Out-ofclass target languagerelated time use

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This study reports on results from an investigation into out-of-class time devoted to the target language. Data concerning out-of-class time use was collected from 61 participants. For each episode, 12 data points were collected on the temporal, typological, teleological, and affective characteristics. A total of 1,730 episodes comprising 122,761 minutes were recorded. Participants averaged just over 117 minutes per day during the collection period with a very wide variation between participants. More episodes occurred on weekdays than on weekends, and the distribution over a typical 24-hour period showed one peak at 8:00 and another at 20:00. Most episodes occurred at home (54.3%) and most (61.0%) involved time use that was directly related to school. The typical episode was perceived to involve high concentration, moderate effort, low enjoyment, and very low anxiety. Researchers are encouraged to control for out-of-class time when studying second language acquisition.

この研究の焦点は外国語学習学生が授業外で目的言語と接する時間である。学生から(計61名)授業外の時間の使い方 についてデータを集めた。各エピソードに関して、4種類の特徴(時間・種類・理由・感情)のデータをあわせて12点を収集し た。全部で、1,730のエピソードと122,761分のデータが記録された。研究の期間に、学生が毎日目的言語と接することが 平均117分間以上になった。週末により多くのエピソードが週日に起こって、日中の分配は午前8時と午後8時にピークを示し た。たいていのエピソードが家(54.3%)において起こって、と大半の時間(61.0%)は学校と直接関係があった。典型的な エピソードを考察すると、集中が高くて、努力がミディアム、楽しさが低くて、と不安が非常に低い。外国語学習に関しての研究 を行うときに授業外の時間の変数をコントロールすることを推薦される。

T IME IS an important variable for language learning as learning is primarily a function of two variables: the amount of time allocated to the learning process and the way in which that time is used (Carroll, 1963; Bloom, 1974). In fact, there are essentially two types of time: time spent in class and time spent outside of class. The amount of time spent in class is a known figure determined by the curriculum. The way in which that time is used is determined by a number of different factors, including school policy, course materials, and teaching philosophy. However, a great deal of learning occurs outside of class. Its importance can be seen in the number of teachers who assign homework, schools that ask students on term-end feedback forms about the out-of-class study time necessary for completing a course, and educational ministries which set guidelines for the award of course credit based on both in class and out-of-class time (DAAD, 2010; MEXT, 2004, 2010).

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Nevertheless, surprisingly little research has targeted the amount of out-of-class time use on a target language and none of the few studies located have used robust data collection methods or extended over more than a one-week period. Some time use studies have looked at how children and students spend time throughout the day (e.g., Larson & Verma, 1999; Larson, 2001) by recording all activities, including time spent at home for school. Though some of these studies have used robust methods such as time diaries or experience sampling methodology (Harvey & Pentland, 1999; Juster, Ono, & Stafford, 2003; Michelson, 2005), they neither discriminate between out-of-class time spent on different skill areas nor extend over more than a one-week period. Other studies (e.g., Corno, 2000) have focused on homework in general, with time as a peripheral factor, but employ highly unreliable retrospective time estimates (e.g., Juster, et al., 2003; Plewis, Creeser, & Mooney, 1990). Moreover, these types of homework studies focus almost exclusively on the core subjects of the typical U.S. high school curriculum (e.g., math, English, science) and commonly target either the impact of homework on grades or the affective experiences of the learners. Among the few homework studies that have included data collection on out-of-class time allocated to foreign languages are the studies by Trautwein (2006) and Trautwein and Lüdtke (2007), who examined secondary school learners in Switzerland. However, they, too, collected only one week of data using retrospective time estimates and specifically targeted homework to the exclusion of access of the target language for other purposes.

In short, extensive searches of available databases have revealed that little is actually known about out-of-class use of a target language, and the few studies that do exist have not used a methodology robust enough to actually provide reliable time use data. This lack of attention to the out-of-class time allocation to the target language is, in effect, an area left out of the box entirely in language education. In this paper, I discuss an exploratory longitudinal study that focuses specifically on outof-class time use that is allocated to the target language to begin the discussion of this overlooked aspect of language learning.

The study

For this longitudinal study of Japanese university students' out-of-class time use of the target language I have been collecting data concerning time use episodes, including a) temporal characteristics (length, sequencing, and frequency of episode), b) typological characteristics (what activities occurred), c) motivational characteristics (what prompted the episodes), and d) affective characteristics (how students felt about the episodes).

Method.

Instrument.

Researchers have used a number of different methods for collecting time use information, depending upon their needs and the trade-offs they are willing to make (e.g. accuracy for ease of compliance) and each method has its respective strengths and weaknesses (cf. Harvey, 1999; Pentland, Harvey, Lawton, & McColl, 1999; Robinson, 1999). After piloting several different forms over the past few years (Visgatis & Swenson, 2007), I chose to use a type of ecological momentary assessment (e.g., Bolger, Davis, & Rafaeli, 2003; Schiffman, Stone, & Hufford, 2008) in the form of a prospective (i.e., questions are known to the participants in advance of the targeted phenomena) time diary as my primary instrument. This time diary is modeled on the time diary developed by Michelson (2005). This instrument was developed over several years, with each form tested by asking Japanese university students to maintain the various iterations for one week and provide comments on the ease of use. The final format, used for this study, has a number of advantages (see Appendix 1 for the English version of the instrument).



It is appropriate when a) the number of participants is small, b) the phenomenon under investigations is clearly defined (such as the out-of-class time use of English) but when there is wide variation in the frequency and duration of episodes of the phenomenon, and c) the danger of non-compliance is high if the instrument requires onerous reporting of the phenomenon under investigation (Bolger, Davis, & Rafaeli, 2003). This final point is critical in a longitudinal context, where the primary threat is mortality. If too many participants withdraw, the dataset may not be sufficient to meet the objectives of the study.

In this time diary, titled the English-Access Time Use Survey (see Appendix 1), the anchor point is the episode. Each time a participant comes into contact with the target language (English) outside of class (the episode) they are asked to record 12 data points covering five areas: episodic (what occurred), temporal (start and end date and time), environmental (location and co-participants), teleological (relatedness to school, work, future goals), and affective (feelings about the episode). For this data collection, participants were asked to enter the diary data as soon as possible after each episode, but if that was not feasible, to enter the data each evening.

These data allow a response to several broad questions, including: How much time do participants spend outside of class in accessing the target language? How many episodes occur and what patterns occur during the day and over the week? What is the main purpose for accessing the target language? What are the affective features of the reported episodes?

Participants

University students (n = 61) drawn from three schools in western Japan serve as participants in this study. Forty-one (firstyear) students were from an English and international studies department of a small private women's university, 12 (secondyear) students were from an intensive English program at a mid-sized private coeducational university, and eight (secondto fourth-year) students were from a department of education at a large private coeducational university. The researcher taught only eight of the students in the intensive English program and none of the other students. No other descriptive characteristics of the participants in these convenience samples were recorded. Although these samples make generalization to a broader population highly tentative, the exploratory nature of the project, combined with the difficulty of securing participants for longitudinal studies, makes that compromise unavoidable. Nevertheless, given that there are no other detailed data available on target-language related out-of-class time use, this study may provide a starting point for future research.

Data records were collected on a weekly basis, though some participants submitted record sheets at different intervals. As participation was voluntary, the number of weeks of data from each participant varies widely. Some participants agreed to submit data every week; some provided several weeks of data but not on a weekly basis; others only submitted the record for one week. The data collection period for this project was from September, 2010 through January, 2011. The data addressed in this paper comes from September, 2010 to December, 2010, extending the data reported at the JALT 2010 conference by approximately one month. Due to the longitudinal nature of the project, participation dropped throughout the data collection, a not unexpected occurrence.

Results and discussion

The results of this study provide a preliminary indication of the out-of-class time use devoted to the target language. Table 1 provides an overview of the minutes devoted to English use outside of class by all participants regardless of the degree to which they are participating in the study in total minutes per



month, total minutes for each day of the week, and the total minutes during the period reported in this paper. Out-of-class time use for the entire period (see Appendix 2, Table B1) ranged from a low of 120 minutes (Subject S#6) to 6,630 minutes (S#44). This, of course, ignores the number of weeks that a participant opted to maintain the time diary. By day of week, Monday (21,229 total minutes) and Thursday (20,021 total minutes) have the highest daily time use devoted to English during the period. Sunday, Wednesday, and Friday have an allocation of 14,401 to 14,901 total minutes. Individual time allocation by day of the week ranged from a low of 5 minutes to a high of 2,231 minutes on Thursday. Wide variation in the out-of-class time allocation to English use between participants was found even between those enrolled in the same program of study, taking the same number of classes. Even those enrolled in identical classes throughout the school week showed wide variation in the amount of time allocated to English during the week. Again, because the data do not represent equal numbers of weeks in the study, the time allocation to out-of-class English use between participants is not comparable. However, the variation does suggest that language learners, even those in the same class, use the target language for vastly different amounts of time.

Also of interest is when episodes occurred during the day. As

can be seen in Figure 1, episodes were reported at all times of the day on a 24-hour clock by day of the week. In general, the pattern of episodes by time band shows a rising trend through the day with two peak times for each day of the week. One peak occurs around 8 o'clock in the morning and most likely represents study before class. A second peak occurs around 8 o'clock in the evening. Monday episodes are generally more frequent than other days of the week, regardless of time of day, though similar patterns of episode reporting appear for all days of the week with the exception of Saturday and Sunday mornings when there is no peak in the reported number of episodes. Even the early morning hours (3 a.m. to 4 a.m.) have reported episodes at some point during the week. Note, as the length of an episode varies from a few minutes to several hours, the number of episodes should not be seen as equal to the number of minutes devoted to out-of-class target language use.

The number of episodes per participant by month and by day of the week also varies widely. As with the minutes per month, the highest number of episodes occurred in October (1,013), the month in which most of the participants agreed to maintain a time diary for at least one week (see Appendix 2, Table B2). By day of the week, Monday had the highest number of episodes (322) and Sunday the lowest (181). (For complete data of partici-

		Minutes	by Month			Minutes by Day of Week					
	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Sum	9,512	76,691	26,195	10,363	14,901	21,299	19,847	14,401	20,021	14,528	17,764
Minimum	5	75	175	210	15	30	15	15	5	20	30
Maximum	1,080	7,860	4,390	2,040	1,640	3,590	3,900	1,116	2,310	1,621	3,170
Mean	280	1,300	1,541	942	310	387	368	282	400	291	378
SD	281	1389	1021	566	339	559	583	294	481	338	549

Table 1. Minutes by month and day of the week for all participants





Figure 1. Episodes for day of week by time band

pants by reported episodes, see Appendix 2, Table B3.)

The total number of days of data ranged from 64 days (S#35) to 1 (S#22), with these two participants devoting 5,660 minutes and 120 minutes respectively to English use outside of class (see Table 2 and Appendix 2, Table B4). The participants averaged just over 121 minutes per day for days with data reported, with a range from 33 to 410 minutes. Again, wide variation in the amount of time devoted to the target language outside of class was found between participants in this exploratory study of Japanese university students' out-of-class Englishrelated time use. Variation was found in a) the total number of minutes devoted to out-of-class target language use, b) the average number of minutes per day for days where data was provided, and c) the average minutes per day for the period of participation. Clearly, the factors influencing the results included the wide variation in the dates over which the participant provided data, the total number of days during the study period that the participant provided data, and the total number of days in the period in which each participant agreed to participate. However, the data obtained do provide us with a clearer understanding of the amount of time that Japanese university students spend using a target language outside of class and the ways in which individual students use this time.

	Days with data	Days in period	Total minutes	Minutes per day with data	Minutes per day in period
Max	64	92	15,370	411	750
Min	1	1	105	34	8
М	16.20	24.46	2,012.48	121.15	116.95
Median	7	7	845	99	79
SD	17.92	28.95	2,611.35	71.20	116.53

Table 2. Descriptive data for all participants

In addition to the temporal data, the time diary also collected environmental, teleological, and affective data from the participants about each of the episodes reported in the time diaries. The vast majority of episodes occurred when the participant was alone (83.3%), with the rest of the episodes split between those with friends (9.8%) and others (6.9%).

Most of the episodes occurred in the participants home environment (54.3%). Participants also seemed to make use of their commuting time for accessing English (17.6%), as well as time on campus, either at some special study place (9.9%), such as a self-access center or resource center, or some other place on campus (11.5%). A number of episodes occurred at part-time jobs (6.2%). Other accounted for very few of the episodes (0.5%), with "café" being a representative location.

Somewhat surprisingly, 1,051 (61.0%) of the 1,722 total



episodes were considered by students to be directly related to school. These results differ from a previous study (Visgatis & Swenson, 2007) with fewer participants, where most of the episodes were related to self-improvement. The 2007 data, however, were collected between terms, while the 2010 data were collected during one term. In terms of minutes, more than half (66,481 minutes) of the total minutes were associated with school. These episodes typically involved completion of homework assignments, review of materials, or study for a test. Enjoyment accounted for 340 (19.7%) of the episodes, totaling 21,322 minutes. Here, the largest portion involved episodes related to listening to music from English-speaking groups. Self-improvement was named as the reason for 230 (13.4%) of the episodes that consumed 18,254 minutes. Self-improvement included studying for standardized tests (e.g., TOEIC) that were not directly related to schoolwork. Finally, a small number of episodes were linked to part-time work 101 (5.9%). These episodes focused mainly around teaching at a juku (cram school) or taking orders from foreign customers. By individual participant, however, the number of episodes and time given to various teleological categories varied widely, with some participants reporting no time devoted to school and others 100% school related. (See Appendix 2, Table B5 for teleological distribution of the data by participant.)

Regarding the affective factors, participants reported levels of concentration, effort, enjoyment, and anxiety ranging from 1 to 5 on a Likert scale (see Table 3). Levels of anxiety were generally low, while levels of concentration and effort were reported as somewhat strong to very strong (3 to 5). Levels of reported enjoyment varied widely. The levels of correlation between the affective factors were significant between all factors (p < .05) (see Table 4). Effort and concentration had a moderately positive correlation (r = .591), enjoyment and concentration had a weakly negative correlation (r = .119) and the rest were weakly positive. This may imply that participants consider concentration

on the target language to be more closely aligned with effort expended in learning the language than enjoyment in using the language. Episodes given high ratings for level of enjoyment, in contrast, weakly correlated with effort (r = .057, p < .05). These findings have implications for motivation researchers and for language educators. For motivation research, links between various aspects of motivation clearly need to be made with the actual behavior of students. For language educators, efforts to reduce anxiety and improve enjoyment need to be balanced with language learners feelings about how they are concentrating on learning the target language and the effort expended in learning. This study does not address the question of how much "fun" out-of-class use of a target language should be for students. It does raise the issue that enjoyment and concentration on learning may be interpreted as mutually exclusive by language learners.

Table 3. Affective profile of episodes

	Lov	wer		Hig	gher
	1	2	3	4	5
Concentration	96	127	504	486	491
Effort	120	148	667	444	315
Enjoyment	531	292	387	168	322
Anxiety	1,100	171	220	112	55

 Table 4. Correlation between affective aspects



	Effort	Enjoyment	Anxiety
Concentration	.591**	119**	.180**
Effort		.057*	.245**
Enjoyment			.128**

Notes: ****** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Conclusions

Though any conclusions regarding the data reported here must be considered preliminary in nature, the results indicate that for these participants, primarily first- and second-year university students, a large portion of the out-of-class time use during the term devoted to the target language is related more to schoolwork than to other areas. That time is spent studying before class, often while commuting, and during breaks between classes, not just in evenings and on weekends, is also apparent from the data. In fact, more episodes were reported during weekdays than on weekends. The results also point out that the amount of time devoted to the target language by individual learners varies widely regardless of the program in which the learners are enrolled. In short, these students showed wide variation in their out-of-class time use of the target language even when enrolled in the same program and classes.

One implication for language educators from this exploratory study is that though they may have the expectation that all the students enrolled in the same language class will allocate a similar amount of time to the target language outside of class, their actual time allocation will vary widely. This clearly must be considered when setting homework or requiring out-of-class group work. Further, it indicates that students must become more aware of their own out-of-class time use of the target language, whether it be for school work or enjoyment, when setting and meeting their own learning goals.

Another implication of these results concerns other areas of research. Specifically, researchers investigating second language acquisition who do not consider or control for out-of-class target language time allocation may find their results distorted or skewed in ways that are unanticipated. Researchers are, therefore, urged to consider ways to control for this possibly confounding variable.

Further research must clearly be done to understand the types of target language activities that students engage in outside of class and the relationship between the types of activities and the affective factors. Moreover, time use needs to be linked to motivation in order to understand what role this plays in learner allocation of time outside of class to language learning. Furthermore, given the importance placed on learner motivation, and raising and maintaining motivation, it is essential to understand if motivation translates into time allocation by language learners.

Bio data

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References

Bloom, B. S. (1974). Time and learning. American Psychologist, 682-688.

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, 54(1), 579-616. doi:10.1146/ annurev.psych.54.101601.145030

- Carroll, J. B. (1963). A model of school learning. *Teachers College Record*, 64(8), 723-723.
- Corno, L. (2000). Looking at homework differently. *Elementary School Journal*, 100, 529-548.
- DAAD (Deutscher Akademischer Austausch Dienst). (2010). Credit systems and learning outcomes in ASEM member countries. ASEM Education Secretariat, German Academic Exchange Service. Retrieved from <www.asem-education-secretariat.org>.
- Harvey, A. S., & Pentland, W. E. (1999). Time use research. In W. W. Pentland, A. S. Harvey, M. P. Lawton & M. A. McColl (Eds.), *Time use research in the social sciences* (pp. 3-18). New York.: Klewer Academic / Plenum Publishers.
- Juster, F. T., Ono, H., & Stafford, F. P. (2003). An assessment of alternative measures of time use. *Sociological Methodology*, 33, 19-54.
- Larson, R. W. (2001). How U.S. children and adolescents spend time: What it does (and doesn't) tell us about their development. *Current Directions in Psychological Science*, 10(5), 160-164.
- Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across cultural settings of the world: Work, play and developmental opportunities. *Psychological Bulletin*, 125, 71–736.
- MEXT. (2004). FY2003 white paper on education, culture, sports, science and technology: Higher education to support a knowledgebased society full of creative vitalit: —New developments in higher education reform. Tokyo: Ministry of Education, Culture, Sports, Science and Technology. Retrieved from <www.mext.go.jp/english/ news/2004/05/04052401/003.pdf>.
- MEXT. (2010). Guidelines for building organized and continuous cooperation including double and joint degree programs between university in Japan and university in foreign countries. Higher Education Bureau Higher Education Policy Planning Division Office for International Planning. Tokyo: MEXT. Retrieved from http://www.mext.go.jp/english/koutou/detail/1294463.htm>.
- Michelson, W. (2005). *Time use: Expanding the explanatory power of the social sciences*. Bou, CO: Paradigm.

- Pentland, W. E., Harvey, A. S., Lawton, M. P., & McColl, M. A. (Eds.). (1999). *Time use research in the social sciences*. New York: Kluwer Academic/Plenum Publishers.
- Plewis, I., Creeser, R., & Mooney, A. (1990). Reliability and validity of time budget data: Children's activities outside school. *Journal of Official Statistics*, 6, 411-419.
- Robinson, J. P. (1999). The time-diary method: Structure and uses. In W. W. Pentland, A. S. Harvey, M. P. Lawton & M. A. McColl (Eds.), *Time use research in the social sciences* (pp. 19-45). New York: Klewer Academic / Plenum Publishers.
- Schiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology*, 4, 1-32. doi: 10.1146/annurev.clinpsy.3.022806.091415
- Trautwein, U. & Lüdtke, O. (2007). Students' self-reported effort and time on homework in six school subjects: Between-students differences and within-student variation. *Journal of Educational Psychology*, 99(2), 432-444.
- Trautwein, U. (2006). The homework–achievement relation reconsidered: Differentiating homework time, homework frequency, and homework effort. *Learning & Instruction*, *17*(3), 372-388.
- Visgatis, B. & Swenson, T. (2007). Time allocation and language learning. Paper presented at the JALT International Conference on Language Teaching and Learning & Educational Materials Exposition, Tokyo, November 24.

Appendix I English Version of the English-Access Time Use Survey Instrument

#	Mon	Day	Tii Start HH:MM	me End HH:MM	Activity	Alone	With friends	Other	Related to school (homework, preparation)	Related to PT job	Self-study not directly related to school	Enjoyment	Consistency of concentration	Degree of effort	Enjoyment	å Anxiety	At home or in my room	At a special place on campus	Other place on campus	At work	While commuting	Other
Ex1	6	1	17:00	17:35	TOEIC Listening Practice	\checkmark					\checkmark		4	2	1	2	\checkmark					
Ex2	6	۱	20:00	21:15	Listened to English music	\checkmark						~	1	4	5	1					\checkmark	
Ex3	6	2	10:10	10:45	Reading homework		\checkmark		~				3	3	1	1			\checkmark			
Ex4	6	2	12:00	18:10	Took orders from foreign customers (about 2 orders per hour)		0	~		~			3	5	2	5				~		
1																						
2																						
3																						
4							·····										•••••					
5																						



Appendix 2 Additional Tables

Table B1. Minutes	s by Participant	by Month in Stud	ly and Day of the We	ek
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		Minutes	by Month		Minutes by Day of Week									
S #	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum		
1		600				120	180	120	180			600		
2		240				60		90	90			240		
3		355				150		25	90		90	355		
5	670	450			90	320	190	90	190	150	90	1,120		
6	20	85				30		20			55	105		
7	165	210			120				215	40		375		
8		460				240	30	40		30	120	460		
9		1,430	300		120	60	110	480	390	390	180	1,730		
10		450			130	90	40	30		160		450		
11	460	2,345	920		420	375	540	240	1,300	560	290	3,725		
12	90	400			60	60	60	80	90	80	60	490		
13	365	2,805	752		385	537	510	550	490	580	870	3,922		
15		3,750	1,908	680	914	744	894	747	565	793	1,681	6,338		
16	395	3,140	2,010	1,015	1,640	1,035	1,260	665	1,360	295	305	6,560		
17		1,200			600	120	180			180	120	1,200		
18		3,285			630	420	405	610	245	495	480	3,285		
19	760	1,210			540	215	45	100	430	160	480	1,970		
20	303	2,345	1,315	465	385	585	848	940	960	315	395	4,428		
21		3,605	270		315	395	690	705	780	270	720	3,875		
22		120			120							120		
23	185					110	60	15				185		
24	1,080	7,860	4,390	2,040	810	3,590	3,900	760	2,310	830	3,170	15,370		
25		1,280			45	150	240	210	450	80	105	1,280		
26		690			30	120	30	30	420	30	30	690		
27		1,145			180		150	410	120	120	165	1,145		

VISGATIS • OUT-OF-CLASS TA	RGET LANGUAG	SE-RELATED TIME USE
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		Minutes	by Month		Minutes by Day of Week									
S #	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum		
28	60	570			210	60			60	240	60	630		
29		890			120	120	85	75	15	250	225	890		
30		486					60	189	134	103		486		
31	120	1,210			70	150	150	90	210	210	450	1,330		
32		975				120	170	265	90	150	180	975		
33	91	2,300	1,453		860	991	714	564	440	155	120	3,844		
34	132	505			97	30	90	102	30	108	180	637		
35	180	1,680	2,060	1,740	420	1,020	780	630	1,340	780	690	5,660		
36	110	705			110	200	165		110	90	140	815		
37		515				135	210		60	60	50	515		
38	30	720			240	180	180		30	60	60	750		
39		720			180		180			90	270	720		
40		845			65	180	15	105	30	150	300	845		
41		1,720	960	1,570	60	810	200	150	1,530	1,440	60	4,250		
42	510	900			120	180	180	180	330	60	360	1,410		
43	120	300			60	60	60	60	60	60	60	420		
44	496	2,700	1,859	770	570	1,449	950	1,116	890	420	430	5,825		
45	95	770	1,065	210	530	580	310	160	320	20	220	2,140		
46	195	590			120	260	195	75	30	60	45	785		
47	120			482		130	190	32	180	70		602		
48	1,005	4,985			915	910	1,255	495	515	515	1,385	5,990		
49		205			35	50	35			30	55	205		
50		1,060			100	200	140	30	210	380		1,060		
51	25	270			65	60	60	30	80			295		
52		390				210	180					390		
53	5	390			120	120	60	95				395		
54	120	3,595	2,915		1,155	600	580	1,040	1,145	830	1,280	6,630		
56	723	1,637	2,084	905	195	1,399	1,003	482	434	1,621	215	5,349		
57	60	75			15		60	30	30			135		

	-	Minutes	by Month		Minutes by Day of Week							
S #	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum
58	155	1,210			180	340	225	240	195	140	45	1,365
59		420				40	60	90	70	55	105	420
60	475	1,628	1,759	486	440	837	658	502	583	505	823	4,348
61	120	1,470			120	180	120	450	180	180	360	1,590
62		475			75	75	30	70	5	60	160	475
63		175	175		120	30	135	25	10		30	350
64	72	145				67		72		78		217
Sum	9,512	76,691	26,195	10,363	14,901	21,299	19,847	14,401	20,021	14,528	17,764	
Min	5	75	175	210	15	30	15	15	5	20	30	
Max	1,080	7,860	4,390	2,040	1,640	3,590	3,900	1,116	2,310	1,621	3,170	
М	280	1,300	1,541	942	310	387	368	282	400	291	378	
SD	281	1389	1021	566	339	559	583	294	481	338	549	

Table B2. Total Episodes by Month

	Episodes by Month										
	Sep	Oct	Nov	Dec							
Sum	161	1,013	409	147							
Max	17	66	53	20							
Min	1	1	2	6							
М	4.74	17.17	24.06	13.36							
Median	3	11	21	13							
SD	4.24	16.48	15.53	4.65							





		Episodes	by Month				Epi	sodes by D	OW			
S Code	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum
1		6				1	2	2	1			6
2		4				2		1	1			4
3		7				2		1	2		2	7
5	10	6			1	5	3	1	3	2	1	16
6	1	4				1		1			3	5
7	2	3			1				3	1		5
8		8				1	1	2		1	3	8
9		14	2		1	1	2	4	3	3	2	16
10		8			1	1	1	1		4		8
11	8	32	14		7	9	10	4	14	6	4	54
12	1	6			1	1	1	1	1	1	1	7
13	14	66	16		7	20	13	12	13	15	16	96
15		37	19	8	9	6	9	10	10	10	10	64
16	9	57	38	20	25	18	34	11	23	5	8	124
17		5			1	1	1			1	1	5
18		27			5	3	3	4	4	4	4	27
19	11	11			3	4	2	3	3	3	4	22
20	5	41	33	13	8	17	16	17	17	9	8	92
21		33	2		2	4	7	9	6	3	4	35
22		1			1							1
23	4					1	2	1				4
24	9	56	39	14	11	21	26	8	17	11	19	113
25		16			1	2	3	3	3	2	2	16
26		7			1	1	1	1	1	1	1	7
27		13			2		2	3	2	2	2	13
28	1	5			1	1			1	2	1	6
29		17			1	1	2	3	1	4	5	17

Table B3. Reported Episodes by Participant by Month and Day of Week

		Episodes	by Month			Episodes by DOW						
S Code	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum
30		11					1	4	3	3		11
31	1	12			1	2	2	1	2	3	2	13
32		16				1	3	7	2	2	1	16
33	3	30	21		7	17	9	12	5	3	1	54
34	3	8			2	1	1	2	1	2	2	11
35	2	20	25	17	3	12	9	9	11	11	9	64
36	4	13			2	3	3		4	2	3	17
37		8				2	3		1	1	1	8
38	1	5			1	1	1		1	1	1	6
39		4			1		1			1	1	4
40		9			2	2	1	1	1	1	1	9
41		15	9	12	1	9	2	4	9	9	2	36
42	5	8			1	2	1	1	4	1	3	13
43	2	5			1	1	1	1	1	1	1	7
44	9	52	53	17	8	35	22	22	22	13	9	131
45	3	17	20	6	8	14	8	4	9	1	2	46
46	4	13			2	6	3	2	1	2	1	17
47	1			8		2	2	1	3	1		9
48	17	54			9	14	12	7	10	8	11	71
49		6			1	1	1			1	2	6
50		16			2	3	2	1	3	5		16
51	2	5			2	1	1	1	2			7
52		3				2	1					3
53	1	4			1	1	1	2				5
54	3	39	29		9	8	8	11	15	13	7	71
56	7	47	48	19	9	26	18	21	15	25	7	121
57	2	2			1		1	1	1			4
58	3	24			4	5	4	4	5	3	2	27
59		12				1	1	4	2	2	2	12

		Episodes b	y Month			Episodes by DOW						
S Code	Sep	Oct	Nov	Dec	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sum
60	11	37	36	13	8	21	16	13	14	10	15	97
61	1	13			2	1	1	5	2	2	1	14
62		8			1	1	1	1	1	1	2	8
63		5	5		2	2	2	2	1		1	10
64	1	2				1		1		1		
Sum	161	1,013	409	147	181	322	284	248	280	219	191	1,730
Min	1	1	2	6	1	1	1	1	1	1	1	
Max	17	66	53	20	25	35	34	22	23	25	19	
М	5	17	24	13	4	6	5	5	6	4	4	
SD	4.17	16.34	15.06	4.44	4.36	7.63	6.98	5.17	5.94	4.80	4.28	

Table B4. Minutes per Day by Participant (by Days with Data)

S Code	Start	End	Days with Data	Days in Period	Total Minutes	Minutes per Day with Data	Minutes per Day in Period
35	2010/09/27	2010/12/20	64	84	5,660	88	67
44	2010/09/27	2010/12/15	60	79	5,825	97	74
20	2010/09/27	2010/12/15	57	79	4,428	78	56
60	2010/09/27	2010/12/09	57	73	4,348	76	60
56	2010/09/21	2010/12/22	54	92	5,349	99	58
16	2010/09/27	2010/12/19	53	83	6,560	124	79
54	2010/09/28	2010/11/19	49	52	6,630	135	128
13	2010/09/27	2010/11/28	47	62	3,922	83	63
24	2010/09/27	2010/12/16	46	80	15,370	334	192
11	2010/09/27	2010/11/21	39	55	3,725	96	68
41	2010/10/01	2010/12/17	33	77	4,250	129	55
15	2010/10/12	2010/12/19	33	68	6,338	192	93
33	2010/09/27	2010/11/14	30	48	3,844	128	80
45	2010/09/27	2010/12/12	29	76	2,140	74	28

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S Code	Start	End	Days with Data	Days in Period	Total Minutes	Minutes per Day with Data	Minutes per Day in Period
48	2010/09/27	2010/10/17	21	20	5,990	285	300
58	2010/09/27	2010/10/17	18	20	1,365	76	68
21	2010/10/12	2010/11/01	17	20	3,875	228	194
9	2010/10/11	2010/11/05	14	25	1,730	124	69
25	2010/10/11	2010/10/24	13	13	1,280	98	98
50	2010/10/04	2010/10/29	12	25	1,060	88	42
46	2010/09/27	2010/10/17	12	20	785	65	39
61	2010/09/30	2010/10/10	10	10	1,590	159	159
63	2010/10/17	2010/11/18	9	32	350	39	11
5	2010/09/27	2010/10/04	8	7	1,120	140	160
18	2010/10/05	2010/10/12	8	7	3,285	411	469
19	2010/09/27	2010/10/04	8	7	1,970	246	281
29	2010/10/06	2010/10/13	8	7	890	111	127
31	2010/09/30	2010/10/07	8	7	1,330	166	190
47	2010/09/28	2010/12/16	7	79	602	86	8
51	2010/09/26	2010/10/14	7	18	295	42	16
32	2010/10/06	2010/10/13	7	7	975	139	139
12	2010/09/30	2010/10/06	7	6	490	70	82
26	2010/10/13	2010/10/19	7	6	690	99	115
34	2010/09/29	2010/10/05	7	6	637	91	106
40	2010/10/11	2010/10/17	7	6	845	121	141
42	2010/09/29	2010/10/05	7	6	1,410	201	235
43	2010/09/29	2010/10/05	7	6	420	60	70
62	2010/10/24	2010/10/30	7	6	475	68	79
30	2010/10/13	2010/10/22	6	9	486	81	54
49	2010/10/15	2010/10/23	6	8	205	34	26
27	2010/10/06	2010/10/12	6	6	1,145	191	191
59	2010/10/06	2010/10/12	6	6	420	70	70
36	2010/09/30	2010/10/05	6	5	815	136	163

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						Minutes per Day	Minutes per Day
S Code	Start	End	Days with Data	Days in Period	Total Minutes	with Data	in Period
38	2010/09/30	2010/10/01	6	1	750	125	750
53	2010/09/29	2010/10/06	5	7	395	79	56
8	2010/10/06	2010/10/12	5	6	460	92	77
10	2010/10/01	2010/10/06	5	5	450	90	90
37	2010/10/07	2010/10/12	5	5	515	103	103
17	2010/10/22	2010/10/26	5	4	1,200	240	300
28	2010/09/30	2010/10/04	5	4	630	126	158
1	2010/10/12	2010/10/18	4	6	600	150	100
57	2010/09/29	2010/10/05	4	6	135	34	23
3	2010/10/06	2010/10/11	4	5	355	89	71
39	2010/10/12	2010/10/17	4	5	720	180	144
52	2010/10/11	2010/10/18	3	7	390	130	56
2	2010/10/13	2010/10/18	3	5	240	80	48
6	2010/09/29	2010/10/04	3	5	105	35	21
64	2010/09/29	2010/10/04	3	5	217	72	43
23	2010/09/27	2010/10/01	3	4	185	62	46
7	2010/09/30	2010/10/03	3	3	375	125	125
22	2010/10/03	2010/10/03	1	1	120	120	120
Max					15,370	410.63	750.00
Min					105	33.75	7.62
М					2,012	121.16	116.96
Median					845	99	79



S #	Scho	ool	PT J	ob	Self Impr	ovement	Enjoyment		Sum
24	8,990	60%	5,600	38%	120	1%	150	1%	14,860
54	2,375	36%	1,765	27%			2,490	38%	6,630
16	6,480	99%			80	1%			6,560
15	42	1%			5,958	94%	338	5%	6,338
48	1,475	25%	2,070	35%			2,445	41%	5,990
44	4,504	77%			60	1%	1,261	22%	5,825
56	4,924	90%			384	7%	152	3%	5,460
35	4,010	75%			180	3%	1,170	22%	5,360
20	3,980	90%			175	4%	273	6%	4,428
60	2,918	68%					1,400	32%	4,318
41	290	7%	3,600	85%			360	8%	4,250
13	1,595	41%			390	10%	1,937	49%	3,922
21					3,875	100%			3,875
33	3,688	96%					156	4%	3,844
11	3,325	89%			30	1%	370	10%	3,725
18	2,610	79%			240	7%	435	13%	3,285
45	1,950	91%			20	1%	170	8%	2,140
19	900	46%			90	5%	980	50%	1,970
9	600	36%	60	4%	200	12%	810	49%	1,670
61	180	11%			900	57%	510	32%	1,590
25	660	44%			630	42%	200	13%	1,490
42	330	23%	360	26%	360	26%	360	26%	1,410
58	1,100	81%			45	3%	220	16%	1,365
31	30	2%	420	32%	660	50%	220	17%	1,330
5	470	39%			740	61%			1,210
50	30	3%			1,030	97%			1,060
17	180	18%			120	12%	720	71%	1,020
32	975	100%							975
27	645	70%					270	30%	915

Table B5. Teleological Distribution of Minutes (by Participant from High to Low)



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S #	Sch	ool	PT]	lob	Self Impr	ovement	Enjoyment		Sum
29	690	78%			90	10%	110	12%	890
40	30	4%	5	1%			810	96%	845
36	170	21%			315	39%	330	40%	815
46	740	94%					45	6%	785
38	420	56%	240	32%			90	12%	750
39			720	100%					720
63					350	51%	340	49%	690
34	307	48%					330	52%	637
28	60	10%	450	71%			120	19%	630
47					482	80%	120	20%	602
1	240	40%					360	60%	600
26	540	95%			30	5%			570
62	75	14%			300	55%	175	32%	550
37	470	91%					45	9%	515
12	60	12%	160	33%	60	12%	210	43%	490
30	466	96%					20	4%	486
8	400	87%			30	7%	30	7%	460
10	360	80%			90	20%			450
43									420
59	365	87%			55	13%			420
53	390	99%					5	1%	395
52	180	46%					210	54%	390
7	330	88%			45	12%			375
3	330	93%			25	7%			355
51	20	7%	30	10%			240	83%	290
2	240	100%							240
64	67	31%					150	69%	217
49					65	32%	140	68%	205
23									185
57	60	44%			30	22%	45	33%	135

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S #	School		PT Job		Self Improvement	Enjoyment	Sum
22	120	100%					120
6	95	90%	10	10%			105
Sum	66,481.00		15,490.00		18,254.00	21,322.00	122,152.00
Max	8,990.00		5,600.00		5,958.00	2,490.00	14,860.00
Min	20.00		5.00		20.00	5.00	105.00
М	1,231.13		1,106.43		507.06	473.82	2,002.49
Median	410.00		390.00		147.50	240.00	845.00
SD	1,839.12		1,657.07		1,142.99	595.78	2,561.90



