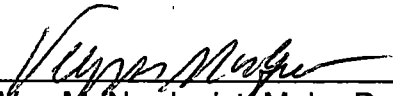
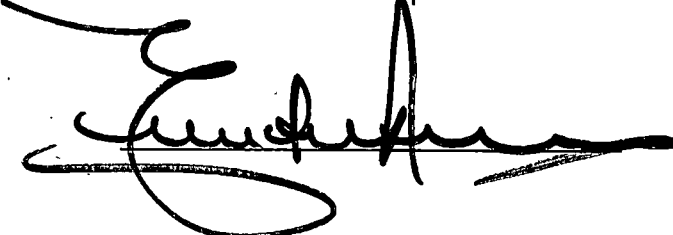


To the Graduate Council:

I am submitting herewith a thesis written by Elizabeth Kathleen Staron entitled "Free Time Activities of Gifted Adolescents at a Residential High School." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Child and Family Studies.


Vey M. Nordquist, Major Professor

We have read this thesis and
recommend its acceptance:


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Accepted for the Council:


Associate Vice Chancellor and
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**FREE TIME ACTIVITIES OF GIFTED ADOLESCENTS
AT A RESIDENTIAL HIGH SCHOOL**

A Thesis Presented for

The Master of Science

Degree

The University of Tennessee, Knoxville

Elizabeth Kathleen Staron

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ABSTRACT

This study investigated the free time use of gifted juniors and seniors at a two-year residential public high school. This study was descriptive in nature and designed to explain life in this environment. The purpose of the study was to learn how students spent their free time and whether or not gender and grade affected activity preference.

The sample included 181 students at the Greenhouse Institute. Eighty-two boys and 99 girls participated. Each of the participants completed a self-report survey about their use of free time. The students completed items that related to five different activity areas: "How Often", "Before Dinner", "Weekends", "Schedule", and "Where in Town." Survey responses were analyzed using frequencies and chi-square statistics.

The results indicated that students spent much of their free time with friends and listening to music. The results also showed that free time preferences were affected by grade and gender. Taken together, many of the results were comparable to the activity preferences of students in non-residential public high schools but also included activities that were unique to a residential environment.

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Chapter I

Introduction

The typical American adolescent attends high school. Most attend public (91%) or private (9%) day schools (National Center for Educational Statistics [NCES] , 2000). Some schools have a potpourri of students of different races, backgrounds, and ability levels, while others are comprised of students who represent a narrower range of diversity.

The purpose of the study was to describe how gifted juniors and seniors at a 2-year residential public high school spent some of their free time. The high school was 1 of 12 high schools of its type in the country. The data were part of a larger ethnographic study that examined the experiences of gifted students at a residential public high school.

Importance of the Study

At a typical public high school, once a student has finished attending school for the day, what he or she does the rest of the day is of minimal concern to school personnel. This is not the case at residential high schools where students are under supervision 24 hours a day, 7 days a week. It would be interesting to know how constant supervision affected students' use of free time in comparison to the way non-residential students used it. Does a more regulated schedule of monitored activities somehow affect the free-time activities of gifted residential students in ways that are substantially different from the more flexible schedule and often-private activities of public school students? How adolescents use their free time allows us to see what kinds of activities they most prefer.

The use of free time by gifted students in a specialized environment such as the Greenhouse Institute has not been studied. Knowledge of free-time use might help researchers in the field of gifted and talented, staff of residential schools (administration, the resident counselors, and the teachers) and students understand better life at residential public high schools. Students who are contemplating enrolling in schools such as the Greenhouse Institute could make more informed decisions if they knew what campus life was like at residential schools. Certainly parents would want to know how students at such a school experience life outside the classroom. Residential staff would be likely to gain a better understanding of student life at this school and to implement changes that would improve its quality. The findings could also help staff advise prospective students and their parents about the suitability of the program for meeting their individual needs. Finally, researchers might be able to use the present findings to develop other research questions, such as what is the nature of peer relationships at a residential high school.

Definitions of Terms and Concepts

Two terms are frequently used in this study: free time and gifted. Robinson (1977) proposed that "free time implies periods which allow individuals maximum choice over their activities...time period during which people can express their values, interests and talents presumably to enjoy life at its fullest" (p. 161). Drawing from this definition, free time in the present study referred to measurable periods of time when students were not in class and were able to make their own choices about ways to spend their free time.

Gifted is defined as "having a great natural ability" (Merriam-Webster, 2000). Selection for the Greenhouse Institute is based upon previous academic records, interviews, recommendations, and standardized testing (Greenhouse Institute, 2000). Because the Greenhouse Institute is designed for gifted students, the definition of giftedness is determined by the school's home state and each student must meet the state's criteria of giftedness to be admitted to the school. In the present study, students were considered gifted if they were enrolled at the Greenhouse Institute.

The key concepts in this study were: time usage, activity participation and preference. Time usage referred to the manner in which students chose to spend their time. Activity participation referred to the type of activity and how often students took part in an activity. Preference referred to the activities that students liked best, usually the ones to which they devoted most of their free time.

Specific Aim of the Proposed Study

This study was designed to illustrate how gifted students at a residential high school spend their free time. The Greenhouse Institute has been highly unusual, the only one of its kind in the state. Students usually did not know one another before orientation at the start of their junior year. Friendships often formed quickly because students were in constant contact day in and day out, everyday of the week. The rules are established by the administration and the state, not by the parents. Students had the experience of living on their own away from home, but the setting was highly structured and in some cases might

be more structured than a student's home life. Parents were not a constant presence in a student's daily life. They did not have the typical daily interaction that commonly occurred with adolescents in public schools. All of these factors influence a student's daily life and affect how free time is used. These students have only a certain number of hours in the day when they can do what they want. How they choose to use this time is important because it reveals a part of the students' lives that might not be visible in the classroom.

The specific aim of the study was to examine what juniors and seniors at a high school for gifted adolescents did in their free time. The possible effect of gender and grade on free time choices also was examined.

Variables

The variables of interest were time usage, activity participation, and preference. Preference was determined by the frequency of choice and length of time a student participated in an individual activity. Preference estimates determined which activities were most popular among the students. To determine how gender or grade affected the use of free time, the individual responses of boys and girls from two grade levels (juniors, seniors) were examined. Males were expected to report more interest and time spent in sports, computers, and group activities, whereas females were expected to report more interest and time spent in activities dealing with interactions of a personal or solitary nature. Differences related to grade level were expected because juniors at the Greenhouse Institute were exposed to a new environment. Juniors came to the Greenhouse Institute from typical public high schools and had not been in

a setting like the Greenhouse Institute previously. Everything about the Greenhouse Institute was new to them. This was not the case for the seniors.

Chapter II

Review of the Literature

Although many people believe they know how adolescents spend their free time, research on this topic is limited. Most of what is available is dated. The research presented revealed the type of activities that were typically undertaken by adolescents in the general population when they were out of the classroom. This review presented the research in chronological order. The research was divided into two main sections: Primary sources and secondary sources. Primary sources were studies in which the findings were reported by the individuals who conducted the research. Secondary sources consisted of studies in which the work of someone else was reported. The research was also organized by the type of methodology used, age of participants, and research questions addressed. A table that includes all of the studies is located in Appendix A. The literature review concluded with a comparison of the primary source research and a list of questions that were addressed in the present study.

Primary Sources

Teenagers and Electronic Paging Devices/How Teenagers Spend a Typical Week

Csikszentmihalyi, Larson, and Prescott (1977) conducted a first-of-its-kind study of how adolescents spend their time. All of the participants were between the ages of 13 and 18, with a median age of 14. The participants were recruited through personal contact with graduate students. The 25 adolescents logged what they were doing when a random beep from an electronic paging device

sounded. The adolescents were beeped five to seven times per day at random times between 8:00 a.m. – 11:00 p.m., 7 days a week over a 2-month time period. Each time they were beeped, participants completed a self-report sheet indicating what they were doing and with whom.

The most prevalent activities were talking with peers (33% of the time/34 hours per week), watching television (14% of the time/12 hours per week), studying (13% of the time/13.5 hours per week) and reading (7% of the time/7.3 hours per week). Playing sports and games (4% of the time/ 4.6 hours per week) was reported more often by boys than by girls and more often by younger participants than older participants. Although these adolescents, regardless of gender, spent approximately 50% of their time in similar free-time activities, the other 50% was spent in gender-specific activities, (i.e., activities frequented almost exclusively by adolescents of the same gender).

In a later study, Csikszentmihalyi and Larson (1984) looked at a typical week in the life of American teenagers using similar methodology. The researchers surveyed 75 high school students in the Chicago area. The participants were beeped every 2 waking hours, except during school hours when they were beeped every 40 minutes. The beeps occurred between the hours of 7:30 a.m. and 10:30 p.m., Sunday through Thursday and 7:30 a.m. to 1:30 a.m., Friday and Saturday. The typical participant responded on average to only 69% of the beeps. After beeps occurred, each adolescent completed a self-report sheet indicating whom they were with and what they were doing. The final data set consisted of 4,489 self-reports.

The adolescents spent 68% of their time outside of school. Of that time, 40% (42 hours) was devoted to leisure activities. The breakdown included socializing (16%/17.8 hours), watching television (7%/8 hours), reading for pleasure (4%/5.25 hours), sports and games (3%/3.57 hours.), and resting and napping (3%/3.55 hours). It was found that boys typically spent approximately six hours per week participating in sports and games, whereas girls participated only one half that time in them. This was the only activity that revealed a significant gender effect.

The adolescents reported they spent 29% of their time with their friends and 27% alone, 32 hours per week and 30 hours per week respectively. During the time adolescents spent with their friends, 58% included leisure activities, and 9% was classified as productive (i.e., studying). "They spend much of this time talking among themselves, they talk with each other more often than they talk to adults. They discuss school, parents, world affairs; but mostly they discuss themselves and what kind of people they are" (Csikszentmihalyi & Larson 1984, p. 174). It was found that adolescents spent most of their time alone on maintenance activities (42%). Maintenance in these instances included sleeping and doing chores. When they were alone, adolescents also spent 36% of their time in leisure activities and 22% doing productive activities (like studying).

Taken together, these findings suggested that most of an adolescent's time spent outside of the classroom was spent in free-time activities. The inclusion of listening to music and napping/relaxing as free-time activities should be noted. It should also be noted that upon comparison of the variables

Watching Television and Reading, the total amount of time spent in these activities decreased in the later study. Whereas similar time allotments for time with peers, studying, and sports and games can be seen in the two studies.

Children Ages 3-18 and Time Use Diaries/ Gender Differences in Time Use

Mauldin and Meeks (1990) examined the effects of gender differences on the ways children used time. The data for this study came from the 1981 Time Use Longitudinal Panel. The sample included 757 children of whom 410 were surveyed for time use on weekdays and 347 were surveyed for time use on weekend days. The children ranged in age from 3 to 18: 73 were below the age of 6; 118 were between 6 and 9; 118 were between the ages of 10 and 12; 100 were between 13 and 15; and 83 were between 16 and 18. The participants completed a time diary to describe how they spent their time during a 24-hour period. The children ages 6-17 were the only ones who provided the information directly. The days of interest were one weekday, one Saturday, and one Sunday.

It was found that the total time that children spent in free-time activities was approximately 6 hours for boys and 5.25 hours for girls on weekdays, as opposed to 9.75 hours for boys and 8.25 hours for girls on weekends. Most of this time was spent in passive leisure activities, such as watching television. A gender effect occurred for the amount of time spent watching television on weekends. Boys watched more than girls, 3.9 hours and 1.9 hours respectively. This gender difference, though, did not occur on the weekdays. Playing games accounted for the second largest allotment of free time on both weekdays and

weekends. A gender effect also occurred for the amount of time spent playing games. Boys tended to spend more time than girls playing games on both weekends and weekdays. Other gender differences also were found regarding socializing, active sports, and shopping activities. Girls spent more time socializing and shopping, whereas boys spent more time in active sports. Boys also tended to spend more time in leisure activities than did girls. However, the amount of time spent in leisure activities increased for both boys and girls on weekends. The numerical values presented are for all of that gender regardless of age because the numerical values of adolescents alone could not be deciphered. Based on the results, it was concluded that gender differences occurred quite often in the ways that children 3 to 18 years old allotted their time and engaged in leisure activities.

Teenagers and Time Use Diaries/Free Time vs. Non-Free Time Activities

Robinson (1991) presented data from the Americans' Use of Time Project. Data were collected from two samples of adolescents and young adults. One consisted of 418 participants, aged 12 to 17 years. The second sample was similar in most respects to the first except that the participants were between the ages of 18 and 29 and were termed young adults. All participants in this study were unmarried. Only results that pertained to the first group are presented here. Data were analyzed in terms of number of hours per week.

The results were divided into two categories: non-free time and free time. On average, teenagers spent 17.7 hours per week watching television and 62.6 hours per week sleeping. Some of the other non-school-oriented activities that

comprised a large part of students' non-school time were (a) 4.4 hours visiting socially, (b) 3.3 hours participating or watching sports, (c) 2.8 hours spent playing games, (d) 2.6 hours spent in conversation, (e) 2.4 hours shopping, and (f) 1.3 hours reading for pleasure. The greatest amount of free time was spent watching television. It occurred three times as often as time spent on any other activity. The second greatest amount of time was devoted to socializing.

Teenagers and Surveys/ Activity Participation and Interest

The Horatio Alger Group (1996) conducted a survey of almost 1,000 students between the ages of 13 and 17. The students came from a variety of backgrounds. Eighty-six percent of the students attended public school, 10% attended private school, and 3% took part in some other schooling opportunities. The sample was representative of the national population in geographic distribution, population density, household size, gender, age of household head, and family income. The numbers in parentheses referred to the percentage of participants who reported participating in that activity. The top five non-school activities for these students were listening to music (87%), spending time with friends (82%), watching television/videos (82%), hobbies (58%), and playing video games (49%). In all but two of the activities, larger percentages of boys participated than of girls. Girls spent more time than boys listening to music and spending time with friends. The participants also ranked their hobbies and special interests. The top five hobbies and special interests for both groups were: music (68%), sports/fitness (61%), movies (57%), video games (49%), and computers (47%). As with the list of non-school activities, there were only two

hobbies that featured a larger percentage of girls than of boys: music and movies.

In that study, free-time activities referred to those occurring after school hours. The approximate amount of total free time was 60 hours per week. The adolescents spent an average of 4 hours per weekday and 4.8 hours per weekend day watching television. An additional 3.6 hours per weekday and 4.3 hours per weekend day were spent listening to the radio. The totals showed that, on average, at least 55 of the 60 hours were spent watching television or listening to music. As in the other studies, gender differences were found for some of the adolescents' preferences. Unlike adolescents in other studies, participants in this study had strong preferences for listening to music and for using personal computers to access the Internet.

A Summation and Comparison of the Studies

The findings of the primary studies are summarized and compared in this section and illustrated in Appendix A.

Similarities in time use: Friendships, sports and games. Friendships were important aspects to adolescents' time use across all of the studies. Every study noted a significant amount of free time was spent with friends. Study time was nearly universal also. Mauldin and Meeks (1990) failed to address this aspect of adolescents' use of free time. All of the studies included references to sports and games. Only two of the studies, Mauldin and Meeks and the Horatio Alger Group (1996), reported that boys had more interest in sports and games than girls did.

Differences in time use: Television, reading, napping and computer activities. The amount of time devoted to watching television appeared to

increase in the more recent studies as compared to the earlier studies.

Csikszentmihalyi & Larson (1984) found that adolescents watched 1.5 hours per day. By 1990-1991, adolescents appeared to be averaging 3 hours per day watching television (Mauldin & Meeks, 1990; Robinson, 1991). In 1996, it was reported adolescents were watching at least 4 hours per day (Horatio Alger Group, 1996). Both the Horatio Alger Group and Mauldin and Meeks found that boys watched television more than girls did on weekends.

Of all the studies, only Mauldin and Meeks (1990) did not include reading for pleasure as a free-time activity. Csikszentmihalyi, et al. (1977) reported that time spent reading was consistent across genders, whereas the Horatio Alger Group (1996) found a 2-hour time difference (4.6 hours for girls and 2.6 hours for boys per week.) Robinson (1991) reported that the amount of time spent reading was 1.4 hours per week, regardless of adolescent gender. Only two studies (Csikszentmihalyi & Larson, 1984; Robinson, 1991) mentioned napping or relaxing as a free-time activity and the Horatio Alger Group (1996) was the only study to include video games and computers on the lists of free-time activities.

Additional differences in time use: Listening to music, shopping, and movies. Csikszentmihalyi et al. (1977) did not mention listening to music as a free-time activity, but Robinson (1991) and the Horatio Alger Group (1996) did. Robinson (1991) reported music was listened to only .9 hours per week, whereas the Horatio Alger Group reported it as being listened to approximately 4 hours

per day. In Csikszentmihalyi et al. (1977) and Csikszentmihalyi and Larson (1984), adolescents did not mention shopping as a free-time activity, but 16- to 18-year-old adolescents in Mauldin and Meeks' (1990) study spent most of their free time shopping. Robinson (1991) also found that adolescents 12- to 17-years-old spent approximately 2.4 hours per week shopping. Finally, the Robinson and Horatio Alger Group studies were the only ones in which adolescents identified movies and videos as a free-time activity. At least 50% of the participants in the Horatio Alger Group study said that they went to movies, and Robinson found that 12- to 17-year-olds spent 0.6 hours per week watching movies.

Conclusions Related to the Primary Sources

In conclusion, while similar topics were addressed in these studies, each study was slightly different. In most, it was found that television viewing and spending time with friends was something that adolescents liked to do. In some of the studies, the adolescents indicated that they spent more time reading than other studies showed. The choices of activities included in each study should also be noted. There was no master list of free-time activities that was used across studies. The research also illustrated that although most adolescents liked to do the same kinds of things, the amount of time they devoted to each activity was not the same and was based on individual preference. Individual preference also affected activities that were included in a study. Researchers did not analyze activities that were not mentioned by their participants, even if they might have been relevant. For example, Mauldin and Meeks (1990) did not

examine movies and studying, even though both activities were possible choices at the time. Also, the availability of newer technology such as computers and home entertainment units was not considered by researchers until recently. Undoubtedly these have had an increasing effect on the use of free time by adolescents.

Secondary Sources

According to an article by Kantrowitz and Wingert (1999), adolescents spent 11 hours per week watching television, 9.9 hours per week listening to compact disks and tapes, and 3.7 hours per week studying. Fewer than 50% of teenagers regularly dated, and only 2% reported that they did not watch television during the course of a week. In addition, 47% said they used computers to explore the Internet. The amount of time spent online was not cited. The authors also cited Barbara Schneider of the University of Chicago who reported that on average adolescents spend 3.5 hours per day alone (Kantrowitz & Wingert).

Because these were secondary data, the specifics about the participants who provided the information are not known. The authors cited nine sources for this data but did not relate statistics to specific sources. Further investigation found that five of the studies cited were conducted by private institutions, three were conducted by the federal government, and one was conducted by a university. Of the private institutions, three were marketing firms with staff trying to learn more about the consumption and buying habits of adolescents. The information collected by the marketing firm staff was not available for public

inspection. Some of the private institutions specialized in one area of study. For example, one institution's mission dealt with human reproduction and the sexual habits of Americans. In some of the studies, like the ones from the federal government, researchers were interested more in demographic information than in time use. Governmental data sets were different, therefore, from the other data sets. The studies that came from primary sources provided information about specific groups of people. Because the information about adolescent behavior was obtained from so many sources and the methods of obtaining the subject samples and gathering data were not described, it was not possible to draw clear conclusions or to make generalizations to adolescents as a population. While some of the findings were similar in terms of the amount of time adolescents watched television or listened to the radio, others were not. It was not possible to know whether any of these other differences were real or artifacts of the sampling or data analysis procedures.

Conclusions

Some free-time activities of adolescents appeared to occur consistently over time, regardless of changes in cultural trends or the development of new technologies. Activities like listening to music, watching television, and interacting with friends were consistently identified as preferred free-time activities. Other activities, for example those involving computers, were not preferred in earlier studies but were in later ones, probably because the technology was so new or so expensive initially for adolescents to access. The effect of a computer on adolescents' use of free time is not known; but with the advent of the Internet,

some kind of effect is bound to occur. The constant preference for activities involving music, movies, and friends raises a question regarding whether or not those activities are also preferred by students at the Greenhouse Institute. Because the Greenhouse Institute is located on a college campus with easy computer access, the amount of time students spent on computers should be examined.

For most of the studies, the term adolescent referred to individuals between the ages of 13 and 18. Even this narrow range of age included a host of major developmental changes. The sample in the current study was not so diverse. The adolescents involved were within a couple of years of each other in age. Changes associated with age, therefore, were not a key question in the study. Rather, there was more interest in looking at how a difference in grade level affected individuals' use of free time. First-year students at the Greenhouse Institute entered a world different from the one they were accustomed to, whereas seniors at the Greenhouse Institute had already been a part of that world for a year. The question of interest was: Does a year make a difference in how the students so close in age chose to spend their free time?

There have been no studies of adolescents who attended residential public school programs. All of the extant studies involve students in public high school settings with the exception of the Horatio Alger (1996) study. Some of the adolescents in that study attended private schools, and no mention was made of whether or not the participants lived at the school during the week, year round, or not at all. What the out-of-class life was like at a school like the Greenhouse

Institute is not known. The primary purpose of the current study, therefore, was to shed some light on adolescent free-time use at a residential public school for gifted individuals. A second purpose was to examine how gender and grade level affected the ways these gifted students spent their free time.

Chapter III

Methodology

The study was designed to assess how juniors and seniors at a 2-year residential public high school for gifted adolescents spend their free time. It was exploratory in nature and was linked to a larger ethnographic study.

Sample

The participants were 181 students who were either juniors or seniors in a selective residential public high school. Of the 235 students, 181 voluntarily responded to the survey. Of the 181 participants, 89 were juniors and 92 were seniors. Of the juniors, there were 45 boys and 44 girls. In the group of seniors, there were 37 boys and 55 girls. The sample was, therefore, purposeful in nature. Purposeful sampling is used when a researcher is sampling from a specialized population and wants to study a specific phenomenon known to exist in that environment (Neuman, 1997). In the present study, only students at the Greenhouse Institute were involved. The data were considered secondary because they were collected by someone else.

Setting

The high school is a residential public high school for gifted students located on a university campus. All of the students are deemed gifted and talented by the state. The high school is funded by the state department of education and established in 1988. It serves "...as a state-wide center for gifted education so that pupils all across the state can have access to the programs and resources appropriate to their abilities" (Greenhouse Institute, 2000). The

approximate enrollment for the school per year is 300 students. The program lasts for two years, and students are admitted in the fall. The students come from all regions of the state. Admission to the school is based upon previous academic records, personal interviews, teachers' recommendations, and standardized testing. Along with their academic requirements for graduation, students are expected to complete a prescribed number of hours of community service in a school-associated service program. Each student and each parent signs a release form for participation in future research projects upon admittance to the school. Students are fully aware that they might be subjects in future studies. The possibility of being a study participant is noted in the school handbook. All the students live on campus in dormitories.

Information about the School Itself

The Greenhouse Institute is one of three schools located on the same university campus: the university, the university high school, and the Greenhouse Institute. Greenhouse Institute students share a dining space with the university students. Other than meal times there are few interactions between Greenhouse Institute students and the other groups. Other interactions are limited to class times and intramural sports. The students view their community as being diverse.

The official school schedule divides the year into an academic year, semesters, weeks, and May term. The academic year occurs from August to May. Semesters are divided into fall and spring. The May term is a 2-week period in which new classes are offered (Greenhouse Institute, 2000).

There are three weekly schedules at the school: (a) Monday-Wednesday-Friday, (b) Tuesday-Thursday, and (c) Weekend. Monday, Wednesday and Friday classes are organized into 50-minute blocks of time, whereas Tuesday-Thursday classes occur for 75 minutes. Some classes and labs are offered during evening hours (Greenhouse Institute, 2000). For most students the typical week begins on Sunday evening. The school sets aside 1.5 hours (6:30-8:00 p.m.) for study. In reality, studying is not the only thing that happens during this time period. Students are allowed to be in their rooms with the doors closed as long as they are quiet. They are not checked on by the Resident Counselors. Class schedules are not equal. Students are allowed to register for their own classes. The school operates like a college. All of the courses are honors, Advance Placement, or university courses. Students live in dorms on the university campus. Typical daily interactions among parents and offspring do not occur for these students. They have more in common with college students than with their public school contemporaries. "The Greenhouse Institute offers...more freedom-more responsibility than is offered in a traditional high school, but less freedom and more supervision than is offered to college students" (Greenhouse Institute, 2000).

While juniors and seniors are treated essentially the same, there are circumstances in which seniors have additional privileges. For example, juniors at this school are assigned roommates in a way similar to freshmen in college (i.e., by chance). Juniors do not control with whom they are going to live. Seniors are allowed to select their roommates and also their residence hall counselors.

Generally, juniors and seniors adhere to the same set of rules. There are only two exceptions: (a) upon checking out for the evening, juniors must be back by 10 p.m., whereas seniors have to be back by 10:30 p.m.; and (b) seniors can earn credits toward waiving mandatory study time; juniors cannot. Credits are earned on the basis of a student's classroom performance (Greenhouse Institute, 2000).

Each student is given a Student Handbook that outlines the program, rules, and regulations. An inherent conflict exists on campus between the rules and a student's sense of freedom. The setting serves as both a home and as a school. Consequently, the rules were established to deal with a small minority of students who cause problems. Students are not supervised by their parents but by the school staff who serve as inabsentia parents.

Access and Data Collection

Access

All of the data were collected at the school where the participants were students. The data were collected by Dr. Laurence Coleman of The University of Tennessee and is being used with his permission. Dr. Coleman gained access to the Greenhouse Institute following a conversation with the school's director about conducting an ethnographic study. The school's home state funded the research. The study was part of Dr. Coleman's continuing interest in the experience of being gifted in our society. "...I want to investigate the ordinary activities of people who are extraordinary" (Coleman, 1997, p.119).

Data Collection

The method of data collection was ethnographic in nature. Ethnography is the process of "...describing a culture and understanding another way of life from the native point of view " (Neuman, p. 346). In an ethnographic study, the researcher becomes a member of the group or system being observed and uses participant observation, interviews, and archives/documents to gather information.

A survey was developed and responses used to compare with participant observation and information gathered through informal conversations and formal interviews. It was not developed, however, until Dr. Coleman had completed four months of participant observation, several informal interviews, and a number of formal interviews. Survey items were derived from students' comments and their behavior during the participant observations. The survey allowed students to report how they spent their time during the week and on weekends. In some cases, they also described the activities that they participated in during those times. The questionnaire provided a means of verification as to trustworthiness and credibility (validity & reliability) of the participant observation and interviews. The results of the survey were compared with the results of the participant observations and interviews to see if what was found on the survey was consistent with what was said by and observed of the students.

In the Field

Dr. Coleman spent an academic year at the Greenhouse Institute. The year began in August 2 days before orientation and continued through

graduation. During fall semester, 3 out of 4 weeks were spent at the Institute. During spring semester, Dr. Coleman spent 10 days a month at the Institute. During selected periods, he lived in the male dorm and was known as either "Larry" or "the guy on the second floor" (L. J. Coleman, personal communication, October 28, 1999).

When Dr. Coleman lived in the dormitory he ate with the participants, went to classes with them, and attended club meetings. He also followed all of the student rules. In some instances he participated in student activities that resident counselors did not. For example, he shared a bathroom with the students. Sometimes individual students were "shadowed" (different classes of students were observed for a day). On other days, Dr. Coleman attended meetings of faculty and administrators. The goal was to experience as much as possible of student life at the school. No preconceived assumptions or supplemental judgments were made about the school or the people who resided there. During the fall cycle, Dr. Coleman shared a small office-like space with a student. By November, questions that might be used during the formal interviews were being piloted and the creation of the survey was completed.

During his first month, Dr. Coleman spent 16-17 hours per day collecting or entering data into a computer. After the first month, he began to spend more time in his room and less time with students during the weekend hours. He used weekend time to organize field notes, write memos, and compile data. This time also was used to write a running commentary of his impressions in addition to typing field notes.

Immersion into the Institute's society allowed Dr. Coleman to create relationships and friendships with the students and the faculty. When he was not at the school, some of the students noticed and commented about his absence and expressed various feelings about his return. Students compiled a list of things they recommended he do to understand them and their lives at the Institute. Compilation of the list was the students' idea. Some examples on the list were: do laundry, stay up all night, and use the university library. Dr. Coleman completed the students' list of activities.

When Dr. Coleman returned in the spring, the students who had agreed to participate in his research were interviewed. Eventually, all the information he gathered was used to address such questions as, "Why are these students the way they are? Where do they go? What do they do? Where do they spend their time?" (L. J. Coleman, personal communication, October 28, 1999).

Measures Used in the Present Study

Instrument

The participants completed a survey instrument (see Appendix B) that asked how, what, where, and when they spent their free time. The instrument was not intended to generate data that would generalize to all high school students, only lead to some tentative conclusions about the use of free time and comparisons of free time use with findings presented in the literature review. The survey instrument was developed for Dr. Coleman's purposes, and no attempts were made to establish its reliability. The validity of the instrument was determined to some extent by how well it verified what was seen during the

participant observation periods. Items on the survey were organized into the following five groups:

1. The first group of items addressed the frequency with which students participated in activities like doing laundry, going to the computer lab or visiting home for the weekend. Students were given a range of possible responses from which to choose, such as "never" to "every week." For example, one item stated, "I do my laundry: more than once a week, once a month, once every 2 months, someone else does it for me." Students circled the appropriate answer. This item grouping was referred to as, "How Often?"
2. The next group of items focused on the kinds of activities that students participated in before dinner during the week and the frequency with which they participated. Students were given a list of activities and asked to signify how often they participated in each one. The response choices ranged from "once per year" to "1-2 times per year" to "3-4 times per week" to "every day." This item grouping was called "Before Dinner."
3. The third group of items related to students' activities that occurred on weekends. The purpose of this group of items was to discover how many hours students spent in these activities over the course of a weekend. The students were given a list of 11 activities and asked to estimate how many hours they spent in each one. This item grouping was called "Weekends."

4. The fourth group of items addressed places that students typically frequented either in the community or on campus. Students indicated activity frequencies by placing check marks (which meant 1-3 times this year), underlining (which meant 4-10 times this year), circling (which meant 11-20 times this year) or putting a square (which meant over 20 times this year) around the place names. This group of items was called, "Where in Town."
5. The final item group related to daily routines and included questions like, "What time do you wake up on Monday, Wednesday and Friday?" The grouping was called "Schedule."

Procedure

The surveys were distributed during hall meetings by the Resident Counselors (RC). Surveys were either returned to the RCs or directly to Dr. Coleman. Reminders were sent weekly to the RCs for one month. Surveys were completed on a voluntary and anonymous basis.

Problems with the Instrument

One of the first problems with instrument items was quantifying the responses. Most of the items required responses that were not quantitative. Therefore, for the data to be statistically analyzed, all responses were changed to numbers. A codebook was created after the surveys had been returned to Dr. Coleman and he had returned to Tennessee. In the codebook, each response was assigned a number. For the groupings called "How Often," "Before Dinner," and "Where in Town," an ordinal scale was created for each response based on

the responses selected. The ordinal scale consisted of successive numbers and was not the same for every grouping. If an item provided only four possible responses, the numerical counterparts for them were 0, 1, 2, or 3. For responses to the group of items called "Weekends," the unit of analysis was time and ranged from 0 to 50.5 hours. Zero was the least amount of time and 50.5 was the greatest amount of time that could be spent in an activity on the weekend. For the item group called "Schedule," no scale was created. The responses designated a specific time during the course of a day, which occurred between 12:00 a.m. and 11:59 p.m. If responses were missing, the value 9999 was assigned. Numbers were entered into a statistical program for future analysis. These data were coded, inputted, analyzed, and deciphered by the author.

A second problem occurred because some students created their own responses to items rather than choosing from the ones provided. The common group of items in which this occurred was "How Often." When this problem occurred, the written-in response was inputted with the rest of the data. For example, for the item "How often do you frequent the computer lab?" the response choice of "never" was not included. Yet upon examination of the output, including a graph, "never" was included as a response. This was probably due to the lack of all-inclusive choices in this section. This created difficulties for determining frequency counts, percentages, and significance levels. None of the items were dropped due to low response rate. The items were included, since some students did signify participating in that activity.

A third problem occurred because some students did not respond at all to individual items, causing missing data. It was difficult to analyze and interpret an item when fewer than 50% of the population responded to it. Obviously, the larger the number of participants who responded to an item, the easier it was to determine what happened.

A fourth problem was created by responses that often were not all-inclusive. It was possible that other responses, whether to open-ended questions or to forced-choice items, might have occurred if students were given opportunities to answer different questions or to select responses from a wider array of choices. Whether or not the lack of inclusiveness significantly affected the content of students' responses could not been determined.

Data Analysis

Percentage and frequency distributions were used to analyze the data and to make simple comparisons based on activity participation, time usage, and preference. Chi-square tests were used to analyze responses related to gender and grade differences. Chi-square was the appropriate statistical test because all of the data were categorical in nature.

Chapter IV

Results

Frequencies and percentages were computed for all of the variables. The frequencies and percentages reflected the responses of the population as a whole. Chi-square statistics were performed to see whether or not either grade or gender were a contributing factor to activity choice. Significance for this test was set at the .05 level.

Purpose #1: Free Time Use at a Residential Public High School for the Gifted

The activities were divided into the following five areas: How Often, Before Dinner, Weekends, Schedule, and Where In Town. The responses presented in this area deal only with percentages and differences that were found in the cumulative percent-frequency distributions. The areas were set up in one of two ways: They included either a chart of the responses or the modes for individual items. The "Schedule" area included a table of the weekly schedule based upon the modes. The number of participants who responded to each item was provided also.

How Often

Students indicated how often they participated in certain activities (i.e., doing laundry). Activities could occur either during the week or on the weekends. Students were provided specific choices and asked to identify which one corresponded best with their routine.

Laundry: (n=180). The most popular response for how often laundry was done was "once a month." As they did on other items, some students wrote in their own responses, even though a write-in choice was not available for this item. Other frequent responses were "more than once a week" and "someone else does it for me." (See Figure 1.)

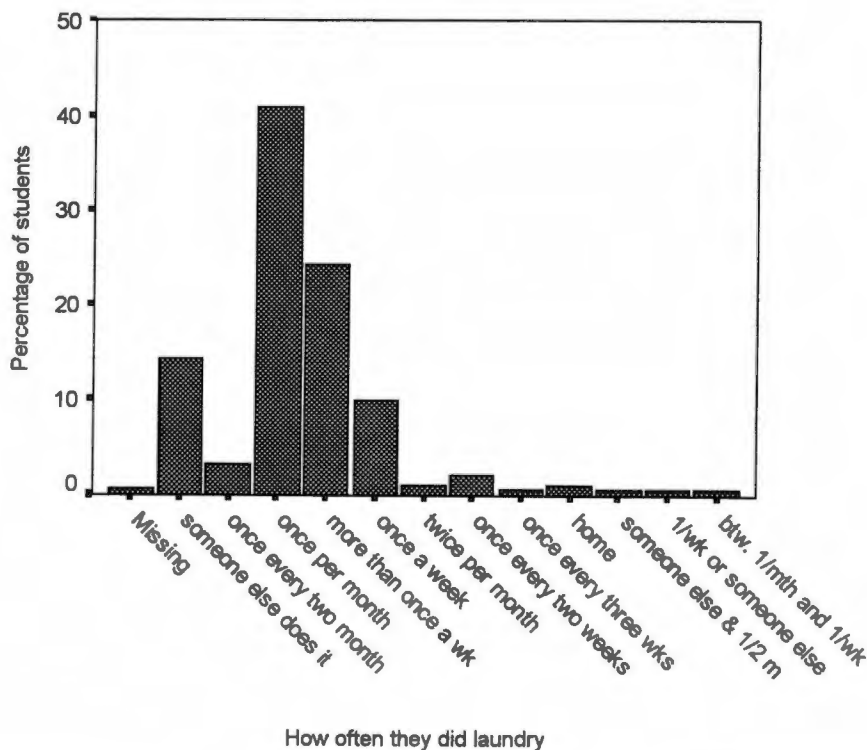


Figure 1. Percentage of students and how often they did their laundry.

Intramurals: (n=174). Intramural activities were not something that students participated in on a frequent basis. Two-thirds reported either not participating at all or participating only when they felt like it. Fewer than 10% of the students reported participating in intramural activities every day. (See Figure 2.)

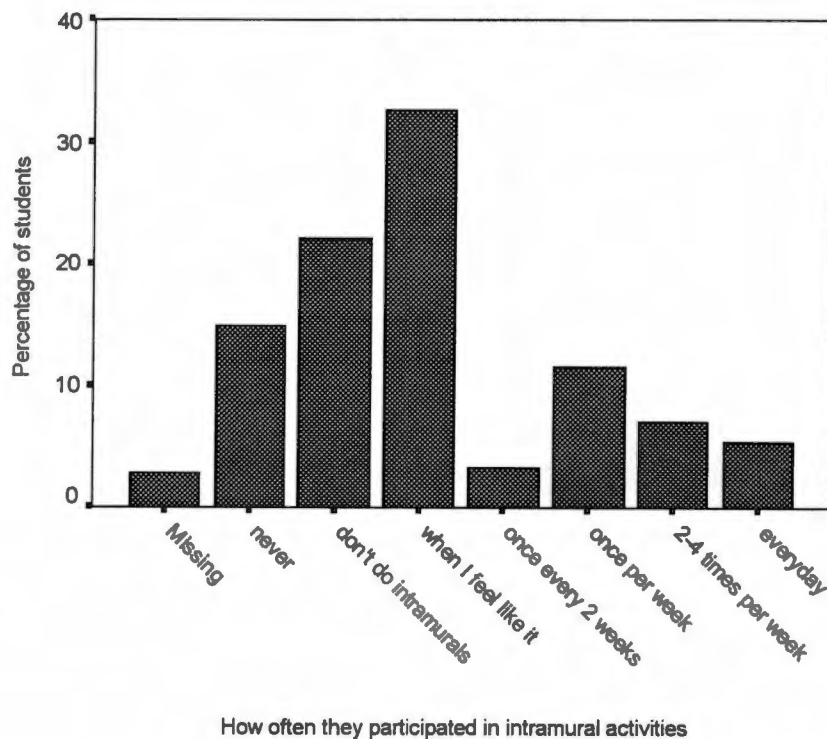


Figure 2. Percentage of students and how often they participated in intramural activities.

Going home: (n=180). The most frequent response to this item was "special circumstances"; over 40% of the students selected this alternative. Few students indicated that they never went home. (See Figure 3.)

Frequentering the lab: (n=180). The largest grouping on this item occurred for the response "3 or more times per day." Some students indicated they had "never" been to the computer lab. Others reported that they had visited it only once, and a few indicated that they visited the computer lab only on weekends. (See Figure 4.)

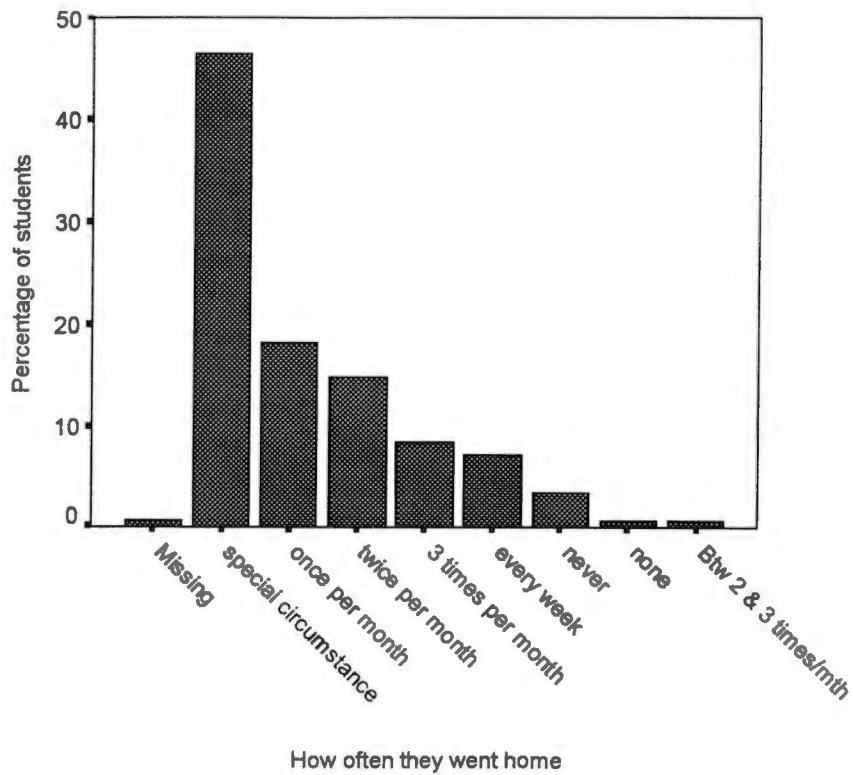


Figure 3. Percentage of students and how often they went home.

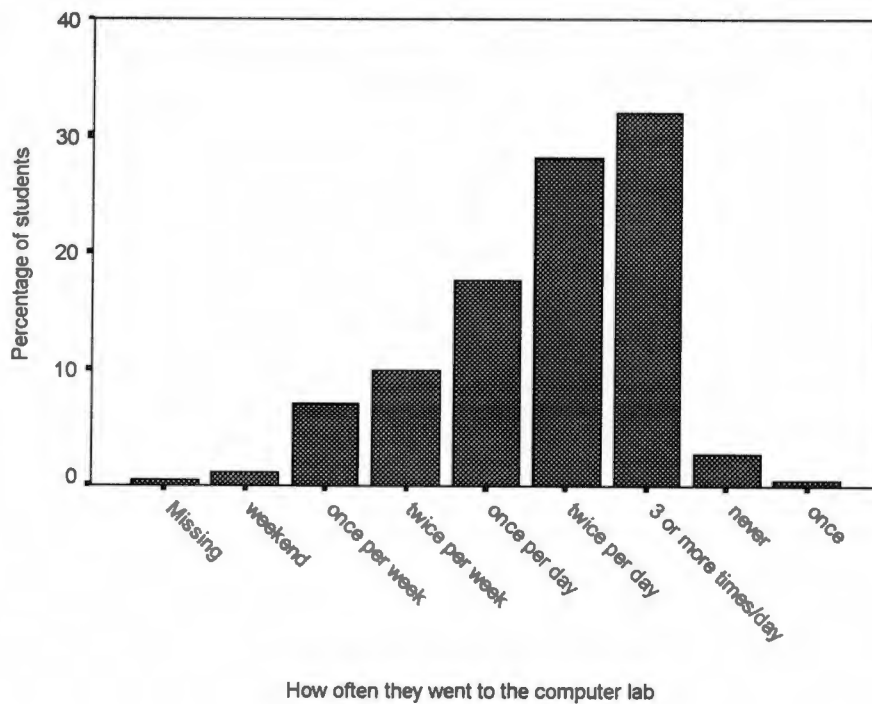


Figure 4. Percentage of students and how often they went to the computer lab.

Visiting colleges (n=180). Because college visits "typically" occurred during the senior year, the modes for juniors and seniors were computed separately. No students indicated that they made either seven or eight college visits. The mode for seniors was 2 and was selected by 27% of the students. The mode for juniors was 0 and selected by 72% of the students. For the total population, the most common answer was 0 and was selected by almost 50% of the students (see Figure 5).

Leaving the hall at night: (n=178). These results are based on the number of nights during the school week, not on weekend nights. The most

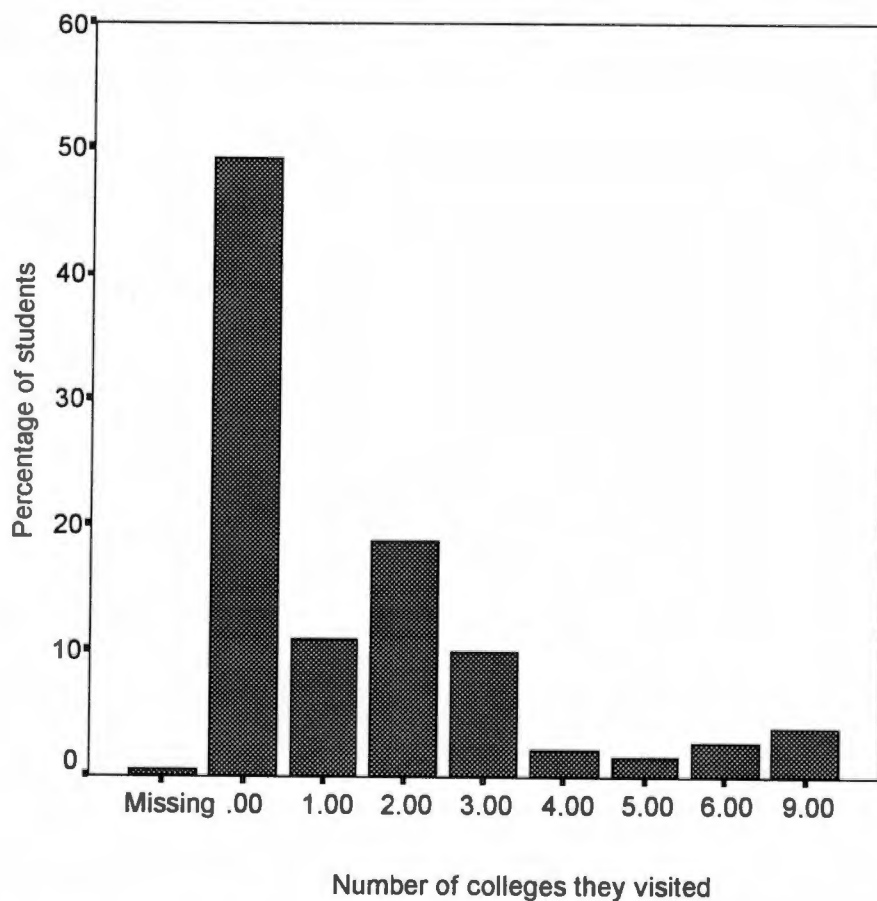


Figure 5. Percentage of students and the number of colleges they visited.

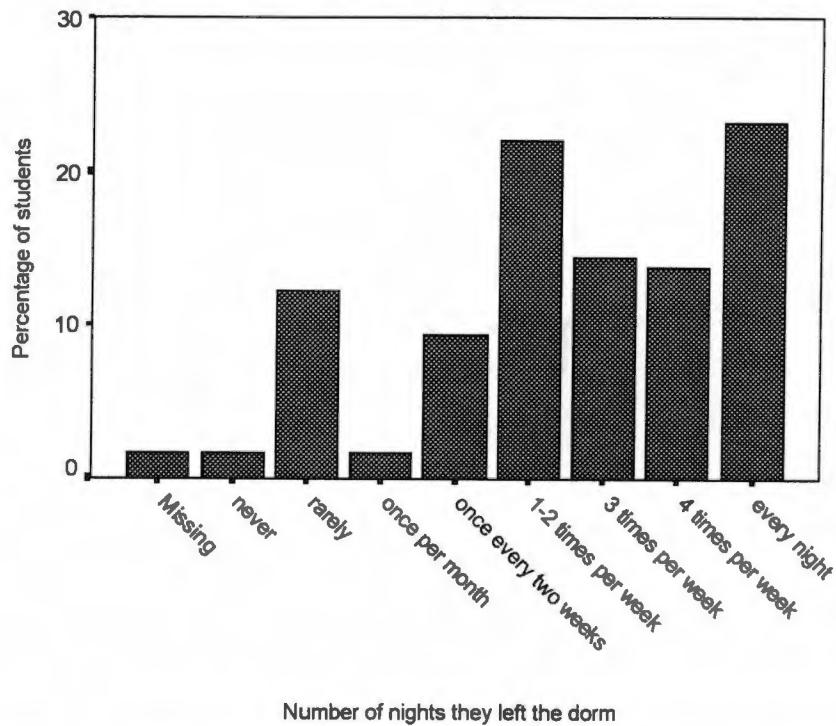


Figure 6. Percentage of students and the number of nights they left the dorm.

common responses were "every night" and "1-2 times per week." There were some students who reported they never left the hall at night and others who reported rarely leaving the hall. (See Figure 6.)

Before Dinner

In this area students selected activities that occurred before dinner each night. The survey included 21 activity choices and asked students to approximate how many times during the week they participated in each activity. Table 1 was created based upon the mode responses to each item. The ranges of percentage of students who chose each response are included in Table 1. Student responses indicated there were no activities in which the majority

Table 1

How Often Activities are Undertaken during the Week by the Largest Percentage of Students

Percentage of students	Frequency of activity participation during the week		
	Once per week	One-two times per week	every day
60-69			Check into the hall
50-59			Listen to music Hang out in room and talk to friends
40-49			Go to the computer lab
30-39	Go to the art gallery		Do homework Have food or something to drink
20-29	Go to the village Go for a walk with friends Read for pleasure	Take a nap Hang out in the RC's apartment Hang out in the lounge Go to a meeting	
10-19	Go to intramural activities Go to Gym 1 Play games and cards Go running		Find a place to be alone Go to athletic practice

participated 3 to 4 times per week. Some of the activities occurred in conjunction with other activities, and that should be taken into consideration when looking at the results. For example, it was possible for students to listen to music and do their homework or hang out in their room with friends. Also, this was one of two areas in which some items yielded less than a 75% response rate.

Weekend

Students had 50.5 hours of free time from the close of school on Friday until they checked in on Sunday evening. The survey included 10 activity choices and asked students to approximate how many hours they spent in each activity during the weekend. Table 2 was created based upon the mode responses and the range of percentage of students who chose each response. By adding all the modes, it was found that students utilized a total of 50 hours on the weekend. This left 0.5 hours unaccounted for on weekends. Activities such as dating, playing on the computer, and participating in hall programs did not play a large role in the weekend activities. These three activities had modal responses of zero hours. Most of the weekend time was spent sleeping, hanging out, or outside of the halls.

Schedule

This item provided information about the organization of student time, starting with when they got up in the morning until they went to bed. Table 3 was created based upon the mode responses to each item. The percentages of students who chose each response are included in Table 3.

As Table 3 illustrates, there was a tendency for students to sleep late on

Table 2

Range of Hours Reported for Weekend Activities by the Largest Percentage of Students

Percentage of students	Range of hours reported for weekend activities				
	0-5	5-10	10-15	15-20	20-25
50-59	Playing intramural activities				
40-49	Dating				
30-39	Participating in hall programs				Sleeping
20-29	Eating Watching movies or videos Playing on the computer	Doing school work			
10-19			Hanging out Outside the dorm		

Table 3

Schedule Times Reported by the Largest Percentage of Students

Questions	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
What time do you get up?	12 p.m. 14%	7 a.m. 25%	9 a.m. 14%	7 a.m. 25%	8 or 9 a.m. 12%	7 a.m. 25%	12 p.m. 14%
What time is your first class?		8 a.m. 78%	10 a.m. 18%	8 a.m. 78%	9 a.m. 23%	8 a.m. 78%	
What time do you go to bed?	1 a.m. 24%	1 a.m. 27%	1 a.m. 24%	1 a.m. 28%	1 a.m. 24%	2 a.m. 20%	2 a.m. 20%

weekends and to stay up later on Friday and Saturday nights than on Sunday through Thursday nights. There also was a tendency to go to bed at the same time. Students were awake for approximately 18 hours per day Monday through Friday. Table 3 provides an example of when students' days began and ended during an average week.

Where in Town

These items included locations in town that were frequented by the students. Responses were categorized by the type of location and also by the percentage of students who reported going to each location at least once during the year (see Table 4). The only type of location that was selected by every student was "Restaurant." The only type of location that was not selected by over 75% of the students was "Stores." The largest number of establishments was in the 25-50% range, while the smallest number of establishments fell in the "less than 25%" range. The places students visited most often were the Village (94%), the Library (88%), and the Quad (77%).

Purpose #2: Gender and Grade Level Effects on Free-Time Activities

Chi-square analyses were performed to learn whether or not grade and/or gender had a significant effect on item responses. The level of significance was .05.

Gender

The gender analysis revealed 16 significant differences among activity preferences. They were "frequenting the lab" χ^2 (8, N=180) =23.91, $p<.05$; leaving the hall at night" χ^2 (7, N=178) = 19.69, $p<.05$; "participating in

Table 4

Locations in Town and the Percentage of Students Who Visited Them

Percentage of students	Type of Locations				
	Restaurant	Rec.	Campus Areas	Stores	Town areas
75-100	Food Court Coffee Cup Subway	Gym 1	Library The Quad		The Village Theatre
50-75	McDonald's Taco Bell Greek Pizza	Student Center	University Bookstore	The Mall Meijer Bookstore Revco	
25-50	BW-3 Burritos Burger King Marsh Ivanhoe	Gym 2	Duck Pond Frog Pond Hall College Music Building	Target Wal-mart	River Park
Less than 25	Pizza King				State Park

intramural activities" χ^2 (3, N=64) = 8.23, $p < .05$; "reading for pleasure" χ^2 (3, N=80) = 8.02, $p < .05$; "going to the computer lab" χ^2 (3, N=155) = 8.37, $p < .05$; "going to Gym 1" χ^2 (3, N=96) = 8.37, $p < .05$; "taking a walk with friends" χ^2 (3, N=114) = 8.37, $p < .05$; "hours in the computer lab" χ^2 (23, N=167) = 37.25, $p < .05$; "hours eating" χ^2 (17, N=174) = 34.52, $p < .05$; "recreation in the student center" χ^2 (3, N=102) = 10.02, $p < .05$; "going to Meijer" χ^2 (3, N=130) = 8.94, $p < .05$; "going to the bookstore" χ^2 (3, N=131) = 10.33, $p < .05$; "going to Taco Bell" χ^2 (3, N=116) = 12.99, $p < .05$; "checking in" χ^2 (3, N=151) = 19.46, $p < .05$; "first class Monday/Wednesday Friday" χ^2 (4, N=181) = 10.30, $p < .05$; and "first class Thursday" χ^2 (17, N=169) = 29.15, $p < .05$. Of these 16 activities, there were only two that boys participated in more than girls. These activities were "participating in intramural activities" and "recreation in the student center." The other 14 activities were participated in more by girls than by boys and included, "frequenting the lab," "leaving the hall at night," "reading for pleasure," "going to the computer lab," "going to Gym 1," "taking a walk with friends," "hours in the computer lab," "hours eating," "going to Meijer," "going to the bookstore," "going to Taco Bell," "checking in," "first class Monday/Wednesday/Friday," and "first class Thursday."

Grade

The grade analysis revealed nine activities in which differential participation was reported. These activities were "hanging out in the RC's apartment" χ^2 (3, N= 136) = 10.17, $p < .05$; "playing games and cards" χ^2 (3,

N=82) = 8.20, $p < .05$; "taking a nap" $\chi^2(3, N=140) = 7.84, p < .05$; "going to the theatre" $\chi^2(3, N=142) = 8.78, p < .05$; "going to the quad" $\chi^2(3, N=140) = 11.16, p < .05$; "visiting colleges" $\chi^2(7, N=180) = 74.76, p < .05$; "going to the bookstore" $\chi^2(3, N=131) = 10.78, p < .05$; "first class-Monday/Wednesday/Friday" $\chi^2(4, N=181) = 21.15, p < .05$; and "first class-Tuesday" ($\chi^2(13, N=159) = 48.48, p < .05$.

Of these nine activities, juniors participated in only three more than seniors.

They were "taking a nap", "going to the bookstore" and "playing games or cards."

Seniors participated more in the other six activities, "hanging out in the RC's apartment", "going to the theatre", "going to the quad", "visiting colleges", "first class-Tuesday", and "first class-Monday/Wednesday/Friday." The significance levels for all activities can be found in Appendix C.

Chapter V

Discussion

The purpose of the study was to examine the free-time use of gifted students at a 2-year residential public high school. An exploratory study allowed for a description of the activity preferences of gifted adolescents with attention paid to the types of locations gifted children preferred to visit in their spare time to be formulated. Comparisons across gender and grade level were drawn to detect possible sources of variation. Because the study was descriptive, findings cannot be generalized to a larger population of gifted adolescents. Results are discussed by noting similarities and dissimilarities to existing literature, presenting findings that were unique to these students, discussing general limitations of the study, and presenting implications for future research.

Similarities

Listening to music and spending time with friends emerged as highly popular leisure time activities among the participants. Nearly 80% of gifted students reported listening to music at least three times per week, a figure slightly lower than that reported by the Horatio Alger Group (1996). The actual amount of time per day engaged in this activity could not be determined, however. This made it difficult to draw comparisons with studies cited in the literature review that did include this information. Yet, because such a large percentage of students identified listening to music as a free-time activity, one conclusion to be drawn would be that for the students at the Greenhouse Institute, it was the most preferred free-time activity.

Gifted students in the present study spent time with their friends in a variety of ways, including going for walks and hanging out in their bedroom. The actual amount of time spent with friends in these various activities was difficult to calculate. Students at the Greenhouse Institute lived in dormitories and were in contact with peers most of the day. Over one-half of the students reported spending some time hanging out with their friends in their rooms before dinner every day. Approximately one-fourth of students reported going for walks with their friends once a week. Students also reported spending between 0 and 30 hours per weekend hanging out with friends, with the largest number of students spending 10 hours in this activity. In contrast, students in earlier studies did not interact as often with their friends, in part because they interacted with family members. The largest amount of time spent with friends was reported by Csikszentmihalyi, et al. (1977)—a total of 34 hours per week, approximately 4.85 hours per day. Students lived at home and did not reside with friends at school. Greenhouse students associated with friends about 5 hours per day. Given these similarities, it can be concluded that the students at the Greenhouse Institute spent about the same amount of time with friends, at least on weekends.

Another similarity between the present study and previous research related to the time spent napping. In the current study, it was found that approximately 30% of the students took a nap at least three times per week. Csikszentmihalyi and Larson (1984) and Robinson (1991) also reported that students spent part of their free time taking naps. Respective figures were 3.55

and 1.3 hours per week. Thus, napping was a preferred activity by students whether they attended a residential or a non-residential public high school.

Dating choices was another activity that was comparable to adolescent preferences in previous research. In the current study, nearly 50% of the students at the Greenhouse Institute did not date on weekends, regardless of grade or gender. Kantrowitz and Wingert (1999) also reported that less than 50% of adolescents regularly dated. Dating at the Greenhouse Institute did not look different in reference to dating of adolescents in a non-residential public high school. Perhaps "formal dating" was not as relevant in that environment or no longer refers to the ways that adolescents pursue sexual interests and relationships.

Findings in this study replicated gender differences found in previous studies of free-time use and activity preference. In the present study, boys were more likely than girls to participate in sport-related activities. They spent considerably more time in intramural activities than girls. Mauldin and Meeks (1990) and the Horatio Alger Group (1996) also found that boys were more likely than girls to spend time in sports and sport-related activities. Although the Greenhouse Institute did not sponsor organized sport teams, it did offer sport-related intramural activities. Students at the Greenhouse Institute were able to participate in organized sports at the nearby university high school, but it was not possible to determine how much time they spent in those activities.

The Horatio Alger Group (1996) found that girls read for pleasure more often than boys did. This finding was replicated by the present study. Reading

for pleasure constituted reading that was not required for class. Given the consistency with a previous study, it appeared that this activity was a higher priority for girls than for boys. A possible explanation for the greater reading preference among girls might be linked to gender role socialization in activities. As noted previously, boys spent more time in sports and sport-related activities than did girls. It was possible that boys preferred group activities whereas girls prefer solitary activities such as reading. This possibly was in accord with the beliefs of Maccoby (1990), who believed that boys might need group structure more than girls do.

Gender differences also occurred in shopping activities. Higher rates were reported by girls compared to boys. This finding was consistent with Mauldin and Meeks (1990). However, gender differences emerged for only two of six shopping sites. Since the current study included items related to specific stores and not to shopping in general, the findings might have been different if students had reported the actual amount of time they spent shopping. Thus, the most that can be said about this finding would be that there were some stores that girls would be more likely to frequent than boys.

Differences

In the current study, most students watched movies or videos a minimum of 1 hour per weekend, with the majority watching 2 hours. According to Robinson (1991), adolescents spent 0.6 hours per week watching movies and videos. It should be noted that the students at the Greenhouse Institute spent more time watching movies and videos in a weekend than the adolescents in the

Robinson (1991) study did in a week. Therefore, it might be concluded that watching movies and videos was a more preferred free-time activity at their residential high school than in a non-residential high school.

The Horatio Alger Group (1996) found that nearly one-half of students went to movies, whereas 85% of the students in the present study spent some of their free time watching movies or videos. Because the participants in the Horatio Alger study were not asked to report on the amount of time they spent watching videos, general comparisons about this activity could not be made. However, it can be concluded that a larger percentage of Greenhouse Institute students watched movies or videos than did adolescents who lived at home.

Csikszentmihalyi and Larson (1984) found that students spent 14 hours per week studying, roughly 2 hours per day. Students at the Greenhouse Institute spent between 0 and 20 hours per weekend studying. The model response was 5 hours per weekend, and approximately 44% reported devoting 5 or more hours per weekend to studying, roughly 2.5 hours per day. It should also be noted that students of the Greenhouse Institute are required to study at least 1.5 hours Monday through Thursday. The conclusion, therefore, can be drawn that Greenhouse Institute students spent a lot more time studying than most students who attend a non-residential public high school. The greater amount of time spent studying can be explained in three ways. First, the students at Greenhouse Institute are enrolled in college-level courses. Because these students were still in high school, the additional study time might be necessary in order for them to transition from high school-level course work to college-level

course work and maintain the same level of academic achievement. Second, it is possible the students at the Greenhouse Institute are more academically motivated than were their contemporaries at a traditional high school.

In the present study, it was found that 70% of the students at the Greenhouse Institute had little interest in intramural activities and that 78% spent no time at all in intramural activities on weekends. Intramural activities were the sporting activities offered by the Greenhouse Institute. The Horatio Alger Group (1996) found that 43% of adolescents were involved in sports/fitness activities. Thus, it appeared that sport-related activities were not so important to the students of Greenhouse compared to other adolescents. Perhaps this finding, like studying, is related to these students' high academic ability. It is possible that these students had a preference for the academic side of school rather than for sports. Because the Greenhouse Institute did not offer organized sports, perhaps the students believed that sports were not as important as academics or perhaps their academic pursuits limited the time available for sport-related activities.

Unique Findings

As members of a residential school, Greenhouse students engaged in activities that were specific to their environment, for example doing laundry. Because they lived at home, participants in the previous studies had laundry done by someone else in the household or had their laundry done with the rest of the household laundry. When students at the Greenhouse Institute were asked if someone else did their laundry for them, only 14% answered positively. Forty

percent reported that they did their own laundry at least once per month. Thus, laundry constituted a responsibility for many of the students.

Previous studies also did not address activities related to the use of computers in a laboratory setting. Students at the Greenhouse Institute spent a considerable amount of time in computer labs. Approximately 60% of students reported frequenting the computer lab at least twice per day. The concept of computer usage was mentioned in only two studies--Horatio Alger Group (1996) and Kantrowitz and Wingert (1999). However, access to a computer lab was not addressed in either one. Regardless, the amount of time spent on a computer and the ways in which the computer was used might have been different. Students at Greenhouse Institute had access to computers 24 hours per day. Students at traditional high schools might have access to computers 24 hours per day, but within certain conditions. Students who lived at home might have to share their computer with the rest of the family. This could diminish the amount of time that the students could stay on the computer. It could also affect the ways in which the computer is used. Students who lived at home might have their computer use monitored by parents. These students might be allowed to use the computer only for writing papers or for playing games or for surfing the Internet when someone else did not need the computer. This was not the case at the Greenhouse Institute. Computer labs are comprised of a number of computers, and the students had access to all of them. The possibility of students having computers in their dorm rooms also should be taken into consideration. While students at Greenhouse Institute shared computers, there would be a marked

difference between a group of people sharing one computer and a group having access to a room full of computers. These students also had access to the Internet and had their own e-mail accounts. Perhaps students at Greenhouse Institute had more autonomy regarding computer use than did students who live at home.

Another activity that was not mentioned in previous studies was visiting colleges. Although it was possible that students in previous studies spent time visiting colleges, the activity was never mentioned. It was included in the current study because so many students expressed an interest in attending college. Approximately 99% of graduating students attend college (L.J. Coleman, personal communication, October 28, 1999). The large number of students who attend college might be related to two factors. First of all, these students already have an idea of what college life is like because they have lived on a college campus and have taken college courses. Second, as mentioned previously, these students are highly motivated.

Most of the items that were included in the "Before Dinner" activity area were not addressed in previous research. Activities such as "checking in" and "hanging out in the RC's apartment" were not relevant to traditional public high school settings. A residential facility creates additional activities that could, perhaps, should be undertaken during students' free time. Along with the additional activities created by this setting, these students also did not have some of the activities that might have been part of their lives when they attended a traditional high school. For example, students at Greenhouse Institute had

discretion about how they spent their free time before dinner. Students who live at home might not have this discretion. As family members, these students might have had chores to do before their family returned home. Such chores might have included doing dishes, getting mail, or watching over a younger sibling. These would be responsibilities of the student before they would be able to spend their time the way they would like.

Also, the places that gifted children frequented in their free time were unique to the present study and of particular interest because these students did not have access to automobiles. Some of the establishments that students frequented were quite a distance from campus (e.g., the mall, Target, and Walmart). How students actually traveled to and from these places was not addressed, but they did have access to a public transportation system.

The number of nights that students left the hall also was unique to this study. Students at a public school, in contrast, could be questioned on how many nights a week they left their houses, rather than on how many nights a week they left their dormitories. The previous studies did not ask about the number of nights those students went out. Yet, because the questions are not the same and are dealing with different settings, the conclusions would have been tentative. When the students at Greenhouse Institute went out at night, they checked out and when they returned they checked in. There also was a curfew. Students who lived at home might not always have to check out or to check in. They also might have figured out ways to bypass curfews. Also, some students who lived

at home might not have had the freedom accorded to the students at Greenhouse Institute regarding going out on school nights.

Items that related to scheduled routines also were specific to the present study. Previous research did not explore students' bedtime routines or their class schedules. This was of interest because of the unique setting at the Greenhouse Institute, which was more similar to a university than to a typical high school. Students at Greenhouse Institute had flexibility in choosing their class schedules, in contrast to the set daily schedule of a typical high school student. For students of a typical public high school, the day begins around 8 a.m. and ends around 4 p.m. (Csikszentmihalyi, et al., 1977). At Greenhouse Institute, the students' class schedules had more in common with those of college students than with those of other high school students. Students were able to attend evening classes and to choose what times during the day they would like to attend class. These students had more time between classes than did other public high school students. They could have an hour or more between classes, thus freeing up some of their time.

Variation in activity preference by student grade level was an area that had not been addressed in previous research. Because of the unique structure of the school, activity preferences associated with grade level were included in the present study. Only juniors and seniors attended Greenhouse Institute. Grade differences also were considered because this setting was a new experience for juniors. Seniors had a year-long history and were accustomed to residential life. Seniors were more likely than juniors to "hang out in their RC's apartment" and to "visit colleges." The greater likelihood for seniors to participate in these activities

was understandable. Seniors were allowed to choose the RC they lived with for the year, whereas juniors were not accorded that decision. Because seniors had a prior relationship with their RC; it was understandable that seniors spent more time hanging out with that person. It also was understandable that seniors were more likely to visit colleges. The senior year was a time of decision-making about the future, which could require sending out applications to colleges. It is common after the applications have been sent out and the acceptances have been received, for the students to make a trip to visit the college where they may spend the next four years. Juniors were not at that point and, therefore, were less likely to visit colleges.

Seniors also were more likely than juniors to have a class on Monday mornings and were more likely to have their first class later in the morning. Juniors were more likely to have an 8 a.m. class. A possible explanation for this was that core classes for Greenhouse Institute are offered earlier on Monday, Wednesday, and Friday mornings. Seniors were also more likely to have a class on Tuesday mornings than were juniors. On these days, it was the seniors who were more likely to have the early morning class. A possible explanation for this would be that upper-level classes were more likely to be taught early in the morning on Tuesdays.

Juniors were more likely to take naps than seniors. They also took naps more frequently than the seniors. It is possible that juniors were taking more naps because their sleep habits were changing due to being in this new environment.

Perhaps juniors were finding they needed to stay up later to get their work done and, therefore, were taking afternoon naps to catch up on their sleep.

Limitations

The first limitation of the study was the uniqueness of the residential environment. It was designed for the enrichment of gifted children resident to the state. The results cannot be used, therefore, to make generalizations about adolescent activity preferences in other schools and comparisons to non-residential public schools must be speculative.

There were 17 more females in the study than males, and the chi-square analyses were conducted using the number of students who responded to items, rather than to the percentage who responded. For example, an item might have been responded to by more females but by a larger percentage of males. This occurred on five of the items: hours spent in the computer lab on weekends; the number of hours spent eating on weekends; and how often students went to Meijer, Bookstore, and Taco Bell. The findings associated with each of these items could have been different had equal numbers of males and females constituted the sample or had the chi-square been computed using the percentage of students in each gender that responded to the item. This problem was present for only one of the chi-square analyses computed for grade level.

Another limiting factor concerned the design of the survey instrument. In some instances, students wrote in their own responses to items instead of choosing from the ones available. Item choices in some cases did not exhaust all possible alternatives. Also, students sometimes failed to respond to some

items. Perhaps problems created by missing data could have been minimized had students been given more item choices or had more open-ended items been included in the survey form. Also, possibly missing data did not significantly affect some of the statistical analyses.

The study was further limited by the exclusion of items related to television and video games. This limited comparisons with studies like Robinson (1991), who reported that adolescents spent roughly 17 hours per week watching television. Also, because students at Greenhouse Institute spent significant time watching videos, it can be concluded that there were televisions on campus. The oversight, therefore, was a definite limitation of the study.

The study did not address how computers were being used. It would have been desirable to have questions that addressed computer usage. Given the popularity of Nintendo, Sega, and the exorbitant number of games that were available for a personal computer, students could have spent considerable free time playing video games. Studies like Horatio Alger's (1996) and Kantrowitz and Wingert's (1999) noted that students spent much free time playing video games and conducting Internet searches. Computerized video games no longer must be purchased; they can be downloaded easily from the Internet. Given the considerable amount of time computers were being used, future studies should use more specific questions about computer use.

Implications For Future Research

Because the study was the first of its kind, it made a unique contribution to the literature. Studies like this provide researchers with a glimpse into the world

of gifted adolescents who live on the grounds of a residential public high school. Adolescents who attend schools such as Greenhouse Institute are a selective group. There are only 12 such schools in the United States. How schools like this one differ from other residential secondary academic environments is a possible question for future research. Another question is how life at residential public high schools differs from life at typical public high schools? These are questions that were not addressed in the present study. Yet, this study did offer some suggestions for future lines of inquiry and methods of conducting future research. One area that should be examined is the type and quality of peer relationships that are established at residential schools. Students at Greenhouse Institute did not date very much. This finding raises questions about the formation of sexual relationships at a residential school. Another area of interest relates to the use of computers. Are they used purely for academic activities or multiple purposes that include games and surfing the Internet? A final area of interest relates to sports. Is the lack of interest in sport activities due to the fact that the school does not offer organized sports, or is the giftedness of these students and their academic inclination somehow involved? All these questions merit further investigation.

Applied Implications

Studies like this have implications for parents who do not have daily contact with their children. Undoubtedly, parents wonder about their children's use of time. The present findings offer some insights and permit parents to gain a better idea of how their sons and daughters spend their time outside of the

classroom. The findings also provide a springboard for parent-child communication. Because their children are away at school, some parents might have difficulty finding topics to discuss with their children and consequently might tend to focus more on academic progress. If parents are offered a view of how their children are likely to spend their time, it could help them to relate to their children better. Once parents are aware of what their children are doing and what their interests might be, they should be able to formulate questions and show more interest in their children's lives outside of the classroom.

Studies like this one also have implications for future and present students. The findings might offer some insight to prospective students about life in a setting like Greenhouse Institute, especially free-time activities. The findings also might offer current students a validation of the ways in which they spent their free time.

Finally, studies like this one might have implications for the administrators and staff of schools like Greenhouse Institute. Knowing activity preferences of gifted adolescents could help administrators and staff utilize resources more effectively and include (or exclude) certain activities in the program. For example, although the school does offer intramural activities, the findings from this study indicate that most students did not participate in them. Perhaps it would be better to devote time and money to other activities that the students did prefer, such as activities that promote interests in computers or offer opportunities for gifted adolescents to develop relationships with the opposite sex. A program that is in part, at least, on the activity preferences of the student population is probably a

program that will be better received by students and supported more by the parents. Studies like this also lend support to the idea that boys and girls are different and have different preferences in free-time activities. The current findings also allude to a difference in the preference of free-time activities based upon a difference in grade level.

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APPENDICES

APPENDIX A
Studies Assessing Free Time and Adolescents

Table A-1: Studies Assessing Free Time and Adolescents.

Study	Sample Size & Recruitment	Sample Characteristics and Method.	Television	Peers	Studying	Sports/ Games	Reading	Napping/ Relaxing	Video Games	Music	Shopping	Movies	Dating	Computers
Csikszentmihalyi, M., Larson, R. & Prescott, S. (1977). The ecology of adolescent activity and experience. Journal of Youth and Adolescence.6 (3), 281-294.	25 adolescents recruited through personal contacts by graduate students.	The adolescents ranged in age from 13-18, the median age was 14. There were 16 boys and 9 girls. The adolescents were beeped 5-7 times per day at random times between 8 am - 11 pm. The beeps were administered 7 days a weeks for a two month time period. After being beeped, they filled out self reports about who they were with and what they were doing.	13.5% of their time was spent watching television. 14 hours per week	32.8% of their time was spent talking with their friends. 34 hours per week.	12.9% of their time was spent studying. 13.5 hours per week	4.4% of their time. Boys reported playing sports and games more than girls. It was also reported more by the younger ages. 4.6 hours per week.	7% of their time. 7.3 hours per week. Time was consistent across the sexes.							
Csikszentmihalyi, M. & Larson, R.. (1984). Being adolescent. New York: Basic Books Press	75 adolescents who were attending high school in the Chicago area.	The adolescents ranged from high school freshmen to high school seniors. There were 15 freshmen, 19 sophomores, 18 juniors and 22 seniors. One student of the original 75 was withdrawn from the study. The adolescents were beeped once every two waking hours, except during school hours when they were beeped every 45 minutes. The beeps occurred between 7:30 am - 10:30 pm Sunday through Thursday and 7:30 am - 1:30 am Friday and Saturday. The beeps were administered for a 7 day time period. After being beeped, they filled out self reports about who they were with and what they were doing.	7.2% of their leisure was spent watching television. 8 hours per week.	The participants reported spending 29% of their total time with their friends. 32 hours per week. 16% of their leisure time was spent socializing. 17.8 hours per week.	The participants Reported spending 12.7% of their total time studying. 14 hours per week 9% of their time spent with their friends was reporting as studying. 2.88 hours per week.	3.4% of leisure time was spent playing sports and games. 3.57 hours per week. Boys spent approx. 6 hours per week. Girls spent approx. half of that.	3.5% of leisure time was spent reading for pleasure 5.25 hours per week.	3.2% of leisure time was spent resting and napping. 3.55 hours per week.		1.4% of their leisure time was spent listening to music. 1.55 hours per week.				
Mauldin, T. & Meeks, C.B. (1990). Sex differences in children's time use. Sex Roles. 22(9/10), 537-553.	757 children who had taken part in the 1981 Time Use Longitudinal Study.	The children ranged in ages from 3 - 18. 73 were below the age of 6, 118 were between 6 and 9, 118 were between 10 and 12, 100 were between 13 and 15, and 83 were between 16 and 18. The children completed a time diary about how they used their time during a 24 hour period.	During the week, there were no differences in the amount of television. On the weekends, boys spent more time watching television than girls. Boys spent an average of 3 hours watching television, whereas girls spent only 1.9	Gender differences were evident. Boys spent less time than girls socializing. On the weekends, 13-18 year olds spent more time studying than the other age groups. On the weekdays, 16-18 year olds spent more time socializing		Boys spent more time playing sports and games than girls. Preschoolers spent the least amount of time playing sports, but the most time playing games of all				Music and art were lumped together into one category. Boys spent more time on arts and music during the week and females spent more time on the weekends.	Girls spent more time shopping than boys. 16-18 year olds and preschoolers spent the most time shopping			

Table A-1 Cont.

Study	Sample Size & Recruitment	Sample Characteristics and Method.	Television	Peers	Studying	Sports/ Games	Reading	Napping/ Relaxing	Video Games	Music	Shopping	Movies	Dating	Computers
			girls spent only 1.9	more time socializing than any other age group.		games of all the age groups.								
Robinson, J. (1991). It's 10 o'clock. Do you know where your teenager is?. <u>American Demographics</u> , (October), 8.	418 participants who took part in the 1985 Americans' Use of Time Project	The adolescents ranged in age from 12- 17. The adolescents completed time-use diaries.	17.7 hours per week were spent watching television.	4.4 hours per week were spent on social reasons, 2.1 hours were spent on traveling for social reasons and 2.6 hours were spent in conversation.	3.1 hours per week were spent on homework.	3.3 hours per week were spent in sport activities. .8 hours per week were spent at sporting events. 2.8 hours per week were spent playing games.	1.3 hours per week were spent reading	1.3 hours per week were spent napping. .8 hours per week were spent relaxing		.9 hours per week were spent listening to the radio or records.	2.4 hours per week were spent shopping.	.6 hours were spent watching movies.		
<u>The Mood of American Youth 1996</u> . (1996). Alexandria, VA: Horatio Alger Association of Distinguished Americans, Inc.	Approximately 1,000 students recruited through their homes.	The students ranged in age from 13 to 17 years old. Eighty-six percent of the students attended public school, 10% attended private school and 3% took part in some other schooling opportunity. The students completed surveys. The surveys contained questions in 5 areas. School, home, after school, problems facing adolescents, and hopes and dreams for the future.	81.9% of the students listed watching television as a non-school activity in which they participate. An average 4 hours per weekday and 4.8 hours per weekend day were spent watching television. On weekends, boys watch more television than girls.	82.2% of the students listed spending time with friends as a non-school activity in which they participate.	The students reported spending less than one hour per day on homework.	43.2% of the participants are involved in sport/fitness activities. 31% attend live sporting events. 61% consider sports a hobby. Boys are more likely than girls to participate in sports, attend a sporting event, and consider it a hobby.	40.3% said they read for pleasure. 43.3% listed reading as a hobby. Girls read for pleasure more than boys. (4.6 vs. 2.6 hours). The younger adolescents are more likely to read and also spend more time reading.		48.9% said they played video games. 48.7% of the students listed playing video games as a hobby. Boys are more likely than girls to play video games and younger adolescents report greater use.	87% of the participants listed listening to music as a non-school activity. It was the number 1 listed activity for both boys and girls, but girls listen to music more than boys. 67.5% listed music as a hobby. The older adolescents also reported listening to the radio more on the weekends than the younger adolescents. The students listen to the radio 3.6 hours per day on the weekdays and 4.3 hours per day on the weekends.	44.7% said that they went shopping as a non-school time activity.	45.4% of the students spent time going to the movies. 57.2% listed computers as one of their hobbies.		40.6% spent time using personal computers. 15% listed using internet and other on-line services as one of their hobbies.
Kantrowitz, B & Wingert, P. (1990, May 10). How well do you know your kid? <u>Newsweek</u> , 133, 36-41.	Article is a secondary source.		11 hours per week is spent watching television. Only 2% of adolescents reported not watching television.	50% of teenagers date regularly. 4 hours a week is spent going to parties.	3.7 hours per week are spent studying.					9.9 hours per week are spent listening to CDs and tapes.			Less than 50% of teenagers report dating on a regular basis.	47% of adolescents are using the computer to go online.

APPENDIX B

Survey

Survey

TO: Greenhouse Institute Students

FROM: Larry Coleman, "the guy on the second floor"

Please take 15 minutes and answer these questions. Your response will help me find out how Greenhouse Institute students spend their time. Many of you have been kind enough to share your experiences with me, but obviously I cannot talk to everyone. So, I am asking that you take a few minutes and fill out this questionnaire.

HOW OFTEN

This question is to learn the frequency you do certain actions. Circle the answer that fits you.

I do my laundry: more than once a week, once a month, once every 2 months, someone else does it for me.

I go to Intramural Activities: everyday, 2-4 times per week, once a week, once every 2 weeks, only when I feel like it, I do not do organized sports, never

I go home: Not counting extended weekends, how often have you gone home this year?
Every week, 3 times/month, 2 times/month, 1 time/month, only on special circumstances

Going to the Computer Lab: how frequently do you go?
3 more times/day, 2 times/day, 1 time/day, twice per/week, once/week, weekend only.

Visiting Colleges: How many college visits have you made while at the Greenhouse Institute?
Circle your answer: 0 – 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 or more

How frequently do you leave the dorms in the evening when NOT on Greenhouse Institute business? Every night, 4 evenings, 3 evenings, 1-2 evenings, once every 2 weeks, once a month, rarely, never

Before dinner during the week, not the weekend, I do the following

Check those actions you do *every* day

Circle those actions you typically do. Typical means *3-4 days per week*

Draw a square around those you do *1-2 times* per week.

Underline those you have done *once* during the year.

Check in

Hang out in your room and talk to friends

Hang out in RC apartment

Go to Intramural stuff

Go running

Go to a meeting of some kind

Go to Athletic practice

Read something for yourself

Play games or cards

Find a place to be alone

Take a nap

Hang out in the lounge

Go to the computer lab

Go to Gym 1

Go for a walk with friends

Have food or drink

Go to the Village

Do homework

Listen to music

Go to the art gallery

On Weekends when you stay at the Greenhouse Institute from 4:00 p.m. Friday until Check-in at 6:30 on Sunday, there is 50.5 hours. Write your estimate of how many hours you spend doing the following:

Sleeping

Playing on the Computer

Playing intramural

Hanging out

Watching movies or videos

Eating

Doing school work

Participating in dorm programs

Dating

Out of the dorm

Where in Town?

This question is to confirm all the places people have told me they have gone.

Check all the places you have been to in town 1- 3 times this year.

Underline all the places in town you have been to 4 -10 times this year.

Circle those places you have been to 11 – 20 times this year.

Square those places you have been to over 20 times.

Student Center Food Court

Gym 1

Recreation in Student Center

Duck Pond

Mall

Pizza King

Burritos

Frog Pond

Meijer

Target

State Park

University Bookstore

McDonald's

Coffee Cup

Bookstore

Revco

River Park

BW-3

Subway

Hall

Theatre

Taco Bell

The Village

College

Burger King

Wal-Mart

University Library

Music Building

Greek Pizza

Gym 2

Marsh

Ivanhoe's

The Quad

WHEN

Write your answer in the blank:

What time is your first class on Monday, Wednesday and Friday? _____

The time you usually wake up on Monday, Wednesday and Friday? _____

What time is your first class on Tuesday? _____

What time is your first class on Thursday? _____

The time you usually wake up on Tuesday and Thursday? _____

The time you usually wake up on Saturday and Sunday? _____

The time you usually go to sleep at night on Sunday, Tuesday and Thursday? _____

The time you usually go to sleep at night on Monday and Wednesday? _____

The time you usually go to sleep at night on Friday and Saturday nights? _____

APPENDIX C
Chi-Square and Significance Level Values

Table E-1: Results of the Chi-Square Analyses for Grade and Gender

Items	Gender p=	χ^2 for gender	Grade p=	χ^2 for grade	Degrees of freedom for grade and gender	N
Laundry	.062	20.31	.223	15.34	12	180
Intramural activities	.618	4.43	.097	10.72	6	174
Going home	.773	4.86	.563	6.76	8	180
Frequenting the computer lab	.002*	23.91	.493	7.41	8	180
Visiting colleges	.122	11.40	.000*	74.76	7	180
Leaving the dorm at night	.006*	19.69	.409	7.20	7	178
Check in	.000*	19.46	.498	2.38	3	151
Hang out in your room and talk to friends	.985	.15	.368	3.16	3	158
Hang out in the RC apartment	.156	5.22	.017*	10.17	3	136
Go to Intramural stuff	.042*	8.23	.949	.36	3	64
Go running	.432	2.75	.649	1.65	3	52
Go to a meeting	.417	2.84	.174	4.98	3	121
Go to Athletic practice	.545	2.14	.371	3.13	3	46
Read something for pleasure	.046*	8.02	.690	1.47	3	80
Play cards or games	.198	4.67	.042*	8.20	3	82
Find a place to be alone	.230	4.31	.165	5.10	3	100
Take a nap	.879	.68	.049*	7.84	3	140
Hang out in the lounge	.383	3.06	.731	1.29	3	132
Go to the computer lab	.035*	8.61	.831	.88	3	155
Go to Gym1	.039*	8.37	.577	1.98	3	96
Go for a walk with friends	.039*	8.37	.755	1.19	3	114
Have food or drink	.648	1.65	.936	.42	3	132
Go to the Village	.138	5.51	.315	3.55	3	122
Do homework	.177	4.93	.198	4.66	3	159
Listen to music	.432	2.75	.103	6.19	3	165
Go to the art gallery	.179	4.90	.403	2.93	3	64
Sleeping	.560	29.18	.474	30.85	31	176
Playing on the computer	.031*	37.25	.206	28.27	23	167
Playing intramural	.250	12.55	.411	10.34	10	145
Hanging out	.077	53.33	.540	38.45	40	164
Watching movies or videos	.663	15.91	.213	23.58	19	170
Eating	.007*	34.52	.211	21.34	17	174
Doing school work	.081	41.36	.267	34.35	30	169
Participating in dorm programs	.183	19.73	.202	19.27	15	154
Dating	.181	31.25	.218	30.18	25	152
Out of the dorm	.295	47.47	.760	36.17	43	161

* p<.05

Table E-1 Cont.

Items	Gender p=	χ^2 for gender	Grade p=	χ^2 for grade	Degree of freedom for grade and gender	N
Student Center Food Court	.837	.85	.251	4.10	3	158
Gym 1	.299	3.68	.263	3.98	3	146
Recreation in Student Center	.018*	10.02	.994	.08	3	102
Duck Pond	.837	.36	.451	1.60	3	52
Mall	.109	6.06	.650	1.64	3	126
Pizza King	.314	3.56	.266	3.96	3	26
Burritos	.195	3.27	.239	2.86	3	55
Frog Pond	.324	3.47	.498	2.38	3	58
Meijer	.030*	8.94	.555	2.10	3	130
Target	.315	3.54	.429	2.77	3	73
State Park	.232	1.43	.361	.83	3	30
University Bookstore	.298	3.68	.815	.94	3	119
McDonald's	.483	2.46	.457	2.60	3	93
Coffee Cup	.639	1.69	.173	5.00	3	150
Bookstore	.016*	10.33	.013*	10.78	3	131
Revco	.840	.84	.157	5.21	3	119
River Park	.386	3.04	.816	.94	3	68
BW-3	.408	2.90	.055	7.61	3	96
Subway	.699	1.43	.324	3.50	3	154
Hall	.168	5.05	.574	1.99	3	76
Movie Theatre	.735	1.28	.032*	8.78	3	142
Taco Bell	.005*	12.99	.374	3.12	3	116
The Village	.063	7.3	.067	7.16	3	170
College	.196	4.70	.704	1.41	3	54
Burger King	.953	.34	.953	.34	3	63
Wal-Mart	.197	4.68	.445	2.67	3	91
Library	.092	6.45	.075	6.91	3	160
Music Building	.917	.51	.441	2.70	3	50
Greek Pizza	.547	2.12	.942	.39	3	117
Gym 2	.476	2.50	.713	1.37	3	80
Marsh	.720	1.34	.340	3.36	3	105
Ivanhoe's	.382	.76	.983	.000	3	59
The Quad	.760	1.17	.011*	11.16	3	140
First class- Monday/Wednesday/Friday	.036*	10.30	.000*	21.15	4	181
Wake up- Monday/Wednesday/Friday	.196	43.03	.458	36.22	36	178
First class-Tuesday	.812	8.47	.000*	48.48	13	159
First class-Thursday	.033*	29.15	.074	26.02	17	169
Wake up-Tuesday	.293	47.53	.322	46.72	43	178
Wake up-Thursday	.087	51.46	.438	39.72	39	179
Wake up-Saturday	.107	63.83	.122	62.91	51	181

* p<.05

Table E-1 Cont.

Items	Gender p=	χ^2 for gender	Grade p=	χ^2 for grade	Degree of freedom for grade and gender	N
Go to bed- Sunday/Tuesday/Thursday	.268	38.65	.160	42.12	34	181
Go to bed-Monday	.086	38.68	.434	28.58	28	163
Go to bed-Wednesday	.082	37.76	.547	25.49	27	163
Go to bed-Friday	.565	30.06	.315	35.30	32	177
Go to bed Saturday	.513	32.08	.332	35.96	33	177

* $p < .05$

VITA

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