

Evaluation of Cybersmart Detectives online education activity

Overview of Evaluation methodology

Introduction

This overview provides a summary of the evaluation methodology used to assess the educational effectiveness of the Cybersmart Detectives (CSD) online activity. The CSD activity is provided by the Australian Communications and Media Authority (ACMA) to teach children aged 11-12 about key internet safety messages. In the activity, children work online in real time liaising with community professionals to solve an internet-themed problem. The activity is based in the school environment, and brings together a number of agencies with an interest in promoting online safety for young people, including education, State and Federal Police, government and child welfare advocates. Further information on Cybersmart Detectives is available at:

<http://www.cybersmart.gov.au/cybersmartchallenge.aspx>

Evaluation objectives

The Child Health Promotion Research Centre (CHPRC) at Edith Cowan University conducted the evaluation, which was designed to answer five key questions:

1. Investigate if the game's key cybersafety messages are identified by students;
2. Measure the short-term impact of CSD on student learning about cybersafety;
3. Determine if students recognise the link between key cybersafety messages and how these messages should be assimilated in their own behaviours/lives;
4. Examine the teacher's role in reinforcing the key cybersafety messages; and
5. Assess the value of the pre-game and post-game lessons in reinforcing the key cyber-safety messages.

Evaluation methodology

The evaluation required the collection of data from multiple sources (students, teachers, stakeholders, ACMA staff) using different research techniques. These included:

- Quantitative data collection (pre- and post-CSD activity survey with students);
- Qualitative data collection (post-game focus groups with students, teacher interviews, analysis of CSD activity transcripts);
- Development of a national and international stakeholder group;
- In depth interviews with ACMA staff involved in the development and implementation of the Cybersmart Detectives activity; and
- Literature review of the research on cybersafety program evaluation.

In addition, the CHPRC conducted supplementary analyses to explore students' responses to poll questions (embedded within the CSD activity) and qualitative transcripts comprising student and guide comments posed during the CSD activity.

Further detailed information on the evaluation methodology is available in Chapter 3 of the CHPRC report. As the main objective of the evaluation was to assess the effectiveness of the CSD activity in schools, the methodology used to collect quantitative and qualitative data from students and teachers is summarised below.

Quantitative data: Student Sample

School recruitment

A total of 41 Western Australian Catholic and Independent schools ($n = 20$ Catholic, 21 Independent) were approached to participate in the CSD evaluation. Of these, 18 responded to the invitation to participate. Six schools declined, leaving a total of 12 schools recruited to participate in the CSD evaluation. Of the recruited schools, three withdrew complete or partial participation, meaning that nine schools completed the evaluation components and the CSD activity.

Survey sample

In these nine schools, 13 classes with a total of 341 students were scheduled to play the game and participate in the pre- and post-CSD activity survey in Term 3. Overall, 292 students completed the pre-CSD activity survey. Forty-nine students did not complete the survey due to being absent on the day the CSD activity was administered and parental consent was not obtained for 12 students. This resulted in an overall response rate of 89 per cent (292 out of 329). The majority of students (92 per cent; 269 out of 292) completed the post-CSD activity survey. These surveys were administered 1-2 weeks after exposure to the CSD activity. A flowchart illustrating the recruitment of the final survey sample is provided in figure 1.

Qualitative data: Student and Teacher Sample

After completing the CSD activity, students were selected to participate in a focus group discussion to elicit detailed information about their perceptions of the activity. A minimum of two focus groups were conducted in each school. A total of 87 students (42 boys and 45 girls) participated in the 18 focus groups completed for the CSD evaluation.

Teachers who had a class participating in the CSD activity were invited to participate in a brief face-to-face interview approximately one to two weeks later. The aim of this interview was to understand the organisational requirements involved in the administration of the CSD activity, teacher perceptions of the pre and post CSD activity resources and their views on the impact of the activity on students. A total of 12 interviews were completed with teachers from the nine schools participating in the CSD evaluation.

Evaluation methodology challenges and limitations

As the ACMA offers the CSD activity to all Australian schools, an optimal evaluation design would have randomly selected a sample of schools from across Australia. However, logistical and budgetary constraints meant that the evaluation had to draw a sample of schools from one state (Western Australia) and one education sector (Catholic/Independent). The CHPRC report addressed the issue

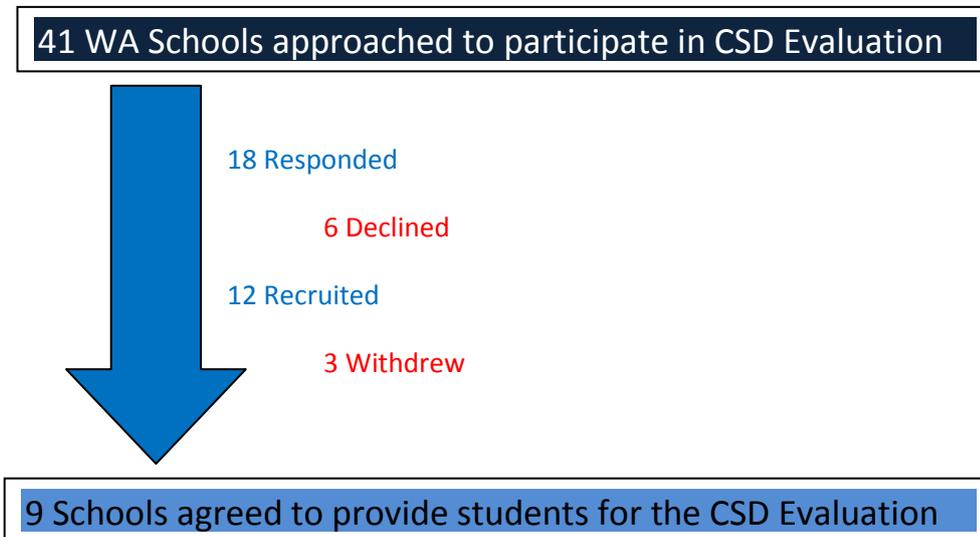
of the representativeness of the evaluation sample in their discussion of the research findings (Chapter 6). In brief, the authors conclude, “while it is not possible to directly compare students in this study with all other students in Australia, on the most basic issue of Internet usage, this sample was consistent with other national data” (p. 151).

Another challenge in evaluating the CSD activity was the difficulty of replicating the ACMA’s standard administration of the activity while simultaneously collecting research data for evaluation purposes in a working school environment. The ACMA facilitates the delivery of the CSD activity to schools by providing ongoing administrative and technical support. This support takes a variety of forms ranging from assistance with logging into the CSD activity online, resolving technical failures, through to the provision of activity guides to provide real-time feedback to students. In fact, the availability of a sufficient number of trained activity guides is one of the factors that influence the optimal implementation of the CSD activity as an education resource.

The CHPRC report noted that conduct of the CSD activity during the evaluation differed in some ways from the usual ACMA practice. The authors stated that while every effort was made to ensure that the administration of the activity during the evaluation was similar to the standard ACMA administration, there were differences. For example, the usual ACMA administrative support provided to teachers was not always provided in the evaluation (p.44). It was also acknowledged that participating in the research project “added some additional tasks for teachers above and beyond actually playing the game” (p.146). This may have had an impact on a teacher’s perception of their administrative role in the CSD activity. This, in turn, could have heightened any anxiety or confusion that teachers may have experienced when participating in the CSD activity for the first time during the evaluation.

Figure 1: Student sample recruitment

School Recruitment Phase



Student Recruitment Phase

