

LEARNING ACTIVITIES OF IU BLOOMINGTON STUDENTS:

Report of an Online Survey

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Factoids

1. *On average, IU students spend 17 to 19 hours on coursework each week.*
2. *20% of students spend more than 25 hours per week on coursework; 17% spend less than 10 hours per week.*
3. *Students prepare for exams by rereading or reading assigned texts and lecture notes, reviewing sample or old exams, and memorizing.*
4. *Memorizing is the third most useful exam prep strategy, though instructors are likely to say they discourage it.*
5. *What distracts students from their studies?*
 - a. *Spontaneous social activities with friends (36%)*
 - b. *Lack of motivation (31%)*
 - c. *Working at a job (15%)*
6. *While half of students have a job, only 13% report work as their greatest impediment to study.*
7. *High GPA students study about the same length of time as low GPA students. Perhaps how that time is spent makes the difference.*
8. *As their most important exam preparation strategies, high GPA students reorganize the material in their own way and review sample exams. Low GPA students make note cards and memorize information.*
9. *At least 60% of students spend time on coursework on each day of an average week; their study time ranges from a high of 4 hours on Sunday to a low of 1.8 hours on Friday and Saturday.*
10. *Women spend about two hours more per week on coursework than men do.*

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EXECUTIVE SUMMARY

The study attempts to determine what IUB undergraduates do and how much of it they do when they are academically engaged outside the classroom. An earlier local study (Wolf et al., 1991) also addressed student engagement. “Academic engagement” consists of 14 activities ranging from online communication to tutorial assistance to conventional studying of textbooks. The study focuses on five specific questions regarding students’ academic activities outside of class:

- What learning activities do students engage in and how do these contribute to their learning?
- How many hours do students spend on coursework in a typical week?
- What activities do students engage in to prepare for an examination and how do these contribute to their learning?
- How do students manage the time they spend on academic tasks?
- What factors may interfere with academic engagement?

We constructed a survey to examine these questions and administered it to a sample of IU Bloomington undergraduates in the spring 2003 semester. We analyzed the resulting data both for the overall sample and for various demographic subsets of the sample. Though the students responding to the survey had slightly higher than average GPAs, our sample (about 550 students) was generally representative of the undergraduate student body. The following patterns emerged from analysis of the data.

- Despite changes in teaching styles and technology over the past decades, the most common student learning activities were

reading, studying for exams, doing homework, and writing papers.

- The students in our sample spent an average of 19 hours per week on academic activities outside of class. Women, freshmen, students living on campus, students from outside of Indiana, and students in the top GPA quartile all spent more time on coursework than men, seniors, students living off campus, Indiana residents, and students in the bottom GPA quartile.
- Students preparing for examinations did so by reading or rereading assigned texts and lecture notes, reviewing sample exams or old exams, and memorizing.
- Studying is an evening activity: students were most likely to study between 6:00 p.m. and 2:00 a.m.
- The impediment to academic engagement selected most often by students in the sample was “spontaneous social activities with friends,” which was chosen by 36% of the sample, followed by “lack of motivation,” selected by 31% of the sample. “Working at a job” was selected by 15% of the sample.

Other pertinent findings: While high GPA students did invest a little more time than low GPA students in coursework, the difference was smaller than might be expected. Perhaps it is not so much the amount of time spent that makes a difference, but what is done with that time. The myth that students do not study on weekends is challenged, to a degree, by our study. Although the average number of study hours for Friday and Saturday was markedly lower than for other days of the week, at least 60% of respondents spent some time on coursework on each day of the week.

INTRODUCTION

Among the goals of most students who attend college is academic success, as manifested by good grades. University faculty members, administrators, and academic support staff also all want students to succeed academically. They all devote considerable time and effort to helping students learn how to master the basic information and ways of thinking of a particular discipline and how to demonstrate that learning on tests, in written work, and in a variety of other ways.

The results of all these efforts are, of course, mixed: some students learn and excel, while others do not. What factors underlie the success of some students and the failure of others? Considerable research has been done to examine this question, and a multitude of answers has been proposed. Among the most generally accepted answers to this question is the idea of time on task: the amount of time students spend on academic activities (Astin, 1993; Pascarella, 2001). This basic principle is also embodied in the “Seven Principles of Good Practice” proposed by Chickering and Gamson (1987). These principles “are intended as guidelines for faculty members, students, and administrators—with support from state agencies and trustees—to improve teaching and learning” (p. 4). The principles include contact between students and faculty, active and collaborative learning, prompt feedback, high expectations, respect for diverse ways of learning, and an emphasis on time on academic task.

Our research focuses on the last of these, the amount of time students devote to academic pursuits. Some of what students do in support of their learning—that is, their time on task—takes place in the

classroom, where activities such as listening actively, taking notes, asking and answering questions, collaborating with peers, or participating in planned activities contribute to academic success. However, much of what students do, academically speaking, occurs outside of class and is largely invisible to instructors and academic support staff. For example, students are often advised that they should spend at least three hours on coursework outside of class for each hour they spend in class. As instructors and administrators, we may fear that most students spend far less time than this on coursework, but we have had little solid evidence to support or allay our concerns. The purpose of this study was to make visible and to quantify what students do when they are academically engaged outside the classroom.

The assertion that time on task contributes to academic success has face validity and makes intuitive sense, but the data on this point are not particularly strong or consistent. For example, Schuman, Walsh, Olson, and Etheridge (1985) conducted several studies at the University of Michigan, with hundreds of subjects and using a variety of designs and techniques, in an attempt to uncover a relationship between study time and GPA. They reported a consistent failure to find such a correlation, and concluded by suggesting that other factors, such as aptitude or knowing what to study, may explain academic success substantially better than study time. Like Schuman et al., Lahmers and Zulauf (2000) also found little support in the literature for the contention that time on task is correlated with GPA. Their own study, in which 79 students from three courses filled out a time

diary, revealed that study time was associated with GPA only when time management skills were taken into account. Furthermore, their data indicated that study time must increase very significantly before effects on GPA are seen.

Similar results were reported by Thomas, Iventosch, and Rohwer (1987), who administered a number of survey instruments (measuring various personality variables in addition to study habits) to high school and college students. Of most interest in the present context were the results for the college students, which revealed some correlation between academic aptitude and grades, but no correlation between responses on the survey of study habits and grades.

Rau and Durand (2000) also found that the research literature is inconsistent regarding the correlation between study time and GPA, and they suggested several reasons for this failure. They noted that previous studies, at extremely selective universities such as Harvard and Stanford, may have examined only students at the upper end of the range in terms of aptitude; in fact, those students may spend 40 to 50 hours per week on academic activities, when one considers both time in and out of class. Students at less selective institutions such as Illinois State University reportedly spend much less time (an average of 8 hours per week outside of class) on academic activities. Rau and Durand's own research, which attempted to identify a construct they call "the academic ethic," measured not only study time, but also information on partying behavior. They reported a strong relationship between the presence or absence of the academic ethic and students' GPAs.

Another study showing only a limited relationship between study time and GPA, *How students study: Views from Bloomington campus undergraduates*, was conducted by the IUB Office of Academic Affairs and Dean of the Faculties in 1991 (Wolf, Schmitz, and Ellis, 1991).

In what has come to be known informally as the "Study Study," student researchers interviewed 305 undergraduates concerning their study behaviors and related topics. This survey intentionally did not define studying, but left it to the respondents to determine what activities fell within this category. However, it is apparent from the interview protocol and the survey report that "studying" largely referred to preparing for a test or quiz. In the interviews, students were asked a variety of questions about their study habits: how much time they spend studying, what are their preferred days of the week and times of day to study, what strategies they use in preparing for exams, how current they usually are in their coursework, and what obstacles to studying they encounter most frequently. Wolf et al. found little difference between high and low GPA students in the number of hours they studied. However, students in the highest GPA quartile were more likely than those in the lowest quartile to study on weekends and during the day. The high GPA group was also more likely to report that they "keep up" in all or most of their courses. Interestingly, low GPA students were found to start studying for an exam earlier than high GPA students.

These negative or mixed results must be balanced against an important source of positive evidence linking engagement in academic activities and GPA: the *National Survey of Student Engagement*, or NSSE (Kuh, 2001b). The NSSE is a large-scale survey that determines student engagement in empirically defined good educational practices, and what benefit students derive from these experiences. The survey is distributed to over 100,000 students at hundreds of colleges and universities across the country, and has led to the development of national benchmarks for good educational practice. The survey divides these good practices into five areas: level of academic challenge, active and collaborative learning, student interactions with faculty, enriching

educational experiences, and supportive campus environment. Students taking this survey are usually asked to estimate how frequently they engage in various behaviors (never, sometimes, often, or very often); they are also asked to estimate the gains they have made in college in several areas, including their general education, practical competence, and personal-social growth. Students' responses in all five of the benchmark areas, as well as their perceived gains, are positively correlated with GPA (Kuh, 2001b).

Several other smaller studies have also found a positive relationship between study habits or time spent studying and GPA. Bol, O'Connell, and Nunnery (1985) found a significant positive correlation between students' scores on some subscales of a study habits inventory and the students' grades in two courses. Warkentin and Bol (1997) used interview data to reveal differences in the study habits of students receiving high grades in a course and those receiving low grades. In addition, Howard (1993) administered a survey of study habits to a group of students and also obtained information about how much time per week the students spent studying, the students' GPAs, and demographic variables. Using the scores on the study habits survey as the dependent variable, Howard found significant relationships between students' GPA and survey responses (students with higher GPAs scoring higher on the survey) and between time spent studying and survey responses (a longer time spent studying was associated with higher scores on the survey). Finally, Michaels and Miethe (1989), responding to Schuman et al.'s (1985) failure to find a consistent relationship between study time and grades, investigated the relationships among study time, the quality of study (measured by behaviors such as rewriting lecture notes, studying in the library or other quiet place, and maintaining a regular schedule of studying), GPA, and various background or demographic variables. They found a small but signifi-

cant relationship between study time and GPA, but the effect was specific to the student's class: for freshmen and sophomores, increasing study time had an impact on grades, but this relationship did not hold for juniors or seniors. In addition, the effect was seen only in students who were self-described as "non-crammers," that is, who studied regularly throughout the semester rather than just before exams.

Because the research on the question of study time and academic success has been inconsistent at best, our goal in the present study was, in part, to address topics similar to those addressed in these studies. Our conception of our research was informed by the NSSE, which examines numerous aspects of students' engagement in college, in academic as well as other activities. We examined in detail a particular piece of the academic engagement puzzle quantified by the NSSE: the time students spend outside of class on academic pursuits related to their coursework.

Another part of our goal in the present study was to follow up on the study of Wolf et al. (1991) with a large sample of IUB undergraduates in order to determine if there have been discernible changes in student behaviors in the intervening twelve years. However, our interests extended beyond the study behaviors (that is, exam preparation) examined in that survey. We wanted to learn about all the activities that students engage in outside of class that might contribute to their academic success—that is, we wanted to quantify students' "time on academic task" outside of the classroom. Part of the rationale for this wider scope derives from the considerable changes in the teaching-learning landscape that have occurred over the past decade or so. Since 1991, there has been increased emphasis on "active learning" strategies—ways to engage students in their own learning beyond the traditional listen-read-study-test cycle. Active learning seeks ways to encourage students to talk about, write about, and

otherwise use new learning. Further, active learning proponents tend to favor papers, projects, portfolios and other forms of assessment over traditional tests. These views of teaching and learning were certainly known in 1991; however, we believe that they are much more widely held now than then. In 1991, exam preparation could still be viewed as the most important activity students engaged in to support their academic success. Now it can be seen as only one of several important activities students engage in to support their learning.

Another goal of our study was to examine in detail the relationships between demographic variables and study time—to understand better “who studies?”, to relate our data to the relevant literature, and to investigate potential connections between studying and other variables that have been demonstrated to affect academic success.

To address these goals, our study focuses on five specific questions regarding students’ academic activities outside of class. The questions are:

- ♦ What learning activities do students engage in and how do these contribute to their learning?
- ♦ How many hours do students spend on coursework in a typical week?
- ♦ What activities do students engage in to prepare for an examination and how do these contribute to their learning?
- ♦ How do students manage the time they spend on academic tasks?
- ♦ What factors may interfere with academic engagement?

Our choice of research questions was informed by several goals. First, we wanted to make our survey comparable to the 1991 survey, and also go beyond the exam preparation strategies that were the focus of that study to include other activities students commonly engage in outside of class in responding to course demands. We also wanted to make visible students’ time on academic task outside the classroom, to connect our study to other relevant research literature, and to elaborate on questions posed in the NSSE (Kuh, 20001a). We constructed a survey to examine these questions and administered it to a sample of IU Bloomington undergraduates in the spring 2003 semester. We analyzed the resulting data both for the overall sample, and for various demographic subsets of the sample.

METHODS

Background

The Learning Activities Survey was developed and administered by Lisa Kurz, Writing Tutorial Services, and David Perry, Evaluation Services and Testing, with the support of Instructional Support Services and the Office of Academic Affairs and Dean of the Faculties. The survey was conducted with the approval of the Bloomington Campus Committee for the Protection of Human Subjects. Survey items were developed from several sources, including the report *How students study: Views from Bloomington campus undergraduates* (Wolf et al., 1991), a brief survey of relevant literature, and the experiences of the co-authors and other teaching and learning consultants. An initial version of the survey was pilot-tested with a small group of undergraduates and revisions were made based on their responses and suggestions.

The survey

The survey was administered online via a secure World Wide Web site. The site was accessed via a log-in procedure that enabled us to identify respondents by their network username, that permitted only students in our random sample (see below) to access the survey, and that prevented subjects from submitting the survey more than once. Students accessing the site first viewed an informed consent statement and clicked a check box indicating that they wished to participate. Then students accessed the survey itself, which consisted of 110 items in several sections (see Appendix for survey questions and answer options). Survey items covered a wide variety of topics related to learning activities, including the following:

- how many hours students spend on a variety of course-related activities in a typical week and in the previous seven-day period
- how much each activity contributes to their learning
- how many hours they spend on coursework (excluding time in class) by day of the week
- how many hours students spend on a variety of exam-preparation activities and how much each contributes to their learning
- times during the day when they are most likely to study and when they study most effectively
- how up to date they are in their coursework
- activities that may interfere with their coursework.

We defined a “learning activity” as an academic behavior a student might do outside of the classroom that focuses on a particular course and that could contribute to success in that course. Our definition thus excluded global behaviors potentially related to academic success, such as stress reduction or time management techniques, and focused on specific activities related to particular courses. Our list of learning activities was constructed in consultation with IUB undergraduates, and confirmed as comprehensive by our pilot subjects.

In all, the survey was available for two weeks, the last week in February and the first week in March, 2003. We selected this time frame because students at this time in the semester have settled into an academic routine, and their responses thus reflect representative academic behaviors. This time frame also avoided the week before spring break, when many professors give midterm exams.

After the survey was administered, we obtained demographic data for each student participant from the Office of the Registrar. These data included the student's age, gender, ethnicity, residency status (in or out of state), housing status (on or off campus), class, school and major subject, the number of credit hours currently enrolled in, rank in high school class, and SAT or ACT scores.

Recruitment procedures

To recruit participants, we obtained a random sample of 1,000 full-time undergraduates from the Office of the Registrar. These students were sent a letter signed by W. Raymond Smith, Associate Vice Chancellor for Academic Affairs, explaining the purpose of the survey, inviting their participation, and providing the Web ad-

dress for the survey. Students were offered a \$10 cash payment for their participation. A few days after the students received the letter, we sent a follow-up e-mail message to the entire sample, encouraging them to participate and again providing the Web address for the survey. Approximately one week later, we sent a second and final e-mail reminder to students in the original sample who had not yet completed the survey. A total of 554 completed surveys were received, for a response rate of 55.4%. Our sample comprises about 2% of the total IUB undergraduate population.

Profile of survey respondents

Our respondents were similar to the total population on most of the demographic variables we examined. Table 1 presents some key comparisons:

Table 1. Demographics of the sample.

Demographic variable	Learning survey sample	Undergraduate population
Gender	Female: 55.6%	Female: 52.3%
Age (mean)	20 years	20 years
Ethnicity	White: 84.5% African American: 3.5% Asian: 4% Non-res. alien: 3.5% Hispanic: <1% Native American: <1% Other American: 1.5% Refuse to answer: <1%	White: 80% African American: 3.8% Asian: 3.1% Non-res. alien: 8.5% Hispanic: 2.1% Native American: 0.2% Other American: 1.1% Refuse to answer: 1%
Residency status	Indiana resident: 71.5%	Indiana resident: 68.0%
Housing status	On campus: 50% Off campus: 48.5% Blank/no answer: 1.4%	On campus: 35.7% Off campus: 58.1% Blank/no answer: 6.2%
High school rank	Upper 30%: 62.5%	Upper 30%: 57-61% (over past four years)
Total SAT score (mean)	1132	1087-1091 (over past four years)
Class standing	Freshman: 24% Sophomore: 27% Junior: 22% Senior: 27%	Freshman: 23% Sophomore: 24% Junior: 22% Senior: 31%
Cumulative GPA (mean)	3.10	3.01

We conclude from these comparisons that students living on campus were substantially over-represented in the sample. The sample also slightly over-represented white students, females, Indiana residents, underclassmen, and higher academic achievers.

Data analysis

First-level data analysis was accomplished by simple frequency counts. Open-ended items were analyzed by content analysis and categorization. Cross-tabulations and other statistical procedures were performed in accord with generally accepted statistical principles (Rea and Parker, 1997), using SPSS. Only comparisons that are statistically significant at the .05 level are reported below in the Results section.¹

Limitations of the study

The survey response rate of 55.4% is considered to be adequate for survey research. While our sample represents the overall undergraduate population at IUB quite well in most respects, students living on campus are over-represented. This limits somewhat our ability to draw conclusions about the undergraduate population as a whole.

The effect of the online survey format on responses is unknown. While we have no reason to believe that students would have responded differently to a paper survey, there is little previous research with online surveys to guide our expectations. However, a recent study comparing responses to the NSSE in online versus paper formats revealed that while students tended to respond more positively to the online survey than to the paper mode, these differences were small (Carini et al., 2003).

Finally, the survey requires respondents to recall and estimate the amount of time they spent on learning activities in a typical week and in the preceding seven-day period. We are uncertain as to how well respondents were able to perform this task, even assuming a good-faith effort to do so. However, we are encouraged by the similar estimates between a typical week and the immediately preceding week, for which students' memories should have been sharper. Also, there is an encouraging correspondence between the total amount of time students estimated spending on specific learning activities in a week and the total amount of time they said they spent by day of the week. Furthermore, as discussed by Kuh (2001b) and others, students may inflate certain behaviors when responding to a survey, but these effects are likely to be relatively constant across different types of students. Thus even if the absolute values are questioned, the relative figures provided by students are likely to be valid and reliable indicators of their performance.

1 Because the survey data were largely categorical, comparisons between subsets of the sample were done using nonparametric statistical tests.

RESULTS

We have organized the results around the five questions posed in the Introduction:

- What learning activities do students engage in and how do these contribute to their learning?
- How many hours do students spend on coursework in a typical week?
- What activities do students engage in to prepare for an examination and how do these contribute to their learning?
- How do students manage the time they spend on academic tasks?
- What factors may interfere with academic engagement?

Each question, along with the survey items that relate to that question, is addressed in a section of the results. Within each section, we discuss both results for the entire sample, and comparisons between various subsets of the sample. These comparisons focus on variables that have previously been related to academic success (gender, GPA, housing, residency, and class standing); if we can identify differences in learning activities in specific populations through these analyses, we may facilitate the development of policies and strategies for student success. We also compare our results to those obtained in the 1991 survey when possible.

What learning activities do students engage in and how do these contribute to their learning? (Survey items 1 and 3)

General results

The first set of survey items asked students to estimate the number of hours they spent in an “average week this semester” on fourteen activities related to coursework. Response options included None, 0.1 to 1 hours, 1.1 to 3 hours, 3.1 to 6 hours, 6.1 to 10 hours, 10.1 to 15 hours, and 16 or more hours. Students were instructed to exclude time spent in class. They were also asked to rate the contribution of each activity to their learning according to the following scale: “none,” “a little,” “some,” or “a lot.” Finally, they were given the opportunity to write in activities other than those we had listed. Table 2 provides summary data for the fourteen prompted activities. (Mean hours are estimated according to standard procedures for grouped data. Contribution ratings were converted to a 0-3 scale, ranging from 0 for “none” to 3 for “a lot.”)

Table 2. Summary data for time spent on learning activities.

Activity	% who ever engaged in activity, current semester (N=554)	Mean hours per week (including only those who ever engaged in an activity)	Mean hours per week (entire sample)	Mean contribution rating (including only those who ever engaged in an activity)*
1.1 Read assigned text	99%	4.39	4.35	2.16
1.2 Study for exam or quiz	99%	4.50	4.48	2.51
1.3 Do homework (e.g., problem sets)	98%	4.46	4.38	2.13
1.4 Work on group project	73%	2.03	1.49	1.54
1.5 Communicate with instructor	82%	1.01	0.83	1.85
1.6 Meet with a tutor	12%	1.36	0.16	2.53
1.7 Participate in online discussion	13%	1.36	0.18	1.28
1.8 Annotate text, write journal entry	59%	1.59	0.94	1.45
1.9 Lab work (e.g., science, language)	17%	2.29	0.38	1.88
1.10 Practice (e.g., skills or music)	54%	3.26	1.75	1.92
1.11 Community service related to a course	19%	2.25	0.43	1.92
1.12 Write or revise a paper	95%	2.80	2.67	1.98
1.13 Prepare in-class presentation	65%	1.80	1.17	1.78
1.14 Research for a paper or project	89%	2.39	2.13	2.04

* 0 = "none," 1 = "a little," 2 = "some," 3 = "a lot"

In general, the higher the proportion of students who report ever engaging in an activity during the semester, the more time they tend to spend on that activity. There are two notable exceptions to this trend. Many students report communicating with the instructor (activity 1.5), but

they only spend about an hour per week on it. On the other hand, only about half the students in the sample report spending time practicing skills, but those who do engage in this activity spend over three hours per week on it.

Nearly all students in the sample pursue the following three activities, and spend 3 to 4 hours per week on each one: studying for an exam or quiz (activity 1.2), doing homework (activity 1.3), and reading assigned material (activity 1.1). A slightly smaller (but still substantial) percent of the students in the sample engage in two other activities, and spend 2 to 3 hours per week on each one: writing, or revising a paper (activity 1.12), and doing library research (activity 1.14). Four-fifths of students in the sample communicate with their instructor (activity 1.5) in a typical week, and spend an average of about an hour doing so. Half to three-fourths of the students in the sample spend time in a typical week working on a group project (activity 1.4); preparing an in-class presentation (activity 1.13); doing an informal writing activity (activity 1.8); and practicing skills or music (activity 1.10), spending roughly 1.5 to 3 hours per week on these activities.

The ratings of the contribution of each activity to students' learning were calculated considering only those students who ever engaged in that activity; that is, the contribution ratings of students who never engaged in an activity were ignored. Based on these ratings, four activities were rated highest: meeting with a tutor (activity 1.6), studying for an exam or quiz (activity 1.2), reading assigned material (activity 1.1), and doing homework (activity 1.3). Activities rated as having an intermediate contribution to student learning were: doing library research (activity 1.14); planning, writing, or revising a paper (activity 1.12); practicing skills or music (activity 1.10); and doing community service (activity 1.11).

In general, the activities students are most likely to engage in are also those they rate as contributing most to their learning. There are two notable exceptions to

this. First, while only 12% of respondents reported ever meeting with a tutor (activity 1.6) those who did gave this activity the highest mean contribution rating. This result suggests that one-on-one tutorial help contributes significantly to the academic success of the students who seek it. On the other hand, about three-fourths reported working on a group project (activity 1.4), but this rated low in contribution to learning.

We also provided an open-ended option to elicit other activities students engage in that contribute to success in their courses. The 354 responses from 241 participants fell into about ten categories, the most common of which were communicating or studying with peers (22% of responses), class attendance (18%), reading behaviors, including taking notes and highlighting (11%), communicating with instructors (10%), and exam preparation activities, such as reviewing old exams (8%).

Item 3 in the survey asked students to estimate how much time they spent on the same fourteen activities "last week," defined as the previous seven-day period. The pattern of responses was very similar to those for item 1. When the items are ranked by mean hours, the order for the two sets of items is nearly identical. However, the time estimates for the previous week tended to be, on average, about twenty percent lower than those for a typical week. One explanation for this is that in the instructions for item 1, we asked students to indicate some time for an activity if they ever engaged in it during the semester. Therefore, it is reasonable that students' time estimates for a typical week would be somewhat higher than those for the previous week. Because we felt that the typical week responses provided a more complete picture of student learning behaviors, we focused the analysis on that item.

Table 3. Time spent on learning activities by women and men.

Activity	Women: Mean hours per week (N=308)	Men: Mean hours per week (N=246)
1.1 Read assigned text	4.80	3.78
1.3 Do homework (e.g., problem set)	4.76	3.91
1.8 Annotate text, write journal entry	1.01	0.85
1.12 Write or revise a paper	2.87	2.43

Comparison by gender

Table 3 reports statistically significant differences between females and males in regard to learning activities.

Women report spending more time than men on twelve of the fourteen activities and the overall difference between the two groups is statistically significant. The two exceptions are practicing skills (activity 1.10) and working on a group project (activity 1.4) where men report slightly more time. As might be expected, the differences are greatest for those activities in which students invest the most time—reading text (activity 1.1), doing homework (activity 1.3), annotating texts (activity 1.8), and writing a paper (activity 1.12). For those four activities combined, women spend about 2.5 hours per week more than men. The contribution ratings are similar for women and men. Women tend to rate most activities slightly higher than men.

Comparison by class standing

Differences between freshmen and seniors for this item are mixed and mostly small. The most noteworthy activities are doing homework (activity 1.3), where freshmen report spending about an hour and a

half more per week than seniors, and group projects (activity 1.4), where seniors spend about an hour more than freshmen. Each of these might be expected considering the differing curricular demands at these two stages of undergraduate life. Freshmen tend to rate the contribution of activities higher than seniors overall. In particular, they place higher value on meeting with a tutor (activity 1.6) and informal writing (activity 1.8).

Comparison by grade-point average (GPA)

Perhaps the most striking observation about upper and lower quartile GPA groups in regard to learning activities is that they are quite similar. Similar proportions of the two groups report engaging in the various activities and the total estimated mean hours per week for all activities are nearly identical: 25.82 hours for the upper quartile and 26.23 for the lower. However, within this overall pattern of similarity there are a few notable differences. Compared to the low GPA group, the high group spends about an hour more per week reading assignments. On the other hand, the high group reported spending less time meeting with a tutor, preparing for in-class presentations, and doing research for a paper or project. Table 4 shows these differences.

Table 4. Time spent on learning activities by high- and low-GPA students.

Activity	GPA, Highest quartile: Mean hours per week (N=136)	GPA, Lowest quartile: Mean hours per week (N=136)
1.1 Read assigned text	5.17	4.15
1.6 Meet with a tutor	0.11	0.23
1.13 Prepare in-class presentation	0.87	1.54
1.14 Research for a paper or project	1.86	2.63

Contribution ratings were also similar in terms of the rank order of items. However, the upper GPA group values reading text (activity 1.1), studying for a test (activity 1.2), and doing homework (activity 1.3) more than the lower group, while the lower group rates meeting with a tutor (activity 1.6) higher.

Comparison by housing status

The learning activity profiles of on-campus and off-campus students are very similar except for three activities. On-campus students report spending over an hour per week more doing homework than off-campus students. On-campus students are more than twice as likely (15.9% compared to 7.1%) to have ever met with a tutor during the semester and nearly twice as likely (21.3% compared to 12.6%) to have done lab work.

Contribution ratings were similar for the two groups, although on-campus students tended to rate most activities a little higher. The differences were greatest for meeting with a tutor (activity 1.6) and doing lab work (activity 1.9).

Comparison by residency status

Out-of-state students report spending more time per week on ten of the fourteen activities than in-state students. However, the difference is significant only for group work (activity 1.4), where they invest about one-third of an hour more.

How many hours do students spend on coursework in a typical week? (Survey items 2 and 4)

General results

In the second survey item, students were asked to estimate the number of hours they spent on all learning activities outside of class on each day of the week in an “average week” during the semester. Table 5 shows the percent of respondents who reported any study time and mean hours by day of the week.

Table 5. Time spent on coursework by day of the week.

Day of the week	% who report studying, average week	Mean hours
Monday	97%	2.9
Tuesday	98%	3.0
Wednesday	98%	3.0
Thursday	91%	2.7
Friday	62%	1.5
Saturday	61%	1.9
Sunday	96%	4.0
TOTAL		19.0

Daily estimates were summed to create a weekly estimate for each student. Table 6 shows how these weekly estimates were distributed.

Table 6. Distribution of time spent on coursework per week.

Hours per week	% of sample	Cumulative % of sample
0 – 5	3.1%	3.1%
6 - 10	14.1%	17.2%
11 – 15	25.6%	42.8%
16 - 20	23.1%	65.9%
21 - 25	13.5%	79.4%
26 – 30	8.7%	88.1%
31 - 35	4.5%	92.6%
36 – 40	2.3%	94.9%
>40	5.1%	100.00%

Mean hours per week = 19.0
Standard deviation = 10.2

In survey item 4 students were asked to report these same daily estimates for the seven-day period immediately preceding the day they completed the survey. The results were very similar to those for item 2, but somewhat lower (a mean total of 17.6

hours for last week, compared to 19.0 hours for an average week). Because we wished to reduce the effects of time of semester on the survey results, our analysis focuses on the estimates for an average week.

Table 7. Time spent on coursework by day of the week for high- and low-GPA students.

Day of the week	High GPA quartile		Low GPA quartile	
	% who report studying	Mean hours	% who report studying	Mean hours
Monday	96%	3.3	96%	2.9
Tuesday	99%	3.4	96%	2.9
Wednesday	99%	3.4	99%	3.1
Thursday	95%	3.0	87%	2.6
Friday	71%	1.9	54%	1.4
Saturday	78%	2.6	48%	1.4
Sunday	98%	4.2	96%	4.0
TOTAL		21.8		18.3

Comparison by grade-point average (GPA)

The difference between the highest and lowest GPA quartiles is more striking when examined by day of the week than by learning activity. The high group reports a mean total of 21.8 hours per week compared to the low group mean of 18.3 hours per week. The high GPA group reports studying more hours every day of the week. On most days the difference is moderate, ranging from 0.2 to 0.5 hours. However, on Satur-

day the high GPA group reports spending 1.2 hours more on coursework than the low group, a significant difference. On Friday and Saturday combined (the days when students are least likely to study) the high GPA group invests an average of 1.7 hours more than the low GPA group. The figures below show the difference between high and low GPA students in the amount of time spent on coursework, and in the number of students who engage in coursework, on each day of a typical week.

Figure 1: Time spent on coursework on each day of an average week by high- and low-GPA students

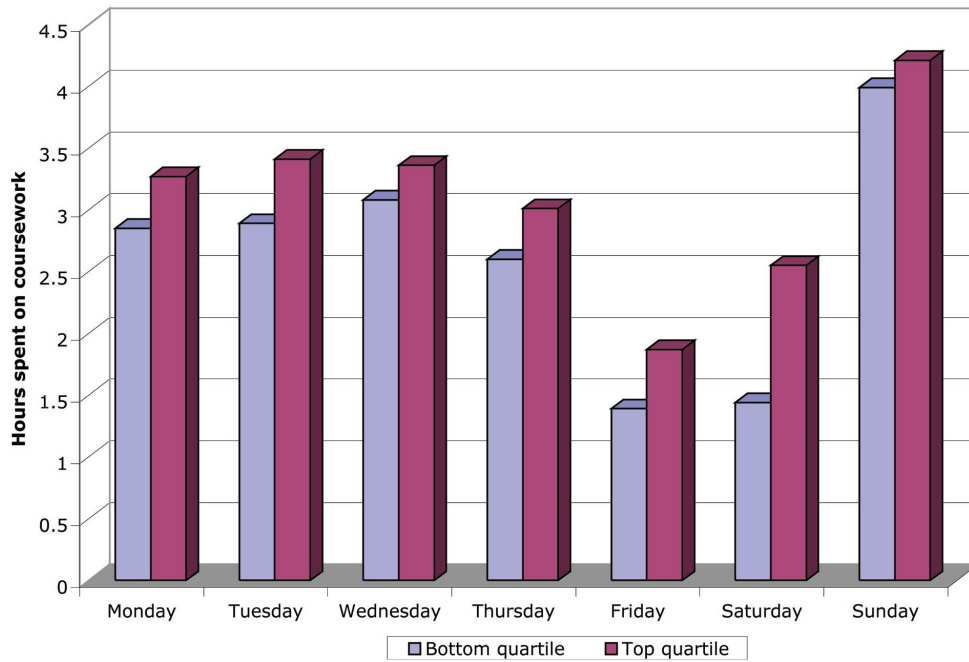
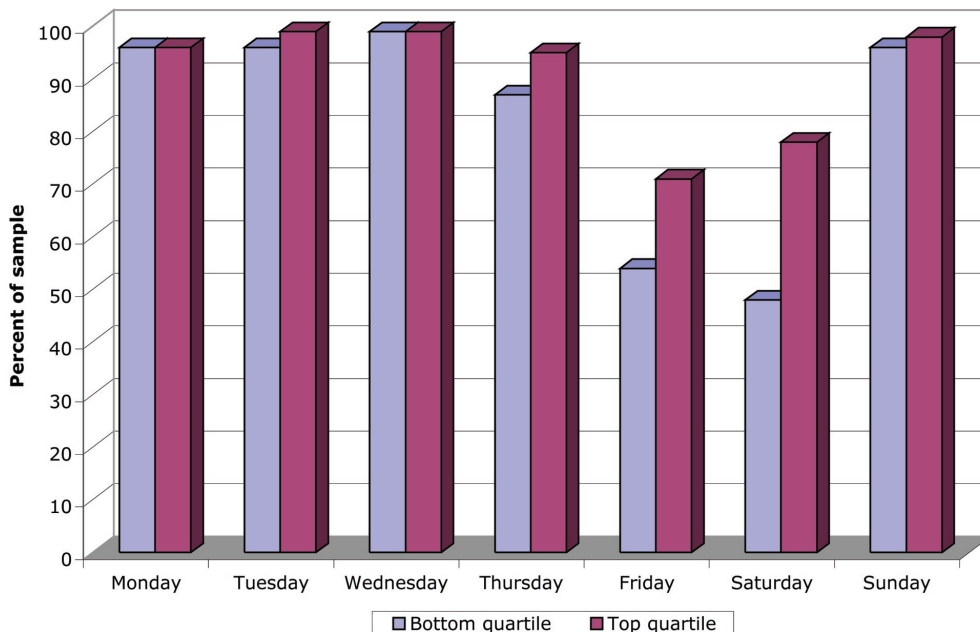


Figure 2: Percent of high- and low-GPA students who do coursework on each day of an average week



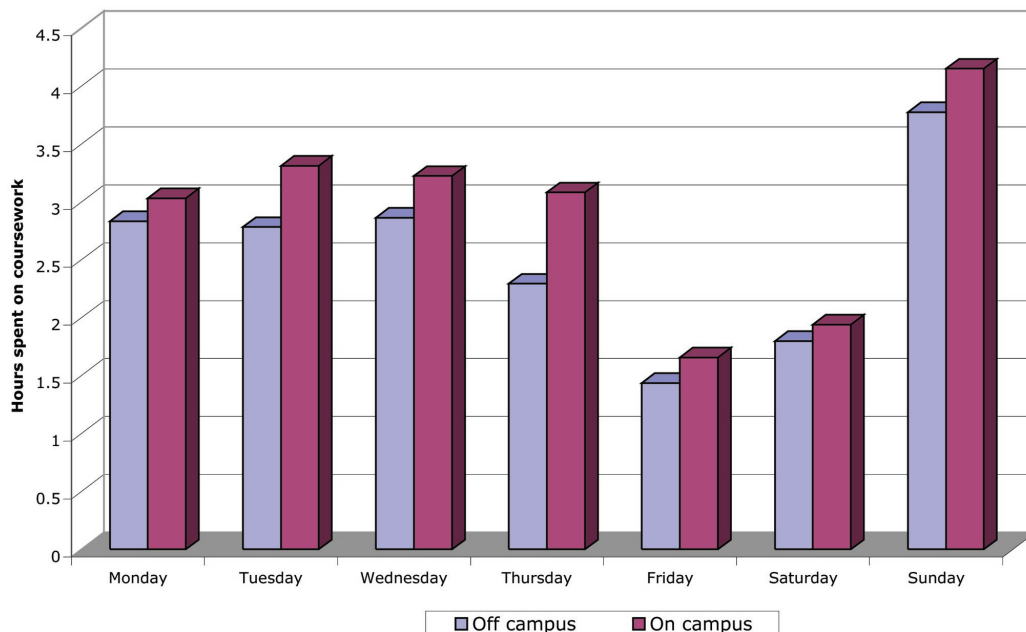
Comparison by housing status

On-campus students report more study time than off-campus students on each day of an average week, with the greatest difference on Tuesday and Thursday (see table and graph below).

Table 8. Time spent on coursework by day of the week for on-campus and off-campus students.

Day of the week	On-campus students		Off-campus students	
	% who report studying	Mean hours	% who report studying	Mean hours
Monday	97%	3.0	96%	2.8
Tuesday	99%	3.3	97%	2.8
Wednesday	99%	3.2	96%	2.9
Thursday	95%	3.1	88%	2.3
Friday	66%	1.7	57%	1.4
Saturday	66%	1.9	55%	1.8
Sunday	97%	4.2	94%	3.8
TOTAL		20.4		17.8

Figure 3: Time spent on coursework on each day of an average week by on-campus and off-campus students



Other significant comparisons

- Women spend more time on coursework than men each day of the week; while the differences on particular days are small, over the span of a typical week women spend an average of two hours more than men do on coursework.
- Freshmen and seniors are similar in terms of hours of study by day of the week. The largest difference is on Thursday, when freshmen are significantly more likely to invest time in coursework than seniors, by an average of nearly one hour.
- Out-of-state students spend more time studying each day of the week than in-state students. The largest differences are 0.5 hours on Tuesday and Sunday.

What activities do students engage in to prepare for an examination and how do these contribute to their learning? (Survey item 5)

General results

In survey item 5 we focused on behaviors students might engage in when preparing for an examination or quiz. We were interested in exam preparation because we believe it is one of the most important student tasks and because the 1991 study focused on this aspect of academic preparation. The item asked students to estimate the amount of time they spent on eight activities as they prepared for a typical exam, and to rate the contribution of each to their learning. The same response options were used as for survey question 1. Percentages of students engaging in each of the activities and estimated mean hours per week are reported below.

Table 9. Summary data for time spent on exam preparation activities.

Exam preparation activity	% who ever engaged in activity (N=554)	Mean hours per exam (including only those who ever engaged in an activity)	Mean hours per exam (entire sample)	Mean contribution rating (0-3 scale, including only those who ever engaged in an activity)*
5.1 Read or reread assigned text	98%	3.16	3.10	2.23
5.2 Review sample exams or old exams	86%	2.06	1.76	2.29
5.3 Discuss course content with classmates	79%	1.57	1.24	1.95
5.4 Make and use notecards	49%	2.06	1.00	2.22
5.5 Organize material in your own way	83%	2.22	1.85	2.29
5.6 Read, highlight, rewrite lecture notes	93%	2.63	2.44	2.36
5.7 Attend an optional review session	70%	1.36	0.95	2.06
5.8 Memorize definitions, terms	95%	2.31	2.18	2.18

* 0 = "none," 1 = "a little," 2 = "some," 3 = "a lot"

The most common exam preparation strategies are reading text (activity 5.1), memorizing (activity 5.8), reading lecture notes (activity 5.6), reviewing old exams (activity 5.2), and organizing the material (activity 5.5). These same activities are also those in which students report investing the greatest time. There is little distinction among the contribution ratings with all activities averaging around 2 or a little higher (the “some” level). As in survey item 1, the ratings tend to be higher for those items in which students invest more time. It is worth noting that reading lecture notes received the highest rating for contribution to learning.

We also invited students to write in additional exam preparation strategies they used. We received 188 items from 135 respondents. The most common categories were reviewing (of reading, lecture notes, key words), 33% of responses; working with others (studying with a group or partner, meeting with the instructor to get questions answered, attending a review session),

20% of responses; practicing (redoing homework problems, using flash cards, taking a practice test), 20% of responses; and going beyond the information given (preparing their own review sheet or study guide, outlining concepts, making up questions), 12% of responses.

Comparison by gender

Women report higher overall use of the eight strategies than men. As shown in table 10, women invest more time per exam than men on six of the eight activities, with the greatest differences in mean hours for using notecards (activity 5.4), reading lecture notes (activity 5.6), and reading assigned text (activity 5.1). Summing the mean hours for all activities suggests that, on average, women spend about 2.5 hours more than men in preparing for a typical exam.

The pattern of contribution ratings is similar for the two groups, but women place a higher value on each of the activities, and particularly on those they do more.

Table 10. Time spent on exam preparation activities by women and men.

Exam preparation activity	Women, mean hours per exam (N=308)	Men, mean hours per exam (N=246)
5.1 Read or reread assigned text	3.37	2.77
5.2 Review sample exams or old exams	1.75	1.79
5.3 Discuss course content with classmates	1.21	1.29
5.4 Make and use notecards	1.33	0.59
5.5 Organize material in your own way	1.95	1.72
5.6 Read, highlight, rewrite lecture notes	2.72	2.08
5.7 Attend an optional review session	0.98	0.92
5.8 Memorize definitions, terms	2.34	1.98
TOTAL	15.65	13.14

Comparison by class standing

More freshmen than seniors report using six of the eight activities. The greatest differences are for attending a review session (activity 5.7) and making notecards (activity 5.4). As indicated in the table below, no clear pattern is shown for time spent on the activities, but the total time for freshmen is slightly higher than for seniors. Contribution ratings are very similar for the two groups.

Table 11. Time spent on exam preparation activities by freshmen and seniors.

Exam preparation activity	Freshmen, mean hours per exam (N=134)	Seniors, mean hours per exam (N=150)
5.1 Read or reread assigned text	3.01	3.21
5.2 Review sample exams or old exams	1.77	1.64
5.3 Discuss course content with classmates	1.26	0.97
5.4 Make and use notecards	0.98	0.79
5.5 Organize material in your own way	1.77	1.92
5.6 Read, highlight, rewrite lecture notes	2.36	2.47
5.7 Attend an optional review session	1.20	0.68
5.8 Memorize definitions, terms	2.34	1.85
TOTAL	14.69	13.53

Comparison by grade-point average (GPA)

Similar proportions of the two groups report using the various activities. The greatest discrepancy is for reviewing sample exams (activity 5.2), engaged in by 87.5% of the high-GPA group compared to 79.4% of the low-GPA group. Surprisingly, the low group reports spending slightly more time on exam preparation than the high group. The largest differences are in memorizing information (activity 5.8) and attending review sessions (activity 5.7). Table 12 shows these comparisons.

Table 12. Time spent on exam preparation activities by high- and low-GPA students.

Exam preparation activity	High GPA quartile, mean hours per exam (N=136)	Low GPA quartile, mean hours per exam (N=136)
5.1 Read or reread assigned text	3.28	3.04
5.2 Review sample exams or old exams	1.77	1.73
5.3 Discuss course content with classmates	1.20	1.13
5.4 Make and use notecards	0.94	1.18
5.5 Organize material in your own way	1.88	2.17
5.6 Read, highlight, rewrite lecture notes	2.50	2.50
5.7 Attend an optional review session	0.77	1.11
5.8 Memorize definitions, terms	1.94	2.61
TOTAL	14.28	15.47

Overall contribution ratings are quite different for the two groups. The high-GPA group ranks organizing the material in their own way (activity 5.5) and reviewing sample exams (activity 5.2) as contributing most to their learning. The low-GPA group, on the other hand, ranks making notecards (activity 5.4) and memorizing information (activity 5.8) as contributing the most. Reading lecture notes was rated third by both groups.

Comparison to the 1991 IUB study

Both our survey and the previous IUB survey of study habits (Wolf et al., 1991) asked students to indicate their use of a series of common study strategies and to rate how effective those strategies were for them. The 1991 study did not ask students to estimate the amount of time they spent on each activity. Data for the two surveys are reported in Table 13.

Table 13. Comparison of data on exam preparation activities from Wolf et al. (1991) and Kurz et al. (2003).

Wolf et al. 1991

Strategy	Percent reporting use	Effectiveness (rank)
Read lecture notes	82.3%	1
Read and reread text	70.5%	2
Highlight text	29.2%	3
Read, rewrite lecture notes	23.9%	7 (tie)
Check test files for past answers	23.0%	4
Study in a group or review session	11.8%	6
Speculate about questions	11.8%	5
Try to find out about the professor from peers	11.5%	7 (tie)
Write notecards	8.5%	9

Kurz et al., 2003

Strategy	Percent reporting use	Effectiveness (rank)
Read, reread text	98.2%	4
Memorize definitions, terms	94.6%	6
Read, rewrite lecture notes	92.7%	1
Review sample, old exams	85.7%	2 (tie)
Organize the material in your own way	83.3%	2 (tie)
Discuss course content with classmates	79.1%	8
Attend optional review session	70.0%	7
Make, use notecards	48.2%	5

The “use” figures are not directly comparable between the two studies, because, unlike the 1991 study, we offered students a list of strategies to select from. In 1991, reading lecture notes and reading the text were the most commonly mentioned strategies, with a large gap between these and the next most frequently mentioned strategy. In 2003 there was less differentiation among the items. Reading text and lecture notes were still used by a high percentage of students, but so was memorizing terms and definitions, a strategy not reported in 1991. Reviewing lecture notes was rated as the most effective strategy in both studies.

How do students manage the time they spend on academic tasks? (Survey items 6, 7, 8, 9, and 10)

Daily time management (Survey items 6 and 7)

Survey items 6 through 10 asked about various aspects of students’ time management. Items 6 and 7 focused on daily time management, asking students to indicate what times of day they are most likely to study for an exam and when they do their most effective studying. These questions are very similar to questions asked in the 1991 survey, and provide an opportunity to show changes in students’ study habits over the 12-year period. For item 6, we divided a 24-hour period into 4-hour blocks (that is, 6 a.m. to 10 a.m., 10 a.m. to 2 p.m., etc.),

and asked students to indicate whether they were “very likely,” “somewhat likely,” or “not likely” to study during each time period. Table 14 gives the percent of students in the sample who chose each option for each time period.

The time blocks most often selected by students as times when they are “very likely” to study were 6 to 10 p.m. (with 75% of the sample responding “very likely” during this time period) and 10 p.m. to 2 a.m. (with 56.3% of the sample responding “very likely”). For time periods during the day—10 a.m. to 2 p.m. and 2 to 6 p.m.—the most common response was “somewhat likely” (46.8% and 51.9% of the sample, respectively). Only 17.1% (for the 10 a.m. to 2 p.m. time period) and 29.7% (for the 2 to 6 p.m. time period) of students in the sample indicated that they are “very likely” to study during the day. For the remaining early morning time periods, 2 to 6 a.m. and 6 to 10 a.m., most students responded that they are “not likely” to study at those times.

Item 7 was similar to item 6. We again divided a 24-hour period into 4-hour blocks, but in item 7 we asked students to indicate how effectively they would study during each time period. We pointed out in this question that their responses “may be different from the times you actually studied” to ensure that students answered this question honestly. Students chose “very effective,” “somewhat effective,” or “not effective” for each time period. Table 15 gives the percent of students who chose each response for each time period.

Table 14. Summary data on times during the day when students are likely to study.

Response	6 – 10 am	10 am - 2 pm	2 – 6 pm	6 – 10 pm	10 pm – 2 am	2 – 6 am
Not likely	69.1%	36.1%	18.4%	4.7%	15.9%	73.1%
Somewhat likely	20.8%	46.8%	51.9%	20.3%	27.7%	17.9%
Very likely	10.1%	17.1%	29.7%	75.0%	56.3%	9.0%

Numbers for a particular time block represent the percent of students who selected each response for that block.

Students indicated that they would do their most effective studying during the 6 to 10 p.m. time period, with 67.8% of the sample selecting “most effective” and another 27.5% selecting “somewhat effective” for this time. The time period ranked second in effectiveness by the students was 2 to 6 p.m., with 44.7% of students rating this time period as “very effective” and 42.4% as “somewhat effective.” The time periods surrounding these “very effective” time periods—from 10 a.m. to 2 p.m. and from 10 p.m. to 2 a.m.—were rated as “somewhat effective” by most students (50.6% and 41.7% of the sample, respectively). The remaining time periods,

2 to 6 a.m. and 6 to 10 a.m., were most often rated “not effective” by students (58.7% and 75.1% of the sample, respectively).

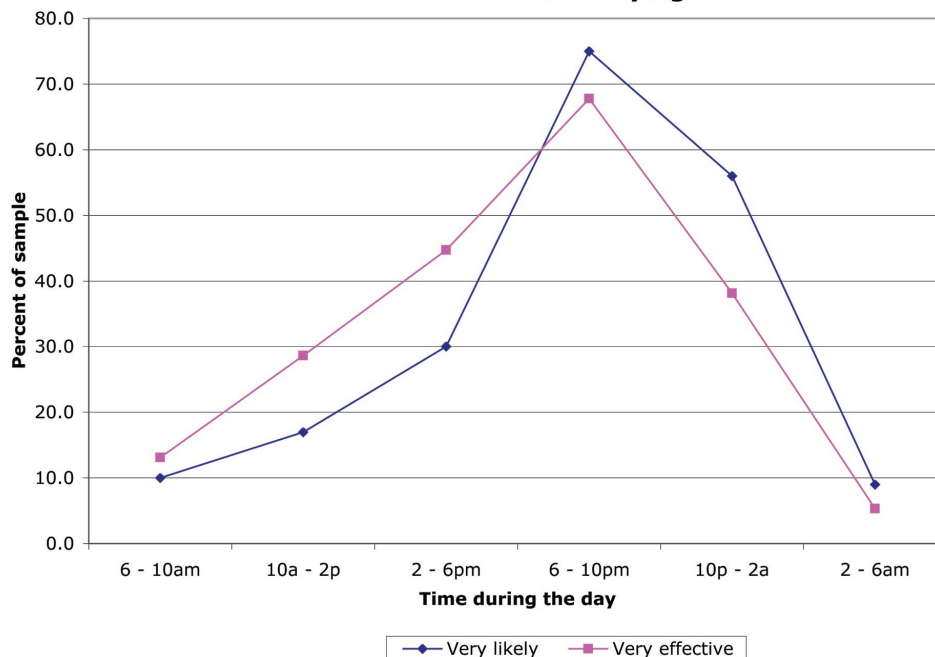
The responses of students to items 6 and 7 are, in general, similar; students are most likely to study between 6 and 10 p.m., and they also believe that they do their most effective studying during this time. A comparison of other time periods, however, reveals an interesting difference. Students are most likely to study between 6 p.m. and 2 a.m., but they believe that they do their most effective studying earlier in the day, between 2 and 10 p.m. (see figure below).

Table 15. Summary data on times during the day when students do their most effective studying.

Response	6 – 10 am	10 am – 2 pm	2 – 6 pm	6 – 10 pm	10 pm – 2 am	2 – 6 am
Not effective	58.7%	20.8%	12.9%	4.7%	20.1%	75.1%
Somewhat effective	28.2%	50.6%	42.4%	27.5%	41.7%	19.6%
Very effective	13.1%	28.6%	44.7%	67.8%	38.1%	5.3%

Numbers for a particular time block represent the percent of students who selected each response for that block.

Figure 4: Summary data for likelihood versus effectiveness of studying



Comparison to the 1991 survey

Students' responses to these two items are consistent with results reported in the 1991 study. In that study, students were asked to choose a single 4-hour period (from a set of 4-hour blocks spanning a 24-hour period) when they were most likely to study, and a single time period in which they did their most effective studying. As in our study, students in the 1991 survey reported that they were most likely to study during the 6 to 10 p.m. time period (51.3% of respondents) or the 10 p.m. to 2 a.m. time period (26.6% of respondents). Also consistent with our results were the results of the 1991 survey on effective study times; in that survey, students indicated that daytime hours were effective study time more often than they identified those hours as likely study time.

Time spent on exam preparation (Survey items 8 and 9)

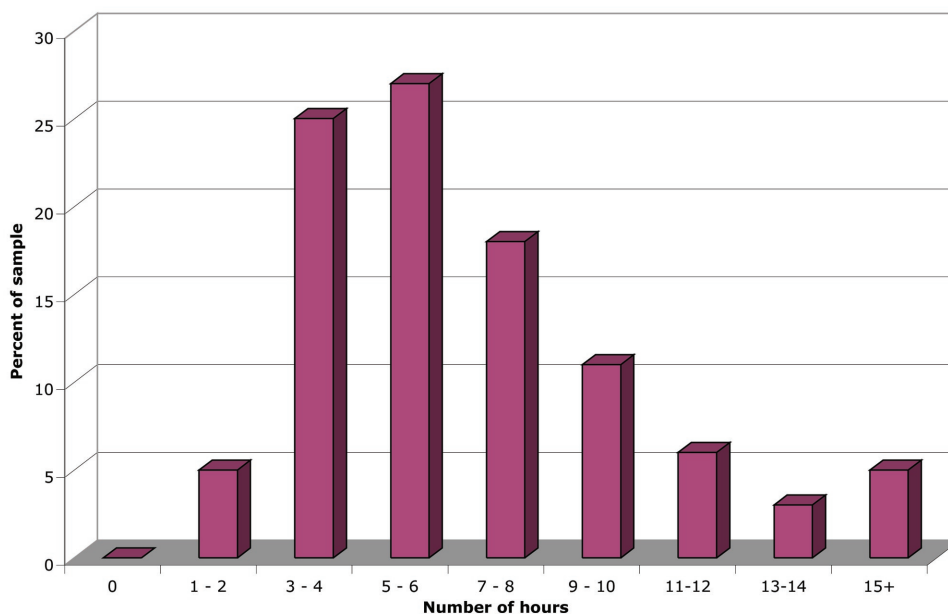
In item 8, students were asked when they typically start to study for an exam (not a final exam) in a course. Students chose one answer from options including "two weeks before the exam," "one week before the exam," "several days before the exam," "one day before the exam," and "the

night before the exam." The most common response to this question was "several days before the exam," with 48% of the students selecting this option. Another 22% of students chose the "one week before" or "two weeks before" options. The remaining 29% of the students in the sample selected the "one day before" or "the night before" options.

These responses correspond fairly well with the results of the 1991 study. In that survey, 63% of the sample reported that they start studying "several days" before a test date. In the present study, using exactly the same question, 48% of students chose the same option. In the 1991 survey, 26% of the sample reported beginning studying one day before an exam or the night before; in the present study, the comparable figure is 29%. Although it is possible that students may be starting to study for an exam later (that is, closer to the test date), we cannot say this definitively because the data are not available for other response options in the 1991 survey.

In item 9 of the present study, students indicated the maximum number of hours they usually study for an exam. The mean response averaged over the entire sample was 6.8 hours, and the median was 6.5 hours. The most common responses were 5

Figure 5: Summary data for maximum number of hours spent studying



or 6 hours, with 27% of the sample responding in this range. Another 43% of students reported that they spend 7 or more hours studying for an exam, and 30% responded that they spend a maximum of 1 to 4 hours studying for an exam. Figure 5 presents these results graphically.

The answers to this question did not differ significantly when they were analyzed by gender, GPA quartile, or residency status (in-state versus out-of-state). There was a marginally significant difference between freshmen and seniors, with seniors tending to spend more time studying for exams (7.0 hours, versus 6.2 hours for freshmen). In addition, students living off campus spend significantly more time studying (7.1 hours) than students living on campus (6.5 hours).

Keeping up to date in coursework (Survey item 10)

With the last item on time management we examined this issue more broadly, by asking students to indicate in general how much they keep up with the work required for their courses. Students were asked to choose one option from the following list:

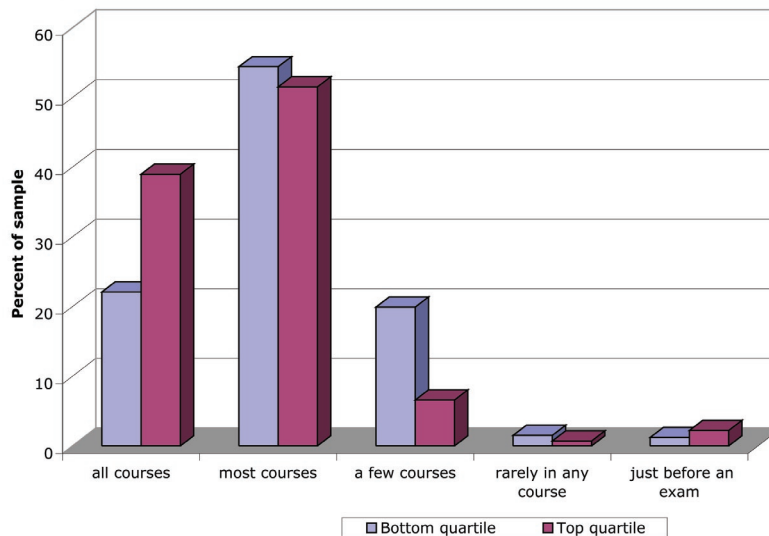
- I am generally up to date in all of my courses.
- I am generally up to date in most of my courses.

- I am generally up to date in a few of my courses.
- I rarely keep up in any of my courses.
- I am only up to date right before an exam.

Nearly half (49%) of the students in the sample responded that they are up to date in all of their courses. Another 30% indicated that they are generally up to date in most of their courses, and 16% of students in the sample keep up to date in only a few of their courses. Only 5% of the sample chose one of the other two options. These results correspond well with the results of the 1991 survey, in which 65.2% of students indicated that they are up to date in all or most of their courses; in the present survey, the comparable number is 79%.

In examining responses to this question by different subsets of the sample, we found that women are more likely than men to keep up in all of their courses, with 33.8% of women falling in this category compared to 24.4% of men. Freshmen are also more likely to keep up in all of their courses than are seniors (34.3% versus 28.5%). In addition, students in the top GPA quartile are more likely to keep up in all of their courses than are students in the bottom quartile (39.0% versus 22.1%). Figure 6 presents this comparison graphically.

Figure 6: How current high- and low-GPA students are in coursework



What factors may interfere with academic engagement? (Survey items 11 and 12)

In the final two items of the survey, students were asked about factors that may interfere with their engagement in academic activities.

Obstacles to coursework (Survey item 11)

Item 11 asked students to indicate which one factor was most likely to interfere with their coursework on a regular basis. Students were given a list of options including “spontaneous social activities with friends,” “participation in scheduled, recognized activities on campus,” “participation in scheduled residence hall or Greek activities,” “working at a job,” “personal difficulties,” and “lack of motivation.”

The answer selected most often by students in the sample was “spontaneous social activities with friends,” which was chosen by 36% of the sample. The next most common obstacle was “lack of motivation,” selected by 31% of the sample. “Working at a job” was selected by 15% of the sample. Smaller numbers of students cited formal activities, sponsored by campus organizations (selected by 8% of the sample) or the residence halls or Greek organizations (selected by 5% of respondents), as the most likely obstacles. The remaining 4% of respondents chose “personal difficulties” as the most likely obstacle.

This question also included an open-ended option, which elicited 147 items from 95 respondents. Many of the respondents who chose this option indicated that they did so because they wanted to name two or more factors that interfere with their coursework on a regular basis. Social factors, such as spending time with friends or chatting with friends online, were mentioned most frequently (41% of the items). Personal factors, including a job, lack of

motivation, or watching television, were the next most frequent category, accounting for 37% of the responses. Scheduling or time management activities accounted for 14% of responses, and environmental factors for 7% (e.g., poor study environment in the residence halls, high stress environment).

Comparisons by demographic variables

Comparisons of the responses to this question by different subsets of the sample varied considerably. Women were more likely to cite jobs and residence hall or Greek activities as obstacles compared to men, with 22.7% of women selecting one of these options compared to 11.8% of men. Social activities were chosen as obstacles more frequently by men than women (35.4% for men, 27.3% for women).

Students in the top GPA quartile were more likely to choose organized activities (student organizations or residence hall/Greek activities) than students in the bottom quartile (18.5% of the top quartile, versus 5.9% of the bottom quartile). Students in the bottom quartile were more likely to choose lack of motivation as an obstacle; this option was chosen by 31.1% of the bottom quartile and 20.0% of the top quartile.

In the comparison of students by class, freshmen were more likely than seniors to select socializing as an obstacle; 38% of freshmen chose this option as compared to 28% of seniors. On the other hand, seniors were more likely than freshmen to select a job as their most frequent obstacle (17% of seniors versus 6% of freshmen). The same pattern of results was obtained for the comparison by residency status. Students from out of state, like freshmen, were more likely to choose socializing as an obstacle (39% of nonresidents versus 28% of residents). Students who are Indiana residents, like seniors, were more likely to select jobs as an obstacle (16% versus 5% for nonresidents).

In comparing students living on campus to those living off campus, we found that students living on campus were more likely to select participation in organized activities (16.6% versus 6.3% of off-campus students). Students living off campus more often selected jobs as their most frequent obstacle (18.2% versus 7.9% of on-campus students).

Comparison to the 1991 survey

In the 1991 survey, students were asked a question very similar to item 11 from the present survey. Data from the two studies are compared below.

The most significant differences between the two survey findings are in the two items that ranked highest in both years: spontaneous social activities and lack of motivation. The number of students reporting spontaneous social activities as an obstacle declined, and the number of students citing lack of motivation as an obstacle increased, from 1991 to 2003.

Table 16. Comparison of data on obstacles to studying from Wolf et al. (1991) and Kurz et al. (2003).

Interfering activity	1991 data	2003 data
Spontaneous social activities with friends	47.2%	31.3%
Participation in scheduled, recognized activities on campus	9.5%*	6.8%
Participation in scheduled residence hall or Greek activities	---*	4.8%
Working at a job	12.1%	13.4%
Personal difficulties	not reported	3.3%
Lack of motivation	21.0%	27.2%
Other	not asked	13.2%

* In the 1991 report, these two categories were merged as "participation in student organizations."

**Time spent on other activities
(Survey item 12)**

In item 12, students indicated how many hours per week they spend on each of a list of activities, including “a paying job on campus,” “a paying job off campus,” “community service activities not required for a course,” “recreational sports or athletics,” and “campus student organizations or Greek organizations.” The response options for each activity included zero hours, 1 to 3 hours, 4 to 6 hours, 7 to 9 hours, etc., up to 22+ hours. The results are presented in Table 17.

Table 17. Summary data for time spent on non-academic activities.

Activity	% who engage in the activity on a weekly basis	Mean hours per week (including only those who engage in the activity regularly)	Mean hours per week (entire sample)
Paying job on campus	20.3%	10.6	2.1
Paying job off campus	25.0%	13.2	3.2
Community service activities not required for a course	31.3%	3.0	0.9
Recreational sports or athletics	68.7%	5.2	3.5
Campus student or Greek organizations	44.0%	5.8	2.5

Of the activities listed in this question, the activity engaged in by the largest percentage of the sample was recreational sports or athletics; 68.7% of the sample indicated that they spend at least some time on this activity on a weekly basis. Students who engage in this activity spend about 5.2 hours per week on it. The next most common activity was participation in campus student organizations or Greek organizations; 44.0% of the sample reported that they spend some time on such activities, and the average time spent was 5.8 hours. About one third (31.3%) of the sample engage in community service activities, and they spend an average of 3 hours per week on them. Only 20 to 25 percent of the sample reported that they spend time at a paying job on or off campus. Students with on-campus jobs spend an average of 10.6 hours per week at those jobs, and students

with off-campus jobs spend an average of 13.2 hours per week at those jobs.

If we divide the activities in this question into two categories—having a paying job of some sort, and doing other extracurricular activities—we can examine the responses to this question in a somewhat simpler way. Categorizing the responses in this way reveals that 42.5% of the students in our sample have some sort of paying job, and 84% of the sample regularly engage in some other sort of extracurricular activity. Furthermore, 33% of students both hold down a paying job and engage in other activities.

Another way to analyze these responses is to calculate the total amount of time each student spends on all of these activities combined; these numbers are an indicator of how much time students spend on all extracurricular activities in an average week.

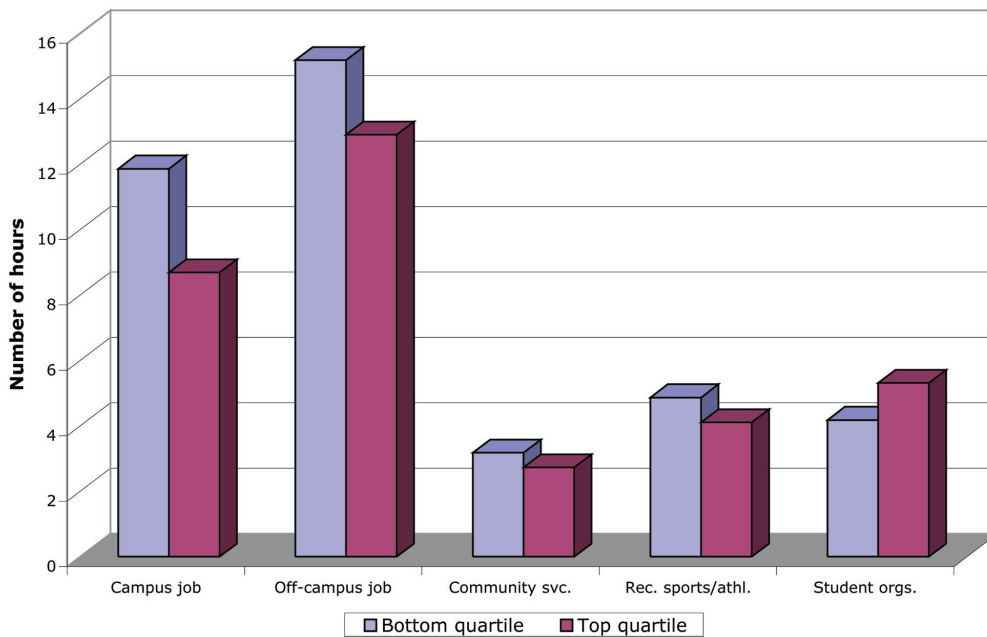
This analysis reveals that about one fourth of the students in our sample (23.5%) spend 1 to 6 hours per week, and another fourth (25.8%) spend 7 to 12 hours per week, on these activities. A smaller percentage (17.9%) of students in the sample spend 13 to 18 hours, and 25.1% spend 19 or more hours per week on these activities.

Comparisons by demographic variables

There were numerous differences in the responses to this question by different subsets of the sample. Differences were seen most often in the categories of having a paying job off campus and participating in student or Greek organizations.

Seniors, students living off campus, Indiana residents, and students in the lowest GPA quartile spent significantly more time than other students working at a job off campus. For participating in campus student or Greek organizations, students from out of state, students living on campus, and students in the top GPA quartile spent significantly more time on this activity than their counterparts. The only other significant comparison among the items in this question concerns recreational sports or athletics; men spent significantly more time on this activity than did women. Figure 7 presents the comparison for high versus low GPA students.

Figure 7: Amount of time spent on nonacademic activities by high- and low-GPA students



SUMMARY AND CONCLUSIONS

Doing coursework

- Students engage in a wide variety of activities outside of class that they perceive as contributing to their academic success. Of the fourteen activities listed in items 1 and 3, ten of the activities were selected by a majority of students in the sample as activities they do on a regular basis, and all of the activities were engaged in by at least some of the respondents. Thus our survey gives a more complete view of students' academic activities outside of class than has previously been available.
- Despite changes in teaching styles and philosophy, the most common student learning activities are probably no different today than they were a decade ago: reading, studying for exams, doing homework, and writing papers.
- The specific coursework activities that students devote time to vary depending on a student's gender, class, GPA, housing, and residency status. Differences among subgroups are seen most often in reading assigned texts, doing homework, studying for exams, and meeting with a tutor.
- Students perceive that the academic activities that take up the most time outside of class are also those that contribute the most to their learning. Students seem to allocate their time in a reasonable fashion, devoting more time to activities that they think contribute more to their learning. This is the case both for the overall analysis and in the comparisons by demographic variables.
- The students in our sample spend an average of 19 hours per week on academic activities outside of class. Women, freshmen, students living on campus, students from outside of Indiana, and students in the top GPA quartile all spend more time on coursework than men, seniors, students living off campus, Indiana residents, and students in the bottom GPA quartile.
- The myth that students do not study on weekends is challenged, to a degree, by our study. Although the average number of study hours for Friday and Saturday is low compared to other days of the week, at least 60% of respondents spend some time on coursework on each day of the week.
- About 17% of undergraduates report spending 10 hours or fewer per week on coursework. On the other hand, 20% of undergraduates spend more than 25 hours per week on coursework.
- While high GPA students do invest a little more time than low GPA students in coursework, the difference is smaller than might be expected (about 3.5 hours per week). Perhaps it is not so much the amount of time spent that makes a difference, but what is done with that time.
- On-campus students tend to rate learning activities higher than off-campus students in terms of contribution to their learning. This suggests, perhaps, that on-campus students are generally more engaged in the academic process.

- ✦ Many students consider studying with peers or talking with them about course content to be an important part of their learning, as evidenced by the fact that this was the most commonly cited category of “other” activities that contribute to learning. At the same time, students are doubtful of the value of group projects and online discussions, as evidenced by the low contribution ratings these activities received.
- ✦ The Internet, while much discussed, does not appear to have had a great impact on student learning activities to date, at least insofar as indicated by our study. Only 13% reported ever having participated in a course-related online discussion or chat during the semester. We did not ask specifically about use of the Internet for homework, practice exams, or reading assignments.

Exam preparation strategies

- ✦ Students use a wide variety of exam preparation strategies. This variety may reflect differences in the nature of the material to be learned, the demands of different courses or majors, the individual histories of students with particular study strategies, or available resources (e.g., the availability of review sessions or old exams). When categorized by gender, class, and GPA, students differ in both the study strategies used and in the perceived contribution of these strategies to their learning. Students seem to perceive that some strategies—for example, organizing the material in their own way—are generally more valuable than others, even if they do not always use these strategies.
- ✦ There are few significant differences among groups in the total amount of time spent studying for exams. Thus, it seems likely that the most important factor in successful exam preparation is not the amount of time students spend studying for an exam, but rather which strategies they engage in, and how well those strategies suit the course and the material to be learned.
- ✦ Memorizing information for a test is likely something that many instructors would say they discourage. Even so, our respondents reported that it is one of the most heavily used strategies for exam preparation.
- ✦ As was the case with the 1991 survey, students in our sample rate reviewing lecture notes as the most important exam preparation strategy. Evidently, what instructors say in class is still what students believe counts as most important.

Time management

- ✦ The favored times of day for students to study for exams (and possibly to do other coursework) are in the evenings and late at night, even though they realize that the late-night hours are not the most effective times for these activities. In addition, students are not likely to study during the day, even though they perceive the afternoon hours as being quite effective study times. These discrepancies could be due to procrastination or a lack of motivation (suggested by the results of item 11), or to competing demands on students’ time during the afternoon and early evening hours.
- ✦ Most of the students in our sample do not cram for exams; they spread out their study time (a maximum of 6 to 7 hours) over several days before the exam.
- ✦ Nearly 80% of our respondents said they are up to date in most or all of their courses, compared to 65% in 1991.
- ✦ Almost twice as many students in the top GPA quartile said they are up to date in all of their courses as students in the bottom quartile (39% of the top quartile, compared to 22% of the bottom quartile).

Obstacles to doing coursework

- ✦ Overall results suggested that social activities and lack of motivation are the most common sources of interference, but the results varied considerably among different subsets of students. For example, seniors, Indiana residents, and students living off campus all select working at a job as a frequent obstacle. This may suggest that financial pressures are a factor for the academic success of these students. Women, students living on campus, and high GPA students often select organized activities as an obstacle. The latter are also all groups of students who tend to spend more time on coursework than their counterparts; this combination of results may suggest that these students are particularly good at managing their time, or that these organized activities do not interfere with academic success as much as some other activities. Interestingly, the only comparison in which lack of motivation was a significant factor was in the comparison of high and low GPA students, in which it was cited more by low GPA students.
- ✦ Most students engage in at least some “extracurricular” activities, including recreational sports, campus student organizations, and part-time jobs. On average, these activities take up about 12 hours per week for students in our sample.
- ✦ Nearly half the students in our sample have a paying job, on which they spend an average of about 12 hours per week. However, only about 13% of the sample selected a job as the greatest obstacle to studying.

Comparison of our results to the research literature

- ✦ Our results reveal that relative to lower GPA students, students in the top GPA quartile spend more time on academic activities and are more likely to be up to date in their coursework. These results are in general consistent with the results of the NSSE (Kuh, 2001a, 2001b), that students who are more engaged with academic activities have higher GPAs than students who are less engaged. Our results are also consistent with a number of studies that find a positive correlation between study time or study habits and GPA (Bol et al., 1985; Warkentin and Bol, 1997; Michaels and Miethe, 1989; Howard, 1993).
- ✦ The finding in our study that IU Bloomington undergraduates spend, on average, 19 hours per week outside of class on academic activities fits reasonably well with reports of students’ time spent on academic tasks at other universities. Results reported by Lahmers and Zulauf (2000) indicate that Harvard freshmen spend about 40 hours per week on academics, Stanford freshmen 46 hours, and Cornell undergraduates 49.6 hours; these figures presumably include time spent in class, which is typically in the range of 14 to 17 hours per week. Students at the University of Michigan, an institution comparable to IU Bloomington, were reported to spend 25 hours per week outside of class on academics (Schuman et al., 1985), and students at Illinois State University and Rutgers, 8 to 12 hours per week. The results for IU Bloomington lie above those of Illinois State and Rutgers, below those of Harvard and Stanford, and fairly close to those of the University of Michigan.

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APPENDIX 1: THE SURVEY

Survey of Learning Activities of IU Bloomington Students

IU Bloomington Evaluation Services and Testing
Campus Writing Program
Office of Academic Affairs

Thank you for agreeing to complete this survey. Be sure to click on the *Submit* button at the end to record your answers. You may change any of your responses before you click on the *Submit* button.

1. Each item in the grid below is an activity that you might engage in on a weekly basis to help you succeed academically at IU. We're interested in approximately how much time you spent in each activity, outside of classtime, **during an *AVERAGE* week this semester**. In the blue column, select the option labeled "none" if you NEVER engaged in a specified activity this semester; if you ever engaged in the specified activity this semester (even if you didn't spend much time on it on a weekly basis), select one of the options other than "none."

We're also interested in how much you think these activities contributed to your learning. To indicate this, select the option in the purple column that indicates how much each activity contributed to your learning in the course(s) for which you engage in that activity: none, little, some, or a lot.

Remember, we're asking you to report on learning activities

- That support your courses
- Not including time spent in class
- During an average or typical week this semester.

Response options - Hours: None, 0.1 – 1, 1.1 – 3, 3.1 – 6, 6.1 – 10, 10.1 – 15, 16+

Response options – Contribution: none; little; some; a lot

	Hours I spent on this in an average week	Contribution to my learning
1.1 Read assigned material (e.g., text or course packet)	Select Hours	Select Contribution
1.2 Study for an exam or quiz	Select Hours	Select Contribution
1.3 Do homework (e.g., problem sets or other regular assignments)	Select Hours	Select Contribution
1.4 Work with classmates on a group project	Select Hours	Select Contribution
1.5 Communicate with professor or AI (face to face or by phone or email)	Select Hours	Select Contribution
1.6 Meet with a tutor	Select Hours	Select Contribution
1.7 Participate in an online discussion forum or chat	Select Hours	Select Contribution
1.8 Annotate a text, write a journal entry, or other informal writing activity	Select Hours	Select Contribution
1.9 Spend time in a language lab or science lab (not including regularly scheduled lab time)	Select Hours	Select Contribution
1.10 Practice (e.g., skills or a musical instrument)	Select Hours	Select Contribution
1.11 Participate in community service related to a course	Select Hours	Select Contribution
1.12 Plan, write, or revise a paper	Select Hours	Select Contribution
1.13 Prepare an in-class presentation	Select Hours	Select Contribution
1.14 Do research (in the library or online) for a paper or project	Select Hours	Select Contribution

List here any other activities that you engage in that contribute to your success in a course:

2. All of the activities listed in the grid in item 1 are activities that you might do on a weekly basis during a typical semester. Indicate below the number of hours you'd spend on all those activities *combined* on each day of an average week, *not* including time spent in class.

Response options: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+

2.1	Monday	<input type="text" value="Click to select"/>
2.2	Tuesday	<input type="text" value="Click to select"/>
2.3	Wednesday	<input type="text" value="Click to select"/>
2.4	Thursday	<input type="text" value="Click to select"/>
2.5	Friday	<input type="text" value="Click to select"/>
2.6	Saturday	<input type="text" value="Click to select"/>
2.7	Sunday	<input type="text" value="Click to select"/>

3. Now we'd like to know about last week (the most recent seven days). Use the grid below to indicate how much time you spent in each of the listed activities last week, outside of class time. Select the option "none" if you did not engage in the specified activity at all last week.

Response options: None, 0.1 – 1, 1.1 – 3, 3.1 – 6, 6.1 – 10, 10.1 – 15, 16+

	Hours I spent on this LAST week
3.1 Read assigned material (e.g., text or course packet)	<input type="text" value="Select Hours"/>
3.2 Study for an exam or quiz	<input type="text" value="Select Hours"/>
3.3 Do homework (e.g., problem sets or other regular assignments)	<input type="text" value="Select Hours"/>
3.4 Work with classmates on a group project	<input type="text" value="Select Hours"/>
3.5 Communicate with professor or AI (face to face or by phone or email)	<input type="text" value="Select Hours"/>
3.6 Meet with a tutor	<input type="text" value="Select Hours"/>
3.7 Participate in an online discussion forum or chat	<input type="text" value="Select Hours"/>
3.8 Annotate a text, write a journal entry, or other informal writing activity	<input type="text" value="Select Hours"/>
3.9 Spend time in a language lab or science lab (not including regularly scheduled lab time)	<input type="text" value="Select Hours"/>
3.10 Practice (e.g., skills or a musical instrument)	<input type="text" value="Select Hours"/>
3.11 Participate in community service related to a course	<input type="text" value="Select Hours"/>
3.12 Plan, write, or revise a paper	<input type="text" value="Select Hours"/>
3.13 Prepare an in-class presentation	<input type="text" value="Select Hours"/>
3.14 Do research (in the library or online) for a paper or project	<input type="text" value="Select Hours"/>

4. Consider all the activities in the grid in the previous item. Indicate below approximately how many hours *total* you spent on all of those activities combined in each day of last week, not including time spent in class.

Response options: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+

4.1	Monday	Click to select ▼
4.2	Tuesday	Click to select ▼
4.3	Wednesday	Click to select ▼
4.4	Thursday	Click to select ▼
4.5	Friday	Click to select ▼
4.6	Saturday	Click to select ▼
4.7	Sunday	Click to select ▼

5. The next set of questions concerns activities you may engage in when you're preparing for an exam in a course. We're interested in how much time (in hours) you spend on these activities, as you prepare for a typical exam. In the blue column, select the option that corresponds to the amount of time you'd spend on the specified activity when you prepare for a typical exam. We're also interested in how much these activities contribute to your learning. To indicate this, select the option in the purple column that indicates how much each activity contributes to your learning in the course(s) for which you engage in that activity: none, little, some, or a lot.

Response options - Hours: None, 0.1 – 1, 1.1 – 3, 3.1 – 6, 6.1 – 10, 10.1 – 15, 16+

Response options – Contribution: none; little; some; a lot

	Hours I spent on this in preparing for a typical exam	Contribution to my learning	
5.1	Read or reread assigned texts	Select Hours ▼	Select Contribution ▼
5.2	Review sample exams or old exams	Select Hours ▼	Select Contribution ▼
5.3	Discuss course content with classmates	Select Hours ▼	Select Contribution ▼
5.4	Make and use notecards	Select Hours ▼	Select Contribution ▼
5.5	Organize the material in your own way (e.g., explain ideas in your own words, ask and answer your own questions)	Select Hours ▼	Select Contribution ▼
5.6	Read, highlight, or rewrite lecture notes	Select Hours ▼	Select Contribution ▼
5.7	Attend an optional review session	Select Hours ▼	Select Contribution ▼
5.8	Memorize definitions, terms, etc.	Select Hours ▼	Select Contribution ▼

List other activities you engage in when preparing for an exam:

6. For each of the time periods below, indicate how likely you are to study for an exam during that period.

	Very likely	Somewhat likely	Not likely
6 am - 10 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 am - 2 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 pm - 6 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 pm - 10 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 pm - 2 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 am - 6 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. For each of the time periods below, indicate how effectively you would study during that period. (These may be different from the times you actually studied.)

	Most effective	Somewhat effective	Not effective
6 am - 10 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 am - 2 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 pm - 6 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 pm - 10 pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 pm - 2 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 am - 6 am	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Choose the response that best indicates when you typically start studying for an exam (not a final exam).

<input type="checkbox"/>	2 weeks before the exam
<input type="checkbox"/>	One week before the exam
<input type="checkbox"/>	Several days before the exam
<input type="checkbox"/>	One day before the exam
<input type="checkbox"/>	The night before the exam

-
9. Indicate below the maximum number of hours you usually spend studying for an exam.

Response options: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16+

Click to select 

-
10. Do you generally “keep up” in the work required for your courses? Mark the response that best describes your behavior.

<input type="checkbox"/>	I am generally up-to-date in all of my courses.
<input type="checkbox"/>	I am generally up-to-date in most of my courses.
<input type="checkbox"/>	I am generally up-to-date in a few of my courses.
<input type="checkbox"/>	I rarely keep up in any of my courses.
<input type="checkbox"/>	I am only up-to-date right before an exam.

11. What is most likely to keep you from doing coursework on a regular basis?
 (Choose the response that most often interferes with your coursework.)

<input type="checkbox"/>	Spontaneous social activities with friends (e.g., parties, movies)
<input type="checkbox"/>	Participation in scheduled, recognized activities on campus (e.g., IUSA)
<input type="checkbox"/>	Participation in scheduled residence hall or Greek activities
<input type="checkbox"/>	Working at a job
<input type="checkbox"/>	Personal difficulties
<input type="checkbox"/>	Lack of motivation
<input type="checkbox"/>	Other (please explain below) <div style="border: 1px solid black; height: 100px; width: 100%;"></div>

12. Indicate below the approximate number of hours per week that you spend on each of the following activities. If you do not engage in a particular activity, select “0”.

Response options: 0, 1-3, 4-6, 7-9, 10-12, 13-15, 16-18, 19-21, 22+

		Hours per week
12.1	A paying job on campus	Select Hours ▼
12.2	A paying job off campus	Select Hours ▼
12.3	Community service activities not required for a course	Select Hours ▼
12.4	Recreational sports or athletics	Select Hours ▼
12.5	Campus student organizations or Greek organizations	Select Hours ▼

Thank you for completing this survey. Be sure to click the submit button below;
 otherwise, your answers will not be recorded.

APPENDIX 2: SUMMARY DATA

Survey of Learning Activities of IU Bloomington Students: Overall Data Summary

Note: Total number of respondents = 554.

Percents indicate proportion of respondents who selected that response option.

Percents may not sum to 100% due to rounding error.

Item 1: Hours spent on selected learning activities in an average week and contribution to learning

Learning activity	Hours spent in an average week										Contribution to learning			
	None	0.1 – 1	1.1 – 3	3.1 – 6	6.1 – 10	10.1–15	16+	None	Little	Some	A lot			
1.1 Read assigned material, first time	0.9%	10.7%	33.8%	32.4%	15.6%	5.6%	1.1%	2.4%	19.0%	40.0%	38.6%			
1.2 Study for an exam or quiz	0.4%	7.2%	35.3%	35.1%	15.6%	4.9%	1.6%	1.3%	8.0%	29.4%	61.4%			
1.3 Do homework	1.8%	12.6%	33.2%	28.9%	16.3%	4.2%	3.1%	3.6%	21.0%	37.6%	37.8%			
1.4 Work on a group project	26.4%	33.6%	26.6%	9.8%	3.1%	0.4%	0.2%	30.7%	35.3%	22.7%	11.3%			
1.5 Communicate with instructor	17.7%	65.9%	13.9%	1.3%	0.9%	0.2%	0.2%	20.4%	28.4%	28.6%	22.7%			
1.6 Meet with a tutor	88.4%	6.5%	4.3%	0.7%	---	---	---	86.4%	2.3%	5.2%	6.2%			
1.7 Participate in online discussion	86.6%	10.3%	2.2%	0.2%	0.5%	---	0.2%	87.2%	8.2%	3.8%	0.8%			
1.8 Annotate text, write in journal	40.7%	33.4%	19.4%	4.9%	1.5%	0.2%	---	44.2%	28.9%	20.9%	6.0%			
1.9 Work in lab, language or other	83.2%	8.1%	5.4%	2.0%	0.7%	0.2%	0.4%	81.3%	7.1%	8.1%	3.5%			
1.10 Practice skills	46.4%	22.7%	15.5%	6.7%	4.2%	1.6%	2.9%	46.9%	17.8%	16.9%	18.4%			
1.11 Participate in community service	80.9%	9.9%	6.1%	1.4%	0.7%	0.5%	0.4%	79.0%	8.1%	7.7%	5.2%			
1.12 Plan, write, revise a paper	4.5%	23.8%	40.6%	25.6%	3.4%	1.4%	0.5%	5.4%	25.5%	42.4%	26.6%			
1.13 Prepare in-class presentation	35.0%	34.5%	21.5%	6.9%	1.1%	0.9%	0.2%	33.6%	26.5%	26.5%	13.3%			
1.14 Do research for paper, project	11.2%	32.0%	36.5%	14.8%	4.0%	1.4%	0.2%	11.5%	22.6%	38.4%	27.6%			

Item 2: Hours spent on all learning activities combined on each day of an average week

Day of the week	Hours spent											
	0	1	2	3	4	5	6	7	8	9	10	11+
2.1 Monday	3.1%	13.4%	29.0%	26.5%	14.1%	6.5%	3.4%	1.6%	1.3%	0.4%	0.2%	0.5%
2.2 Tuesday	2.0%	14.9%	29.0%	21.6%	15.6%	8.3%	4.5%	1.3%	1.8%	0.2%	0.4%	0.5%
2.3 Wednesday	2.0%	14.3%	26.3%	25.1%	15.3%	8.2%	4.7%	2.0%	1.5%	0.4%	---	0.4%
2.4 Thursday	8.3%	19.9%	27.2%	16.5%	11.2%	8.5%	5.1%	1.6%	0.9%	0.4%	---	0.4%
2.5 Friday	37.6%	22.2%	17.8%	10.3%	5.3%	2.0%	2.9%	---	1.1%	0.2%	0.2%	0.6%
2.6 Saturday	38.8%	17.0%	14.1%	12.1%	5.5%	3.1%	4.6%	2.0%	1.3%	0.6%	0.2%	0.9%
2.7 Sunday	3.8%	7.1%	15.4%	19.8%	20.3%	12.7%	8.9%	4.2%	4.0%	1.1%	1.6%	1.3%

Item 3: Hours spent on selected learning activities *last week*

Learning activity	Hours spent last week									
	None	0.1 – 1	1.1 – 3	3.1 – 6	6.1 – 10	10.1–15	16+			
3.1 Read assigned material, first time	3.1%	16.9%	37.6%	28.5%	10.3%	1.8%	1.8%			
3.2 Study for an exam or quiz	10.3%	14.0%	26.5%	24.7%	13.4%	6.5%	4.5%			
3.3 Do homework	9.1%	19.2%	31.8%	24.9%	8.9%	4.0%	2.2%			
3.4 Work on a group project	59.7%	13.3%	15.6%	7.8%	3.1%	0.4%	0.2%			
3.5 Communicate with instructor	33.5%	55.1%	10.4%	1.1%	---	---	---			
3.6 Meet with a tutor	91.5%	4.2%	3.3%	0.7%	---	0.4%	---			
3.7 Participate in online discussion	90.9%	7.3%	1.3%	0.5%	---	---	---			
3.8 Annotate text, write in journal	54.6%	22.0%	17.5%	5.8%	0.2%	---	---			
3.9 Work in lab, language or other	87.8%	4.9%	4.0%	1.8%	0.7%	0.4%	0.4%			
3.10 Practice skills	59.3%	16.6%	11.8%	6.9%	2.2%	0.9%	2.4%			
3.11 Participate in community service	90.5%	3.3%	3.3%	1.3%	0.9%	0.6%	0.2%			
3.12 Plan, write, revise a paper	24.1%	18.2%	32.9%	20.2%	3.6%	0.7%	0.4%			
3.13 Prepare in-class presentation	73.6%	10.9%	8.7%	5.6%	0.9%	0.2%	---			
3.14 Do research for paper, project	41.2%	20.6%	23.7%	11.0%	2.0%	1.3%	0.2%			

Item 4: Hours spent on all learning activities combined on each day last week

Day of the week	Hours spent											
	0	1	2	3	4	5	6	7	8	9	10	11+
4.1 Monday	5.7%	20.0%	21.7%	24.8%	11.7%	6.7%	4.2%	2.0%	1.5%	0.6%	0.4%	0.9%
4.2 Tuesday	6.6%	14.8%	26.6%	18.2%	14.4%	8.2%	6.6%	1.3%	1.6%	---	0.6%	1.3%
4.3 Wednesday	8.4%	17.3%	19.9%	22.1%	14.1%	6.8%	5.5%	2.6%	1.8%	0.2%	0.4%	1.1%
4.4 Thursday	16.6%	19.9%	21.9%	16.4%	10.6%	6.0%	4.4%	2.0%	1.1%	0.4%	0.4%	0.6%
4.5 Friday	46.6%	16.6%	15.5%	8.6%	4.4%	3.8%	2.0%	1.1%	0.7%	0.2%	---	0.4%
4.6 Saturday	53.5%	9.4%	10.3%	9.7%	7.5%	3.1%	1.5%	2.0%	1.1%	0.2%	0.7%	0.9%
4.7 Sunday	11.2%	10.8%	19.1%	17.8%	14.1%	11.9%	4.8%	3.5%	2.2%	1.5%	1.3%	2.0%

Item 5: Hours spent on selected activities in preparing for a typical exam and contribution to learning

Learning activity	Hours spent for a typical exam										Contribution to learning			
	None	0.1 – 1	1.1 – 3	3.1 – 6	6.1 – 10	10.1–15	16+	None	Little	Some	A lot			
5.1 Read or reread assigned texts	1.8%	19.4%	42.7%	26.1%	7.3%	2.0%	0.7%	2.7%	18.5%	34.5%	44.3%			
5.2 Review sample exams, old exams	14.3%	31.8%	38.8%	12.2%	2.5%	0.4%	---	13.8%	14.9%	29.0%	42.3%			
5.3 Discuss content with classmates	20.9%	45.0%	26.0%	6.4%	1.3%	0.2%	0.4%	20.2%	25.9%	29.3%	24.6%			
5.4 Make and use note cards	51.8%	18.0%	21.8%	6.7%	1.1%	0.6%	---	49.5%	10.6%	17.4%	22.5%			
5.5 Organize material in own way	16.7%	30.2%	35.3%	14.0%	3.3%	0.4%	0.2%	16.9%	14.4%	25.2%	43.5%			
5.6 Read, rewrite lecture notes	7.3%	24.5%	42.7%	19.6%	4.9%	0.5%	0.5%	6.8%	13.9%	30.4%	49.0%			
5.7 Attend an optional review session	30.0%	35.6%	32.0%	2.4%	---	---	---	29.0%	17.1%	29.7%	24.2%			
5.8 Memorize definitions, terms	5.4%	34.9%	39.4%	15.6%	3.1%	0.7%	0.9%	6.0%	18.4%	37.8%	37.8%			

Item 6: Times of day when respondents are likely to study for an exam

	Very likely	Somewhat likely	Not likely
6.1 6:00 a.m. – 10:00 a.m.	10.1%	20.8%	69.1%
6.2 10:00 a.m. – 2:00 p.m.	17.1%	46.8%	36.1%
6.3 2:00 p.m. – 6:00 p.m.	29.7%	51.9%	18.4%
6.4 6:00 p.m. – 10:00 p.m.	75.0%	20.3%	4.7%
6.5 10:00 p.m. – 2:00 a.m.	56.3%	27.7%	15.9%
6.6 2:00 a.m. – 6:00 a.m.	9.0%	17.9%	73.1%

Item 7: Times of day when respondents believe they can most effectively study for an exam

	Most effective	Somewhat effective	Not effective
7.1 6:00 a.m. – 10:00 a.m.	13.1%	28.2%	58.7%
7.2 10:00 a.m. – 2:00 p.m.	28.6%	50.6%	20.8%
7.3 2:00 p.m. – 6:00 p.m.	44.7%	42.4%	12.9%
7.4 6:00 p.m. – 10:00 p.m.	67.8%	27.5%	4.7%
7.5 10:00 p.m. – 2:00 a.m.	38.1%	41.7%	20.2%
7.6 2:00 a.m. – 6:00 a.m.	5.3%	19.6%	75.1%

Item 8: How far in advance respondents typically start studying for an exam

	Two weeks before	One week before	Several days before	One day before	The night before
	2.2%	20.3%	48.2%	22.5%	6.9%

Item 9: Maximum hours usually spent studying for an exam

		Hours spent															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16+
		0.2%	5.3%	13.0%	11.9%	13.0%	14.1%	6.2%	11.5%	1.7%	9.5%	1.1%	4.9%	1.5%	1.5%	2.4%	2.4%

Item 10: How current respondents are in their coursework

	Generally up-to-date in all of my courses	Generally up-to-date in most of my courses	Generally up-to-date in a few of my courses	Rarely keep up in any of my courses	Only up-to-date right before an exam
	29.7%	48.9%	16.3%	2.4%	2.7%

Item 11: Factors most likely to interfere with coursework

	Spontaneous social activities	Scheduled campus activities	Scheduled residence hall or Greek activities	Working at a job	Personal difficulties	Lack of motivation	Other
	31.3%	6.8%	4.8%	13.4%	3.3%	27.2%	13.2%

Item 12: Hours spent on selected non-academic activities per week

Activity	Hours spent										
	0	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22+		
12.1 A paying job on campus	79.7%	1.8%	3.1%	2.9%	6.2%	3.7%	0.4%	0.4%	1.8%		
12.2 A paying job off campus	75.0%	2.4%	3.2%	3.0%	3.2%	3.2%	2.0%	3.0%	5.2%		
12.3 Community service not required for course	68.7%	24.5%	4.4%	1.5%	0.2%	0.7%	---	---	---		
12.4 Recreational sports or athletics	31.3%	29.9%	20.7%	9.0%	4.8%	2.0%	1.5%	0.7%	0.2%		
12.5 Campus student or Greek organizations	56.0%	18.6%	12.2%	4.7%	4.6%	0.9%	1.3%	0.6%	1.1%		