13%) were planning to use it – 1 school administrator, 2 SROs, and 4 security staff;
- 13 (23%) were planning to test it – 4 school administrators, 4 SROs, and 5 security staff;
- 13 (23%) might test it – 7 school administrators, 1 SRO, and 5 security staff; and
- 8 (14%) would not be using it – 7 school administrators and 1 security staff.

These percentages will change as users continue to test and evaluate the package. As a result, the number of respondents in this sample who end up using *School COP* is likely to be higher than the 22 reported individuals because some of the respondents who reported they plan to test the software are likely to end up using it. On the other hand, it is possible that most of the 34 requesters and conference participants we were unable interview have no plans to use *School COP*, which would decrease the ratio of users to nonusers.

Overall, the preliminary findings of this survey suggest that a significant proportion of individuals who obtain copies of *School COP* – perhaps one-quarter to one-half – are likely to end up using it. This proportion of ultimate users is likely to be higher among SROs and security and security support staff than school administrators.

Findings from Interviews with Current *School COP* Users

More detailed interviews with the 15 current *School COP* users provided insights into why they decided to use the package, how they are using it, and what impact it is having in their school(s). For example, the most common reason the 15 users gave for using *School COP* was that it enabled them to prepare crime and incident information for meetings with school officials and other stakeholders. Seven users gave this as their main reason, or one of their main reasons, for using the software. At least two users also gave each of the following reasons for using *School COP*:

- it is extremely easy to use—it is better and faster than paper (4 users);
- it saves time doing monthly or annual reports (3);
- it makes it possible to identify “hot spots” in the schools (3);

- it provides easily retrievable information about specific students (2); and
- the mapping feature is very helpful for getting additional school safety resources (2).

As of early March 2001, most of the 15 users had entered only between five and 30 incidents into the database. However, one user had already entered 160 incidents, another 590, and a third 680.

Three of the 15 reported they use the *School COP* mapping features on a regular basis. For example, one SRO reported that he had scanned in his entire school's building areas and grounds and that using the mapping feature was "wonderful." It is worth noting that these users produced their maps without any technical assistance from project staff. Seven of the remaining 12 users reported they planned to use the mapping feature in the near future; all but one of them said they had not had the time yet to activate it. The remaining user who expected to use the feature was waiting to obtain school maps. Four users reported they had no intention of using the mapping feature, two because their schools had no maps, one because the feature would not be worthwhile, and one because mapping would not be useful unless the software could be networked. One user was not sure whether he would eventually use the mapping feature.

The assessment found that 9 of the 15 users were already sharing *School COP* reports or data with other individuals or groups; seven of these users share data on a regular basis. Six share the information regularly with school administrators (including school boards) and three with security staff. Examples of information sharing include:

- A regional director of school safety shares data with high school principals every month by e-mail. In turn, the principals share the data with the SROs in their schools. The regional director also presents data at the monthly school superintendents' meeting. For example, she presented data showing that one district was using corporal punishment significantly more frequently than the other districts were.
- The sworn director of a city school system's in-house police department presents information on gang issues provided by *School COP* at the weekly meeting of the city's police department.
- One SRO shares data routinely with a high school's 20-person in-house sworn police department.
- A county school safety and security specialist shares information about offenders at a weekly meeting with the county juvenile probation department.

Other users share information generated by *School COP* on special occasions.

- An SRO who covers two K-8 schools has twice e-mailed information upon request to the superintendent of schools. The superintendent asked for a report summarizing all incidents by school and a second report showing the names and types of misconduct of all students involved in more than one incident.
- An SRO shares information with some parents whose children have gotten into trouble, reporting that "instead of giving them a brief description of what happens, I can immediately

print and hand them the incident report.” At the same time, he can print the student’s entire disciplinary history, “proving to the parents (and student) that there has been a history of misbehavior.”

- Upon request, the chief of security for a school district shares selected information from *School COP* with the media; for example, in response to a request from the press, he provided data on the number of explosive devices people had attempted to bring or had brought into the schools.
- The sworn director of a city school system’s in-house police department shared information with the superintendent of schools showing an increase in the number of drug arrests occurring at the schools.

In general, users had not had enough time to enter sufficient data to use the program’s capabilities in order to achieve the ultimate goals of *School COP* – that is, promote changes in prevention, enforcement, or discipline in their schools. However, three users had already used the software to effect changes.

- At a high school in a mid-sized city in the West, a rash of students complained that they were being harassed while trying to get from other parts of the school to “A” Hall. The SRO used *School COP* to print a map of the incidents to identify the corridors where the harassment was taking place. He took the map to the principal who then arranged for the Parent Teachers Organization to station parents in the problem corridors. The SRO encouraged teachers in the problem corridors to poke their heads out of their doors periodically to monitor corridor activity. The SRO plans to use the map next year to ask for more surveillance cameras in the corridors.
- A county school safety and security specialist used *School COP*’s mapping feature to identify where and when a series of locker break-ins were occurring. By using *School COP*, he found that most of the break-ins were taking place during lunchtime and after the last class period of the day. Based on these data, he arranged for school security staff to increase their monitoring of the identified locations and times of day. He then correlated which students had cut class during the times when most of the locker break-ins had occurred. The combination of increased monitoring by teachers assigned hall duty and information from *School COP* regarding who had cut classes helped him to identify and apprehend students who appeared to be responsible for the crimes. The number of incidents has since declined.
- The same safety and security specialist used *School COP* to track where and when gang activity was taking place at a number of schools and which students were involved. He then used the software program’s mapping and graphing capabilities to document to the county school board the severity and nature of the problem. As a result, the superintendent developed a school gang policy, now included in the student manual, that identifies what kinds of gang-related behavior (e.g., use of gang colors) will not be tolerated and the punishments the school will impose for each behavior.

- Use of *School COP* at a high school in a mid-sized Midwestern city helped initiate formal discussions between teachers, school administrators, and students on issues related to school safety.

A few other users had drawn on *School COP* data to ask for changes, but school administrators had not yet responded to the requests:

- A SRO who had entered 30 incidents to date at a high school used the data to provide evidence to the principal and superintendent of the relatively large number of fights that were occurring during lunchtime in a very busy area where many students have their lockers. He proposed that some of the students be assigned lockers in other parts of the school with the expectation that, by reducing the number of students at this high traffic area by an estimated 25 percent, the number of fights would decline. The two administrators asked him to document more cases and present the evidence again before they made the change.
- The director of a school's in-house police department used *School COP* to show the superintendent the number of drug arrests occurring in several schools. Based on the data, the director will ask the superintendent for additional money for increased surveillance, a request the superintendent will take to the school board.
- At a school principals' meeting, the director of research, evaluation, and training for a 40-school city school system displayed data from *School COP* showing the number and type of weapons being brought into the schools. She was hoping that the data would motivate the principals to increase their use of scanning equipment at the entrances to the schools.
- The chief of security for a school district who had logged in 160 incidents used the data to determine which schools had the most damage caused by skateboards. He has presented the data to the school board with a request for funds to purchase and install plastic protectors at the corners of the benches in selected schools to reduce the damage.