

Factors to consider for web-based collection of time diary data in the ATUS

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American Time Use Survey (ATUS)
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Why is ATUS considering web-based data collection?

- Response to the American Time Use Survey (ATUS) is falling
- Tight budgets
- Might the addition of an online collection mode boost survey response and reduce costs?
- Concerns



Outline

- Brief overview of the ATUS
- Research
- General concerns

ATUS Overview



ATUS Interview

- 15- to 20-minute CATI interview
- Household composition, labor force questions are asked
- Time-use diary is collected
 - ▶ What did you do yesterday?
 - ▶ Where were you while you were _____?
 - ▶ Who was in the room with you while you were _____?

ATUS Interview

- Additional questions after time diary
 - ▶ Summary questions to clearly identify work, income-generating, and volunteer activities
 - ▶ Secondary childcare
 - ▶ Eldercare
- Modules on special topics

ATUS Interview

Were there any activities that you were paid for or will be paid for?

1. Select

97. None/no more paid activities

	Start	Activity	Stop	Where	For main job	For other job	For pay
[2]	12:00PM	Preparing meals and snack	1:00PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[3]	1:00PM	Laundry/Playing with the d	1:30PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[4]	1:30PM	Preparing meals and snack	2:00PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[5]	2:00PM	Eating and drinking	2:30PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[6]	2:30PM	Driving to mall	2:45PM	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[7]	2:45PM	Shopping for clothes	5:00PM	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[8]	5:00PM	Driving home	5:25PM	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[9]	5:25PM	Preparing meals and snack	5:50PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[10]	5:50PM	Watching TV	6:30PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[11]	6:30PM	Eating and drinking	7:00PM	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[12]	7:00PM	Driving to the ice cream sh	7:30PM	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[13]	7:30PM	Eating ice cream	8:15PM	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

00000103 PW2 1:09:29 PM 6/5/2007

Summary Question Grid

Diary Grid

17 Major activity categories of the ATUS lexicon

- Personal Care
- Household activities
- Caring for and helping household members
- Caring for and helping nonhousehold members
- Work and work-related activities
- Education
- Consumer purchases
- Professional and personal care services
- Household services

17 Major activity categories of the ATUS lexicon

- Government services and civic obligations
- Eating and drinking
- Socializing, relaxing, and leisure
- Sports, exercise, and recreation
- Religious and spiritual activities
- Volunteer activities
- Telephone calls
- Traveling



ATUS Products

NEWS RELEASE
BUREAU OF LABOR STATISTICS
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AMERICAN TIME USE SURVEY — 2018 RESULTS

In 2018, 89 percent of full-time employed persons worked on an average weekday, compared with 31 percent on an average weekend day, the U.S. Bureau of Labor Statistics reported today. Full-time employed persons averaged 8.5 hours of work time on weekdays they worked, and 5.4 hours on weekend days they worked. Multiple jobholders were more likely to work on an average weekend day than were single jobholders—56 percent, compared with 28 percent.

These and other results from the American Time Use Survey (ATUS) were released today. These data include the average amount of time per day in 2018 that individuals worked, did household activities, and engaged in leisure and sports activities. Additionally, measures of the average time per day spent providing childcare—both as a primary (or main) activity and while doing other things—for the combined years 2014-18 are provided. For a detailed description of ATUS data and methodology, see the Technical Note.

American Time Use

Series Id: TUU30105AA01001102
Not seasonally adjusted
Series title: Percent participating on an avg day - Food preparation and cleanup
Type of estimate: Percent of population engaged in activity on an average day
Activity: Food preparation and cleanup
Type of Days: All days
Age Group: 15 years and over

Download: [xlsx](#)

Year	Period	Estimate	Standard Error
2003	Annual	50.8	0.39
2004	Annual	51.2	0.47
2005	Annual	52.2	0.54
2006	Annual	51.6	0.54
2007	Annual	50.8	0.55
2008	Annual	52.3	0.56
2009	Annual	54.6	0.48
2010	Annual	54.8	0.53
2011	Annual	53.4	0.53
2012	Annual	52.5	0.60
2013	Annual	55.3	0.61
2014	Annual	56.3	0.64
2015	Annual	56.9	0.59
2016	Annual	57.8	0.61
2017	Annual	57.6	0.57
2018	Annual	57.6	0.70

Table A-4A. Percent of employed persons working on their main job on days they worked of day, 12 AM to 11 AM, average for the combined years 2013-17

Occupation	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM
Total, 15 years and over	4.3	3.6	3.2	3.0	4.5	6.7	13.5	28.2
Management, professional, and related occupations	2.7	1.9	1.5	1.5	2.3	3.6	8.7	22.0
Management, business, and financial operations occupations	2.1	1.3	0.8	1.0	1.8	3.8	9.7	23.4
Management occupations	2.0	1.1	0.5	0.8	2.1	4.3	10.5	24.9
Business and financial operations occupations	2.4	1.8	1.4	1.4	1.1	2.8	7.8	19.8
Professional and related occupations	3.2	2.4	2.0	1.9	2.7	3.4	7.9	21.0
Computer and mathematical occupations	1.7	1.3	0.9	1.0	1.1	1.6	7.6	20.0
Architecture and engineering occupations	1.9	1.3	1.3	0.6	1.6	2.9	12.9	33.3
Life, physical, and social science occupations	4.1	3.0	3.4	3.3	3.3	3.9	10.4	20.1
Community and social services occupations	2.7	1.5	1.4	0.6	1.2	1.8	3.5	13.5

- Data series
- Tables
- Public use data files and documentation
- News releases

Web collection



Westat study

- Research Question: Should ATUS move from CATI to self-administered web and CATI mixed-mode data collection?
 - ▶ What would the effect be on response rates?
 - ▶ What would the effect be on measurement error?
 - ▶ Would the data be comparable between modes?
- Literature review
- Design Proposal
- Comparability report
- Mock-up of an instrument for collecting time diary info via the web

Literature review

- Little research on web-collected diaries
- Many of the studies they identified:
 - ▶ Are pilot studies
 - ▶ Are mixed-mode
 - ▶ Use light diaries
 - ▶ Use incentives
- Time-use data collected online is of similar quality to data collected by phone and paper

Literature review

■ Literature on web collection

- ▶ Online surveys achieve lower response than other modes
- ▶ Web has higher breakoff rates than CATI, especially for complex surveys

Survey design proposal



- Allocation of sample to mode
- Contact procedures
- Diary design
 - ▶ Survey questions and layout
 - ▶ Summary of diary day
 - ▶ Other summary questions
 - ▶ Probes/data quality checks
 - ▶ Changes to activity classification

Survey design proposal– allocation of sample to the mode

Week	Day	Telephone HH		Non-telephone HH
		High Web Use	Low Web Use	
1	7 days before diary day	Advance mailing	Advance mailing	Advance mailing
	1 day after diary day (if not complete)	Replacement letter	Replacement letter	Replacement letter
2	1 day after diary day (if not complete)	Replacement letter	Switch to phone for remaining weeks; calls begin on the day after the diary day on week three	Replacement letter
3	1 day after diary day (if not complete)	Switch to phone for remaining weeks; calls begin on the day after the diary day on week four	Interviewer calls for interview on day after diary day	Switch to phone for remaining weeks; Send letter with pre-paid calling card and call-in number
4-8	1 day after diary day (If not complete)	Interviewer calls for interview on day after diary day	Interviewer calls for interview on day after diary day	Respondent calls in for interview on day after diary day



Survey design proposal - layout

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Please select or enter a description of your main activity on Wednesday, February 4 at 6 : 00 AM ? [Summary of my activity on February 4](#)

Work [CLICK HERE for activity list](#)

Working at main job

Select Activity

Or

Enter Description Search

How long did you spend on this activity?

Start time: 6 : 00 AM

Stop time: : AM

Or





Enter Length: minutes

Who was with you during this activity?



<input type="checkbox"/> John Doe	<input type="checkbox"/> Other non household children under 18
<input type="checkbox"/> Jimmy Doe	<input type="checkbox"/> Other non household adults over 18
<input type="checkbox"/> Parents	<input type="checkbox"/> Boss or manager
<input type="checkbox"/> Other non household family member under 18	<input type="checkbox"/> People I supervise
<input type="checkbox"/> Other non household family member over 18	<input type="checkbox"/> Co-workers
<input type="checkbox"/> Friends	<input type="checkbox"/> Customers
<input type="checkbox"/> Neighbors	

Where were you during this activity?

Next Activity Clear

Time	Activity	
4 : 00 AM	Sleeping	
5 : 00 AM	Eating and Drinking	  
6 : 00 AM		



Activity List - Windows Internet Explorer

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ATUS Activity List

- Sleeping
- Eating and Drinking
 - o Eating or Drinking – meals, snacks, drinks
 - o Food and kitchen preparation
 - o Kitchen and food clean-up
- Socializing, Relaxing, and Leisure
 - o Watching TV
 - o Socializing and communicating with others
 - o Reading for personal interest
 - o Relaxing/thinking
 - o Computer use
 - o Playing games
 - o Arts and entertainment
- Personal Care
 - o Grooming
 - o Health-related self-care
 - o Personal, private activities
 - o Personal care emergencies
- Work
 - o Working at main job
 - o Working at other jobs
 - o Work-related activity
 - o Other income generating activity


Survey design proposal – summary of the day


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Here is a summary of your activity on Wednesday, February 4. Please verify that this information is correct. You may add, delete, or edit activity by clicking the buttons on the left.

	Start Time	End Time	Activity
  	4:00 AM	7:00 AM	Sleeping
Add Activity ->			
  	7:00 AM	7:30 AM	Personal Care
  	7:30 AM	8:00 AM	Eating and Drinking
  	8:00 AM	8:30 AM	Travel
  	8:30 PM	12:00 PM	Work
  	12:00 PM	5:00 PM	Eating and Drinking
  	5:00 PM	5:30 PM	Travel
  	5:30 PM	6:30 PM	Eating and Drinking
  	6:30 PM	9:30 PM	Watching TV
  	9:30 PM	10:00 PM	Personal Care
	10:00 PM	4:00 AM	Sleeping

Survey design proposal – summary questions

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You indicated that Jimmy Doe was awake between 7:00 AM and 8:00 PM.

Please indicate during which times or which activities during that time period Jimmy Doe was in your care by checking the box on the right.

Time	Activity	Jimmy Doe in your care?
7:00 AM	Personal Care	<input type="checkbox"/>
7:30 AM	Eating and Drinking	<input type="checkbox"/>
8:00 AM	Travel	<input type="checkbox"/>
8:30 PM	Work	<input type="checkbox"/>
12:00 PM	Eating and Drinking	<input type="checkbox"/>
5:00 PM	Travel	<input type="checkbox"/>
5:30 PM	Eating and Drinking	<input type="checkbox"/>
6:30 PM	Watching TV	<input type="checkbox"/>

Survey design proposal – probing & activity classification

■ Probing

- ▶ Follow-ups can be asked in two locations
 - As the respondent completes the diary
 - On the summary screen

■ Changes to activity classification

- ▶ Drop boxes or search fields can be used
- ▶ Analyzed data to identify most prevalent activities



Research question: How much detail to collect in a Web diary?

- Collect activities as open-ended responses?
- Ask respondents to identify their activities from a list?
- Continue to ask “Who?” and “Where?” for activities?
- Continue to ask about secondary childcare?
- Include clarifying probes within the diary?
- To minimize breakoffs, we need to reduce the complexity of the diary

How might ATUS be impacted?

- ATUS products: Negative impact
 - ▶ Potential breaks in thousands of data series
 - ▶ Potential loss in comparability within a given year and compared to previous years
 - ▶ Less data for research

Final thoughts

■ Current situation

- ▶ Declining response rates
- ▶ Increasing costs

■ Future is online data collection

- ▶ Web-based
- ▶ Mobile apps

■ Transition

- ▶ Understand limitations & possibilities
- ▶ Identify priorities



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