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## A Study of Obligated and Unobligated Time Use Among UNC Students

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### Abstract

The purpose of this research was to assess obligated and unobligated time use among University of Northern Colorado (UNC) students within an average twenty-four hour day of the fifteen week semester. A convenience sample of 195 UNC undergraduate students completed a 19-item questionnaire composed of closed ended questions involving time allotments to obligated and unobligated activities. Results indicated that UNC students spend approximately the same amount of time in obligated and unobligated activity. Means testing across the seven time categories revealed no significant differences between male and female students. However, mean testing between upper classmen and lower classmen indicated that upper classmen devote more time to obligated activity (education and work) than freshmen and sophomore students. Overall, UNC students appear to differ little from national trends in time consumption among university students.

*Keywords:* time use, college students, active leisure, passive leisure, work

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Time use studies have been conducted over a multitude of disciplines and scientific fields. According to Stinson (1999), time as a topic for philosophy and research has included:

- *physicists theorizing on the relationship between time and space;*
- *philosophers and theologians speculating on time and eternity;*
- *physicians and psychologists debating the nature of biological clocks;*
- *anthropologists describing the effect of time on cultural evolution;*
- *historians treating time like their own personal data set;*
- *statisticians conducting time-series analyses; and*
- *economists debating to what extent time is money (p. 3).*

For the social sciences, understanding time use and its relationship to both healthy and harmful behaviors has been a foundation for research in criminal justice, psychology, education, health, and business, among others. For Stinson (1990), time use studies may involve such methods as face-to-face interviews, paper diaries, time records, and telephone and computerized surveys. Progress in technology and methods for time use measurement has improved efforts to gather data with more “precision, efficiency, and accuracy” (p. 6).

According to Robinson & Godbey (1997), and Michelson (2005), there are four fundamental time categories that are well accepted in the literature. Derived from the work of Ås (1978, 1982) these four categories include: contracted time, committed time, necessary time, and free time. Contracted time involves the time under contractual agreement and obligates individuals to assume paid work or education. Committed time entails the unpaid time allotted towards the care of one’s home and family. Thus, productive work incorporates both contracted and committed time. Necessary time involves the time devoted to self maintenance behaviors

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such as eating, sleeping, hygiene, and so forth. Free time encompasses the remaining time left in a 24 hour day after contracted, committed, and necessary time have been consumed.

For Robinson & Godbey (1997), any further division of these categories would be considered “arbitrary and debatable” yet the expansion of these categories could allow “us to broaden our understanding of the determinants of free time” (p. 13). For the purpose of simplicity, the aforementioned categories of time were dichotomized to reflect two broad categories of time use: unobligated time and obligated time. Thus, free time is considered unobligated or leisure time while contracted and committed time reflects obligated time.

According to DeGraaf, Jordan, & DeGraaf (2010), leisure is often conceptualized as free time, as activity, or simply as a state of mind from which behaviors are intrinsically motivated and freely chosen outside the demands of external compulsion. However, complexities arise from defining leisure simply as activity. For example, one might consider jogging or gardening as leisure activities while another person might view the very same activities as work. Thus, leisure is best defined as a state of mind or a state of being (DeGraaf et. al., 2010). This definition encompasses notions of free or discretionary time while still capturing the variation in activity choices that reflect an individual’s motivations and personality. Ultimately, leisure implies that liberty and autonomy are exercised in the realm of unobligated time.

**Applied Categories of Time Use**

Time has also been categorized for the American Time Use Survey (ATUS) administered by the United States Department of Labor, Bureau of Labor Statistics. The ATUS (2010) measures the amount of time in a 24-hour day that people spend engaged in the broad range of activities, the time of day the activity was performed, and all those present during the activity. According to the ATUS (2010), 1,100 interviews are conducted each month on reoccurring basis primarily with computer-assisted telephone interviewing. Thus, to reflect current and established

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research on time usage, this study adopted the same categories as those established by the ATUS.

For more precise measurement of leisure time usage, the categories were expanded to capture time allotted to various sports, recreations, and passive leisure activities.

### **Unobligated Time**

Time free from obligation encompasses all leisure pursuits, and may be further dichotomized into passive and active leisure categories. According to the ATUS (2010), trends indicate that adolescents spend about 4.3 hours, seniors spend about 7.0 hours, and the civilian population spends about 4.4 hours devoted to leisure activities on an average day.

*Passive Leisure.* Pursuits that require little or no physical exertion are considered passive leisure, which includes such activities as communicating/socializing, reading, relaxing/napping, browsing the internet, video and computer games, board and card games, music, arts and crafts, hobbies, entertainment and cultural events, and religious activity.

For this study, the category of *Communication* was expanded to include cell phone and technology use, face-to-face conversations, and social gatherings. For this trend, the ATUS (2010) indicated that adolescents spend about 0.80 hours, seniors spend about 0.60 hours, and the civilian population spends about 0.38 hours devoted to socializing and communicating on an average day.

*Active Leisure.* Pursuits that require physical activity and exertion are considered active leisure behaviors. This broad category captures what is considered sports, exercise, and recreation. *Sports* include varsity, club, and intramural participation while *Exercise* includes fitness training, using exercise equipment, a personal trainer, or weight lifting. For *Recreation*, activities might include hiking, golfing, climbing, snowboarding, camping, paddling, cycling, or fishing among others. According to the ATUS (2010), adolescents spend about 0.70 hours,

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seniors spend about 0.20 hours, and the civilian population spends about 0.19 hours devoted to active leisure activities on an average day.

**Obligated Time**

*Work.* Obligated time involves the activity categories of work and education. Work related activity includes both part-time and full-time obligation. According to the ATUS (2010), adolescents spend 6.70 hours, students spend 6.30 hours, and the civilian population spends 8.28 hours devoted to obligated activities on an average day.

*Education.* Class time, class assignments, and studying comprised the amount of time devoted to the obligation category of education. According to the ATUS (2010), adolescents spend about 5.95 hours, college students spend about 3.30 hours, and the civilian population spends about 0.78 hours devoted to educational activities in an average 24 hour day.

**Purpose**

Using the aforementioned categories of time, the purpose of this research was to assess obligated and unobligated time use among UNC students within an average twenty-four hour day of the fifteen week semester. Thus, five research questions guided this study:

R1: How do UNC students use their time?

R2: How do UNC students spend their time socializing and communicating?

R3: How do UNC students spend their time participating in active and passive leisure?

R4: Are there differences in time uses between upperclassmen and lowerclassmen?

R5: Are there differences in time uses between male and female students?

**Methods****Participants**

A convenience sample was conducted by administering questionnaires in classrooms settings as well as popular locations around the UNC campus including: the dining halls, the

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University Center, Campus Recreation Center and the James A. Michener Library. The questionnaire was made available in hard copy to students at the different locations around campus. In all, 195 students participated in the study; however, nine respondents completed less than 50% of the questionnaire items and were eliminated from analysis. Thus, the remaining students (n=186) were analyzed.

The majority of students in the sample were female (56.3%) and male (42.6%), while the ethnic makeup of the sample included Caucasians (77.4%), African Americans (1.6%), Native Americans (2.1%), Asians (1.1%), Hispanics (11.6%), and 2.1% were Pacific Islander. The age range for the sample was 18-22 year old from which 94.1% were full-time students. The majority of the sample was composed of Freshmen (36.6%), then Sophomores (28.8%), Seniors (18.3%), and Juniors (14.7%).

### **Measures and Procedures**

The instrument for this study was a simple 19-item questionnaire assessing student's time allocation in hours to unobligated (communication, sports, exercise, recreation, passive leisure) activity and obligated (work and education) activity. A series of closed ended questions were used to obtain ratio level data to assess time spent in the specific activities subsumed under each category. Several demographic items related to age, class status, ethnicity, and gender were included in the measure as meaningful categories to be used to test for significant mean differences.

In order to answer the first three research questions, descriptive statistics were used to specify the proportions of time allotted to both obligated and unobligated activities and the activities that subsume them. For the fourth and fifth research questions, two series of independent samples t-tests were conducted to test for mean differences across the seven categories of time usage. For R4, means scores were tested between upperclassmen and

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lowerclassmen across the seven categories of time usage. For R5, mean scores were tested between male and female students across the seven categories of time usage.

**Results**

For the first research question, students were asked to indicate how much time they spend in each of the seven established categories of time usage. Sums of the mean scores indicate that students spend approximately the same amount of the time (4.7 hours) in obligated and unobligated activity. Students spent on average 3.6 hours in passive leisure and 1.1 hours in active leisure. Students spent the majority of their obligated time in class (4.8 hours) and the majority of their unobligated time socializing with others (2.7 hours) (see Table 1).

For the second research question, students were asked to specify how they allotted their time within the passive leisure activity of communication/socializing. The findings indicated that the majority (56%) spend this time in face to face interaction and social gatherings, relative to time using technology to communicate (44%) (see Figure 1 and Table 1).

For the third research question, students were asked to specify how they allotted their unobligated time to passive and active leisure pursuits. The results indicated that students overall spend more time in passive leisure than in active leisure. For UNC students, the most popular passive pursuit involved playing or listening to music while the most popular recreational pursuit was skiing/snowboarding (see Figure 2 and Table 1).



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**Table 1***Mean numbers of hours allocated by category*

Time Use Category	Average Time Engaged Per 24 Hours
<b>Unobligated Time</b>	<b>4.65 total hours</b>
<i>Communication</i>	Mean 2.71 hours
Social Networking	1.77
Cell Phone Usage	3.05
Face-To-Face	4.39
Social Gatherings	1.64
<i>Sports</i>	Mean 0.42 hours
Collegiate Sports	0.37
Intramural Sports	0.32
Pick-Up Games	0.58
<i>Exercise</i>	Mean 0.38 hours
Fitness Programs	0.32
Personal Fitness	0.84
Exercise Equipment	0.29
Personal Trainer	0.09
Weight Lifting	0.39
<i>Recreation</i>	Mean 0.25 hours
Hiking	0.34
Golf	0.09
Disc Golf	0.16
Rock Climbing	0.14
Skiing and Snowboarding	0.59
Camping	0.39
Paddle Sports	0.02
<i>Passive Leisure</i>	Mean 0.89 hours
Reading	1.17
Relaxing/ Napping	1.61
Browsing the Internet	1.44
Video/ Computer Games	0.54
Board/ Card Games	0.11
Playing or Listening to Music	2.18
Arts and Crafts	0.27
Hobbies	0.77
Entertainment/ Cultural Events	0.53
Religious Activities	0.33
<b>Obligated Time</b>	<b>4.69 total hours</b>
<i>Work</i>	Mean 1.53 hours
<i>Educational</i>	Mean 3.16 hours
Class Time	4.80
Projects/ Assignments	2.19

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Studying	2.48
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For the fourth research question, an independent samples t-test was conducted to reveal differences between upperclassmen and lowerclassmen across the seven time use categories. Means testing revealed two significant differences in obligated time activity between upperclassmen and lowerclassmen. Specifically, upperclassmen on average worked more hours and devoted more time to their education than lowerclassmen (see Table 2). For the fifth research question, an independent samples t-test was conducted to reveal differences between male and female students across the seven time use categories. Testing indicated that there were no significant differences between males and females across the time use categories (see Table 3).

**Table 2*****Mean comparisons of time use in hours between upperclassmen and lowerclassmen***

Measure	Upper Classmen		Lower Classmen		<i>t</i>	<i>df</i>	<i>p-value</i>
	Mean	SD	Mean	SD			
Communication	2.48	1.48	2.83	1.93	1.25	186	.211
Sports	.48	1.32	.39	.51	-.67	186	.501
Exercise	.38	.58	.38	.32	-.11	186	.910
Recreation	.30	.50	.22	.50	-1.1	185	.271
Leisure	.85	.52	.91	.54	.7	186	.486
*Work	2.68	2.63	.94	1.38	-5.94	186	.000
*Education	3.57	2.34	2.94	1.41	-2.28	186	.023

\* $p < .05$ **Table 3*****Mean comparisons of time use in hours between male and female students***

	Males	Females
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Measure	Mean	SD	Mean	SD	<i>t</i>	<i>df</i>	<i>p-value</i>
Communication	2.74	1.62	2.70	1.91	.2	186	.868
Sports	.34	.41	.48	1.09	-1.1	186	.295
Exercise	.33	.32	.41	.49	-1.3	186	.198
Recreation	.18	.44	.30	.53	-1.5	186	.140
Leisure	.93	.53	.86	.54	.8	186	.427
Work	1.42	2.44	1.61	1.74	-.64	185	.526
Education	3.18	1.95	3.14	1.68	.12	185	.902

**Discussion**

The purpose of this research was to assess obligated and unobligated time use among UNC students within an average twenty-four hour day of the fifteen week semester. In summary, the findings revealed that UNC students spent nearly equal amounts of time in obligated and unobligated activity. Their leisure habits are decidedly more passive than active and socializing with others is a popular time use function. Compared to a similar 2006 study of California undergraduate students (Brint & Cantwell, 2010), UNC students spend less time in education and work while spending more time socializing and exercising. Compared to a much larger 2008 study of undergraduates at the University of California (Brint, Douglass, Thomson, & Chatman, 2010), UNC students spend more time working and exercising but less on educational obligations.

Given the popularity of socializing as a passive leisure pursuit, it appears that students spend almost half (44%) of their communication time using technology. This trend was also noted by Hanson, Drumheller, Mallard, McKee, & Schlegel (2010) in their observations that “students still primarily communicate face to face, but they are also spending several hours per day texting and using the phone” (p. 28). According to the US Fed News Service (2009), the trend in technology use has surged among university students, especially with text messaging and cell phone camera use. Since many students use cell phones to keep in touch with family and

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friends, the majority admitted to text messaging in class. While socializing was considered a separate category of time consumption for this study, it is understood that socializing, especially with technology, occurs in many contexts, whether in obligated or unobligated time.

In their leisure, UNC students spend approximately three times as much of their unobligated time in passive leisure (3.6 hours) than active leisure (1.1 hours). However, when compared to a 2008 sample of 63,600 University of California undergraduates (Brint et. al. 2010), UNC students spend less time in passive leisure but spend nearly twenty minutes more in active leisure per day. That UNC students would be more physically active than their California peers seems to substantiate the trend observed by the United Health Foundation (2011) in their rankings of the healthiest states of the United States. Overall, Colorado ranked ninth in the nation while California ranked twenty fourth in the country.

Means testing between male and female students revealed no significant differences across the seven time categories. However, there were significant differences between upper classmen (juniors and seniors) and lower classmen (freshmen and sophomores) across the amounts of time devoted to education and work. Higher mean scores for upper classmen would seem to indicate that as students progress through UNC they accumulate more responsibilities and obligations that were not present in their freshman or sophomore years. This may also be a function of upper classmen leaving residence halls for off campus housing and consequently may need additional income to cover expenses.

Overall, the findings of this study reflected several of the common trends found in the time-use literature. Future studies might include additional variables, such as GPA, in order to discern differences between high performing and underperforming students across the structures of their time use. For more precision, future research might explore with more detail how pervasive technology use has become with modern students. Explorations in multitasking might

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reveal the nature and amount of overlap that might exist between time categories, such as unobligated technological communication and obligated class time. It is expected that economic and social forces will continue to alter the structures of student time and the demands that are put upon them.

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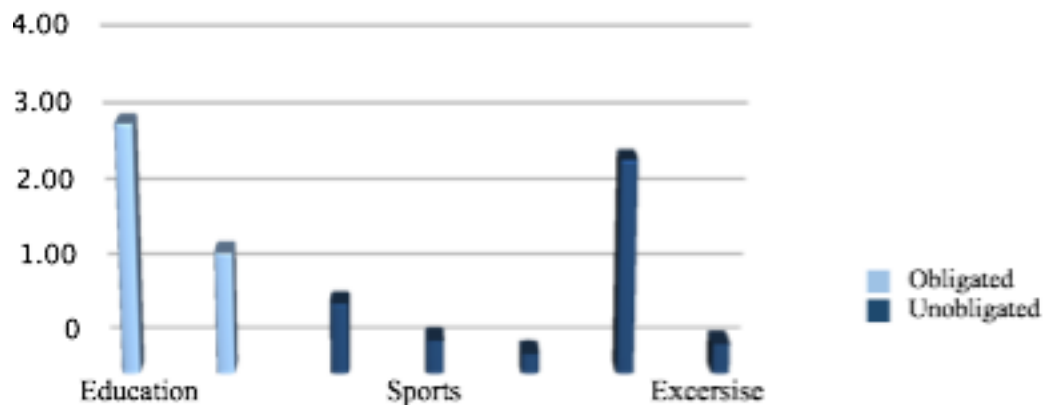
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