Using Online Surveys for Evaluating School-Based Drug Prevention Programs

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Background: The primary context for providing substance abuse prevention education to adolescents in the United States has been through schools and other local educational agencies. Federal and state spending for such programs is increasingly being tied to school commitments to monitor such prevention programs and evaluate their effectiveness.

Purpose: Over the past decade, access to computers and the Internet has become almost universal in U.S. elementary and middle schools. Our purpose is to outline the potential of Web-based surveys as a data collection tool that can significantly lower program evaluation and monitoring costs and to present preliminary evidence on the feasibility of online survey administration in school settings.

Setting: The empirical part of the article draws on input from teachers, administrators, and practitioners responsible for youth drug prevention and evaluation efforts in schools and communities.

Subjects: Sixteen focus group participants were recruited from counties in and around the San Francisco Bay area in Northern California. Eight of the participants were district-level prevention coordinators and county-level health administrators who administered State and Federal grants to schools within their counties. The remaining subjects were recipients of prevention funding: school teachers, health educators, and practitioners in youth drug prevention and treatment centers. In addition, telephone interviews were conducted with twenty-five Title IV coordinators and drug prevention specialists from various state education and health departments.

Intervention: The article focuses on efforts undertaken in schools to implement and evaluate drug prevention programs, how the use of online surveys can facilitate these efforts, and the feasibility of such methods in school settings.

Research Design: Our research design adopted a qualitative approach and included nationwide telephone interviews and in-house focus group discussions over a six-month period.

Data Collection and Analysis: Data collection included structured, in-person forty-five-minute interviews and discussion notes. In addition, a short, closed-ended survey was administered to focus group participants for collecting information on their school characteristics (population served, school size, Internet, and computer facilities). Survey data were analyzed with simple descriptive statistics.

Findings: The focus group discussions and telephone interviews indicated a high degree of interest in using Web-based surveys for data collection and evaluation of youth drug prevention programs. Access to computers was not viewed as an impediment. Some schools in the Bay area were already using online surveys for assessing teacher performance. Further, states like Kentucky, California, and Wisconsin have already moved to Web-based uniform reporting system that required uploading survey data online. This suggests that Web-based data collection in schools is likely to become widespread.

Conclusions: The use of online surveys in classrooms can significantly enhance the evaluation and monitoring capabilities of schools and communities by minimizing the time required for creating and administering surveys and reducing the time required for data processing. As more states move towards a central reporting database, schools and communities are likely to adopt Web-based mechanisms for collecting and reporting program outcomes.

Keywords: online surveys; program evaluation; drug prevention

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The primary context for providing substance abuse prevention education to adolescents in the United States has been through schools and other local educational agencies (Ringwalt et al., 2002). There is now substantial empirical evidence concerning the relative effectiveness of a number of school-based substance use and violence prevention curricula (National Institute on Drug Abuse [NIDA], 1997). Several federal agencies in the United States have now published and disseminated information on evidence-based prevention programs (Pentz, 2003). These include the National Institute on Drug Abuse's Research Guide (Sloboda & David, 1997), the Center for Disease Control's Effective Programs Collection (Collins et al., 2002), and the Substance Abuse and Mental Health Services Administration (SAMHSA) Model Programs Collection (2008). On the basis of this research, both private and public organizations have called for schools to implement prevention programs that have yielded empirical evidence of effectiveness, and federal and state spending is increasingly being tied to school commitments to use such programs (Kellam & Langevin, 2003; Pentz, 2003).

This emphasis on evidence-based programs has been accompanied by a corresponding demand for accountability from schools and other grantees. Currently, there are several federal and state sources of funding for local and community-based drug and violence prevention efforts such as the Office of National Drug Control Policy, the Office of Juvenile Justice and Delinquency Prevention, and SAMSHA's Center for Substance Abuse Prevention (CSAP). But by far, the largest single source of federal prevention funding is through the U.S. Department of Education's Safe and Drug-Free Schools and Communities (SDFSC) programs (Hantman & Crosse, 2000). On July 1, 1998, the U.S. Department of Education promulgated the Principles of Effectiveness and made compliance with the principles a prerequisite for public schools to continue

receiving funds through the Safe and Drug-Free Schools and Communities Act (Title IV Part A) (. The Act requires that "the program or activity shall undergo a periodic evaluation to assess its progress toward reducing violence and illegal drug use in schools to be served based on locally selected performance measures" and that "the results shall be used to refine, improve, and strengthen the program, and to refine the performance measures" (U.S. DOE, 1998). The policy has significant implications. Many districts report that their prevention efforts rely heavily on SDFSC funding as it is by far their largest and often the only source of drug abuse prevention funding (Hallfors & Godette, 2002; Hantman & Crosse, 2000). Other federal and state funding agencies have similar demands for accountability. For example, CSAP, which provides prevention funding to states through its State Incentive Grants (SIG) stipulates that at least 85 percent of the grants must be spent on implementing "science-based" prevention interventions, and requires all grantees to monitor and evaluate program effectiveness" (SAMHSA, n.d.). Schools and communities also receive grants from private foundations such as the American Legacy Foundation and the Robert Wood Johnson Foundation, all of which have their own program monitoring and accountability requirements.

In this climate of increased accountability, school districts and communities in the United States are under growing pressure to evaluate whether their drug and violence prevention programs are working (Hallfors, Khatapoush, Kadushin, Watson, & Saxe, 2000; Hallfors & Iritani, 2002). It is often difficult, however, for relatively small community- and school-based programs to sustain meaningful program evaluation systems. Problems include lack of staff enthusiasm, insufficient funding, staffing and expertise (Mantell, DiVittis, & Auerbach, 1997; Sedivy, 2000). Teachers are expected to take on responsibilities other than teaching even at a time when there are increasing pressures on them to raise the academic achievement levels

of their students, and administration of questionnaires about substance use or other health topics are perceived as consuming valuable time (Hallfors et al., 2000). Thorough scientific evaluation is prohibitively expensive and awareness of low-cost alternatives to in-depth evaluation is very low (Cross, 1999). Compounding the problem is the scarcity of qualified external consultants who are willing to accept small contracts typical of school-based evaluation efforts (Lane, 2000).

Recent advances in survey technology—particularly the use of Web-based surveys—provide promising opportunities for program evaluation. Despite the growing popularity of computer-assisted surveys, researchers and practitioners working in the field of drug prevention have generally been slow to adopt this technology for data collection purposes, mainly due to a lack of awareness and/or availability of such tools, as well as with the practical issues related to such technologies. In this article, we will provide a brief overview of existing evaluation needs in schools and communities across the United States, emerging trends in computer and Web-based data collection methods in social science research that can fulfill these needs, and the feasibility of applying such methods in schools and community settings. We will also lay out design suggestions for online evaluation tools that are specifically geared towards evaluating school-based prevention efforts in the United States.

Data Collection using Computer-Assisted and Web-Based Surveys

With the increasing availability of desktop and laptop computers in schools, the use of computer-assisted self-interviews (CASI) has tremendous potential as a data collection tool. CASI has several significant advantages over traditional data collection methods such as paper and pencil formats and face-to-face interviews (O' Reilly, Hubbard, Lessler, Biemer, Turner, 1994; Turner et al., 1998). CASI

produces better quality data compared with traditional interview methods (Turner, Roberts, Hendershot, Miller, & Thornberry, 1996; Turner et al., 1998). For instance, computer-assisted surveys can include a number of built-in programming safeguards that can eliminate invalid data entries and minimize missing data. The surveys can be preprogrammed to automatically reject invalid or out-of-range entries and nonresponses (Lessler, Caspar, Penne, & Barker, 2000; Turner et al., 1996; Turner et al., 1998). Computer-based surveys eliminate the need for data entry, as survey responses are entered directly into the computer (Hallfors et al., 2000). Such direct data entry in turn eliminates the need for data entry personnel, thereby reducing transcription errors as well as workload. Direct data entry also provides substantial savings in data processing costs and time, a feature that is particularly valuable for schools that operate on tight budgets. Finally, the CASI data are immediately available to evaluators for analysis, while paper-and-pencil survey data processing can take months.

Another advantage with computerized surveys is that they allow for complex questionnaire designs by providing automated skip patterns, i.e. questions that do not apply to a specific respondent are automatically skipped (Turner et al., 1998). This feature makes CASI especially attractive for interviewing younger children who may be unable to maneuver complex branching in questionnaires (Beebe, Mika, Harrison, Anderson, & Fulkerson, 1997). Automated skip patterns also enable quick completion of surveys, a feature that is particularly useful in school settings, due to the large sample sizes (Hallfors et al., 2000; McCabe, Boyd, Young, & Crawford, 2004). Further, there is some evidence that CASI may increase the willingness of adolescent respondents to report sensitive behaviors relating to sexual practices or drug use, compared with paper surveys (Supple et al., 1999; Turner et al., 1998; Wang et al., 2005).

CASI has been used successfully in multilingual contexts (Turner et al., 1996) and in international settings (Wijgert, Padian, Shiboski, & Turner, 2000).

Internet-based computer surveys are advancement over traditional computer-assisted surveys and a more recent innovation. A Web-based survey is different from a traditional CASI in that the data are stored on a server through an Internet connection instead of a computer's hard drive. Other than that, online surveys retain all the strengths of CASI. In fact, they have several additional advantages that are particularly relevant for evaluation research. They can be accessed by several users at the same time and from multiple access points. Also, because the data are stored online in a central database, student responses are not stored in the schools' or organizations' computer hard drives, and therefore not readily accessible to program staff. This further enhances the confidentiality and anonymity of the data collected. A potential benefit of this increased privacy could be a greater willingness by parents to provide consent for school surveys. There is a growing body of evidence indicating that the substance and quality of the data produced by Web-based surveys are equivalent, or better, to that produced by paper surveys (Cooper et al., 2006; Denscombe, 2006; Mangunkusumo et al., 2006; McCabe, Boyd, Young, Crawford, & Pope, 2005; Wang et al., 2005).

Online surveys, like traditional CASIs, could also include audio capabilities. Audio computer-assisted self-interview (A-CASI) allows the respondent to hear the survey question or items over a computer headset in privacy and read the items simultaneously. A-CASI technology can thus successfully increase the quality of the computer-respondent interaction and address potential barriers to data collection associated with literacy (Newman et al., 2002; Voisin et al., 2005). It appears to have been particularly effective with subjects who do not have extensive familiarity with computers or who have difficulty reading on a computer monitor (Cooley, Gribble, & Turner, Miller, 2000; Jones 2003). A-CASI has also been found to enhance the perceived privacy of the interview and significantly reduced underreporting bias due to nonresponses and "don't know" responses (Lessler et al., 2000).

Feasibility of Web-Based Surveys in School- and Community-Based Settings

The increase in computer facilities in U.S. schools makes it practically and financially feasible to consider web-based computer-administered querying for future alcohol, tobacco, or drug surveys. Over the past decade, access to computers and the Internet has become almost universal in U.S. elementary schools. Nearly 100 percent of public schools had access to the Internet in 2005, with 97 percent of them using broadband connections (Wells & Lewis, 2006). The percentage of instructional rooms with access to the Internet was 94 percent, and the ratio of students to instructional computers with online access was 3.8 to 1. There were no differences in access by minority enrollment, school size, rural/urban setting or socioeconomic status (Wells & Lewis, 2006). CASI has already been used in a limited form in several recent national surveys of youth sexual behavior and substance use including the National Survey of Adolescent Males, National Household Survey on Drug Abuse, and the National Survey of Child and Adolescent Well-Being. More recently, substance abuse researchers have been using Web-based surveys for collecting data from elementary (McCabe, et al., 2005; Wang et al., 2005), secondary (e.g. Beebe et al., 1997; Boyd, Teter, & McCabe, 2004; Boyd, McCabe, Cranford, & Young, 2007; McCabe et al., 2004) and postsecondary student populations (e.g. Eisenberg, Golberstein, & Gollust, 2007; Kypri & Gallagher, 2003; McCabe et. al., 2007; McCabe & Teter, 2007;

Miller et al., 2002; Pealer & Weiler, 2003). In a recent study, Web-based surveys were found to be an effective tool for collecting data from Hispanic high school students located in remote, rural areas (Cooper et al., 2006). It has been argued that audio-enhanced Web-based surveys might be a format that is more comprehensible to junior high and vocational high school students who might have lower literacy skills than senior high school students (McCabe et al., 2004). Moreover, there is overwhelming evidence that students prefer Internet CASI to paper-and-pencil surveys and perceive more response anonymity (e.g. Case & Haines, 2004; Hallfors et al., 2000; McCabe, Boyd, Couper, Crawford, & d'Arcy, 2002; McCabe et al., 2004). The images associated with computer administration are aligned more closely with television images than those of the written word, a preference often observed among adolescent populations, thereby increasing respondent motivation for completing surveys (Beebe et al., 1997). CASI also seems acceptable to school staff (Hallfors et al., 2000).

In 2007, as part of a project funded by the National Institute of Drug Abuse, the authors conducted focus groups and telephone interviews to assess the feasibility of online CASI administration in schools in the San Francisco Bay area and beyond for collecting evaluation data on drug prevention efforts. The San Francisco Bay Area, commonly known as the Bay Area, is a metropolitan region that is located in northern California. It is a demographically diverse region covering nine counties and includes large cities such as San Jose, Oakland, and San Francisco, along with several smaller urban and rural areas. The goal of the discussion was to gather input on the specific evaluation needs of practitioners and teachers in the Bay area who were implementing state and federally-funded drug prevention programs and to assess the feasibility of developing online data collection tools that could be used by local classrooms and community-based organizations for program evaluation purposes. The focus group studies were supplemented by nationwide telephone interviews with county and district prevention coordinators across the United States. The qualitative studies yielded useful insights into current evaluation efforts in schools and communities that received state and federal funding for drug prevention and offer design and content guidelines for future online evaluation tools that are school-based. Following is a summary of the discussions.

Focus group participants were recruited from six of the nine Bay area counties and included school administrators, teachers, and district officials, as well as practitioners who were involved with youth drug prevention efforts in the Bay area. Participants were recruited through an advertisement on Craig's list, a regional Web site used by academic and research organizations for recruitment of study participants, and through mailings to local elementary, middle and high schools. A solicitation was also placed in a Title IV Listserv whose subscribers included county coordinators for the Safe and Drug Free Schools programs and Tobacco Use Prevention Education (TUPE) grants in California. About forty prospective participants responded to the solicitations, out of which sixteen were selected to participate in two different focus groups on the basis of the following indicators: geographic location of the school/program, demographics of the population served, grade level(s) taught by the respondent, number of students/program participants, existing program evaluation systems, computer and Internet infrastructures, and type of drug prevention program/services provided. The participants in the first focus group (Group 1) were largely administrators who disbursed and oversaw prevention funding. The group included district-level prevention coordinators and county level-health administrators who oversaw SDFS and TUPE grants to schools within their respective counties. Group 2

consisted of program implementers and recipients of funding: teachers who taught in elementary, middle and high schools in and around the Bay area (including two who served in an alternative school), as well practitioners who worked in local youth drug prevention and treatment centers. Both groups had individuals representing organizations/schools that worked exclusively with Hispanic and African-American populations. Each focus group session lasted for about two hours.

Current Evaluation Efforts in Bay Area Schools

It appeared that there are wide variations in evaluation requirements among schools in and around the San Francisco Bay area that seemed almost entirely driven by the funding agency. Prevention coordinators and county-level officials created and distributed evaluation surveys across schools in their district; teachers administered the surveys in the classroom and mailed them back to the district office where they were entered and analyzed, either in-house or through an external consultant hired by the district (the external consultant was typically paid 3-10 percent of the original grant).

Numerous problems with the evaluation process were reported. Insufficient funding, insufficient time, and lack of technical assistance were cited by both groups, but there was a distinct disconnect between the two groups as to who was to blame. District officials in Group 1 lamented that schools were offered all the technical support for data collection and analysis that was required and that the schools had to be "pushed" into even administering surveys. Group 2 teachers, on the other hand, claimed that very little assistance was forthcoming from the district office. They felt that besides technical support, they needed survey administration assistance as well, as they were stressed for time. Those in the poorly funded districts mentioned high student movement and attrition, and the problems in

tracking students, which may explain why pre-post assessments were seldom used by these schools. The schools also had to provide districts with end-of-the-year "performance reports," which reported simple changes in drug and violence incidents over the school year as part of their program assessment. Teachers complained about the time and effort involved in tracking such data and preparing these reports. Practitioners in the focus group did not receive any form of technical assistance from their funding agencies and seemed most burdened by the entire evaluation process.

Both groups were receptive to the idea of online data collection, and some focus group participants reported having firsthand experience with computer-assisted surveys. For example, two district-level coordinators from Group 1 had used online surveys for gathering pilot study data on a newly developed program that was being implemented in two high schools in their district. They rated the experience very positively and stated that student participation was high even without youth incentives. Three of the teachers in Group 2 reported that their schools were already using online surveys for teacher evaluations by students. Although the overall experience with online data collection was minimal, it was very positive for those who were participated in it.

Accessibility to sufficient computers was not seen as a major problem by both groups. Except for the continuation school, all schools had at least one computer lab that could hold a full class with additional computers in libraries and in each classroom. A bigger concern related to survey confidentiality and privacy. The concerns related to data storage and security, as well as the easy visibility of survey responses on closely spaced monitor screens. A number of solutions were discussed. Participants suggested that respondent privacy could be enhanced by using monitor visors (that can range from $20-$40 per piece) or computer privacy screens. Participants were also asked about allowing students to take their surveys from multiple

access points, particularly from their homes or other private locations. The reaction was decidedly mixed in both groups. Some felt that this would promote flexibility and greater survey participation, while others felt there would be more scope for misuse as it teachers would be unable to monitor the respondents.

Overall, the focus group discussions indicated a high degree of interest on the online data collection tool from district officials and practitioners from Group 1. Both groups agreed that pricing was central to widespread acceptability. Participants identified county- and district-level SDFSC coordinators as the primary "frontline" persons who could spearhead the use of online data collection mechanisms in their districts.

Nationwide Phone Interviews

In addition to the focus groups, we also conducted brief forty-five-minute telephone interviews with twenty-five SDFS/Title IV coordinators and substance abuse prevention specialists across the country. The officials were drawn from various state departments of education, and departments of alcohol and drugs, and acted as liaisons between the funding office and schools/local organizations. As expected, we found a lot of variation across state education departments in terms of evaluation expectations, local control, evaluation capacities, as well as functions performed by district-level coordinators. In all states, schools and local agencies that sought prevention funds were expected to write out an evaluation plan with initial needs assessment (a requirement in almost all SDFSC and CSAP grant applications) and objective performance measures, and follow it with end-of-year performance reports that showed changes in outcome measures. All schools receiving grants were expected to collect baseline data for establishing incidence or prevalence of data on truancy rates, drug- and violence-related suspensions and expulsions, drug incidence, and

prevalence rates, and for demonstrating simple percentage changes in outcomes for end of the year performance reports.

For data collection and measurement, grantees were usually directed to use measures compiled by CSAP and listed on the NIDA Web site. In addition, schools were expected to participate every two years in statewide school climate and risk behavior surveys in order to gather drug and violence incidence and prevalence data (such as the Colorado Youth Risk Behavior Survey and the California Healthy Kids Survey). Similar to the focus group, the survey creation and data analysis was done at the district level by the district coordinator's office. In some cases, the tasks were contracted out to external evaluators or firms.

We were encouraged by the fact that states such as Kentucky, California, Minnesota, and Wisconsin had already moved to an online uniform reporting system (i.e., by uploading survey data into an online system). Other states, notably Alaska, Washington, and South Dakota were exploring such a possibility. We also found interest in the online data collection concept from officials in Colorado, Oregon, and South Carolina. Like our focus groups, access to computers was not seen as a significant problem and many viewed a move towards online data collection as "well-timed." In South Carolina, the SDFC coordinator informed us that high schools were already making use of online classes. We learned that the inclusion of measures from individual state youth risk behavior surveys within any online tool would be major step towards promoting its acceptability by district- and state-level officials.

It became clear that bringing the increasingly popular CASI technology into school and community settings could significantly enhance their evaluation capabilities and help them meet their federal and state funding requirements. Some school districts were already moving in this direction and many others were exploring such a

mechanism. Based on the interviews and focus group discussions, we have outlined some preliminary design considerations for any online data collection tool that can be developed for evaluating school-based drug prevention programs. The most optimal design for such a tool would be one that allows for customized survey development using standardized measures and scales, group administration of surveys, and downloadable data that eliminates the identity of clients. In other words, any online data collection system must be comprehensive and focus on all three aspects of evaluation—survey development, survey administration and data analysis—in order to fulfill the evaluation needs of schools and communities across the United States.

Developing and Administering Suitable Online Evaluation Surveys: Some Recommendations

To fulfill their evaluation requirements, school districts and community organizations often rely on local self-report surveys (McCabe et al., 2004; Hallfors & Iritani, 2002). These self-report surveys are typically constructed from commonly used outcome measures available in the public domain. Currently, there are several published instruments available for evaluating teen drug prevention programs such as the Center for Substance Abuse Prevention's (CSAP) (2003) Core Measures. However, most of the publicly available instruments remain in traditional paper-and-pencil form. Even if offered in machine-readable formats, users must still construct the final pencil-and-paper instrument by laboriously cutting, pasting and editing the electronic file. The final layout of the instrument, its skip patterns and response sets, would require detailed editing to be clearly organized. Very few of these resources are accompanied by guidance on survey creation or basic research principles.

As a first step, any online evaluation tool must include an instrument developer component that will allow practitioners to pick outcomes measures and construct a survey of their choice. Such outcome measures can be preprogrammed and stored in a "bank" of high quality, commonly used questions and scales on a variety of substance abuse and violence related topics. Practitioners can then select the measures they are interested in and create an online survey literally within minutes by a simple selection process (such as checkbox selections).

The focus group discussions and telephone interviews suggested that the most commonly used measures were ones that have undergone rigorous study into its psychometric properties and that were most likely to be mandated or approved by federal, and state funding agencies. These included the following:

- Core risk and protective measures compiled by CSAP that are recommended for state incentive grantees and CSAP-funded youth substance abuse prevention programs. These core measures are drawn from the CSAP Core Measures Initiative; the Student Survey of Risk and Protective Factors that assesses students' attitudes, perceptions, and behavior regarding drug use and violence; the Monitoring the Future Survey, and the National Survey of Drug Use and Health. Most of these measures are in the public domain and can be downloaded from the SAMSHA Prevention Platform Web site (preventionplatform.samhsa.gov/).
- Measures from state-specific school climate and youth risk behavior surveys such as the Oregon Healthy Teen survey, which are mandated by the Oregon Department of Education, or the Kentucky

Incentive for Prevention Survey. Grantees receiving state funding for prevention are required to use school climate measures mandated by states. Most of these state surveys are built from the National Youth Risk Behavior Survey (high school), which includes sections on youth resiliency measures, school safety and connectedness. The Youth Risk Behavior Survey is published by the Center for Disease Control and is administered every two years. It covers six critical health behaviors: alcohol and drug use, injury and violence, tobacco use, nutrition, physical activity, and sexual behavior. Other health topics covered include childhood obesity, asthma, mental health, and food safety.

There are several advantages to preprogramming such standardized outcome measures. The measures and scales are likely to be of high quality having already been tested, evaluated, and refined, with documented reliability and validity (Martin, 1983). Pre-established psychometric properties greatly simplify data analysis because the necessary scales are developed and the outcome measures are clear and relatively error-free (Mackinnon & Dwyer, 2006). Using standardized measures and common outcome data can permit evaluation results to be compared across schools as well as to previously published research (Hallfors & Iritani, 2002; Yin & Ware, 2000).

Any instrument developer that eases survey development will need to have several *programming safeguards* in place to ensure that a novice user can successfully create a scientifically valid evaluation instrument. For example, if a user selects a question from within a skip pattern or scale measure, the entire block of questions will be added to the survey. Because these questions are preprogrammed,

users cannot alter these questions in any way thereby retaining their psychometrics properties.

We developed a preliminary version of such an online instrument developer interface using a combination of HTML and JavaScript with a custom-written CGI (common gateway interface) program developed in Perl to bridge the server-based question database with the interface. Once the question selections have been finalized by the user, the interface would then send the information from the HTML form to a database using a CGI program written in the Perl scripting language. Based on the specific user selections, the instrument developer then automatically generates an online survey that forms the basis of the CASI interface.

Once a survey is created, students can self-administer the questionnaire either in their computer labs or from home. The data gathered will be transmitted online and securely stored on the host server. For users who prefer to conduct data analysis using their own software, the interface should include a function that downloads a copy of the raw data that can then be imported into standard statistical packages such as SPSS, SAS, Stata, and Minitab for offline analysis. It is imperative that the downloaded data be made available *without subject identifiers* in order to maintain confidentiality.

Data collected through such an online system would reside on a secondary Web server, ensuring maximum confidentiality and anonymity. At the same time, the security of the data is of paramount importance. Comprehensive security procedures will need to be drafted for accessing the data; the programming and files associated with the instrument developer and ACASI will need to be installed in secure sections of the server and not available for viewing or download.

Conclusion

Online data collection and analysis tools can significantly enhance the evaluation and monitoring capabilities of schools and communities. Such tools allow school staff to save time and resources by using the computer for a number of key evaluation tasks—especially those that are burdensome, time-consuming, and tedious. And once developed, an online data collection system would emerge as a more affordable option compared with evaluation using traditional data collection methods. By minimizing the time required for survey construction, administration, and analysis, and by completely eliminating the time required for data processing, online tools are guaranteed to be a cheaper alternative to other evaluation options. External consultants and program staff can limit their time to more select tasks such as data analysis and report writing (rather than data collection and processing). Schools and community-based organizations are already financially stretched, and by automating data processing tasks, significant savings in time and costs can be gained.

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