

# Academic performance of a working student essay sample

[Psychology](#), [Behaviorism](#)



Part time students face special challenges. Students who attend university part time face challenges and benefits that are different than full-time students. According to Salme Harju Steinberg, president emeritus of Northeastern Illinois University, most people who enroll as part-time students rather than full time do so for financial reasons (see References 1). Most part-time students are working, many of them full time, at the same time that they are attending school. This can create severe time shortages, and the student requires highly developed time-management skills in order to handle school and work.

## 2. Balancing Work and Study

The balance can be tricky particularly for students who are working full time while they are enrolled in a university. Even when there is time to get to all required classes, additional time is needed to complete assignments and research. If either work or study are excessively stressful for the student, the quality of both may suffer. Due to these stresses, the drop-out rate among part-time students is higher than the rate of other students. For a student who already has a job and not enough time to study, the temptation to simply give up on graduating can be great.

## Families and Children

Many part-time students are older and already have careers, marriages and children to deal with. Children demand a lot of time and leaving them in day care for prolonged periods of time can cause feelings of guilt and anxiety in parents who are spending all of their time at work or at school. Spouses also may feel neglected. If they are not also in school and therefore not experiencing the same difficulties, spouses may not be totally supportive or understanding. In a married and...

## CHAPTER 1

## THE PROBLEM AND ITS SETTING

### Introduction

Education in the largest sense is any act or experience that has a formative effect on the mind, character or physical ability of an individual. In its technical sense, education is the process by which society deliberately transmits its accumulated knowledge, skills and values from one generation to another.

Education is universally recognized as a fundamental building block for human development and one of the strongest instruments for reducing poverty, and is a powerful driver for development of individuals and society—improving health, gender equality, peace, and stability. The Commission on Higher Education (CHED 1995) states that higher education is primarily bridge between the world of learning and the world of work industrialization has increased the demand for more differentiated skills.

The Laguna State Polytechnic University System has been founded to help each student to develop into a total person: who is well equipped with knowledge and skills; one who fits the modern world of technologies; and one who is ready and capable to meet the challenges of life. A bachelor's of science degree in Hotel and Restaurant Management (HRM) will provide with all the skills needed to success in a wide variety of hospitality management careers.

The program allows the students to understand the principles involved in leading a successful hospitality organization. At the same time, they will

have the opportunity to practice these principles in applied courses and through an internship. It can individualize the degree program to fit the career field that most interested one. The career hotel and restaurant management concept deal with the preparation for gainful and successful and satisfying life and equip them with knowledge and social relations as well as manipulative skills in developing impotent attitudes and values in work is the aim of hotel and restaurant management course in general.

Employment is a...

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Chapter 1

The Problem and its Background

Introduction

Many people are familiar with the concept of “ work-life balance”- the ongoing struggle to keep a healthy split between times spent on your professional time. For grad students who work full-time, it’s more accurate to talk about “ work-study-life balance.” And that’s a mouthful; it’s even more of a handful. While it is technically possible to work full-time while studying full-time, it can be a bit like fighting a two-front war- both areas important and require constant attention, and ignoring either is something you do at

your own peril- and meanwhile, you can ever forget your obligations on the “home front” either.

Parents work hard to give the best for their children. The government offers programs and solutions for the benefit and development of the people. And as an individual, students have responsibility to help themselves and be beneficial to others. Working students are those individuals who find ways to make things possible for them and to others. Student’s jobs have become a sort of trend among students around the world, who want to work while studying. In short, the term that suits this trend is “ Earn and Learn” policy. Other reasons why student jobs are popular among students is they help to cope up with the constant increase in tuition fees, and a way to afford further educations.

The problem has been developed with the question as to have the...

### Why Students Work

The reason students work may seem self-evident—to pay for college; however, the sense of many administrators seems to be that students are working more hours, and this choice inhibits their college success as it cuts into study time. As the price of higher education continues to increase, the amount of credit card debt is also increasing and this could be contributing to more students working more hours (Pinto, Parente, & Palmer, 2001).

Cheng’s focus groups revealed a theme of “ constantly searching for meaningful work as well as meaning in their work” (2004, p. 9). Students also expressed a complex attitude developing toward their work, first seeing

it as purely economical, and then with growing appreciation for the academic, social, and career advantages of their work. Choy (2002) reported that 26% of students who considered themselves students who worked thought that working helped them with their course work, and 55% thought it helped to prepare them for a career.

But Horn and Berkold capture the catch 22 in their report on Undergraduates Who Work : “ If the amount they work has an adverse effect on their academic performance or impedes their progress toward attaining a degree, then the primary reason for working has been undermined.”(U. S. Department of Education, 1998). Another interesting find from the NCES studies looking at students who work and employees who study is the finding of the importance of parental expectation in the hours that students were working. It was found that 63% of dependent students who identified as students who work had parents who expected them to work an average of 21 hours. There was also a relationship between the number of hours these students were expected to work their parents, and how many they worked, up to 35 hours (U. S. DepartDisplay 3. Distribution of Students by Average Number of Hours Worked per Week and Race/Ethnicity

0% 20% 40% 60% 80% 100%

White

Hispanic/Latino

American Indian

Note: Details may not add to 100 percent because of rounding. SOURCE:

King, (1999). none 15 or Fewer 16 to 35 36 or Morement of Education, 1998).

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This illustrates another important dimension to student working patterns in college—family and parental expectations Federal Work-Study

Federal programs to support work have been a part of federal support to higher education since at least the Depression. From 1936 to 1943, the federal government awarded millions to pay for campus employment to over 200 colleges to enable students to work their way through college through the National Youth Administration. Subsidizing work during college was held to be consistent with the American values of hard work and more palatable than handouts from even the most conservative perspective. Although the NYA program lost support in partisan wrangling in 1943, the Federal Work-Study program was its descendent, and was established in 1964 as part of President Johnson's larger Great Society initiative in the arsenal of other programs to help fund access to higher education. Currently, the Federal Work-Study budget is \$1, 218, 000, 000 and has benefited 1, 073, 000 students (College Board, 2004). In 1999 Congress mandated that 5% of the budget of the work-study program be restricted to community service jobs. This amount was raised in 2000 to 7%. Effects of On-campus vs. Off-campus Work

Most colleges and universities offer an array of on-campus opportunities for student employment, some funded through the Federal Work-Study program. However, at many campuses, especially nonresidential, the majority of students will work off-campus. The U. S. Department of Education (1998) found that less than one in five students in 1995-96 who selfidentified as students who work, were employed on campus (15%). These were the

students who were most likely to be working 15 or less hours a week and were most likely to be work-study students. One study at a somewhat selective urban institution found that a higher rate of persistence was found for students who were employed on campus in the first or second year of college. In addition, these students also reported higher satisfaction with the institution and higher graduation rates (Cermak & Filkins, 2004).

There are some studies that would seem to indicate the benefits to students of working on campus. Working on campus seems to have the most positive impact on student performance and satisfaction with college (Astin, 1993; Terenzini, Yaeger, Pascarella, & Nora, 1996). Examining data from the NPSAS: 93 (National Postsecondary Student Aid Study) and the Beginning Postsecondary Study (BPS: 90/94) data, researchers at the National Center for Education Statistics (NCES) found that working on campus part time may facilitate social integration (Cuccaro-Alamin & Choy, 1998). This seems to support the findings of earlier researchers who suggested that working off campus is more likely to inhibit social or academic integration (Anderson, 1981; Ehrenberg & Sherman, 1987). Off-campus employment is negatively associated with involvement in critical learning experiences including faculty interaction, at least in one study at a southeastern urban university (Furr & Elling, 2000).

Jobs related to a career interest may also have a positive impact on students (Broughton & Otto, 1999; Pascarella & Terenzini, 1991). Pascarella & Staver (1985) found that working on campus in science-related areas had a positive influence on science major choices. They suggest that for those science



career aspirants, working in a science-related area reinforces their major choice. While it would appear that on-campus work strengthens campus integration and academic engagement, there are relatively few opportunities for on-campus work. Cuccaro-Alamin and Choy (1998 ) found that most working students (91%) worked off-campus. Given that work-study allocations serve approximately 1. 2 million students out of a total of nearly 15 million undergraduate degree seekers, this would seem consistent (College Board, 2004)

### Freshmen and Working

In his 30-year report on the College Institutional Research Program (CIRP) survey, Astin (1998) reported that entering freshman classes were reporting record-high percentages of students expressing major concern about finances and “ record-high percentages of freshman [said] that they [would] have to’ get a job to help pay for college expenses’”(p. 120). Similar numbers reported they would have to work full time while attending (p. 120). With the first year in college being the most vulnerable in terms of persistence, should students work in their first year, and if so, how much? Fjortoft (1995) comments that “ academic advisors and counselors continue to suggest that students not work particularly during their first year on campus” (p 3) in spite of the research pointing to the positive benefits of working. In a 1994 study, off-campus employment was found to have no effect on the cognitive development of beginning students (Pascarella, Bohr, Nora, Desler, & Zusman, 1994). Even though borrowing and working are strongly associated with academic success, less than 6% of freshmen of any

income level do this, taking jobs and working over 15 hours a week (King, 2002). Working: The Good, the Bad, and the Drudgery

Although it is perhaps counterintuitive, the research strongly indicates working to be beneficial to student success. Working helps students develop time-management and prioritizing skills and important interpersonal skills. It also gives them valuable career experience and helps them focus on academic work. Work intensity is related to fall-offs in persistence and graduation rates, although the precise point at which this happens is not conclusive and depends on individual differences. Concluding Thoughts

Working is a necessity for most students in higher education today, and this is unlikely to change in the future. Pascarella and Terenzini (1998) point out “ a relatively small number of research universities and elite liberal arts colleges have set the academic and public standard for what most Americans believe higher education is or should be about.” (p. 155-156). The reality outside these illusory walls is that American students are working their way through a more costly college education, and as college has become more accessible for a greater part of the population, colleges have to find strategies to adapt to these realities. Shelton et al. (1995) comment that “ retention is a joint effort between the student and the institutions,” and the reality of working students is an opportunity for colleges to show innovation and leadership. King (2002) and others have pointed out that institutions may want to think about their discourse with students on the choices they must make.

It is a complex calculus of work+borrowing+working full or part time+ attending full time or part time and compensating for the work penalty . . . and there is little in the life of the young adult to prepare him or her for this kind of cost-benefit analysis. As the nexus of knowledge and learning, perhaps crafting messages about balancing financing strategies and priorities and weaving these into first-year experiences or orientation sessions would help students make good decisions that will help them achieve their goals. Colleges may want to think about strengthening and expanding on-campus work opportunities. A collaborative partnership between career services, human resources, and the institutional research office at IUPUI is looking at ways to develop on-campus working opportunities for more students and is working with academic and entrepreneurial organizations on campus on the benefits of hiring student employees. One Florida urban university strategized on creating 150 on-campus positions to provide more on-campus employment opportunities in an effort to increase retention. Other colleges have built strong research/work programs to help provide major-related employment for their undergraduates.

Helping inform students of the benefits of working, but within the limits known to be beneficial to student success, and helping students meet their educational goals should be the objective. Integrating this with messages of time management and financial choices is the challenge. how such decisions affect academic performance is prospectively important for policy consideration. For high school students, much research has been devoted to

this question, yielding decidedly mixed evidence. Some studies estimated negative effects of part-time employment on school performance (e. g. Singh, 1998; Eckstein and Wolpin, 1999; Oettinger, 1999), others showed that grades improve with low work hours but fall with long hours (e. g. Schill et al., 1985; Lillydahl, 1990; Quirk et al., 2001), and still others failed to detect a causal relationship (e. g. Schoenhals et al., 1998; Warren et al., 2000; Dustmann et al., 2007).

Three recent studies of high school students, all of which used two-stage least squares (2SLS), illustrate the disparity of conclusions in this literature. Using state child labor laws as instruments in 1992 National Education Longitudinal Study data on high school seniors, Tyler 2 (2003) found a large negative effect of additional work hours on standardized test scores. Contradicting this, in annual 1991–2004 Monitoring the Future data on high school seniors, DeSimone (2006) specified components of the student unearned income distribution as instruments to uncover an inverse U-shaped relationship in which grades peak at 15 weekly work hours. Meanwhile, for National Longitudinal Survey of Youth 1997 (NLSY97) 10th–12th graders, Rothstein (2007) estimated that current and lagged work hours have small negative grade impacts that weaken when individual fixed effects are included and lose significance when instrumented using local wage and unemployment rates and state child labor laws.

For college students, the topic has received less attention but seems equally relevant. Many students work specifically to pay for tuition and coursework is presumably more difficult. Observed work propensities and intensities are

high. In the 2001 Harvard College Alcohol Study (CAS), 62 percent of respondents reported working for pay in the previous month, and employed students work nearly 29 weekly hours on average. Yet as with high school students, previous research has not reached a consensus on how employment affects academic performance. Four early studies treat work hours as exogenous. Among 836 students in his 1976–1979 introductory macroeconomics classes at Towson State University, Paul (1982) estimated that 10 additional work hours lowered exam scores by two percent. For 1,933 National Longitudinal Survey males who entered four-year colleges in fall 1972, Ehrenberg and Sherman (1987) found little impact of work hours on grades.

Gleason (1993) depicted evidence of an inverse relationship in 1980s data: compared to unemployed students, grade point averages (GPAs) were 0.25 points higher for those working 1–10 weekly hours but 0.06 points lower for those working 31–40 weekly hours. Hood et al. (1992) similarly found that students working 7–14 hours per week had higher GPAs than those working less or more. 3 Two recent studies explicitly accounted for the potential endogeneity of hours worked. In 1989–1997 data on 2,372 first semester Berea College students, Stinebrickner and Stinebrickner (2003) use work-study job assignments to instrument for labor supply in a 2SLS model. An additional weekly work hour reduced first-semester GPA by 0.16 points. Kalenkoski and Pabilonia (2008) obtained an analogous negative effect of 0.017, nearly an order of magnitude smaller, using 1997–2004 NLSY97 data on 1,234 full-time, first semester four-year college students.

Their three-equation system is estimated with maximum likelihood and specifies parental transfers, a quadratic in the net price of schooling, the state minimum wage, the county unemployment rate and a state work study program indicator as instruments for work hours. Of these, only parental transfers, which itself is endogenously determined, enters the work hours equation significantly. Identification thus occurs predominantly through the idiosyncratic functional form of the model. This paper estimates the effect of paid employment on college student grades. Like recent studies, it uses an instrumental variable (IV) model to address prospective unobserved heterogeneity in the relationship between labor supply and academic performance. It contributes to the college-level literature by using 1993-2001 data from the CAS, which offers a much larger sample that includes students of all class standings. Compared with Stinebrickner and Stinebrickner (2003), the instruments, though not arising as naturally from a random assignment mechanism, are somewhat stronger.

Also, the sample is nationally representative, rather than from a single school with a unique setting, and slightly more recent. Relative to Kalenkoski and Pabilonia (2008), the instruments have considerably more explanatory power for work hours, and the empirical strategy is more directly focused on identifying the impact of working on grades. Besides the aforementioned data features, the main innovation of this study is its 4identification strategy. The IV approach used in most previous research exploits geographic differences in factors potentially affecting student work hours, such as child labor laws or unemployment rates. This tactic, which is infeasible here

regardless because CAS data lack school location information, has serious limitations in both theory and practice. Theoretically, unobserved factors, such as attitudes or policies, affecting student achievement might vary over localities and be correlated with the instruments, thus threatening the instrument exogeneity assumption.

Practically, most college students are too old to be affected by child labor laws, while unemployment rates tend to be weakly related to work hours (Ruhm, 1997; Oettinger, 1999; Rothstein, 2007; Kalenkoski and Pabilonia, 2008). This study instead specifies as instruments variables representing human capital accumulation and preferences of the respondents' fathers. The maintained identification assumptions, therefore, are that paternal schooling attainment and emphasis are strongly related to student labor supply, yet otherwise unrelated to academic performance or its unobserved determinants. Next these assumptions are discussed in terms of the primary instrument, paternal schooling. Subsequently, reasons why the mechanism through which the secondary instrument, an indicator that the respondent was raised Jewish, affects student work hours and GPA is likely to be similar to that for paternal schooling is explained. It seems reasonable to expect that paternal schooling has a negative impact on student labor supply.

Fathers with higher attainment likely place a greater value on education, and in turn might provide more financial support to their college-enrolled children to allow them to spend less time earning money for tuition and living expenses and more time studying. Moreover, as a component of permanent family income (e. g. Heckman and Carneiro, 2003), paternal schooling should

be positively related with student unearned income, which by the 5standard labor-leisure model negatively affects student labor supply. Empirically, it is easy to verify that these expectations manifest themselves in very large first stage instrument F-statistics. The usefulness of this study, therefore, hinges critically on whether paternal schooling truly is exogenous with respect to student achievement. This assumption is supported by the traditional view of the intergenerational human capital transmission literature, which is that child schooling is much more closely related to maternal schooling than paternal schooling (e. g. Haveman and Wolfe, 1995; Chevalier et al., 2005).

Presumably this stems from children spending more time with their mothers than their fathers (Black et al., 2005). Through assortative mating, controlling for maternal schooling might thus adequately capture any correlation between paternal schooling and unobserved student ability or preferences for academics that remains after accounting for endogenous student labor supply. Nonetheless, recent studies showing significant positive correlations between child schooling and paternal schooling, even holding constant maternal schooling (e. g. Behrman and Rosenzweig, 2002; Plug, 2004; Black et al., 2005; Chevalier et al., 2005; Björklund et al., 2006; Oreopoulos et al., 2006), might cast doubt on the validity of the paternal schooling exclusion restriction. It is important to recognize, though, that this study examines academic performance, not schooling.

Paternal schooling might be a poor instrument for the latter because schooling is intergenerationally transmitted, yet have no direct relationship with the former, particularly taking into account its observed strong effect on



student labor supply. This is more plausible because the empirical model holds constant not only schooling itself, i. e. years in college, but also maternal schooling, student age and the school attended. Among students within a specific postsecondary institution, of the same attainment and age, and with identical maternal schooling . This suggests that maternal schooling, as a determinant of student achievement, is a poor candidate to instrument for student labor supply. If fathers on average earn higher incomes than mothers, paternal schooling might also be more strongly linked to their children's labor supply than maternal schooling, which is consistent with the CAS data. 6and own labor supply, it is conceivable that paternal schooling has no separate relationship with student achievement.

The use of a second instrument is vital in allowing for empirical examination of the assumption that paternal schooling is not directly associated with grades. The other instrument used here is an indicator of whether the student was raised Jewish. Botticini & Eckstein (2005, 2007) outline how a religious norm requiring Jewish fathers to educate their sons, which has been operational since around the 3rd century, ultimately spurred entry into skilled occupations by the 9th century. Chiswick (1993) showed that controlling for demographic and skill differentials, including paternal schooling, American Jews in the 1973-1987 General Social Surveys had significantly higher levels of schooling, occupational status and earnings than other whites. Indeed, 3.5% of students in this study's analysis sample were raised Jewish, whereas the National Jewish Population Survey (NJPS; [http://www. jewishvirtuallibrary.](http://www.jewishvirtuallibrary)

org/jsource/USIsrael/ujcpop.html) reported a U. S. Jewish population of 5. 2 million, or 1. 8% of the U. S. population, in 2000.

The NJPS further found that, compared to others in the U. S., Jews had higher educational attainment, rates of employment in management, business and professional/technical positions, and household incomes, lower fertility rates and incidence of poverty, and smaller households. Consequently, the impact of being raised Jewish on work hours is expected to mimic that of paternal schooling, even with paternal schooling held constant. If so, compared with other students, including those with similarly-educated fathers, students raised Jewish will spend fewer hours working for pay in response to greater financial support from their fathers, who have better means of providing such support and also emphasize schooling and the eventual attainment of

Although the religious norm outlined by Botticini & Eckstein (2007) pertained specifically to male offspring, the disproportionate presence of Jewish students in the CAS applies to both genders: 3. 6% of sample males and 3. 4% of sample females were raised Jewish. 7skilled jobs.

The logic for assuming that being raised Jewish has no separate correlation with academic achievement also parallels that for paternal schooling. Stronger preferences for schooling among Jewish families would suggest dubious validity of this exclusion restriction. However, it might be the case that Jewish students enroll in more selective colleges and are more likely to attain a specific level of post-secondary schooling by a certain age, but do not perform better than classmates from the same age/grade cohort. The empirical evidence strongly supports this latter hypothesis.

Working College Student Academic Performance vs. a Full Time Working Student In an era when unemployment remains stubbornly high and employers complain that job candidates lack skills, more and more Americans are attending college. But cuts in state funding to higher education have caused tuition rates to soar, and job loss has forced many families to reduce the amount of financial assistance they provide for their college-bound children. As a result, more college students than ever — approximately 72 percent of undergraduates — work full- or part-time. Students who work full time and students who work part time face serious challenges balancing work with school, but in the process they may gain some benefits. Sponsored Link

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The Nine-to-Fivers

About 20 percent of U. S. undergraduate college students work full time while going to school. Unfortunately, those students are 10 percent less likely to get their degrees than their unemployed peers, according to a study commissioned by Upromise. Because each student has only so much time and energy, the time away from school toward full-time work is a drag on these students' GPAs. Further, this lack of time limits their class choices and library access. Many students who work full time must take classes part time to do well. This means more years spent working and studying, which can cause students to become frustrated and drop out. The Moonlighters

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Studies have shown that working 20 hours a week or less has no significant impact on a student's grades. In fact, students who work 15 hours a week or less while attending college have higher grades than students who don't work. Researchers believe that working pushes students to manage their time more effectively and to eliminate unproductive activities, such as watching television. However, a full 50 percent of undergraduate part-timers clock in 20 hours or more per week, and these students are more likely to drop out of college than students who work fewer hours. While 86 percent of students who work less than 20 hours a week graduate from college, only 79 percent of students who work 20 to 30 hours a week obtain their diplomas.

#### The Locals

If you have to work to get through school, working on campus is your best bet. Students who work on campus have higher GPAs and are more likely to stay in school than students whose jobs take them off campus. Researchers believe that on-campus jobs allow students to feel more connected to the college community and to build stronger networks with professors and fellow students. On-campus jobs are also more likely to be related to academics or to the student's chosen career. Unfortunately, as "Inside High Ed" points out, systematic budget cuts to higher education have made these opportunities increasingly rare.

#### The Professionals

While working part time or full time poses stresses for the undergraduate college student, there are benefits to working. In any kind of job, students develop many of the business "soft skills" that employers look for, such as punctuality and an ability to deal with a diverse array of people. Additionally,

students who work off campus in higher-level, more sophisticated jobs as bank officers or as salespeople are able to enhance their resumes for their careers, and these students also have lower dropout rates than those who work as cashiers or burger-flippers. If you have to work full time, a more demanding, career-oriented job is likely to give you the psychological boost you need to keep it up for the long haul.

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Unique new data from a college with a mandatory work-study program are used to examine the relationship between working during school and academic performance. Particular attention is paid to the importance of biases that are potentially present because the number of hours that are worked is endogenously chosen by the individual. A “naive” OLS regression, which indicates that a positive and statistically significant relationship exists between hours-worked and grade performance, highlights the potential importance of endogeneity bias in this context. Although a fixed effects estimator suggests that working an additional hour has an effect on grades which is quantitatively very close to zero, we suggest that there are likely to

exist causes of endogeneity which are not addressed by the fixed effects estimator.

Indeed, an instrumental variables approach, which takes advantage of unique institutional details of the work-study program at this school, indicates that working an additional hour has a negative and quantitatively large effect on grade performance at this school. The results suggest that, even if results appear “reasonable,” a researcher should be cautious when drawing policy conclusions about the relationship between hours-worked and a particular outcome of interest unless he/she is confident that potential problems associated with the endogeneity of hours have been adequately addressed. <sup>2</sup>This may be a reasonable scenario for students working low to moderate number of hours. However, students who work large numbers of hours may be individuals who are not particularly interested in academics. <sup>1</sup>

## I. Introduction

Important policy decisions have been based on beliefs about the relationship between working during school and a student’s current and future academic performance. However, although some previous research examines these matters, currently no consensus exists on the effect that youth employment has on these outcomes. If working during high school has a harmful effect on academic performance, it might be reasonable to strengthen laws that regulate the number of hours that youth can work. Similarly, if working during college is detrimental, individuals who need to work during college in order to pay tuition costs may be at a disadvantage when compared to students from wealthier backgrounds, and work-study based financial aid

programs may have certain undesirable side effects. Difficulty in determining the true impact that work has on academic performance arises largely because the number of hours that an individual works is endogenously chosen.

For example, it is sometimes posited that individuals who fare well academically in school tend to be blessed with high levels of “ motivation” that may also make them more likely than other students to become involved with nonacademic activities such as work. In empirical work, if “ motivation” is not fully observed, some of the variation in academic performance that should be attributed to differences in motivation . May mistakenly be attributed to differences in work status. Thus, in this scenario, simple econometric models may understate the negative impact that working has on school performance. Indeed, as discussed in the next section, previous studies have sometimes found that academic performance is highest among individuals who are working a moderate number of hours. Credibly dealing with the endogeneity of work hours in empirical work is typically very difficult. 3See Bound et al. (1995) for a discussion of the potential problems that can arise in instrumental variables estimation when the correlation between instruments and the endogenous explanatory variable is weak. 2It is true that certain individual characteristics may be able to capture some portion of factors such as motivation.

However, given the large amount of variation in academic performance that typically remains unexplained after controlling for available individual characteristics, it is likely that including individual characteristics provides

only a relatively low level of protection against this type of endogeneity. Instrumental variable (IV) estimators represent a theoretically appealing way to deal with the endogeneity problem. However, in practice it is often difficult to find instruments that both explain a reasonable portion of the variation in work hours and are unrelated to an individual's academic performance except through their effect on hours worked? Unfortunately, when methods for controlling for endogeneity are not entirely satisfactory, the researcher can be left without any manner in which to determine the extent to which bias may be present in his/her estimates. Even when estimates seem "reasonable," a large amount of bias may be present. In this paper, we utilize unique new data in an attempt to examine the extent to which the endogeneity of hours may bias estimates of the effect of employment on academic performance.

The data are obtained directly from the administrative records of Berea College. Located in central Kentucky, this liberal arts institution operates under a mission of providing an education to those who "have great promise, but limited economic resources." As part of this mission, all students who attend Berea receive full tuition scholarships. Part of the cost of schooling is defrayed through a mandatory work-study program. Although all students must work at least a minimum of ten hours a week, variation in hours worked arises because students can often choose to earn extra income by working additional hours. We wish to note in advance that, given the unique nature of Berea College, it is our belief that our results should be viewed cautiously. Nonetheless, as will be described throughout the paper,



the institutional details of the Berea College labor program and the detailed nature of our administrative data provide us with a unique opportunity to obtain some information about the potential importance of the endogeneity problem described above.

In particular, we are able to compare estimates of the effect of working on academic performance obtained using an Ordinary Least Squares (OLS) estimator, a fixed effects (FE) estimator, and an instrumental variables (IV) estimator. The FE estimator takes advantage of semester-by-semester information on hours worked that is available in our administrative data. The IV approach takes advantage of two features of the labor program at Berea that imply that the job to which a person is assigned in the first semester can serve as an instrument for hours worked. First, as will be discussed in detail, it is reasonable to believe that the first-year job assignment process (which takes place before students arrive at Berea) does not create a situation in which the “ motivation” level of students is higher in some jobs than in others. Second, the amount of hours that are “ available” for a person to work depends on the job to which he/she is assigned.

There are intuitive reasons to believe that both the OLS and FE estimators may tend to understate the negative effect that working has on academic performance. Our results suggest that the amount of bias may be substantial. Whereas the OLS and FE estimators both suggest a positive relationship between working and academic performance, the IV estimator indicates that working additional hours has a harmful effect on academic performance. The remainder of the paper proceeds as follows. In

Section II, we briefly examine past research that considers the relationship between employment while in school and academic or labor market outcomes. In Section III, we describe the data from Berea College and we highlight some of the advantages of these data. In Section IV, we provide the details of the results summarized above. In Section V we conclude.

### What Is the Meaning of Academic Performance?

When people hear the term “academic performance” they often think of a person’s GPA. However, several factors indicate a student’s academic success. While some may not graduate top of their class, they may hold leadership positions in several student groups or score high on standardized tests such as the SAT or ACT. Grades

People often consider grades first when evaluating academic achievement. This includes schools, who rank students by their GPA, awarding special designations such as valedictorian and salutatorian for those who graduate first and second in their class. Scholarship organizations and universities also start by looking at grades, as do some employers, especially when hiring recent graduates. Grades carry more weight in some industries, especially technical professions such as law, medicine and finance. Other industries place less importance on GPA, particularly creative professions such as writing or art and occupations such as sales where people skills are more crucial than technical knowledge. Test Scores

Grades don’t always reflect a person’s knowledge or intelligence. Some students don’t perform well in a classroom setting but are very intelligent

and earn high marks on IQ tests, standardized testing or college entrance exams. Universities and employers consider these scores along with other measurements and may forgive a less-than-perfect GPA for students who perform well on these tests. Some tests, such as the Law School Admission Test (LSAT) and Medical College Admission Test (MCAT), determine if a student is accepted into graduate school. Law firms and medical facilities also place great importance on these scores and may eliminate anyone who scores below a certain number. Related Reading: Academic Interview Reimbursement

### Extracurricular Activities

Some of the brightest students don't earn straight As but are extremely well-rounded, succeeding at everything from music to athletics. The ability to master a diverse set of skills illustrates intelligence, curiosity and persistence, qualities attractive to universities and employers. Some colleges will admit and even award scholarships to students who earned average grades but display a pattern of achievement by consistently learning new skills. Many businesses also see this as a selling point, thinking these candidates are eager to learn and will be easy to train. Leadership

Initiative can also indicate academic performance. Some students demonstrate their competence by serving as student body president or holding officer positions in student groups such as the honor society or the science club. Or, they might regularly organize student events such as fundraisers, pep rallies or dances. Others participate in volunteer organizations and coordinate food drives or other community outreach

efforts. Universities and employers look favorably on consistent leadership activities, feeling these students will bring that same drive to their classrooms or board rooms.

Academic Performance of College

Students: Influence of Time Spent

Studying and Working

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ABSTRACT. Today's college students are less prepared for college-level work than their predecessors. Once they get to college, they tend to spend fewer hours studying while spending more hours working, some even full time (D. T. Smart, C. A. Kelley, & J. S. Conant, 1999). In this study, the authors examined the effect of both time spent studying and time spent working on academic performance. The authors further evaluated the interaction of motivation and ability with study time and its effect on academic performance. The results suggested that nonability variables like motivation and study time significantly interact with ability to influence academic performance. Contrary to popular belief, the amount of time spent studying or at work had no direct influence on academic performance. The authors also addressed implications and direction for future research.

Today's college students are spending less time studying. The fall 2003 survey conducted by the Higher Education Research Institute at UCLA's Graduate School of Education and Information Studies found that only 34% of today's entering freshmen have spent six or more hours per week outside of class on academic-related work (e. g., doing homework, studying) during their senior year in high school. The sample consisted of 276, 449 students at 413 of the nation's 4-year colleges and universities (over one fourth of entering freshmen in the United States), and the data were statistically adjusted to reflect responses of all first time, full-time students entering all four-year colleges and universities as freshmen in 2003. In fact, in 1987 when this question was asked of entering freshmen, 47. 0% claimed they spent 6 or more hours per week studying outside of class. Since then, the time spent studying outside of class has declined steadily each year (Higher Education Research Institute, 2003).

Another trend that is emerging is the increase in the number of college students who are employed either part time or full time. According to Gose (1998), 39% of college freshmen work 16 or more hours per week, an increase of 4% since 1993. Among all business majors, marketing students typically work even more hours per week than do other students (Smart, Tomkovick, Jones, & Menon, 1999). The 2002 survey conducted by the Higher Education Research Institute also found that 65. 3% of entering freshmen have either " some concern " or " major concerns " about not having enough money to complete their college degrees (Higher Education Research Institute, 2002). This was an increase of almost 1% from 2001 and is likely to

increase in the years ahead because of reduced funding for higher education by state legislatures. Although more women (70.9%) were concerned about whether they would have enough funds to complete college than were men (58.3%), all students seemed to be working out of the need to make up for rising tuition and fewer available grants.

In summary, the proportion of college students who are employed either part or full time is likely to increase in the years to come, leaving greater numbers of students with less time for academic work. Students spending less time studying and more time working are two trends that all colleges and universities will have to confront. Lowering academic standards by rewarding minimum effort and achievement (expecting less) is certainly a short-term strategy, but one that will have negative long-term consequences. A more productive way to handle these concerns is to conduct empirical research to determine to what extent these trends will negatively impact the academic performance of college students and use the findings from these studies to improve our academic programs.

The influence that personal variables, such as motivation and ability, have on academic success is well documented, but there is a paucity of research investigating the influence that time college students spend on various activities such as studying outside of class and working has on their academic success. One reason for a lack of research in this area may be the common belief among most students and academicians that more time spent studying outside of class positively influences academic performance and that more time spent working negatively influences academic

performance. Another, more plausible reason for this lack of research may be the complex nature of these relationships when evaluated in the presence of other variables, such as student ability and motivation. For example, it is likely that time spent studying outside of class will have a differential impact on the academic performance of college students who vary in ability.

That is, the relationship that ability has with student performance will be stronger for those students who spend more time outside of class studying than for students who spend less time studying. With this study, we attempted to fill this void in the literature. First, we attempted to determine the direct relationship that time spent on academics outside of class and working had on academic performance among business students. Second, we attempted to determine whether the time spent on academics outside of class interacts with variables, such as student ability and motivation, in influencing the academic performance of business students. Hypotheses Tested

It is commonly believed that students who spend more time on academic related activities outside of class (e. g., reading the text, completing assignments, studying, and preparing reports) are better performers than students who spend less time on these activities. There is some empirical support for this belief. For example, Pascarella and Terenzini(1991) found that the study habits of freshmen relate significantly to their first year cumulative grade point average(GPA). In their investigation of 143 college students, McFadden and Dart(1992) reported that total study time influenced expected course grades. In contrast, Mouw and Khanna (1993) did not find

study habits to significantly improve the explanatory power of the first year cumulative GPA of college students. Ackerman and Gross (2003) have found more recently that students with less free time have a significantly higher GPA than those with more free time.

Because of this conflicting evidence, there is a need to reinvestigate this relationship. Thus, our first hypothesis was H1: There is a relationship between time spent studying outside of class and academic performance. Along with the present trend of students spending less time on academic related activities, a growing number of college and university administrators are concerned that today's postsecondary students are working more hours than their counterparts were years ago (Gose, 1998). It can be reasonably assumed that working more hours per week will leave students less time for studying outside of class and that this will negatively influence their academic performance. Although working more hours per week can be one key reason for a student to be in academic trouble, available research does not seem to support this hypothesis.

Strauss and Volkwein (2002) reported that working more hours per week positively related to a student's GPA. Light (2001), who interviewed undergraduate students of all majors, found no significant relationship between paid work and grades. According to Light, "students who work a lot, a little, or not at all share similar pattern of grades" (p. 29). Because empirical evidence to date has been counterintuitive, testing this hypothesis using different samples and different methodologies is important before generalizations can be made. This led to our next hypothesis that H2: There



is a relationship between time spent working and academic performance. According to Pinder (1984) and others (Chan, Schmitt, Sacco, & DeShon, 1998; Chatman, 1989; Dreher & Bretz, 1991; Nonis & Wright, 2003; Wright & Mischel, 1987), performance is a multiplicative function of both ability and motivation.  $\text{Performance} = \text{Ability} \times \text{Motivation}$ .

For example, a student with very high ability but low motivation is unlikely to perform well, whereas a student with low ability but high motivation is likely to perform well. That is, the variability in motivation across students may dampen associations between ability and performance. In the same vein, one can argue that it is simply the study behavior that ultimately brings about the desired performance and not students' inner desires or motivations. This is supported by the widely held belief that it is hard work (i.e., time spent on academic activities outside of class by a student) that results in academic success and that laziness and procrastination ultimately result in academic failure (Paden & Stell, 1997). Therefore, similar to how motivation interacts with ability to influence academic performance, one can infer that behavior such as hard work interacts with ability to influence performance among college students.

This led us to our third hypothesis to be tested in this study. H3: Behavior (time spent studying outside of class) will significantly interact with ability in that the influence that ability has on academic performance will be higher for students who spend more time studying outside of class than for students who spend less time studying. All indications are that today's college freshmen are less prepared for college than their predecessors. American

College Testing (ACT) Assessment reports that fewer than half of the students who take the ACT are prepared for college. According to the Legislative Analyst's Office (2001), almost half of those students regularly admitted to the California State University system arrive unprepared in reading, writing, and mathematics. Although these statistics are common at most colleges and universities in the nation, how institutions handle these concerns varies. Strategies include attempting to develop methods to diagnose readiness for college-level work while students are still in high school or

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