College Students' Knowledge and Use of Credit

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Results from this exploratory study of incoming college freshmen indicated many students already had access to credit or had acquired debt. Sixty-two percent had access to a credit/charge card and just over half (50.9%) had some type of debt. Older students had significantly more credit/charge cards, as well as higher levels of debt. Single, never married students tended to have lower levels of debt than currently/formerly married students. Most students in this study knew little about credit and credit knowledge was not significantly related to debt levels or access to credit/charge cards. The findings suggest that credit education may be needed before students enter college (or shortly thereafter) to help them make informed decisions and avoid having excessive debt affect current/future financial security.
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Introduction

Credit is a part of most college students' lives. Having access to credit can provide a convenient way to make purchases, a source of transportation, and even a means to attend college. While indications are that many college students manage their credit wisely, other students' unwise and/or overuse of credit have led to financial and other problems.

Debt can impact students while they are in college, such as affecting concentration on their studies or having to reduce their course load in order to get a job (or increase work hours). Excessive debt may even lead to a student having to drop out of college.

Credit-related problems may continue after college. The combination of credit card, student loan, and other debts acquired during college, especially if coupled with unrealistic expectations about income and expenses after graduation, can impact the financial stability and security of college graduates for many years. Poor credit management may even impact employment opportunities, if potential employers check credit histories.

This exploratory study examined college students' knowledge and use of credit. Unlike most other studies, this one focused on incoming freshmen, providing an opportunity to explore whether students incur debt prior to (or early in) their college career.

Use of Credit

According to a Student Monitor survey conducted during spring 2000 and cited in a U.S. General Accounting Office (2001) report, some 63 percent of all college students had at least one credit card. Of those college students with credit cards, 42 percent did not pay their balances in full each month, carrying an average debt of $577. Joo, Grable, and Bagwell (2001) found that 70.7 percent of the college students in their study had one or more credit cards, with more than two-thirds (68.2%) getting their first credit card at age 18 or earlier. Just over half of these students (50.6%) usually did not pay their balances in full each month.

Tan (2003) reported a slightly higher percentage of students with at least one credit card (76.8%). Almost half (49.1%) of those students got their first credit card before entering college; an additional 42.8 percent got their first credit card by the end of their sophomore year. Sixty-three percent of the students with credit cards usually did not pay their balances in full each month, although 40 percent paid more than the minimum payment. Average credit card debt was similar among freshmen and sophomores ($2,077 and $2,089), as well as among seniors and graduate students ($3,559 and $3,628).

Similar results were reported in a Nellie Mae (2005) study of undergraduate applicants for their student loans. They found 76 percent of the students had credit cards, most of whom (56%) got their first one at the age of 18. Seventy-five percent of those with credit cards made payments of less than the outstanding

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balance on all their credit cards (although 44 percent paid more than the minimum payment on all their cards); another four percent relied on their parents to pay their credit card bills. Average credit card debt also varied by grade level, with freshmen carrying an average balance of $1,585 and final year students $2,864.

Even higher percentages of students with at least one credit card were reported by Hayhoe, Leach, and Turner (1999). Eighty percent of students in their study had one or more credit cards (including individually owned or jointly owned with a parent or spouse). Seventy-five percent of those with at least one credit card carried a balance on one or more of those cards. The researchers also examined predictors for those students with four or more credit cards (versus those with less than four credit cards). In addition to several credit attitude and money attitude variables, those students with four or more credit cards were more likely to be older and female, and less likely to borrow from friends or relatives when money was short. They also were more likely to have taken a personal finance course, prepare a list when shopping, and had money used as a reward in their family of origin.

A recent study by Hayhoe, Leach, Allen, and Edwards (2005) sought to confirm the findings of the earlier study by Hayhoe et al. (1999) and found that those students with four or more credit cards (versus those with less than four credit cards) were more likely to be older, white, in a higher year in school; have a student loan; and not have had a course in personal finance. They also were more likely to: score higher on the affective (emotional) credit attitude scale and retention money attitude (not wanting to spend money); score lower on the behavioral (actions) credit attitude scale; and have had fewer imagined interactions with parents. Unlike the earlier study – which included graduate and undergraduate students – this study included only undergraduates and was predominately freshmen (77%). Only 49 percent of the students reported having credit cards.

Credit card debt represented 16 percent of the total debt of students in the Tan (2003) study. The remaining debt included student loans (22%), auto loans (16%), mortgage loans (9%), bank loans (5%), and others (32%). Those students with higher debt levels tended to be older, married, upperclassmen, and those with higher incomes.

The 2002 National Student Loan Survey (Baum & O'Malley, 2003) reported an average student loan debt acquired for undergraduate studies of $18,900. However, while both undergraduate and graduate students indicated feeling burdened by their education debt, over 70 percent agreed that student loans were very or extremely important in allowing them access to higher education. Graduating seniors who had applied for Nellie Mae student loans reported an average combined credit card and student loan debt of $20,402 (Nellie Mae, 2002).

Credit Knowledge
Recent studies of credit knowledge among college students tend to focus on knowledge and understanding of the specifics of the student's credit cards or other debt. For example, Joo, Grable, and Bagwell (2001) found that a significant number of college students in their study knew the Annual Percentage Rate (61.3%), late fee (54.9%), and annual fee (59.5%) for their major credit card. Fewer (39.9%) knew the cash advance fee, however. An exploratory study by Warwick and Mansfield (2000) found only 28.9 percent of students knew the interest rate on their credit card, while more than half knew their credit card limit (57%) and their current credit card balance (52.5%).

A few studies have examined general credit knowledge of college students (or perception of their credit knowledge). Perceived knowledge and understanding about credit card use was examined by Tan (2003), who noted that many of the college students in his study reported "moderate" or "extensive" knowledge (versus "little or none") of the implications of misusing credit cards (90%), how much their debt will ultimately cost (87%), the implications of just making minimum payments (86%), and how to manage their credit card debt (83%). However, knowledge levels were much lower among those students who were having problems handling their debts (24% of the students), defined as those who only paid the minimum each month on their credit cards or who were behind on their payments.

Impact on Students
Thirty-one percent of the students in the Tan (2003) study reported that credit card debt affected (moderately or extensively) their concentration on academic work, their involvement in extracurricular activities, and their decision to take fewer hours and get a job to pay off debt. Credit card debt also affected their decision to remain in school (28%) and their sense of priority about academic work (26%). The effects were even more prevalent among those students who only paid the minimum each month on their credit cards or who were behind on their payments. These students also were more likely to be older, married, and female; have a lower grade point average and lower personal income; and have more credit cards and higher debt levels.

Baek (2001) also found an association between credit practices and college students' concentration on their studies. Paying only the minimum amount on credit

card debt, not paying credit card balances in full, and having student loan or credit card debt were among the significant predictor variables for higher levels of financial concerns (based on how many times in the last 12 months financial concerns kept the college students from concentrating on their studies).

Profiles of financially at-risk students were developed by Lyons (2004), including those who had credit card debt of $1,000 or more, were delinquent on their credit card payments by two months or more, had reached the limit on their credit cards, and did not pay off their credit card balances in full each month. Significant variables that increased the probability of having $1,000 or more in credit card debt (with marginal effects of 7% or more) included having other debt of $1,000 or more, being black, being married, and having acquired a credit card in the mail or at a retail store. Being financially independent, receiving financial aid, having other debt of $1,000 or more, being black, renting an apartment, working more than 16 hours a week, and having acquired a credit card in the mail, at a retail store, or at a campus table significantly increased the probability (by 7% or more) that students did not pay their credit card balances in full each month.

The impact of debt and the accumulation of debt extend beyond the college years. Sullivan, Thorne, and Warren (2001) analyzed bankruptcy data from the Administrative Office of the United States Courts and found that young adults (ages 25-34) made up 26 percent of bankruptcy petitioners in 2001 (including all petitioners, not just the "primary" debtors). This represented an estimated 11.7 per 1,000 of the adult population. Only the 35-44 age group had higher bankruptcy rates (33.7% of all petitioners or 13.3 per 1,000 of the adult population). The degree to which credit card, student loan, and other debts acquired during college contributed to bankruptcy filings by young adults was not studied, but previously cited studies indicated that some students already were having problems managing their debts while in college.

Methodology

Sample
Data were collected over a 3-day period from 216 incoming freshmen students in September, 2002. Students from five sections of a required orientation class for incoming freshmen in the College of Human Environmental Sciences at a southern university were surveyed during the beginning of the class period (approximately 15 minutes).

The students were informed of both the voluntary and confidential nature of the survey. Three surveys were returned blank (i.e., the students chose not to participate) and one survey was discarded due to age

(the student was under age 18). The remaining 216 surveys were utilized in the study, although missing data resulted in slightly smaller samples for regression analyses.

Variables
Variables included demographic characteristics, access to and use of credit, and credit knowledge (see Table 1). Demographic variables were selected after a review of related research and included age, gender, marital status, race, and employment status. Age was maintained as a continuous variable. Other demographic characteristics were coded as dichotomous variables, including gender (female; male), marital status (single, never married; married,

Table 1
Measurement of Variables Used in Regression

Variable	Measurement
Age	Age in years
Gender	1 = Female 0 = Male
Marital status	1 = Single, never married 0 = Married, divorced, or separated
Race	1 = White 0 = African-American, Native-American, Hispanic, Asian, or Other
Employment status	1 = Employed (part-time, full-time, or self-employed) 0 = Not-employed
Credit card in own name	1 = Has credit/charge card in own name (or with spouse, where both liable) 0 = Has no credit/charge card in own name (or with spouse, where both liable)
Other credit card	1 = Has other credit/charge card can use (such as in parent's or guardian's name) 0 = Has no other credit/charge card can use (such as in parent's or guardian's name)
Number of credit cards	Total number of credit/charge cards
Credit card debt	Total amount of credit/charge card debt (including bank credit cards, store credit/charge cards, gasoline charge cards, and others)
Other debt	Total amount of other debt (including student loans, car/truck loans, cash loans, mortgages, and other non-credit/charge cards debt)
Total debt	Total amount of debt (including credit/charge card debt and other debt)
Credit knowledge	Sum of correct responses to the six credit knowledge questions, calculated on a 100-point scale

divorced, or separated), race (white; African American, native-American, Hispanic, Asian, or other), and employment status (employed part-time, employed full-time, or self-employed; not employed).

Access to credit included whether the student had a credit card or charge card in his or her own name (or with a spouse, where both were liable for the debt) and whether the student had other credit/charge cards he or she could use (such as a parent's or guardian's). Additional debt-related variables included the number of credit/charge cards (including bank credit cards, store credit/charge cards, gasoline charge cards, and others), amount of credit/charge card debt, amount of other debt (including car/truck loans, student loans, cash loans, mortgages, and other non-credit/charge card debt), and total debt (including credit/charge card debt and non-credit/charge card debt). In a few cases, where students indicated that they had a specific type of debt (such as a car loan or bank credit card), but failed to enter an amount, means for that specific type of debt were utilized in the data analyses.

The researcher originally had been asked to provide an educational program on credit for incoming freshmen students. Seven questions were developed to provide the basis for both the variable on credit knowledge and the educational program. They ranged from general questions about the advantages/disadvantages of credit and what a creditor can ask when determining "creditworthiness" to more specific questions about grace periods and how long non/late-payment information can be reported by Consumer Reporting Agencies. One question about maximum credit card liability for a stolen credit card was dropped due to comments noted by a few students (indicating the question was not clearly worded). The sum of correct responses to the remaining six questions, calculated on a 100-point scale, was utilized for the credit knowledge variable.

Analyses
Because of the continuous nature of the dependent variables, multiple regression (OLS) was utilized to examine the predictive nature of the independent variables. Four equations utilized a debt variable as the dependent variable (amount of credit/charge card debt, amount of other debt, amount of total debt, and number of credit/charge cards). Independent variables for all four equations included age, gender, marital status, race, employment status, and credit knowledge.

Four equations utilized credit knowledge as the dependent variable. Demographic variables (age, gender, marital status, race, and employment status) were independent variables for all four equations. One equation included the demographic variables and two variables indicating access to a credit/charge card

(students had a credit/charge card in their own name and students had other credit/charge card they could use). Another equation included the demographic variables, credit/charge card debt, and other (non-credit/charge card) debt. The final equation included the demographic variables and total debt as independent variables.

Limitations
Lack of time created some limitations for this study. Had time permitted, the researcher would have included additional credit knowledge questions, conducted a post-test, and included variables such as pre-college training or coursework in personal finance, attitudes toward credit and credit use, and several measures of income and financial independence. Further, because of the convenience nature of the sample – which contributed to limited diversity in several demographic variables – results are tentative and cannot be generalized beyond the scope of this study. Other study limitations are those associated with similar surveys, including willingness to provide debt information and accuracy of recall.

Results
Descriptive Statistics
Descriptive statistics for the demographic, credit use, and credit knowledge variables are provided in Table 2. The respondents were predominantly female (92.1%); single, never married (95.8%); and white (87.5%). Almost three-fourths of the students were 18 years old (74.1%); the oldest incoming freshman was 30 years of age. Most of the students (97.2%) were full-time students, with only 18.5 percent currently employed.

Just over half (50.9%) of the students had some type of debt, including credit/charge card debt and other (non-credit/charge card) debt. Forty-two percent of the students indicated that they had a credit/charge card in their own name (or jointly with a spouse, where both were liable for the debt), while more than a third (34.3%) indicated they had a credit/charge card they could use (such as a parent's or guardian's). Collectively, 62 percent of the students had access to a credit/charge card.

Among those students with credit/charge cards in their own name, the amount owed on these cards averaged $712 (including those with no outstanding balances). Almost two-thirds (65.6%) of these students had outstanding balances, however, averaging $1,086.

Almost a third of the students (31.8%) had non-credit/charge card debt, primarily student loans (24.3%) and car/truck loans (10.7%), that averaged $6,874. Total debt (among those students with some type of debt) averaged $4,876, ranging from $15 to $70,160.

Table 2
Descriptive Statistics

	Incoming freshmen ($N = 216$ unless other noted)		
	Percentage distribution	Mean	Median
Age		18.6	
Gender			
Female	92.1		
Male	7.9		
Marital status			
Single, never married	95.8		
Married	1.9		
Divorced	0.5		
Separated	0.5		
Missing	1.4		
Race			
White	87.5		
African-American	1.4		
Native-American	6.5		
Hispanic	0.9		
Asian	2.8		
Other	0.9		
Employment status			
Full-time student ($\geq$12 credits/semester)	97.2		
Part-time student (<12 credits/semester)	1.4		
Employed full-time ($\geq$35 hours/week)	1.9		
Employed part-time (<35 hours/week)	15.8		
Self-employed	1.4		
Homemaker	2.4		
Other	1.0		
Has credit/charge card in own name or with spouse, where both liable	41.7		
Number of credit/charge cards (among those with credit/charge cards; $n = 90$)		1.8	1.0
Amount owed on credit/charge cards (among those with credit/charge cards; $n = 90$)		$712.03	$150.00
Has outstanding balance on credit/charge cards (among those with credit/charge cards; n = 90)	65.6		
Outstanding balance on credit/charge cards (among those with outstanding balance; n = 59)		$1,086.15	$690.75
Has other credit/charge card can use, such as in parent's or guardian's name	34.3		
Has access to credit/charge card (credit/charge card in own name or other credit/charge card can use)	62.0		
Has other non-credit/charge card debt ($n = 214$)	31.8		
Student loans	24.3		
Car/truck loan	10.7		
Mortgage	0.5		
Cash loans	0.5		
Amount owned on other debt (among those with other debt; $n = 68$)		$6,873.87	$4,764.18
Total debt (among all students; $n = 214$)		$2,483.67	$55.00
Total debt (among those with debt; $n = 109$)		$4,876.20	$2,400.00
Credit knowledge		56.1	50.0

The students were asked a series of questions about credit knowledge, each with four multiple-choice answers. The lowest correct response rate (19.4%) was for a question about how long non- or late-payment information can be reported as part of a credit history. The highest correct response rate (82.9%) was for a question about the advantages and disadvantages of credit. Other questions dealt with what a potential creditor can and cannot ask about (81.0% answered correctly); establishing and/or reestablishing a good credit history (75.0% answered correctly); what a grace period is (32.9% answered correctly); and the recommended maximum percent of take-home income that individuals/families should commit to monthly credit payments, excluding mortgages (45.4% answered correctly). Total credit knowledge scores ranged from 0 to 100, with a mean of 56.

It appeared that the students correctly answered more of the broader, general questions and incorrectly answered more of the specific questions. To examine this more closely, the credit knowledge questions were divided into two groups based on their broad versus specific nature (three general questions and three specific questions). Each student was then graded on the two sets of credit knowledge questions (based on a 100-point scale). A paired sample t-test was used to examine the two sets of credit knowledge scores. Results indicated that the students scored significantly higher on the broader, general questions than they did on the more specific questions ($t = 18.5$, $p < .001$).

Regression Results
Use of Credit The predictive nature of demographic variables (age, gender, marital status, race, and employment status) and credit knowledge on a) three measures of debt levels and b) the number of credit/charge cards the students held was explored (see Table 3). Age was the only significant predictor of credit/charge card debt (with older students having higher levels of debt than younger students), while age and race were significant predictors of the number of credit/charge cards held (older students had more credit/charge cards than younger students, while white students had fewer credit/charge cards than non-white students). Both age and marital status were associated with the amount of other (non-credit/charge card) debt and the amount of total debt. Older students had higher levels of both other debt and total debt than younger students, while single, never married students had lower levels of both other debt and total debt than currently/formerly married students.

Credit Knowledge The predictive nature of demographic variables on credit knowledge also was explored. Other equations included whether access to credit/charge cards or already having acquired debt were associated with credit knowledge. Table 4 provides these regression results.

For all four equations, gender and race were the only significant predictors of credit knowledge. Female students scored lower then male students, while white students scored higher than non-white students.

Age, marital status, and employment status were not significant predictors of credit knowledge. Nor were having access to credit/charge cards (either in their own name or another that they could use, such as in a parent's or guardian's name) or having acquired debt (credit/charge card debt and non-credit/charge card debt; or total debt)

Summary and Conclusions
Many incoming freshmen at the College and University studied already had access to credit or had acquired debt. Sixty-two percent had their own credit/charge card or the use of one (such as their parent's or guardian's credit/charge card). Two-thirds of those who had their own credit/charge card had an outstanding balance on their card(s) and almost one-third of all the students had other (non-credit/charge card) debt. As might be anticipated, older students had more credit/charge cards, as well as higher levels of credit/charge card debt, other (non-credit/charge card) debt, and total debt, than younger students. White students tended to have fewer credit/charge cards than non-white students, while single, never married students had lower levels of both other (non-credit/charge card) debt and total debt than currently/formerly married students.

Freshmen students in this study knew little about credit, although they scored higher when answering more general credit knowledge questions – some of which were related to issues addressed by the media – than when answering more specific questions. Two demographic variables were significant predictors of credit knowledge, with female students consistently scoring lower than male students and white students consistently scoring higher than non-white students. Further study is needed to see if these and other reported relationships are consistent when utilizing a more diverse, representative sample of freshmen students.

Table 3
Standardized Regression Coefficients: Use of Credit

Dependent variable	Equation 1 (*N*=213) Amount of credit/charge card debt	Equation 2 (*N*=211) Amount of other (non-credit/ charge card) debt	Equation 3 (*N*=211) Amount of total debt	Equation 4 (*N*=213) Number of credit/charge cards
	Beta	Beta	Beta	Beta
Age	.405***	.148*	.208**	.319***
Gender (Female)	-.033	.040	.032	-.032
Marital status (Single)	.072	-.294***	-.262***	.046
Race (White)	-.020	-.003	-.006	-.214***
Employment status (Employed)	.113	.101	.114	.092
Credit knowledge	.020	.091	.088	-.032

* p < .05   ** p < .01   *** p < .001

Table 4
Standardized Regression Coefficients: Credit Knowledge

Dependent variable	Equation 1 (*N*=213) Credit knowledge	Equation 2 (*N*=210) Credit knowledge	Equation 3 (*N*=211) Credit knowledge	Equation 4 (*N*=211) Credit knowledge
	Beta	Beta	Beta	Beta
Age	-.041	-.039	-.052	-.060
Gender (Female)	-.155*	-.160*	-.159*	-.158*
Marital status (Single)	-.132	-.130	-.101	-.105
Race (White)	.154*	.193**	.153*	.153*
Employment status (Employed)	.030	.033	.014	.012
Has credit card in own name		-.023		
Has access to other credit card		-.093		
Credit/charge card debt			-.004	
Other (non-credit/charge card) debt			.100	
Total debt				.098

* p < .05   ** p < .01   *** p < .001

Interestingly, there was not a significant relationship between credit knowledge and use of credit. Students who had higher levels of debt – or who had access to credit/charge cards – were not significantly more or less knowledgeable about credit. Nor were students who were more knowledgeable about credit more or less likely to have higher debt levels (or have access to credit).

While access to credit can provide many advantages to college students, it also can create current and future financial problems if used unwisely. Credit education programs may facilitate better financial practices and counter the economic impact of credit mistakes on the individual, their families, businesses, and the economy.

Several major questions still need to be addressed. Who will provide this education? Is it the responsibility of parents, high schools, credit card issuers, the university, community educators, financial counselors, or others? How comprehensive should this education be, given current time and other restraints? What efforts must be taken to insure that the educational program is accurate, current, and unbiased? What educational methods should be utilized – or perhaps what combination of face-to-face, web-based, print-based, and other educational methods – to best assure that students understand the educational information, and more importantly, utilize the information when making credit decisions? When would this education best be provided, or should credit education be addressed at several points in time? The findings from this study suggest that credit education may be needed early – before students enter college (or shortly thereafter). This may help students make informed decisions about credit use and avoid having excessive debt significantly affect their current and future financial security. It also may contribute to the students' academic success while in college.

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