

APPENDIX 2
METHODOLOGY

APPENDIX 2.1

QUESTIONNAIRE

This report is based on a nationally representative survey of 3rd- to 12th-grade students, designed to explore their access to and recreational (nonschool) use of a full range of media, including newspapers, magazines, books, television, DVDs and videotapes, video games, movies, radio, MP3s, CDs and tapes, computers, and the Internet. In addition to interviews with 2,032 students age 8–18, 694 seven-day media-use diaries — collected from respondents who chose to participate — were used to help guide the survey analyses (primarily to develop a proportion of time spent media multitasking). The findings in this report are based on the nationally representative sample, except where noted. The margin of sampling error for this sample is +/-3.8%.

The Kaiser Family Foundation worked with Dana Markow and Jordan Fein of Harris Interactive, Inc., and with Donald F. Roberts and Ulla G. Foehr of Stanford University, to design and analyze the survey. All parties were involved in all stages of the research; however, Harris Interactive was primarily responsible for sampling and data collection while data analyses and reporting of results were the primary responsibility of the Kaiser Family Foundation and the Stanford team. At the Foundation, the project was directed by Victoria Rideout, and received substantial input from Mollyann Brodie. The current study updates the Kaiser Family Foundation's 1999 study, *Kids & Media @ the New Millennium*, which was conducted by the same team.¹

What follows is a detailed description of the methods used in this survey research.

Sample overview

The sample includes 2,032 students in grades 3–12, who completed written questionnaires in the classroom about their media

use the previous day (see Appendix 1 for the full text of the questionnaire). Questionnaires were administered by an independent interviewer who proctored the class and was available to answer any student questions. If an independent interviewer was not available, the teacher administered the questionnaire. Interviews averaged 40 minutes in length and were conducted between October 14, 2003, and March 19, 2004. Because questionnaire administration was spread across the days of the week, “time spent yesterday” includes responses for each of the seven days, with the caveat that a slightly lower proportion of questionnaires pertain to Friday, Saturday, and Sunday (8%, 10% and 13% respectively,) than to Monday through Thursday (14%, 19%, 17%, and 18% respectively). In addition, the sample includes seven-day media-use diaries for 694 of these youth who chose to complete them (see Appendix 2.2 for a copy of the diary).

Creating a school sample

Harris Interactive's national probability sample of schools and students is based on a highly stratified two-stage sampling design. This clustered design employs features similar to the sample designs used in various national surveys of students and schools that are conducted by the National Center for Educational Statistics.

The sample is drawn from a list of approximately 80,000 public, private and parochial schools in the United States. It is selected to account for differences in grade enrollment, region and the size of the municipality where schools are located. A random selection of schools is drawn on the basis of the number of students in each cell proportionate to the number of students in the universe, creating a cross-section of young people in a set of designated grades (in this study, grades 3–12). This sample design also permits oversampling by a variety of criteria (e.g., location,

¹ The 1999 study also included 2- to 7-year-olds, whereas the current study is limited to 8- to 18-year-olds. All comparisons between the two studies reported here concern only the data collected from the 8- to 18-year-olds in the earlier study.

urbanicity, grade level, school type, race/ethnicity). This study includes an oversample of Black and Hispanic students.

There are several benefits that can be gained from school-based interviewing as compared to home-based, in-person or telephone interviewing. The school setting proves to be far more neutral, since young people are allowed to express their attitudes and experiences without the influence of a parent nearby. The privacy of a self-administered questionnaire provides further guarantee of confidentiality when asking young people questions of a sensitive nature. Furthermore, this approach ensures that the sample will include young people in households without telephones or whose parents might otherwise not agree to allow their child to complete an interview.

The interviewing process

Gaining the principal's consent and selecting a class. After sending a letter to principals soliciting their participation, Harris Interactive, Inc. contacted the principals in selected schools by telephone to request their participation in the survey. An eligible grade was randomly assigned to each school. Schools were invited to participate in either the “basic” or “deluxe” version of the survey. The basic survey consisted of the questionnaire only, while the deluxe version consisted of the in-class questionnaire and a seven-day diary to be completed by the student at home. If the principal agreed to participate in either version of the survey, a random selection process was then used to select a particular class to complete the survey. The principal was asked to alphabetize all classes for the grade assigned by Harris Interactive. Using a random number selection grid, an interviewer identified an individual class. For schools serving older youth (11- to 18-years-old), where students attend different classes for each subject, only English classes were used to make the selection. Since all students in all grades must study English, this ensures a more representative sample of students by academic track and level of achievement.

Maximizing response rates

A number of steps were included in the consent process in order to maximize response rates. An alert letter contained a brief description of the survey process and some background information on Harris Interactive. In addition, a letter from the Kaiser Family Foundation describing the importance and scope of the project was included with the alert letter from Harris. Schools also were offered an incentive to participate.

In addition, at a principal's request, calls were made to local boards or district offices to gain approval from the appropriate

officials. If necessary, copies of the introductory letters and other materials were mailed or sent via fax to the principal and/or other school officials.

Maintaining a representative sample

If a particular school could not participate, it was replaced by a school with similar demographic characteristics so as to preserve the integrity of the primary selection. Another randomly drawn school was chosen within the same region, with similar grade enrollment and size of municipality, and in the same or the nearest zip code to the original school.

Interviewing the students

A trained interviewer from Harris Interactive, Inc. distributed questionnaires, including TV listing grids for the previous day, and provided instruction on completing the questionnaires to the selected class. If the school had chosen to participate in the deluxe version of the survey, the interviewer also distributed diary booklets.

By providing teachers with educational materials, including *The Basic Primer on Public Opinion Polling*, we hoped to ensure that this exercise was woven into the classroom curriculum in a meaningful way. Furthermore, by surveying only one class in each school, we imposed on the school as little as possible. Students were given envelopes in which to seal their completed surveys before returning them to the interviewer. The survey instrument is anonymous; at no point were the students asked to provide their names.

Removal of outliers and nonqualified respondents

Of the 2,074 students in grades 3–12 who were surveyed during an English class, 2,032 were kept in the sample and 42 were excluded. All interviews were carefully checked for completeness and accuracy. Twenty-five surveys were removed upon arrival in-house due to significant errors or large proportions of missing data. Nine respondents were removed because they entered an age outside of the targeted age range of this study (8–18). In addition, eight respondents were excluded as “outliers” because their answers fell far outside the normal response range for total media usage. As with all self-administered questionnaires, occasional questions are sometimes left blank. Unless otherwise noted, findings for each question were based on the total number of potential respondents in the sample.

Of the 798 students who completed a seven-day diary recording their use of media, 694 were kept in the diary sample. Respondents were removed from the diary sample if they were removed from

the survey sample (n=12), or if they did not complete at least five full days of the diary (at least 75% of each day; n=92).

Potential sampling error

The results for sample surveys are subject to sampling error — the potential difference between results obtained from the sample and those that would have been obtained had the entire population been questioned. The size of the potential sampling error varies with both the size of the sample and with the percentage giving a particular answer.

In general, when clustered samples (such as in this study where groups of the sample respondents are all members of the same class in the same school) are compared to pure random samples that involve no clustering, it is found that the cluster samples exhibit somewhat greater sampling variation. The ratio of the variance shown by the cluster sample to the variance that would be expected from a pure random sample of the same size is known as the design effect or DEFF.² The square root of DEFF is denoted by DEFT. The design effect is a measure of efficiency of a given sample design as compared to the benchmark of simple random sampling.

On the basis of empirical computation, the values of DEFF and DEFT for this school sample design have been determined as 3.13 and 1.77, respectively. Thus, statistical inferences using data from the school sample which employ standard statistical formulas for the variance and standard error of estimate should be modified through multiplication by the factors of 3.13 and 1.77, respectively.

The margin of sampling error for this sample is +/-3.8%, which accounts for both the size of the sample and the design effect. For smaller subgroups of the sample, the margin of sampling error is larger.

Weighting the data

As with all school-based surveys, a two-stage weighting process is used to ensure a representative sample of students. These weights are based on data from the National Center for Education Statistics and the U.S. Bureau of the Census, and they control the distribution of students by grade, region, size of place, gender and race/ethnicity. Each class is also weighted to average class size achieved. The average class size was 22 students per class.

Exhibit 1.4 provides a comparison of the demographic profile of the weighted and unweighted total sample.

Analyses

Findings discussed in this report are analyzed using standard statistical tests of significance, most commonly tests for differences in population proportions and analyses of variance/t-tests for differences among means. All tests have been adjusted to take sample design and weights into account. Standard levels of significance are applied at the $p < .05$ level (i.e., differences as great as those noted would occur by chance no more than five times in 100).

Tables in this report employ a system of superscripted letters to indicate statistically significant differences between proportions or means. Proportions or means with no superscript or that share any superscripted letter do not differ significantly. Hence, proportions or means with no superscripted letters in common also differ reliably. Several examples may help to clarify this convention.

In the first row of proportions depicted below (Example 1), none of the numbers have superscripted letters in common. Thus, the first proportion (20%) differs significantly from both 35% and 48%, and 35% also differs significantly from 48%.

In Example 2, the first two proportions (12% and 30%) do not share a common superscript, but the third proportion (20%) has a superscript in common with both. Thus, the first (12%) differs significantly from the second (30%), but does not differ from the third (20%). Similarly, the second (30%) also does not differ significantly from the third (20%).

EXHIBIT 1.4

Distribution of the Sample of Students

	Total sample weighted	Unweighted	Nation- wide
Base	%	%	%
Age			
8- to 10-years old	26	26	28
11- to 14-years old	43	35	41
15- to 17-years old [†]	31	39	31
Sex			
Male	51	49	51
Female	49	51	49
Race or Ethnicity			
Hispanic	16	19	16
Black	17	15	17
Other	67	66	67

[†] Weighting was based on 15- to 17-year-olds because relatively few 18 year-olds are in grade 12.

² See, for example, the discussion by L. Kish in Kotz, S. and Johnson, N.L. Encyclopedia of Statistical Sciences: Vol.2 New York: John Wiley & Sons, 1982.

In Example 3, the first proportion (10%) differs significantly from the second proportion (33%), but not from the third (14%). The second proportion (33%) also differs significantly from the third (14%).

Finally, in Example 4, there are no superscripts associated with any of the proportions. Thus, all three numbers share the same “nil” superscript, therefore do not differ significantly

Example 1:	20% ^a	35% ^b	48% ^c
Example 2:	12% ^a	30% ^b	20% ^{ab}
Example 3:	10% ^a	33% ^b	14% ^a
Example 4:	26%	21%	24%

The focus of this report is on results from the 2004 sample. However, in those instances where there have been important or interesting changes since 1999 in any aspect of media behavior, we also present those findings. For the most part, presentation of results comparing findings from 1999 and 2004 are presented in side-bars and in the appendices. When statistical tests indicate that the results for the two years differ significantly (i.e., that the likelihood of a reported difference would occur fewer than five times in 100), we use a double dagger (‡) to mark that fact. Thus, the two proportions in Example 5 do not differ significantly, while the two proportions in Example 6 do.

	2004	1999
Example 5:	61%	54%
Example 6:	24% [‡]	13%

APPENDIX 2.2

DIARY

Introduction

In addition to the questionnaire, the seven-day media use diaries were analyzed for 694 3rd- to 12th-graders.

To generate this sample of 694 diaries, all schools that participated in the survey were recruited to complete the week-long diary portion of the study. A small incentive was offered for completion of the diaries. Of the 798 students who completed a seven-day diary recording their use of media, 694 were kept in the diary sample. Respondents were removed from the diary sample if they were removed from the survey sample ($n=12$), or if they did not complete at least five full days of the diary (at least 75% of each day, $n=92$).

The weighting procedures employed by Harris Interactive for the larger samples were also applied to the subsamples of diaries. It is important to note that the diaries represent a self-selected sample, and as such, are not necessarily representative of all children age 8–18.

Diary questions and administration

The children were asked to record any media use that occurred in the seven-day diary period. Media use was recorded in half-hour segments covering the time period from 6:00 a.m.–midnight.

If a respondent indicated using media during any half-hour time slot, he or she was asked to indicate whether or not each act of media use occurred in combination with other activities. The list of possible additional activities included: nothing else, chores,

eating, talking on the phone, doing homework (either on or off the computer), listening to music, watching TV, videos or DVDs, reading, playing video games, playing computer games, instant messaging, e-mailing, visiting Web sites, other computer activities, or something else. Young people who used media were then asked to indicate where the activity took place: in their bedroom, another room in the house, a friend's home, school, at child care or an after school program, in a car or bus or train, or someplace else. Finally, youths who used media in that half-hour time slot were asked to indicate whether they were alone or with one or more of the following: mother or father, brother or sister, friend, sitter or nanny, grandparent, teacher, someone else.

In addition to the media questions asked about each half-hour, the students were asked to answer four questions about themselves at the beginning of the diary, as well as six questions about time spent in other activities at the end of each day (see sample pages that follow).

Examples

The following are reproductions of sample pages from the diary, including the instruction page, the "About You" questions, the first page of Day One of the diary, in which children recorded their media use in half-hour increments, and the final page of Day One of the diary, in which children recorded the date, day of the week, and what else they did that day.

DIRECTIONS

PLEASE READ ALL OF THE INSTRUCTIONS CAREFULLY

THIS DIARY will be a record of your activities for **seven** days, beginning **today**. In your diary booklet there are seven sections: one for each day. Each section contains an Activities Grid and two end of day questions. Please fill in the Activities Grid throughout the day. At the end of each day, before you go to sleep, please answer the questions at the end of the section and make sure that the Activities Grid is complete.

ABOUT YOU QUESTIONS:

Before you begin to use the Activities Grid, please answer the "ABOUT YOU" questions on the next page. After you complete the five "ABOUT YOU" questions, please continue on to the Activities Grid.

ACTIVITIES GRID:

The Activities Grid is designed to help you keep track of the different kinds of media that you have used throughout the day. Each column is for a different half hour period during the day. There are five different questions.

1. WERE YOU DOING ANY MEDIA ACTIVITIES FOR AT LEAST 15 MINUTES?

(CIRCLE ONLY ONE ANSWER - PLEASE DO NOT LEAVE BLANK)

Yes - Answer the questions below.
No - Go to the next time slot.

Please see activities listed in Question 2 for examples of media activities.

2. WHAT WAS YOUR MAIN MEDIA ACTIVITY?

(CIRCLE ONLY ONE ANSWER)

- 1. Listening to music
- 2. Watching TV
- 3. Watching videotapes/DVDs
- 4. Watching a movie (in a theater)
- 5. Reading for fun (books, magazines, etc.)
- 6. Playing video games (handheld or player)
- 7. Playing computer games
- 8. Doing homework on the computer
- 9. Instant Messaging
- 10. Emailing
- 11. Visiting websites
- 12. Other computer activities

Please circle the number that matches the **one** media activity that you were paying most attention to.

Then answer the next three questions about the media activity that you circled.

3. WHAT ELSE WERE YOU DOING? (CIRCLE AS MANY ANSWERS AS YOU NEED)

- 1. Nothing else
- 2. Chores
- 3. Eating
- 4. Talking on the phone
- 5. Homework (not on the computer)
- 6. Homework (on the computer)
- 7. Listening to music
- 8. Watching TV, videos or DVDs
- 9. Reading
- 10. Playing video games
- 11. Playing computer games
- 12. Instant Messaging
- 13. Emailing
- 14. Visiting websites
- 15. Other computer activities
- 16. Something else: (write in activity)

Please circle the number or numbers that match the other things you were doing when you were reading, listening to music, playing a video game, watching TV or a movie, or using the computer. If you were doing "Something else," please write in your answer.

4. WHERE WERE YOU? (CIRCLE ONLY ONE ANSWER)

- 1. My bedroom
- 2. Another room at home
- 3. A friend's home
- 4. School
- 5. Before/after school program or child care
- 6. Car or bus or train
- 7. Someplace else

Please circle the number that matches the place where you were when you were doing the activity.

5. WHO WAS WITH YOU? (CIRCLE AS MANY ANSWERS AS YOU NEED)

- 1. I was mainly alone
- 2. Mother or father
- 3. Brother or sister
- 4. Friend
- 5. Sitter or nanny
- 6. Grandparent
- 7. Teacher
- 8. Someone else

Please circle the number or numbers that match the people that were with you when you were doing the activity.

THANK YOU FOR YOUR HELP ON THIS IMPORTANT PROJECT!
REMEMBER: TODAY IS DAY ONE!

PLEASE RETURN THIS DIARY TO YOUR TEACHER ON _____

ABOUT YOU

1. WHICH OF THE FOLLOWING BEST DESCRIBES HOW YOU USUALLY WATCH TV?

(CIRCLE ONLY ONE ANSWER)

1. I mainly watch one program or channel at a time
2. I mainly switch back and forth between a couple of channels at once
3. I mainly channel surf

2. HOW MUCH DO YOU USE INSTANT MESSAGING TO STAY IN TOUCH WITH FRIENDS AND FAMILY?

(CIRCLE ONLY ONE ANSWER)

1. A lot
2. Somewhat
3. A little
4. None

3. WHICH WORD BEST DESCRIBES HOW YOU FEEL WHEN YOU ARE WAITING (SUCH AS IN A LINE, OR IN A DOCTOR'S OFFICE) AND YOU DON'T HAVE ANYTHING ELSE TO DO?

(CIRCLE ONLY ONE ANSWER)

1. Anxious or nervous
2. Bored
3. Frustrated or impatient
4. Glad to have some time to relax
5. Like I'm wasting time
6. None of these

4. SOMETIMES PEOPLE USE TWO OR MORE MEDIA AT THE SAME TIME (SUCH AS READING WHILE WATCHING TV OR LISTENING TO MUSIC WHILE PLAYING VIDEOGAMES).

WHICH BEST DESCRIBES WHY YOU USE TWO OR MORE MEDIA AT THE SAME TIME?

(CIRCLE ONLY ONE ANSWER)

1. I never use two or more media at the same time
2. It relaxes me
3. It's the only way I can do everything I need to do
4. It's the only way I can keep up with all of the latest in music, TV, magazines, videogames, etc.
5. So I don't get bored
6. So it's not too quiet
7. That's the way I always do things
8. None of these

5. WHAT IS THE DATE THAT YOU ARE BEGINNING YOUR DIARY (DAY ONE)?

(WRITE ANSWER BELOW)

____ (Month) _____ (Day) _____ (Year)

DAY ONE

11:00 – 11:30 PM 11:30 – 12:00 AM

CIRCLE ONLY ONE ANSWER - PLEASE DO NOT LEAVE BLANK

Yes Answer the questions below. ↓	No Answer the questions below. ↓
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CIRCLE ONLY ONE ANSWER

1	2	3	4	5	1	2	3	4	5
6	7	8	9	10	6	7	8	9	10
11	12	11	12						

CIRCLE AS MANY ANSWERS AS YOU NEED

1	2	3	4	5	1	2	3	4	5
6	7	8	9	10	6	7	8	9	10
11	12	13	14	15	11	12	13	14	15
16	16								

CIRCLE ONLY ONE ANSWER

1	2	3	4	5	1	2	3	4	5
6	7	6	7						

CIRCLE AS MANY ANSWERS AS YOU NEED

1	2	3	4	5	1	2	3	4	5
6	7	8	6	7	8				

11:00 – 11:30 PM 11:30 – 12:00 AM

DAY OF THE WEEK

(CIRCLE ONLY ONE ANSWER)

- SUNDAY 1
- MONDAY 2
- TUESDAY 3
- WEDNESDAY 4
- THURSDAY 5
- FRIDAY 6
- SATURDAY 7

Today, about how much total time did you spend doing the following activities?

(CIRCLE ONE ANSWER NEXT TO EACH STATEMENT - A THROUGH F)

	30 MINUTES		1 HOUR		2 HOURS		3 HOURS		4 HOURS	
	NONE	OR LESS	HOUR	HOURS	HOURS	HOURS	HOURS	OR MORE	OR MORE	
A. Being in school	0	1	2	3	4	5				
B. Working at a job	0	1	2	3	4	5				
C. Doing chores	0	1	2	3	4	5				
D. Doing homework	0	1	2	3	4	5				
E. Participating in a club, sports team, other exercise or hobby	0	1	2	3	4	5				
F. Being in child care or before/after school program	0	1	2	3	4	5				

APPENDIX 2.3

MEDIA GENRES

In the survey, respondents were asked to provide genre information about two media — television and music. The information was collected differently for each medium. For television content, the students were provided with TV listings for their community for the previous day (or weekend day), and were asked to circle each show they had watched (students were allowed to circle only one show per time slot, and were instructed to circle a show only if they had watched “most” of the program). All programs the youth marked were then classified into one of 19 categories or genres listed below:

- Children’s
- Children’s Educational
- Comedy Series
- Drama Series
- Movie
- Soap Opera
- Music Videos
- News Magazine/News Commentary/Discussion Programs
- Talk Show
- Reality
- News
- Sports
- Entertainment/Variety
- Documentary/Informational/Instructional
- Game Show
- Infomercial
- Other
- Other Spanish Language
- Other (non-Spanish) Foreign Language

For music genres, the young people themselves categorized their music listening by choosing from a list of genres provided in the questionnaire. The youths were asked: “What types of music, either on CDs, tapes, MP3s, or radio broadcasts, did you listen to yesterday? (CIRCLE AS MANY ANSWERS AS YOU NEED.)” and were offered the list of genres below from which to choose.

- Alternative Rock
- Classic Rock
- Classical
- Country & Western
- Gospel or Christian music
- Hard Rock or Metal
- Jazz or Blues
- Latin or Salsa
- Rap or Hip Hop
- Rave or Techno
- Reggae
- Rhythm & Blues or Soul
- Ska or Punk
- Soft Rock
- Top 40
- Something else