

Research Approach

Overview

Although there is a burgeoning literature and empirical work on adults and credibility (see Flanagin and Metzger 2007), including informative work on college-age adults (Metzger, Flanagin, and Zwarun 2003; Rieh and Hilligoss 2007), extremely little research has been conducted on pre-college age youth. What empirical research does exist is almost exclusively based on interviews of very small samples of children and adolescents, which cannot be generalized with any accuracy to the overall youth population. To redress this shortcoming, this project generated survey data from a representative sample of young people in the United States.

The survey instrument used in this study was generated through a multi-step, multi-method process. The initial survey topics were based on an extensive review of past literature and existing surveys on information trust, credibility, and quality. To better understand cognitive and developmental issues relevant specifically to youth information assessment and

processing, research experts currently working in the fields of developmental psychology and cognitive psychology were recruited as project consultants. A draft version of the questionnaire was critiqued and modified through working sessions with these consultants over the course of multiple days. The outcome of these sessions was a comprehensive questionnaire pertaining to digital media use and assessment, informed by contemporary perspectives from cognitive and developmental psychology.

To gauge the clarity, comprehensiveness, and relevance of the questionnaire for youth audiences, a small-scale focus group was next conducted among children ages 9 to 18. Questionnaire modifications were again made based on this session, and the consultants' recommendation that participants should be no younger than 11 years old was confirmed. Next, to further validate the questionnaire for youth audiences, as well as for the portion of the survey evaluating parents' assessments of their child's online information behaviors, 40 parent-child pairs were recruited. These pairs represented a broad range of races, ethnicities, and household incomes, as well as roughly equal numbers of children in each age cohort and sex. Members of each child/parent dyad underwent a separate hour-long face-to-face interview with researchers, in which they provided feedback on questionnaire content, question wording, and general survey administration. Once again, this feedback was used to modify the questionnaire.

This version of the survey was then pilot-tested among 183 undergraduate college students, in order to gauge the reliabilities of the attitudinal and usage scales included in the questionnaire and to uncover any other outstanding issues. Minor adjustments were made to the questionnaire, which was then

forwarded to the research firm that administered the survey to the target population, as noted in more detail below.

Given the near-ubiquitous use of the Internet among contemporary youth, and the fact that this constituted our target audience, Web-based survey techniques were used to assess youths' Web usage behaviors and attitudes about online credibility. The questionnaire was administered to a sample of youth with Internet access in the United States, ranging in age from 11 to 18 years old. In addition, one parent of each child was surveyed to obtain household indicators of digital media use, parental involvement in their child's digital media use, and demographic factors.

The 2,747 valid responses obtained were a roughly equal representation across youth age cohorts (i.e., approximately 340 respondents for each age within the range). Surveying a range of ages accomplished a number of things: it represented children at critical junctures in social and cognitive development; it considered youth at times in their academic development and in their development as citizens that are key to their future decisions and choices; and it enabled comparisons between children of various ages, providing relatively precise comparisons across age cohorts (e.g., junior high versus high school), to pinpoint the key junctures at which children attend to, and act on, distinctions in information credibility. Moreover, this sample size yielded sufficient representation across sex and other demographic differences to facilitate comparison across these factors. Finally, because the current project is an extension of ongoing research on adults, it will also provide direct comparison between youth and adult populations in future studies, which will suggest lifespan differences in the key variables of interest.

Survey Methodology

Survey Administration

The survey was conducted online by the research firm Knowledge Networks and was fielded between June 17 and July 26, 2009. Knowledge Networks maintains a probability-based panel of participants and is thus the only online survey source that meets the standard of federal and peer review, setting the gold standard in the industry. As mentioned earlier, 2,747 children in the United States between the ages of 11 and 18 who use the Internet and who live at home, as well as one parent for each child participant, completed the survey. Statistical results were weighted to correct known demographic discrepancies between the U.S. population and Knowledge Networks' online panel. Details on the design, execution, and weighting procedures of the survey are discussed below. Additional information about the survey methodology and subject panel used by Knowledge Networks can be found in Appendix B.

Sample Design

Knowledge Networks has recruited the first online research panel that is representative of the entire U.S. population. Panel members are randomly recruited by probability-based sampling (telephone, mail-, and Web-based surveys), and households are provided with access to the Internet and hardware if needed (although this did not apply to the current survey, since our target sample included only current Internet users). After initially accepting the invitation by Knowledge Networks to join the panel, respondents are then profiled online by answering demographic questions, and maintained on the panel using the

same procedures established for research subjects recruited by random digit dialing. The sample for this study was drawn from a combination of random digit dialing and address-based sampling methods (taken from the U.S. Postal Service's Delivery Sequence File). The combination of these two frames allows Knowledge Networks to reach homes without a landline telephone, homes with numbers on the do-not-call list, and homes that use call-screening that normally would be missed by random digit dialing methods alone.

The typical survey commitment for Knowledge Networks panel members is one survey per week or four per month, with a duration of 10 to 15 minutes per survey. Knowledge Networks' general sampling rule is to assign no more than one survey per week to members. Knowledge Networks operates an ongoing, modest incentive program to encourage participation and create member loyalty. Members can enter special raffles or can be entered into special sweepstakes to win both cash and other prizes.

For this study, households with children living at home between 11 and 18 years of age were identified by Knowledge Networks within their online panel (18-year-olds not living at home were excluded from this sample). A sample was drawn at random from among active panel members. For this survey, 5,936 U.S. adult parents with at least one child age 11 to 18 were selected for the main and pretest surveys.

Contact Procedures

Potential participants received a notification email letting them know there is a new survey available for them to take. This

email notification contained a link that sent them to the survey questionnaire. No login name or password was required.

Parents were first asked to complete a short screening questionnaire to confirm that they had a child age 11 to 18 and to gain consent for the child to participate. Upon completion of their portion of the survey, parents were asked to have one selected 11- to 18-year-old complete a longer series of questions designed to assess the child's use of the Internet. To accommodate participants' schedules and increase the chances of having a child complete the survey, parents were told that they could have their child complete the survey at a later time if that was more convenient.

A first email reminder was sent to all non-responding panel members in the sample on July 2, 2009. Second and third email reminders were sent 7 and 12 days later, respectively. Finally, calls were made to all remaining non-responding panel members starting July 16, 2009 and throughout that weekend.

Incident and Completion Rates

For this survey, 3,136 adult parents with at least one child aged 11 to 18 responded to the invitations, representing a 52.8 percent completion rate. 2,747 parent-child (aged 11 to 18) pairs completed the survey and qualified for analysis, representing a 91.7 percent qualified rate or 46.3 percent response rate.

Sample Weighting

The survey responses were weighted to provide results that are generalizable to the U.S. population of Internet households. Two weighting strategies were employed to compensate for

non-response and other sources of survey error that might bias the results.

First, a post-stratification adjustment using demographic distributions from the most recent U.S. Census Bureau's Current Population Survey data was used to balance errors due to panel recruitment methods and panel attrition. Demographic variables used for this weighting included gender, age, race, education, and Internet access.¹ This weighting was applied before the selection of the sample was made for this study.

In addition, a study-specific post-stratification weight was applied after data collection to adjust for the study's sample design and survey non-response. A weight was calculated for all qualified children to make them comparable to 13- to 18-year-olds who have Internet access at home.² Household income was also included as a weighting variable since education could not be included (i.e., most of the children in this age range have less than a high school education). The sample design effect for this weight is 1.58.

Sample Characteristics

This section provides a detailed profile of the demographic characteristics for both the parent and child samples.

Parent and Household Demographics

Parents in the sample were 45 years old on average (standard deviation = 7.25). Most had attended college, with 53 percent having had at least some college, and 47 percent earning a bachelor's degree or higher. In terms of race, 75 percent of the

parents were white; 9 percent were black, non-Hispanic; 9 percent were Hispanic; 4 percent were other, non-Hispanic; and 4 percent reported their race as Mixed, non-Hispanic. Thirty-one percent of the participating parents were male, and 69 percent were female. Eighty percent of parents were married or living with a partner, 20 percent were divorced, separated, widowed, or never married. Seventy-six percent of parents were working at the time that the data were collected for this study.

Household annual income ranged from less than \$5,000 to more than \$175,000, with an average income ranging from \$60,000 to \$85,000. Most families (88 percent) had between 3 and 5 members living in the household, and the average number of children living at home was 2.25 (standard deviation = 1.39). Participants came from all parts of the United States, with slightly more coming from the Midwest (31 percent) compared to the Northeast (19 percent), South (28 percent), and West (23 percent). Table 1 shows the more specific breakdown of the sample's geographic distribution:

Child Demographics

The child respondents consisted of 53 percent males and 47 percent females ranging in age from 11 to 18 years, with an average age of 14.33 (standard deviation = 2.28). Table 2 shows the percentage of children in the sample within each age group surveyed. Seventy-five percent of the child respondents reported that they were white; 9 percent were black, non-Hispanic; 12 percent were Hispanic; 0.4 percent were other, non-Hispanic; and 4 percent reported being Mixed race, non-Hispanic.

Table 1

Percent of participants from various U.S. geographic areas

Region	Percent Residing
New England	4.9
East-North Central	20.6
East-South Central	4.7
Mid-Atlantic	13.6
South Atlantic	15.1
Mountain	7.2
Pacific	15.5
West-North Central	10.7
West-South Central	7.7

Table 2

Number and percent of participants within each age category sampled

Age	Number	Percent
11	378	13.8
12	371	13.5
13	385	14
14	323	11.8
15	327	11.9
16	316	11.5
17	368	13.4
18	279	10.2