Evaluation of Internet Child Safety Materials Used by ICAC Task Forces in School and Community Settings
(PROJECT NUMBER 2009-SN-B9-0004)

FINAL TECHNICAL REPORT
EXECUTIVE SUMMARY

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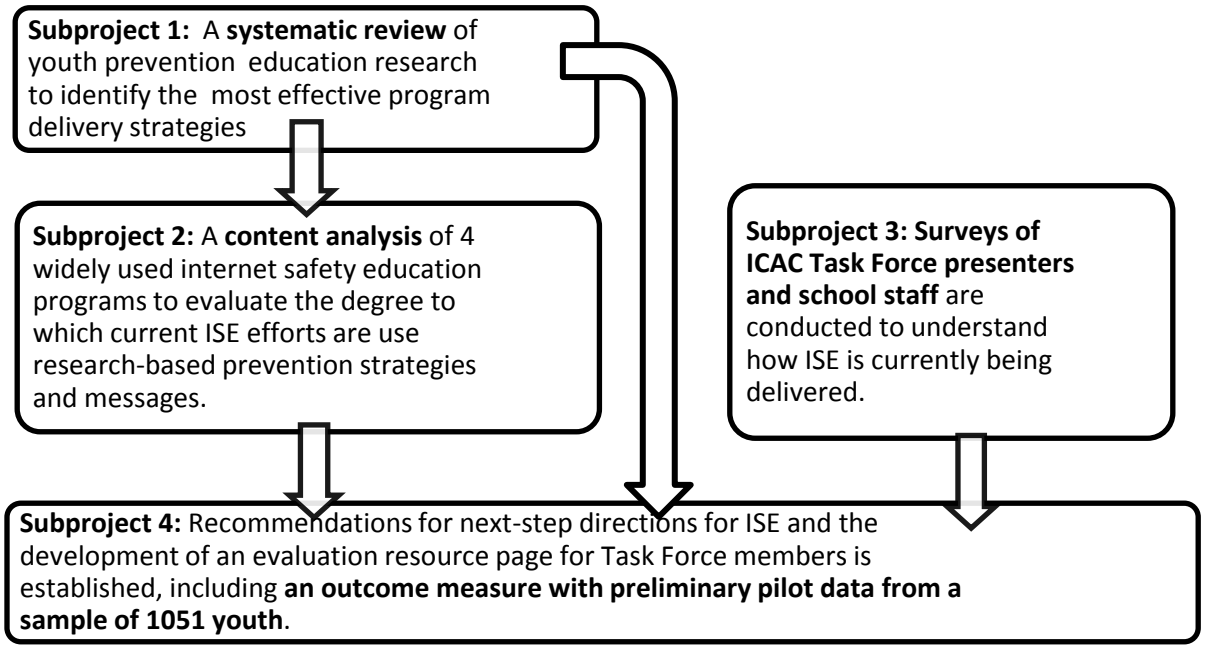
The rapid development of new technology over the past two decades is likely to be considered a hallmark of our times, but publicity about online predators and cyberbullying has raised alarms about risks for youth. Law enforcement has been active in delivering materials to communities and dissemination efforts have been very successful. A recent national survey of youth internet users found that in 2010, 47% of youth reported attending an internet safety program hosted by law enforcement in the previous year (Mitchell et al., 2012a). This is up from 21% of youth who reported ISE exposure from law enforcement in 2005. Unfortunately, the broad dissemination of ISE prevention programs and materials happened so quickly that much of it has been put into place before substantial research was available on the nature of the problems youth were experiencing online and their causes.

To prepare for outcome evaluation, it is important to first understand how the field is currently delivering ISE. The current study was designed to: 1) create checklists to help policy-makers, program developers and consumers better identify programs that use proven methods and incorporate research; 2) evaluate how well a sample of ISE programs meet these criteria, looking at lessons from four long-standing and well-established ISE programs: IKeepSafe, I-SAFE, Netsmartz, and Web Wise Kids; 3) understand how ISE program materials are being used by educators and law enforcement presenters; and 4) provide pilot data on an ISE outcome measure that can be used in future evaluation.

METHODOLOGY

To achieve these project aims, our study was divided into **four subprojects** (see Figure 1).

Figure 1. Study subprojects



First, a systematic review was conducted to identify effective elements of prevention across different youth problem areas such as drug abuse, sex education, and youth violence. We coded 31 meta-analyses that looked at whether particular program characteristics (e.g., theoretical approach, type of program leader, length of program) were related to the effectiveness of the reviewed prevention programs. Based on the review, a KEEP (Known Elements of Effective Prevention) Checklist was developed for use as a guidance tool by ISE program developers and consumers, listing the program delivery elements shown to be most effective.

Second, we conducted a content analysis of 33 lessons from four well-developed and long-standing youth ISE curricula: i-SAFE, iKeepSafe, Netsmartz, and Web Wise Kids. Lessons were coded by identifying key program messages, and rating curriculum materials using the KEEP Checklist and ISE Fact Checking Sheets, developed for this project.

The third subproject involved a process evaluation to better understand how internet safety education programs are being disseminated. The process evaluation was conducted via national surveys with three groups: 1) 43 ICAC Task Force commanders; 2) 91 law enforcement

professionals from 34 states who present ISE for ICAC Task Force; and 3) 139 school representatives from 32 states who were recruited by posting about the survey on several educational listservs, including three email forums serving school librarians.

For our fourth subproject, we piloted an internet safety education outcome survey focused on online harassment and digital citizenship and administered it to 1051 students in the 6th through 10th grades at 5 middle schools and 1 high school in New Hampshire. Our goal was to provide the field with a research-based tool that can be used in future evaluation and program monitoring outcomes.

KEY FINDINGS

A description of the results is provided for each of the subprojects separately below.

Subproject 1: Development of the KEEP Checklist (Known Elements of Effective Prevention).

The meta-synthesis systematically identified prevention program strategies that can be considered "evidence-based" across a wide range of youth problems. The key markers of successful prevention education found across the reviewed meta-analyses were:

1) A structured curriculum: activities and presentation materials that are manual-based in order to ensure consistent quality delivery.

2) Skill-based learning objectives that target established risk and protective-factors: the review identified a benefit to focusing on a) skill-based learning objectives that are b) supported by research on risk and protective factors.

3) Active learning strategies: a) role-playing, in which students had an opportunity to practice the skills they had been taught; and b) active discussion periods, including open-ended questions and debate.

4) Adequate dose: while lengthy, long-term programs were not necessary, single-session lessons were not enough. Research suggested that several lessons are needed, with each lesson building on the previous.

5) Additional learning opportunities: homework, and by booster sessions provided after the initial program is administered.

Findings for other prevention elements or characteristics studied by the meta-analyses were less conclusive and more research will be needed to understand their role in effective prevention. For example, while including youth as presenters did not result in improved effectiveness for many studies; one meta-analysis found a strong effect for the involvement of peers (Gottfredson & Wilson, 2003). It is a prevention education strategy that deserves more attention from evaluation researchers.

Subproject 2: A content analysis of four ISE programs

We coded 16 selected lessons from four ISE programs (I-Safe, IKeepSafe, Web Wise Kids, and Netsmartz) using the KEEP Checklist and identified that most failed to incorporate basic standards of effective prevention education. While all of the reviewed programs provided "structured lessons," most did not list skill-based learning objectives, none specified the research behind what was being taught and the expected outcomes, and none of the programs provided an adequate dose for learning. Each program had clearly spent a lot of time creating multiple lessons across a range of different ISE topics, but the lessons were typically offered as stand-alone topics.

Most of the reviewed ISE programs had integrated active discussion sessions into their lessons, in which time was set aside for youth to respond to open-ended questions. However, only one of the reviewed lessons included role-playing. While many of the programs had developed creative activities to accompany their materials, the activities were designed to reinforce educational messages versus provide opportunities for the youth to practice skills.

The ISE Fact-Checking Sheets indicated that the reviewed ISE programs were also not incorporating research-based messages consistently. The materials on sexual solicitations and internet predators included an average of 2 out of 7 research-based messages. Materials on sexting

included an average of 2 out of 5 research-based messages we coded. And the ten lessons focused on cyber-bullying included an average of 3 out of 8 research-based messages.

Finally, a larger sample of 33 ISE program lessons was coded for key educational messages. The most common educational messages were: "Tell an adult if something happens online that makes you uncomfortable" and "Don't share or post personal information online." For elementary-aged youth, a common ISE message was to "Be wary of people you meet online." The digital literacy materials showed slightly different emphases. The most typical messages were: "Think before you click or post," "Check your social network privacy settings and be careful who you friend" and "Consider what the information you put online says about you." There are potential logical flaws in the assumption that these educational messages will result in improved safety, and evaluation is needed if such messages are going to be further disseminated.

Subproject 3: Surveys of ICAC Task Force presenters and school professionals on ISE delivery.

A survey administered to a sample of ICAC Task Force presenters (N=91) found that 66% percent of the sample reported presenting on ISE 6 or more times in the previous year (See Table 1). Sixty-two percent reported that they regularly update their materials with research findings, with 22% of that group (10% of whole sample) using publications or website material from established research centers. When asked about their most recent ISE presentation, respondents indicated that the majority of presentations were done in one session (86%). ISE presentation topics covered a wide range of concerns but internet predators and cyberbullying were the most common topics of respondents' recent presentations.

Table 1. ICAC ISE Presenter Survey Results (N=91)

Presentation Characteristics	ICAC Task Force Respondents n (%)
# of ISE presentations in the past year:	
1-10	49 (54)
1-25	21 (23)
26 or more	21 (23)
Groups presented with ISE in past year: [a]	
Schools	86 (95)
Religious organizations	41 (45)
Community groups	65 (71)
Other organizations	24 (26)
Presentation length (last presentation):	
One session	78 (86)
Multiple sessions	11 (12)
Primary topic of last ISE presentation:	
Online harassment/cyberbullying	24 (28)
Internet predators	32 (38)
Other or no primary topic	29 (35)
Materials used in last presentation: [a]	
Netsmartz	51 (56)
Web Wise Kids	1 (1)
i-SAFE	5 (6)
iKeepSafe	3 (3)
Self-created materials	74 (81)
Other	42 (46)
Presentation included discussion period?	79 (87)
Interactive discussion with open-ended questions asked by presenter?	31 (34)
Presentation included activities w/ participants?	22 (24)
Role-playing?	6 (7)

[a]Multiple responses possible.

The majority of ICAC Task Force presenters described using self-created materials (81%), and over half of the sample used materials by Netsmartz. Most ICAC Task Force respondents included a discussion session as part of the presentation (87%), with 34% using questions to generate active discussion with the audience (versus only taking questions). The minority of ISE presentations conducted by Task Force respondents included some kind of additional learning related activity (24%) although only 7% used role-plays.

In our survey of school professionals (N=139), 29% of respondents reported that ISE was provided by an outside speaker coming into the school and 19% reported that the ISE speaker had a criminal justice background (See Table 2). Fifty-six percent of school respondents reported that teachers informally include ISE in the classroom, while 36% reported the use of specific ISE curricula or programs. Respondents indicated that their primary ISE concerns are cyberbullying (39%), privacy (21%), and online reputation (18%). Only 7% cited internet predators as most important for ISE focus and no respondent cited sexting as the most important topic.

Table 2. School Professional ISE Survey Results (N=139)

ISE Characteristics	School Respondents n (%)
Types of ISE implemented: [a]	
ISE presentation by outside speaker	40 (29)
Speaker had law enforcement background	26 (19)
Teachers informally include ISE in classrooms	78 (56)
Teachers or school staff use specific ISE	50 (36)
Most important topic for ISE:	
Sexting	0 (0)
Privacy	24 (21)
Online reputation	22 (18)
Online harassment/cyberbullying	47 (39)
Internet predators	9 (7)
Other	19 (16)
ISE programs or materials used: [a]	
I-SAFE	28 (20)
IKeepSafe	8 (6)
Web Wise Kids	6 (4)
Netsmartz	48 (35)
Common Sense Media Digital Literacy	48 (35)
Other	
Open-ended questions used to generate discussion of ISE?	82 (64)
Role-playing activities included?	50 (39)

The most commonly used curricula by the schools in our sample were Netstmartz (35%); Common Sense Media Digital Literacy curriculum (35%); and i-SAFE (20%). Sixty-four percent reported their program included open-ended discussion sessions and 39% reported that their ISE program included role-playing to reinforce new skills and learning.

Subproject 4: ISE outcome survey development and piloting.

Our administration of the ISE Outcome Measurement Survey found that results for the pilot sample of 1051 youth were similar to the findings of national surveys of online harassment. Thirty-five percent of youth reported that they had been the target of at least one of five negative harassment experiences in the last 3 months (See Table 3). Nine percent of youth reported that they were significantly distressed or embarrassed as a result of online harassment.

Table 3 . Pilot Internet Safety Outcome Survey Results (N=1051)

Online Experiences and Behaviors	Students n (%)
In the past 3 months, did someone:	
Make rude or mean comments to you on the internet?	315 (30)
Use the internet to harass or embarrass you?	143 (14)
Spread rumors about you through the internet?	159 (16)
Share something about you with others online that was meant to be private	160 (16)
Post or forward a video or pictured of you online when they knew it would hurt your feelings or upset you?	89 (9)
Any of the above	371 (35)
In the past 3 months, did you:	
Make rude or nasty comments to someone on the internet?	242 (24)
Use the internet to harass or embarrass someone that you were mad at?	111 (11)
Spread rumors about someone through the internet?	60 (6)
Share something about someone with others online that was mean to be private?	90 (9)
Post or forward a video or picture of someone online when you knew it might hurt or upset them?	49 (5)
Participate in an online group or social networking site where the focus was making fun of someone you know?	59 (6)

The outcome measure also included a measure of "digital citizenship" with Online Kindness and Online Helpfulness subscales. The digital citizenship subscales show good initial psychometric results and will provide ISE programs with a way to measure positive effects of a program on kind and helpful behavior online.

The pilot survey and a user's manual will be placed in an ISE Resource Center on the Fox Valley Technical College's Internet Crimes Against Children Training and Technical Assistance Program (FVTC/ICAC T&TA) for easy accessibility by law enforcement presenters and others.

CONCLUSIONS

Our study found that that the educational approach and messages of most current ISE fail to incorporate critical elements of effective prevention education. Our analysis of four leading ISE programs and survey of ICAC Task Force ISE presenters found that the current approaches to ISE lack: 1) research-based messages; 2) skill-based learning objectives; 3) opportunities for youth to practice new skills; and 4) sufficient time for learning. As a whole, the ISE field has been slow to include research. This failure to establish research-supported program theory means that most ISE is a highly speculative and experimental undertaking, whose success cannot be assumed. Policy-makers, consumers, and communities need to demand ISE programs increase their efforts meet basic standards of effective prevention.

What is the best role for law enforcement?

The criminal justice field deserves praise for highlighting potential internet problems and for mobilizing so quickly. But having law enforcement as the lead professionals in the ISE mobilization also has some drawbacks. First, law enforcement personnel are not generally trained in teaching and curriculum development. Second, it is not clear that it is a sustainable model. It is difficult for law enforcement personnel, who have extensive additional responsibilities, to commit to curricula that require skill-based lessons to be taught over multiple sessions. Finally, law enforcement may not bring the most successful message or tone to ISE. Because of their experience and professional orientation, they tend to emphasize crime and danger, and punishment and sanctions. It is not clear that these themes help to advance many of the skills and behavioral changes that ISE is trying to achieve.

The answer is not necessarily to exclude law enforcement, but to clarify through study and evaluation the roles in which they can be most effective. There are likely creative ways to maintain the potential benefits of law enforcement involvement, even if their role shifts. For example, law enforcement presenters could be brought into talk about very specific law-based issues as a part of a larger ISE school-based curriculum. Or, school resource officers, located in schools might be trained to provide evidence-based curricula over a longer period of time.

POLICY AND PRACTICE IMPLICATIONS

Below we highlight additional implications of our review for the ISE field and outline our key recommendations.

1. **ISE education must move beyond a reliance on stock safety messages and the use of single lessons when addressing complex social-emotional behaviors.**

The assumption behind the current approach to ISE is that youth suffer from a lack of knowledge. However, telling youth to not cyber-bully or share sexual pictures with a boyfriend will have little effect on behavior, according to prevention research: Most youth already know these behaviors are wrong or risky, and either see the benefits outweighing the risks, or perhaps see no other options to handle strong emotions. The more difficult job for ISE program developers is to get youth to actually use this knowledge. Research has provided some guidelines on how to do this including skill-building, better use of research, active learning strategies, and adequate time for youth to learn and practice the skills. Complex problems like peer harassment, risky sexual decisions, and unhealthy romantic relationships (online or off-line) require more time than one 45-minute lesson can offer.

2. **ISE program developers need to reduce their reliance on dramatic statements and scare tactics even further.**

While none of the ISE program materials used the most egregious examples of scare tactics, there were still more subtle examples such as defining sexting broadly (e.g., sending sexual text

messages) and then mentioning that youth are put on sex offender registries for sexting. A second type of scare tactic is using the highest victim rates available to impress on youth, schools and parents the degree of danger. Research shows that most youth do not cyber-bully, do not send sexual pictures, and internet predator abductions are rare. Youth are either going to discount the inflated numbers, be confused by them, or the messages could back-fire by providing youth with negative social norms.

3. **The ISE field needs to re-consider ISE for young children.**

The ISE materials developed for younger children relied much more often on stereotypes and vague messages than the materials for older youth. And the problems that they targeted represented situations that very few children under ten years old have come across. Young children are not interacting with peers online very much, have limited to no interactions with "strangers" online, and have extremely low rates of unwanted experiences online. The idea behind developing ISE materials for young children is probably the hope that important prevention messages will be conveyed before problems begin. But there is no research to suggest that these vague messages will be remembered once the youth reaches the age in which the scenarios might apply.

4. **"Internet safety" goals are very disparate—different educational strategies are going to be needed for different ISE topics.**

ISE programs combine messages about cyberbullying, problematic content (e.g., videos of fights, inappropriate pictures), internet predators, sexting, spam, e-theft, and illegal downloading. But the program logic should look very different for these different ISE concerns. What a youth needs to know to avoid being groomed by an adult online offender (e.g., how to avoid risky relationships) is very different from what they may need to know to avoid cyber-bullying (e.g., how to de-escalate peer conflict). And the skills needed to navigate either of these complex social-emotional concerns are quite different from the fairly straight-forward knowledge they need to

avoid spam and malware. There is not a generic "skill set" or "knowledge set" that is a core to an internet safety "curriculum." We recommend that ISE programs create full, evidence-based programs around specific educational topics.

The field also may need to consider the possibility that stand-alone prevention programs focused on technology-based problems is inefficient given the extensive overlap between online and offline problems. Schools are overwhelmed already by the numerous social and safety problems they are expected to address. It might make more sense to roll existing knowledge about new technology-related problems into proven prevention education focused on broader problem areas.

5. **The field needs to use research more when developing educational messages: ISE messages have critical problematic assumptions and under-developed program logic.**

As an example, the thought behind the common ISE message "Think before you click" appears to be that impulsivity is causing a lot of online problems for youth. But we have no data that this is the case. It may be that even if there were a way to get them to pause and "think," youth would still choose to send the mocking text or post or send the sexy picture. Youth decision-making in these contexts may have more to do with anger, or attention seeking, or sexual expression than impulsive actions.

Even the common ISE recommendation for youth to "Tell an adult" has questionable protective logic. Probably most youth in difficult situations consider it, but hold off for a variety of understandable reasons. And a youth would have to overcome strong natural inhibitions to talk to an adult about sexual conversations, even if that talk had turned disturbing or uncomfortable. Making the issue of "telling" even more complex, the youth running into particular troubles online are often the very youth who have communication problems with adults or parents.

Below we briefly review some of the logic errors that need to be resolved around specific ISE topics:

Internet predators. Research shows that the vast majorities of cases do not involve deceit, but rather teens agreeing to meet individuals that they know are adults for sexual encounters because they believe they are in love or in pursuit of romantic adventure or excitement. Rather than naïve youth, the victims are often at-risk youth with family conflict and abuse histories. This is a complex dynamic that warnings about adults posing as teens and exhortations about parental supervision may not be adequate to address.

Sexting. The "sexting" problem has been conceptualized as young people making and sending sexual images of themselves. But there is an enormous amount about the dynamics and motives of sexual image production and exchange among youth that is not yet understood. Available research suggests that this behavior is complicated and diverse, and ranges from cases of blatant exploitation at the hands of adults to romantic sharing among youth who are old enough to have legal sexual relationships. Will warnings about legal prosecution and effects on one's reputation increase responsible behavior? It is not a simple proposition.

Cyber-bullying. The cyberbullying lessons typically exhort youth to refrain from nastiness and meanness in online communications, and to tell parents and school authorities when they are targeted. But the challenges of bullying prevention are large and have befuddled educators for generations, and they almost certainly apply to cyberbullying as well.

Privacy. Privacy instructions are one of the most common messages we found across all ISE topics that we reviewed--cautions not to give out personal information, not to share passwords, not to use their real name and address. But can such generic messages actually be much of a guide? What do young people hear when educational programs give them messages like "don't give out personal information" that are at odds with the real world and fail to account for its obvious complexity? At best, one would hope that they think about the problem a bit and derive some rough personal rules. But more likely they just ignore it. Worse, however, is the possibility that

such information adds to youth cynicism that adults and educators don't know what they're talking about, and then feel free to ignore everything else they say.

Our review suggests that ISE program developers must do a better job defining their program logic and becoming familiar with the growing research on internet safety, and the more extensive literature on prevention in related problem areas (e.g., bullying, sexual risk taking, dating violence). As an example of what this might look like, a program for middle-school youth targeting cyberbullying might begin by researching risk and causal factors related to bullying and cyberbullying (e.g. anger management problems, social pressure or positive feedback experienced by peers when engaging in bullying behaviors) and develop a program that uses evidence-supported strategies to improve these factors (teaching youth anger-management skills or ways to handle social pressure to "join in" with negative peer behaviors; or increasing social norms around support for students who promote positive bystander behaviors), with the expectation that these strategies will reduce cyber-bullying behaviors and increase positive bystander behaviors.

6. Outcome evaluation is a critical next-step.

We hope that this study will encourage ISE program developers, consumers and policy-makers to replicate our review process themselves and consider the degree that existing and new curricula incorporate research and define program logic. Once an ISE program has defined their problem and goals well, clarified their program logic based on the best available research, and incorporated proven educational and prevention evaluation strategies, rigorous outcome evaluation is the next step to making sure that these efforts work in the expected ways.