AN ANALYSIS OF THE RELATIONSHIP
OF FINANCIAL INDEBTEDNESS TO
STUDENT CHARACTERISTICS

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
In partial fulfillment of
The requirements for
The Degree of
DOCTOR OF PHILOSOPHY
May 2003

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Thesis Approved:

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ACKNOWLEDGMENTS

This accomplishment was possible because of the support and friendship of the faculty, colleagues, friends, and family. I am very appreciative of Dr. Dale Fuqua, the chair of my committee, for his friendship and his patience. He has been my mentor throughout my college career. His encouragement was the motivation for my pursuit of a college education. Dr. Marcia Dickman, my dissertation advisor, has proved invaluable in her friendship, support and her willingness to edit and re-edit this project. I have learned so much under her leadership. She will always be my mentor. To my other committee members Dr. Bob Davis, Dr. Janice Miller, and Dr. William Weeks their guidance, encouragement, and support was priceless. A special thanks to my colleagues and friends, Dr. Danny Benbassat, Laurie Beets, Jack Davis, Robert Dixon, and Don Pitchford for their friendship, encouragement, and support. I am very grateful to Mary Shellhammer, my life-long friend, who was very instrumental in helping me attain this goal. I deeply appreciate the flexibility and accommodations made by the staff members of the Office of the Bursar in allowing me to fulfill my educational aspirations.

I could never have achieved this accomplishment without the love, support, and sacrifice of my loving husband, Gary. When I had no time and little patience he understood. When I wanted to quit, he provided the encouragement needed to pursue this goal. At my most stressful points, flowers would arrive to cheer me. He worked with me in spirit, throughout the process. Words cannot express the depth of my gratitude and love for him.

Ronnie Nottingham, my son, has served as my inspiration in the pursuit of my bachelors, masters, and doctoral degrees. My other children Mark Meyer, Blake Meyer, and Jennifer Meyer have always been supportive of me. My father and mother instilled in me the desire and diligence necessary to achieve this educational endeavor.

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CHAPTER I

INTRODUCTION

Research on college students has become a primary focus in higher education with much investigation of the effects of college on attitudes and values, intellectual and moral development, occupational attainment and earnings after college (Pascarella & Terenzini 1991). Gehring (2001) reported that trends in college pricing in 2001 found students at some four year public institutions paying an average of $3,754 a year in tuition, a 7 percent increase from the previous year. As tuition costs rise, students will have to take out more student loans, adding to their existing debt (Hebel, 2001). Somers (1996) reported that the impact of economic variables such as financial aid is usually not examined.

Mulhauser (2001) stated that 55 percent of undergraduates received some form of financial assistance in 1999-2000, up from 50 percent in 1995-96. Of the undergraduates receiving financial aid, Mulhauser reported that the average award was $6,256, an inflation-adjusted increase of 17 percent over 1995-96, which barely covered the rising cost of a college education. It is common for students to use their MasterCard or Visa to pay their Bursar account so they can enroll in future semesters, receive their diploma or transcript for employment, or to attend another university. Hayhoe, Leach, Turner, Bruin, and Lawrence (2000) suggested that understanding gender differences in use and management of credit cards among college students has important implications. The emphasis on accountability and assessment will require closer attention to how colleges select and educate undergraduates and how effectively the students pursue, master, and complete their studies (Rau & Durand, 2000).

This study examined the relationship of the level of indebtedness of students to the university to a number of personal characteristics in a higher education setting. The participants were a time sample of undergraduate students whose bursar accounts were sent to a collection agency and a random sample of the general undergraduate student population during Spring 2001. The examination of these variables may help in understanding why some students fail financially and provide a foundation for exploring the relationship these variables have to financial success and retention.

Students who have the academic ability but insufficient funds to attend college turn to student loans, which provide an entry into their college or university of choice. According to Hebel (2001), the effects of tough fiscal times are beginning to be projected on to college campuses in the form of large tuition increases, program cuts, and hiring freezes. Christman (2000) explained that the students' focus is on attending college rather than making decisions about repaying their college loans.

It is the combination of the student's goal commitment to get a degree and the institutional commitment for the student to earn the degree at this specific institution that affects retention at a particular institution (Wetzel & O'Toole, 1999). Based on this perspective, Wetzel & O'Toole suggested that it is the strength of the match between the student's motivation and academic ability and the institution's social and academic characteristics that determines the probability that the student will complete the degree at that institution. Wetzel & O'Toole suggested that a comprehensive model would consider the effects of various financial variables, such as real costs, changes in these costs for the upcoming academic year, student loan amounts, and work study programs. Additionally, they explained that this model should address the retention decision as a response to factors incorporated in human capital theory.

Many students that have graduated and are starting their careers deeply in debt have found themselves unable to repay their indebtedness due to changes in the economy. Baptist (2001) reported that the average tuition debt for a student who has attended a four-year institution is approximately $12,000, and tuition for a student who has attended a four-year private school is approximately $14,000. Baptist stated that generally students do not know their interest rates and how much they will owe after graduation. Additionally, Baptist pointed out that repaying student loans could be difficult if students enter low paying positions.

Symonds (2001) reported that since the mid 1990s, most college financial aid initiatives have been designed to help the middle class rather than increasing access for the poor. Symonds stated that affordability of higher education is a critical economic issue. Students who have withdrawn within a semester may have had loans or grants and received a refund of excess funds for living expenses, but, due to their withdrawal, are not eligible for these funds and have incurred a charge back on their bursar account.

Students' investment in higher education is made with the expectation that future financial returns from acquired skills and increased income will outweigh the direct and indirect costs. Student loans pay college expenses today based on an individual's ability to pay in the future. Parks (1999) explained that this credit is extended to an individual without proof of income, but it is to help him/her obtain the knowledge and skills needed to increase his/her lifetime earning potential. The prospect of taking on large debt is daunting for many students from low-income families, who need the largest loans and who do not have the security of parental resources (Farrell, 1999).

Need for the Study

There has been limited research on the persistence of college students based on financial support. Somers (1996) stated that the effect of financial aid on the persistence of college students has received limited attention in the literature. Further, Somers found that one of the major drawbacks of Tinto's (1975) model for the study of student dropout rates is the lack of consideration of financial factors. Examination of relationships of the comprehensive index of variables on student files to the financial and academic success and failure of students in a higher education setting will help in assisting students in managing their finances and obtaining debt free funding for their educational endeavors. Institutions of higher learning experience great financial, personnel, and material expenditures for each student enrolled. This study will assist these institutions in determining how they might further insure student financial security while the students attend the institution and upon the students' graduation.

Purpose of the Study

The purpose of this study was to investigate the relationship of the level of indebtedness of students to a number of personal characteristics in a higher education setting including the following index of variables on student files (a) gender, (b) marital status, (c) ACT, (d) high school GPA, (e) high school rank, (f) high school size, (g) registered hours, (h) completed hours, (i) college GPA, (j) Spring 2001 registered hours, (k) Spring 2001 completed hours, (l) Spring 2001 college GPA, (m) traditional/non-traditional status, (n) resident/non-resident/non-resident international status, (o) classification, (p) enrollment by college, (q) full-time/part-time student status, and (r) independent status.

Statement of the Problem

The problem investigated in this study is: What variables are related to students' levels of indebtedness to the university?

Definition of Terms

ACT Score. The ACT Assessment is a national college admission examination that consists of tests in; English, Mathematics, Reading, and Science Reasoning. The ACT score is required for admissions into a college or university which is published by the American College Testing Services. The ACT Assessment test is prepared according to the: Standards for Educational and Psychological Testing, American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, (1985), Code of Professional Responsibilities in Educational Measurement, National Council on Measurement in Education (1995), and Code of Fair Testing Practices in Education, Joint Committee on Testing Practices, (1988).

Classification. This term refers to student classification system Freshman (less than 30 hrs), Sophomore (30-60 hrs), Junior (60-90 hrs), and Senior (90-120 hrs) which is determined by the number of credit hours completed at the university used by this study.

College Grade Point Average. This is the average of a student's grades for all classes completed in an undergraduate program. It is the sum of the grade points earned for each credit hour, divided by the number of credit hours. Generally, a four point scale is used; an A is equal to 4.00 points, B is equal to 3.00 points, C is equal to 2.00 points, D is equal to 1.00 point, and, F is equal to 0.00 points.

Disbursement of Financial Aid. With the exception of Federal Work-Study, which is distributed by payroll check, financial aid at higher education institutions is disbursed to the student's Bursar account. One-half of student's total aid for the academic year will be made available to the student for the fall semester and one-half for the spring semester. If a student does not enroll for the fall semester, the student's award is cancelled for the entire year, unless the student specifically requests that aid for the spring be retained. Funds disbursed to student's Bursar account are used to cover tuition, fees, on-campus room and board, and other direct institutional charges. If there is a credit balance once all charges are paid, the student will receive a refund from the Bursar's Office.

Financial Aid Eligibility. Any resources for which a student may be eligible, including, but not limited to Veterans' benefits, scholarships and tuition waiver from a higher education institution, community organizations, and employers, are considered in determining a student's eligibility for need-base assistance. In some cases, a higher education institution may offer a Ford Direct Unsubsidized Loan or a Ford Direct Parent Loan (PLUS) to assist a student in meeting the expected family contribution amount.

Financial Issues. Students are sent to a collection agency for non-payment of their bursar account at a university and debt is reported to the Credit Bureau and remains on the credit report for seven years after debt is paid. Students cannot obtain a transcript or other academic records from the university until the debt is paid in full.

Free application for Federal Student Aid (FAFSA). Form completed by student for financial assistance. Student's financial need is determined by the results of the FAFSA for the award year. The FAFSA process is used to determine the student's expected family contribution (EFC), which may include a student and/or parent contribution. Student's financial need, for purposes of financial assistance, is determined by subtracting the student's EFC from the student's total expenses.

Full-Time/Part-Time Student Status. Full time status for undergraduate students is 12 hours. Part-time status is less than 12 hours at the university in this study.

Gender. This term refers to identity as male or female.

High School Grade Point Average. This is the average of a student's grades for all classes completed in high school. It is the sum of the grade points earned for each credit hour, divided by the number of credit hours. Generally, a four point scale is used; an A is equal to 4.00 points, B is equal to 3.00 points, C is equal to 2.00 points, D is equal to 1.00 point, and, F is equal to 0.00 points.

Independent Status. This term defines a student as legally emancipated from the parental domicile and is responsible for his or her own care, custody, and support. Financial need is based on independent status per the Free Application for Federal Student Aid (FAFSA) form that is used in applying for federal and state student grants, work-study, and loans.

Marital Status. This term refers to being single, married, partnered, or divorced which is self- reported.

Need Based Programs. These programs include Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (FSEOG), Federal Work-Study, Federal Perkins Loan, and William D. Ford Federal Direct Subsidized Loan. FSEOG and Perkins funds are awarded to applicants who demonstrate significant financial need. The Perkins Loan and William D. Ford Federal Direct Subsidized Loan have to be repaid.

Non-Need Based Programs. These programs include William D. Ford Federal Direct Unsubsidized Loan and the William D. Ford Federal Direct Parent Loan (Plus) which have to be repaid.

Non Resident International Status. This term refers to students who are not citizens of the United States as reported by the Registrar's and Admission's Office.

Proportion of Hours Completed. This term refers to hours in which the student originally enrolled before withdrawal and hours completed after withdrawal for the semester.

Reasonable Academic Progress. This term is defined as proceeding toward successful completion of degree requirements. A higher education institution's Financial Aid Office is required by federal regulation to determine whether a student is meeting the requirement. The official record of the Registrar's Office is reviewed to determine student compliance with this policy. Federal regulations require that all students complete 75 percent of total hours attempted and maintain a certain GPA. For undergraduate students, they must maintain a GPA of 1.7 for 0 to 30 hours and GPA of 2.0 for 31 hours or more. Undergraduate students cannot exceed a maximum number of 180 hours to complete their degree program. These requirements must be met before financial assistance can be disbursed. These requirements apply to all students, not just prior financial aid recipients.

Resident/Non-Resident Status. Resident students in this study pay in-state tuition because they attend the university that is in their state of residency. Non-resident students have to pay tuition plus out of state fees because they are not a resident of the state where they attend. This information is reported by the Registrar's Office.

Student Financial Aid. This term refers to grants, tuition and fee waivers, scholarships and college work-study as Non-Debt and are not paid back by the student. However, loans, another form of financial aid are considered as debt and have to be paid back when students graduate. To receive financial aid, students have to complete the Free Application for Federal Student Aid (FAFSA) form that is used in applying for federal and state student grants, work-study, and loans.

Traditional/NonTraditional Status. This term defines traditional students as undergraduate college students ages 17-24. Undergraduate student ages 24 and beyond are classified as non-traditional students.

Assumptions and Limitations

1. This study is limited by the available information from the archival data.
2. The results of the study are limited to the specific institution used in the study and generalizations should be made with caution.
3. A limitation of this study may be that variables that are not included may have a relationship to students' financial distress.
4. It is assumed that the identifiable variables and ways they are defined are accurate assessments of the related constructs.

Significance of the Study

This study is significant because it focuses on the examination of variables that affect student financial success and failure that contribute to retention and students' indebtedness to the university. This study explored the relationship of variables that are related to the retention of students and students' indebtedness to the university. This study may provide information that will assist in developing debt-management programs, financial counseling, and flexible repayment options to assist at-risk students from defaulting on their financial obligations.

Research Question

1. What variables are related to students' levels of indebtedness to the university?

Organization of the Study

Chapter 1 describes the framework of financial issues related to retention of students. The purpose of this study was to investigate the relationship of the level of indebtedness of students to a number of personal characteristics. Chapter 1, also, discusses the need for this type of study. The results of this study may be helpful in that it will provide insight into how best to prevent students' failure and drop-out due to financial considerations.

Chapter 2 provides an overview of literature on student development, retention, financial issues, financial issues and development, and educational planning. Chapter 3 describes the subjects, instrumentation, and research design for this study. Chapter 4 discusses the results of the analyses of the data. Chapter 5 provides a discussion based on conclusions drawn from the analyses of the data and includes recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

Research on college students has been dominated by the research traditions of developmental and change theories (Pascarella & Terenzini, 1991), but little research has been conducted on the relationship of students' financial status and academic success. Success in education is not limited to the ability to pay; however, the ability to pay may limit the student's success. For many students, removing financial barriers is of critical concern. Financial considerations may impact other factors that contribute to educational efforts. Gladieux and Swail (2000) reported that enrollment and success in higher education are influenced by many factors; prior schooling and academic achievement, the rigor and pattern of courses taken in secondary school, family and cultural attitudes, motivation, and awareness of opportunities. Little research has been conducted concerning the influence of financial factors on success and retention in higher education. Somers (1996) stated that there has been limited research on the effect of financial aid and a lack of consideration of financial factors on the persistence of college students.

Colleges and universities must be aggressive in their efforts to attract and retain "students whose educational goals and interests are compatible with the institution's strengths" (Fife, 1990, p. ivii). Colleges and universities must take into consideration the financial status and investment of the student. Research has supported that when student goals and interests are not congruent with the institutional mission, students become dissatisfied with their experience and transfer before completing their education, creating a loss for both the student and the institution (Hossler, 1991).

Many times students withdraw from a university leaving a past due balance on their account that they are unable or unwilling to pay. This would lend credence to the hypothesis that finances often impact student retention. More than half of most student populations depend on student aid to pay for college related costs. Gehring (2001) reported that the "Trends in Student Aid 2001" report indicated that students received more than $74 billions in student aid in 2000-2001, an increase of seven percent from the previous year. These young individuals are in the process of leaving adolescence and entering young adulthood. They are often faced with financial decisions based upon limited prior experience. Thus, today's university student is faced with a difficult situation pursuing preparation for life and career while going into greater and greater debt. As higher education costs rise greater than the general inflation rate and students from all socioeconomic backgrounds attend universities, financial considerations will impact greatly both the student and the university.

This literature review is composed of an examination and discussion of the research on student development, retention, financial issues, financial issues and development, and educational planning. The current research study explored and examined variables that affect students' financial success and failure related to their educational endeavors. This study identifies financial variables and other variables that relate to the retention of students in an educational setting. The purpose of the current study was to determine the influence of students' financial situations on the students' educational successes.

Student Development

Financial issues must be considered in relationship to student development. Student development theory suggests that development is related to maturation and maturation is related to decision making. Being able to make a good decision is related to planning and planning is an important skill in financial responsibility. Therefore, it is reasonable to relate student development theory to financial issues. Education should address the students' development; physically, socially, emotionally, spiritually, and intellectually. The cognitive and affective dimensions of development can be viewed as related parts of one process, an integrated perspective on learning and personal development. From an integrated perspective, a successful educational experience simultaneously increases cognitive understanding and sense of self, personal maturity, and interpersonal effectiveness (King & Magolda, 1996). Financial burdens may interfere with this developing sense of self. A student may see himself/herself as less than successful as debt mounts. This, in turn, would interfere with interpersonal effectiveness.

Piaget

Piaget (1952) defined cognitive development as a sequence of irreversible stages involving shift in the process of how one perceives the world. Piaget's concepts include: (1) Development proceeds at an irregular rate. (2) The way individuals think about things is based on how they filter or translate information. (3) Movement from one stage to the next higher stage involves two growth phases. (a) Readiness is the first phase where the individual is prepared. (b) Attainment is the second phase where the individuals become able to employ the set of behavior characteristics of the next stage. (4) Even with the attainment of the next higher stage, the individual may be limited in his/her ability to apply his/her new capabilities in all situations. (5) The identification of an attitude or state of mind appears to accompany some phases of developmental progress. Student affairs professionals need to examine Piaget's cognitive theory as they advise students concerning finances. Students may translate financial information incorrectly or unrealistically due to no prior experience. As the student advances through the cognitive stages and becomes more aware of his/her real financial situation, he/she may be overwhelmed by the discrepancy between indebtedness and ability to pay. He/she is making financial commitments today based upon career plans for the future. He/she may make financial commitments in one stage or development that he/she would not make in a more advanced stage. He/she may feel "locked in" to a choice that he/she would change if he/she were not financially committed. This could lead to frustration and feelings of defeat, anger, withdrawal, depression, etc.

Chickering

Chickering (1969) sees the traditional aged college student as a person in a distinct psychosocial phase defined by the emergence of certain inner capabilities and needs which interact with the demands of a particular college environment. Chickering's seven vectors along which development occurs in young adulthood are: developing competence, managing emotions, developing autonomy, establishing identity, freeing interpersonal relationships, developing purpose, and developing integrity. It is important for students to find their unique identities. As students progress through Chickering's vectors, they become more comfortable with themselves and relationships and move toward internalizing a set of values that provide guidance for behavior. Developing competence includes intellectual competence, physical and manual competence, and social competence. The college freshman is asked to make huge financial commitments while he/she is just developing physical and manual competence. He/she may make decisions he/she would not make at a later stage of development.

Leaving home to enter institutions of higher learning is an emotional time. The student is asked to make financial decisions while experiencing emotions concerning family, friends, career, self-identity, and the future. He/she may not be fully aware of all these. He/she may have achieved limited ability to manage emotions but is expected to manage financial decisions impacting years of his/her life. As the student develops emotional autonomy, he/she goes from parents to peers to self. The student may have made financial commitments in one stage that he/she would not make as he/she achieves self-directness. Chickering's (1969) first three vectors are prerequisites for establishment of identity. The student comes to terms with his/her real self. By this time, he/she may owe thousands of dollars. This could impact a decision for a career choice or relationship choice or both. Students who are immature or who have not successfully developed through Chickering's vectors will make unrealistic or inappropriate decisions concerning financial issues. Particularly, related to the developing autonomy vector, a student may not be instrumentally independent enough to make good financial decisions or may rely too heavily on others for such decisions.

Perry

Perry's (1968) theory outlines the intellectual and ethical development of college students. This nine-position scheme traces the evolution in students' thinking about the nature of knowledge, truth and values, and the meaning of life and responsibilities.

Perry's theory represents a continuum of development divided into four general categories: (1) dualism (positions 1-2) Students who view the world dualistically use discrete, concrete, and absolute categories to understand people, knowledge and values. (2) multiplicity (positions 3-4) Students who view the world multiplistically acknowledge that there are multiple perspectives to a given topic or problem, and those who hold different beliefs are no longer seen as being simply wrong. At this level, students are unable to adequately evaluate points of view, and question the legitimacy of doing so. (3) relativism (positions 5-6) Students who reason relativistically recognize that knowledge is contextual and relative. By the time students reach position six, they are beginning to realize the need to evolve and endorse their own choices from the multiple "truths" that exist in a relativistic world (4) commitment in relativism (positions 7-9) Students who arrive at the upper positions on the scheme have made an active affirmation of themselves and their responsibilities in a pluralistic world, establishing their identities in the process.

The Perry (1968) scheme has proven to be a highly useful tool for practitioners both in understanding students and in designing programs to promote their development. Perry suggested three major ways: establishing program goals, planning the steps in implementing the program, and in evaluating the effectiveness of the program. Knowledge of the Perry scheme could be used to incorporate financial planning in designing programs to promote student development. Students are asked to make financial decisions while in the dualism stage. As they progress through multiplicity to relativism where they make personal commitments in marriage, religion, or career, they take with them the financial encumbrances of the previous stages.

Erikson

Erikson (1959) emphasized the cumulative and related nature of life stages. The resolution of each stage creates the foundation for the next crisis and defines the likelihood of coping with it. Regressing to a prior stage is possible. Erikson stated that it is likely that entrance to college, which brings forth identity issues, also raises the earlier issues of trust, autonomy, initiative, and industry. At the same time the college student is struggling with the question "Who am I?," he/she is probably wondering if his/her new world is a safe place where his/her needs can be met, if he/she really can do it on his/her own, and if, indeed, he/she is as able as his/her high school GPA would indicate. On the other hand, a returning student is encountering an environment with new and different demands in which he/she will also be pressed to examine the identity issue. Students who assimilate into the college environment successfully have "moved away from the norms and behavioral patterns of past associations" (Tinto, 1993, p.98). In fact, it could be argued that the return to college is a reflection of societal changes, which unsettle the self-definitions of adults, raising identity questions. Naretto (1995) reported that researchers have reported that persistence rates were lower for older adults than for traditional age students at four-year public institutions who worked and only attended part-time. A supportive social environment is related positively to the retention of older adults (Ashar & Skenes, 1993: Naretto, 1995).

Two things, according to Erikson (1959), help resolve the identity crisis which include experiences that can clarify interests, skills, and attitudes, experiences which can aid students in making commitments. Erikson suggested that the formation of identity is fostered by an environment which allows for experimentation with varied roles, the experiencing of choice, meaningful achievement, freedom from excessive anxiety, and time for reflection and introspection. The financial burden certainly may contribute to exclusive anxiety. Financial issues could be viewed as insurmountable by students' struggling with identity and autonomy issues. Students are being asked to invest real currency into an unseen and unknown future. Their fiscal worth deteriorates as they try to build their self-identity.

Education should encompass facets of student development. Piaget's (1952) cognitive theory, Chickering's (1969) seven vectors, and Perry's (1968) four categories all address student development progressing along a continuum beginning with self-involved immaturity to other-involved maturity and self-commitment. None of this research involved finances. Yet, students are faced with financial decisions at every stage of development. All these theories agree that real understanding of the world and lifetime commitment are achieved only in the later stages of student development. This occurs when the student is in his/her final year or years at a university or later. Yet, counselors and administrators are asking incoming freshmen to make huge financial commitments affecting their entire university life as well as much of their young adulthood. They are asked to make these financial decisions while they have not achieved the developmental stages, emotionally, socially, spiritually, or intellectually that would allow wise financial choices to be made. Over fifty percent of the student population rely on government financial aid for their education at the college or university level (Gehring, 2001). Institutions of higher learning, student affairs professionals, and the federal government must recognize the relationship of financial planning to student development and consider this as they advise students and construct policy.

Retention

Lack of retention is costly to students, parents, society, and the institution. Many institutional studies of persistence have been completed, based on several theoretical models. Spady (1970) and Tinto (1975) used concepts derived from Durkheim's (1897/1951) theory of suicide to develop research models for the study of student dropout rates. In Tinto's model, the primary reason for student withdrawal is the lack of academic or social integration at a particular campus. Williams and Winston (1985) concluded that students involved in organized student activities, organizations and services "showed statistically significantly greater developmental task achievement in the areas of interdependence, educational plans, career plans, and lifestyle plans" (p.56) than those who are not involved.

Rau and Durand (2000) stated that the academic ethic is not a natural predisposition, but is a learned behavior that is generally found among children from families with a strong work ethic and strong religious or ethical values. These authors view academic effort as the outcome of the kind of comprehensive conception of the world from a specific standpoint that Shils (1997) referred to as the "academic ethic." Shils version of academic ethic is included in the disciplined and methodical discovery and dissemination of new knowledge through the research and teaching activities of university faculty. Shils's goal was to analyze the teacher-scholar role and the intellectual discernment that successful individuals of that role must develop through "long and intensive" (p. 10) and "persistent and systematic study," (p. 11) he concluded that the resulting "habits of the mind" (p. 12) could also "be passed on to the students" (p. 120). Rau and Durand (2000) found that students with a developed academic ethic commit regular hours to their academics. Mino (1999) found that undergraduate students anticipate that their college experience will provide them with an academic and social balance that is achieved through relevant dialogues among their peers and their professors. Mino also reported that because of greater attention to educational costs and retention and attrition rates and the demand for greater accountability in terms of who is teaching undergraduate students and what these students are learning, educators have found that colleges and universities must question their educational goals and address how these goals can be achieved.

Brotherton (2001) suggested that colleges and universities that have succeeded in retaining students have paid attention to students' backgrounds, needs and expectations, and have taken action to accommodate them. Brotherton stated that institutions must be innovative, creative, and precise in their approach to retain students as well as setting measurable goals. Persell (2000) found that institutions that utilize culturally sensitive pedagogies and curriculum have improved the educational successes of their students. Persell suggested that making schools smaller, lowering student-teacher ratio, increasing staff development, hiring and retaining better-educated teachers, and offering more demanding curricula can raise student achievement.

Hoyt (1999) stated that strengthening the financial aid programs on college campuses improves student retention. Hoyt stressed this is especially critical for low-income students who have limited family support. Hoyt explained that living at home may be less expensive and less stressful for students and their families, resulting in higher retention rates. For many students, financial aid alone is not enough and they have to work to supplement the costs of their education. Whigham-Desir & Laveist (2001) explained that the demand of working, especially off-campus in non-work-study jobs, can be an impediment to academic success.

All society suffers from lack of retention at institutions of higher learning. Astin (1984) stated that student involvement is the key to retention. In Tinto's (1975) model, academic and social integration is most important. Ran and Durand (2000) suggested that the academic ethic was a learned behavior stemming from the home. Others (Bourne-Bowie, 2000; Brotherton, 2001; Hoyt, 1999; Mino, 1999; Persell, 2000) emphasized the need to consider and accommodate students' needs. Mino (1999) and Hoyt (1999) discussed financial aid issues. Hoyt suggested that increasing student aid increased retention especially for low-income students. Mino (1999) stated that colleges and universities must question their educational goals and address how these goals can be achieved. Studies specifically addressing the correlation of student finances to retention and attrition are limited. Tuition costs have risen seven percent from 2000-2001 at some four-year public institutions (Gehring, 2001). Financial aid to the student population at institutions of higher learning has increased an average 17 percent from 1995-1996 (Mulhauser, 2001). Colleges and universities must seriously consider financial issues as they review policies affecting student retention.

Financial Issues

Economic variables have not been examined closely even though tuition costs have risen, student aid has increased, and student credit card debt is a known problem. Parks (1999) reported that many students that have access to credit cards lose control of their finances and may generate a debt that they are unable to pay, but using a credit card responsibly can eliminate this problem. The federal government is using loans rather than grants as the primary means of funding students' education (Friel, 2000). This means that the student begins adult life in debt at a time when he/she is least able to pay. Some authors (Breneman & Finney, 1997; Mumper, 1996; Paulsen, 1991, 2000), have observed that decreases in state support for public colleges and universities have led to increases in tuition charges, which have placed a larger portion of the burden of paying for college from the general public to students and their families. More students from middle and lower socioeconomic classes are now attending colleges and universities. These students have to rely on student loans. The loan program has been the primary source of funding for many students seeking a college degree. According to Sweetland (2001), higher education policies have substituted student loans for an increasing proportion of non-obligatory financial aid to students. Sweetland stated that this creates a new generation of debtors who may not be able to afford an increasing debt burden and student loans have become a popular means of supporting higher education expenditures. Between 1990 -1991 and 1994 -1995, the number of student borrowers in the Stafford program grew from 3.7 million to 6.2 million (College Board, 1995). Additionally, parents have also engaged in the loan program via parent plus loans (loans taken out by parents) in helping students meet financial needs in obtaining their education. An important issue is the increasing level of students' debt. Hearn (1998) suggested that increased use of loans as the primary source of federal student aid policy has created new financial challenges in students' lives.

According to Hearn (1998), increasing tuition levels in public and private institutions is closely related to the expansion of student loans. Because of institutions' increased costs for salaries, and other increased costs related to operating an institution, students and their families struggle to meet these costs. Malveaux (2000) stated that these individuals are pressured to mortgage their futures with student loans and very few are offered financial aid packages without loans being a component of the package. Students are having to work part-time while attending college. Full-time summer employment and parental contributions are needed to meet college expenses.

Becker (1993) explained that students' investment in higher education is made with the expectation that future financial returns from acquired skills and increased income will outweigh the direct and indirect costs. Additionally, Hearn (1998) reported that there are stricter requirements for students in meeting independent status. Students and parents have met the cost of education through loans. Higher education institutions, financial institutions, and governments are providing aid to students that can be repaid later when they have completed their college education and have established a career.

The U.S. Department of Education (1994) reported in the 1990s that defaulted student loans cost the federal government at least $2 to $3 billion each year. Roderick R. Paige, the Education Secretary, (Burd, 2001) reported that the rate at which borrowers were defaulting on student loans had dropped for the ninth consecutive year, but depending on economic conditions, the rate in future years could increase.

Acquiring a college education is an important goal. Often it is worth the debt to prepare individuals for the real world. However, students must have the responsibility and means to repay their loans after graduation. Wang (2001) reported that Greg Phillips, a Pittsburgh financial aid adviser, pointed out, "A student who is unsure about a career, or who is leaning toward a low-paying profession, should be very conservative about taking on debt." Wang used the example that an average beginning teacher, with a salary of

$26,639 with net pay approximately $1,500 a month, could finance a maximum of $18,000 in loans.

According to Paulsen and St. John (2002), the financial nexus theory argues that if students perceive low tuition or low living costs to be very important in their choice of college, such cost-consciousness may also have a direct impact on their subsequent persistence decisions. Paulsen and St John stated that in ways consistent with prior research, the actual dollar amounts of costs and aid a student experiences at the time of a decision may have a direct effect on persistence. Additionally, the authors indicated that the role of social class plays an important role in education and attainment and should be considered when examining educational policy. Therefore, understanding the social class is important in understanding the role of finances in students' choice and persistence decisions.

Recent changes in federal student aid policy have been problematic for low-income students compared to affluent students (St. John & Starkey, 1995). Research has indicated that lower income students are more sensitive to college costs in their decision making than upper income students; African American students are more in tune to college costs than white students; community college students are more sensitive to college costs than students attending other types of institutions (Heller, 1997; Leslie & Brinkman, 1988). Paulsen and St. John (2002) reported that the nexus model examined the role of finances in student choice, with a focus on building an understanding of class differences in students' experiences with financial factors in their enrollment decision making.

Institutions of higher learning have used student loans to replace decreasing state support. They have raised student tuition to fund salaries and institution costs. Increased federal student aid enables these institutions to collect higher tuition. The federal loan program has been the primary source of funding for many students seeking a college degree (Friel, 2000). Thus, students and their families are paying a larger portion of educational costs than in the past. African American students and students from lower socioeconomic families are more aware of financial considerations involved in obtaining an education. Whigham-Desir and Laveist (2001) suggested that the primary reason African American students are not successful past their freshman or sophomore years is due to financial difficulties. These considerations are often a deterrent to going to college or a factor in choosing which college or university to attend. Students that are more affluent are not as sensitive to financial considerations. Yet, they may make financial commitments in obtaining an education that may be problematic while at the institution or while establishing careers in young adulthood. Society must address financial issues at institutions of higher learning.

Financial Issues and Development

As students participate in and experience the benefits of the various student affairs programs, they, in turn, can reach out to others. This growth empowers individuals before and beyond graduation. Young (1993) reported that personal empowerment of students describes the relationship of student affairs services to the overall university community. Empowerment is a concept generally applied to individuals; however, it can also be applied to programs that assist and advocate for individuals. Programs can be, in one way, “empowered”, in that student affairs administrators can act to increase program sustainability and increase program effectiveness (Giordano, 1996). Loans and debt can be viewed as an empowerment tool or as a detriment to success.

The Student Learning Imperative (SLI) (American College Personnel Association, 1994) was written to begin discussion of "how student affairs professionals can create the conditions that enhance student learning and personal development" (p.1). It is a tool to transform student affairs practice to promote student learning and personal development. Financial conditions were not considered. Yet, when well over fifty percent of the student population is accruing greater debt each year, financial issues must be seen as one of those conditions that affect student learning and personal development. Tinto (1993) reported that students leave college not because of failure but due to their own cost-benefit analysis. While Tinto is suggesting more than a financial cost-benefit analysis, it would certainly seem reasonable that financial issues should be considered in the equation by students. Further, Tinto stated that these students are not receiving the desired return for their educational investment and are not committed to expending the effort for the learning process.

Generally, entering freshmen have never been away from home, have a low tolerance level, and have no financial responsibility. Many of these are immediately confronted with great financial decisions. Counselors and parents may advise, but the ultimate financial responsibility is theirs. Hummel and Steele (1996) found that the residence hall living experience, with efforts to build a small, supportive, academically focused community, had an important effect on students' college experience and development. Students have to make their own decisions and assume responsibility for themselves. Fraser and Tucker (1997) found that counselors could support and guide students who are struggling to make independent choices, but the students are preoccupied with their parents' preferences. This support and guidance of counselors must address credible and realistic financial counseling integrating career and degree choice and financial burden.

Students are more productive if they have a sense of belonging. Kleemann (1994) found that students who feel a part of a university, who are involved, are more than likely to be more academically successful than those who lack social support and a feeling of belonging. They must develop relationships with others that will make them feel important, promote their self worth, and contribute to a feeling of kinship with other individuals. A friendly and supportive community life will certainly help students learn better and will also help them adapt to their surroundings.

Hood, Riahinejad, and White (1986) reported that research has supported that involvement in campus activities is positively related to identity development. The more students are involved, the greater the opportunity for them to learn, achieve, and grow. Astin (1984) suggested that the impact an educational program has on the student's development is directly proportional to the quantity and quality of student involvement elicited by an educational program. Astin defined involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 297). Today's educational programs include financial debt for over fifty percent of the student population. This indebtedness often causes anxiety and frustration. Students suffering anxiety and frustration are not going to exert the physical and psychological energy to become involved. Educational success can be damaged or destroyed.

According to Sanford's (1966) challenge and support theory, universities must provide an appropriate balance between challenge and support necessary for students' development. Chickering (1969) identified six sources of influences that either support or challenge the environment: clarity and consistency of college objectives, size of institution, curriculum, teaching, evaluation of students, residence hall arrangements, faculty and administration, friends, groups, and student culture.

Research on student development supports the concept of empowerment. The institution provides support for the student as he/she transitions from parental support to self-support. Student affairs professionals must create conditions that enhance student learning and development. These professionals attempt to provide a friendly and supportive community life for the in-coming student. As the student develops, he/she moves from needing support to self-sufficiency and then to providing support. The institution's responsibility is to foster this development. Opportunities must be provided for the student to develop meaningful relationships with students, staff, and faculty. Yet, more and more students are finding it necessary to obtain loans, use credit cards, and work part-time. These financial burdens may allow the student to attend the institution but may interfere with development. Today's financial costs often cause the student to expend all his/her energies to meet cost obligations. He/she has little energy to expend elsewhere. Governments and institutions of higher learning must consider this cost to student development as they legislate and implement funding policies for colleges and universities.

Educational Planning

Educators and legislators are examining financing higher education. Programs are in place to encourage families to begin saving for a college education while the student is young. According to Staples (2000), the ideal long range planning of a child's education begins at least ten years before a child is due to matriculate. Staples explained that the "expected family contribution" number is the number families need to know for planning and budgeting. This expected family contribution number is what colleges use to determine how much the family is expected to pay before it will calculate any financial aid. Wang (2000) reported that many financial advisers suggest treating saving for college like saving for a down payment on a home. Geary and Feldman (2001) stated that the 2001 tax reform does away with the estate tax and has expanded retirement accounts and incentives to save for students' education. Geary and Feldman pointed out that every single reform will disappear in a decade unless Congress unwinds the law's provision which puts the old tax code back in place in 2011.

Friel (2000) reported that the federal government has become the largest financial aid provider in the country, accounting for two-thirds of higher education loans and grants in the 1998-99 academic year. Friel stated that, in 1999, the Student Financial Aid Program awarded more than $450 billion in aid to 8.2 million students through a variety of programs, including direct loans, subsidized loans through private lenders, grants, and work-study. Friel indicated that, in 1990, the default rate on student loans was 22.4 percent, which meant that taxpayers had the responsibility of paying off the college debt on one in four borrowers. Higher education is now accessible to all families who are willing to use financial aid as an option. Eickhoff (2000) reported that, according to the

College Board, families using financial aid to help finance their students' education have increased by 85 percent in the last ten years.

The federal government became involved with the general populations of college students with the National Defense Student Loans (NDSL). The NDSL was the first federal loan program not geared toward a specific group of college students. According to Hearn (1998), these funds were awarded to campuses that provided loans to full-time students based on need as determined by the institution. Hearn stated that loans were given to students in the sciences, teaching, mathematics, and modern foreign languages and were to be repaid over long terms at three- percent interest rate. Hearn reported that nine dollars were contributed to an institution's loan fund by the government for every dollar provided by the institution and repayments were reinvested by institutions in student loans. The NDSL program required testing of students' financial need and involved a contract between the federal government and institutions (Moore, 1983). Moore stated that this required institutions to measure accurately students' actual financial need.

The 1972 Reauthorization of the Higher Education Act gave aid to students instead of institutions. Greater emphasis was placed on giving student's choice among institutions and desired degrees. According to Gladieux and Wolanin (1976), this 1972 reauthorization resulted in a pool of eligible applicants for aid, and a distinct, foundational role for the federal government in building equality of opportunity through student aid. The Basic Educational Opportunity Grants (BEOG) program allowed needy students to take their aid eligibility to the institutions of their choice, instead of relying on the grant funds available at one institution (Hearn, 1998). Hearn stated that informed choices by students have lead to the assumption that grant portability would make institutions more sensitive to market forces favoring efficiency and quality.

The 1980-81 reauthorization limited student borrowing to actual need. In the 1986 reauthorization, NDSLs were changed to Perkins Loans, borrowers were given the option of consolidating their student loans from other federal programs into a single loan under a single, weighted interest rate, and the Supplemental Loans to Students (SLS) program for independent students was initiated (Hearn, 1998). Hearn reported that the SLS program allowed students to finance their college education through unsubsidized loans. Additionally, Hearn reported that during this reauthorization period, Congress tightened need analysis for loan eligibility, placed a limitation on student borrowing to the assessed amount of need, and allowed lenders to charge borrowers a new premium for insurance.

The 1992 reauthorization instituted a "direct lending" program which replaced the traditional guaranteed student loan program. According to Hearn (1998), under this program, institutions lent federal funds directly to students, without the use of private funds or the involvement of private financial institutions. Hearn found that student loans were used as an approach to lower institutions' administrative costs by eliminating the need to deal with private lenders and guaranty agencies participating in the Stafford Loan program. Hearn reported that in August, 1993, Congress passed a compromise where direct lending could be instituted voluntarily at institutions while the traditional nondirect guaranteed loan program could continue. Hearn stated that, under this compromise, institutions performed the administrative functions previously performed by private and state lenders. Additionally, institutions were required to process adjustments in loan amounts, notify servicing contractors of changes in student status, and maintain records of funds receipt and disbursement.

In 1994-95, the Ford direct Student Loan Program was adopted by many institutions. Hearn (1998) reported that students that were need based received the Stafford subsidized loan, the government paid interest during their attendance in college. Hearn stated that students that were not need based received the unsubsidized Stafford loan, the interest rate was higher, and the student paid the interest accrued during attendance.

The current Higher Education Act expires at the end of 2003. Hearn (1998) reported that some issues that Congress will discuss for the next HEA are distance education guidelines, international and graduate student programs, methods for measuring outcomes and classroom quality, student loan programs and college costs, access and affordability issues, financial aid flexibility and loan forgiveness issues. According to Hearn, Congress will need to examine the increased costs to the students as they meet to discuss extending and expanding student loan programs. Research has indicated that the expanded student loan program has allowed colleges and universities to survive and meet the needs of a widely diverse population. Farrell (1999) reported that, in 1997-98, students took out $36 billion in loans, which doubled from ten years earlier, after inflation was adjusted.

The federal government has become the largest financial aid provider in the country (Friel, 2000). The federal government became involved with the general population of college students with the NDSL. At that time, the institutions of higher learning maintained control of the monies. The 1972 Reauthorization of the Higher

Education Act shifted the aid to students instead of the institutions. State support of colleges and universities decreased. Families and students had a greater financial burden because of rising tuition costs. The federal government has begun addressing this problem. Programs are in place encouraging families to begin saving at least ten years before a child is due to matriculate. The federal government offers incentives to save for students' education. All these reforms in funding will disappear in ten years if Congress does not take action to continue the programs. Universities need to align with public elementary, middle, and high schools for educational planning policies. Information concerning the expected family contribution and savings fund incentives needs to be disseminated and explained to parents while a child is in elementary school. Colleges, universities, and the federal government need to conduct studies to see what information, indeed is essential. Lower income families may not be able to save regardless of incentives. More affluent families may have other considerations or choices. Changes in funding policies may need to be implemented at the university level. The cost to a democratic society may well outweigh the state and federal financial contribution to institutions of higher learning.

Summary

Much research has been conducted concerning student development. Theories that impact student development include Piaget's (1952) cognitive theory, Perry's (1968) intellectual and ethical development, Erikson's (1959) life stages, and Chickering's (1969) seven vectors. Developmental issues seem to be related to students' readiness and ability to make good financial decisions, plans, judgements, and goals. Financial debt encumbered at the beginning stages of development remains with the student throughout all stages and into adulthood. These financial burdens are encouraged by the institutions of higher learning and the federal government. Institutions have an ethical responsibility to consider students' readiness for financial decision making when encouraging these financial burdens. Student development must be considered when determining the differences in students who fail and students who succeed.

There are a few studies that specifically address the correlation of student finances to retention. Some authors (Spady, 1970; Tinto, 1975; Williams & Winston, 1985) found that academic and student involvement were the keys to student success. Rau and Durand (2000) and Mino (1999) reported students' families, peers, and professors were the greatest contributing factors to student success. Others (Bourne-Bowie, 2000; Brotherton, 2001; Persell, 2000) addressed ethnicity and cultural influences on student retention. Institutions, sensitive to cultural differences improved the success of their students. Some authors (Hoyt, 1999; Whigham-Desir & Laveist, 2001) found African American student retention rates suffer due to financial issues. Their findings revealed that some cultural differences exist in African American students who fail financially in their educational endeavors and students in the general student population.

These cultural differences in students are directly related to their socioeconomic status. Financial issues are a growing concern in institutions of higher learning. Loans, rather than grants, are the primary means of funding students' education. State support for public colleges and universities has decreased while tuition costs have increased. Students and their families have to pay a greater share of educational costs. More students from the lower and middle socioeconomic classes are attending colleges and universities. Hearn (1998) links increasing tuition levels to the expansion of student loans. Malveaux (2000) reported that this has impacted African American students' ability to attend colleges and universities. Paulsen and St. John (2002) found that social class directly impacted persistence. Lower income students are more sensitive to financial considerations than more affluent students. Some studies have shown that students who fail financially in their educational endeavors may be culturally or economically different from students in the general student population. The diversity of students and their needs requires that institutions of higher education provide an environment that assists them in making sound financial decisions.

Authors (American College Personnel Association, 1994; Giordano, 1996; Young, 1993) have addressed student empowerment and student development. Student affairs professionals and programs were discussed. Authors (Astin, 1984; Hood, Riahinejad & White,1986) found that student involvement impacted effectiveness of educational programs. Chickering (1969) and Sanford (1966) discussed the institution's need to challenge and support the student. None of these studies considered financial issues. They concluded that institutions of higher learning need to provide facilities, programs, and professionals to support the student as he/she leaves parents and becomes self-sufficient. As tuition costs rise and more students from lower socioeconomic classes attend colleges and universities, financial issues must be considered while developing programs and training professionals. More students work part time to support their education. More students are accruing larger debt. Therefore, students' time and financial burdens should become factors in planning developmental programs. Student affairs professionals need to know how students who fail financially are different from the general student population. They, then, can address these differences when planning and implementing programs.

The federal government has become the largest financial aid provider in the country. Student loans have allowed more students from diverse socioeconomic backgrounds access to higher education. Students are accruing more and more debt from loans and credit cards. Most do not know what interest they will pay after they leave college. Therefore, financial issues have become a larger factor for student success or failure.

The federal government is beginning to address this problem. Legislation has passed encouraging families to start saving earlier so loans will not be necessary. More studies need to be conducted concerning student development and finances and the impact of these on society. Families, students, institutions of higher learning, and the federal government need to look at these studies as they consider policy, regulations, and laws concerning student finances. Hearn (1998) reported that Congress will discuss student loan programs and college costs, access and affordability issues, and financial aid flexibility, and loan forgiveness issues for the next Higher Education Act. The literature validates that some students fail financially in their educational endeavors while others succeed. A few studies have indicated ethnic, cultural, and socioeconomic factors impacting educational success or failure. Awareness of differences of students who fail financially from those in the general student population at institutions of higher learning is necessary for Congress to legislate policies governing private and public funding for higher education and for institutions of higher education to respond programmatically to these students.

CHAPTER III

METHOD AND DESIGN

This study focused on the examination of variables that affect student financial success and failure that contribute to retention and indebtedness to the university. Variables in this study were identified that are related to the development and retention of students. Information provided in this study will help to develop debt-management, and financial counseling to assist at-risk students in managing their financial responsibilities.

This study examined variables that affect student's level of indebtedness. Exploring the relationship of these variables to financial status may provide information that would impact student retention and the students' financial relationship to the university. The following comprehensive index of variables were examined: (a) gender, (b) marital status, (c) ACT, (d) high school GPA, (e) high school rank, (f) high school size, (g) registered hours, (h) completed hours, (i) college GPA, (j) Spring 2001 registered hours, (k) Spring 2001 completed hours, (l) Spring 2001 college GPA, (m) traditional/non-traditional status, (n) resident/non-resident/non-resident international status, (o) classification, (p) enrollment by college, (q) full-time/part-time student status, and (r) independent status.

There has been limited research on the contribution of financial support to the persistence and success of the student. The data from this research should help institutions of higher learning counsel students and direct financial aid to promote higher retention and graduation rates.

Research Question

1. What variables are related to students' levels of indebtedness to the university?

Subjects

Approval for the study was granted by the university's Institutional Review Board (see Appendix A). The sample for this study was 508 undergraduate students who were enrolled in courses for the Spring 2001 semester at a medium-sized land grant university in the Southwest. These 508 students comprised groups: group one consisted of 254 students enrolled in Spring 2001 who were indebted to the university and group two consisted of 254 students enrolled in Spring 2001 who had no indebtedness to the university. The Office of the Bursar had attempted to contact individuals in group one to pay their past balance or set up a payment plan. After two collection letters and at least one phone call, these individuals' accounts were sent to a collection agency. The students in group one included all of the accounts that were sent to a collection agency on December 21, 2001. Group two was comprised of 254 student who were randomly selected from the entire undergraduate population. The Office of Institutional Research provided this list of students. If the randomly selected student name was on the list to be sent to the collection agency, it was removed from group two and replaced by another student name.

Instrumentation

Data on the subjects were obtained from a database of undergraduate students previously collected by the Office of Institutional Research and from a list of undergraduate students that was sent to a collection agency on December 21, 2001, by the

Office of the Bursar. Both data sets were obtained from undergraduate students enrolled Spring 2001. No additional instruments or data collection procedures were necessary.

Research Design

This study was an exploratory study that used descriptive and comparative procedures to explore the data. The purpose of the study was to examine the relationship of the level of indebtedness of students to the university on a number of personal characteristics.

In order to compare groups of students at different levels of indebtedness with one another and to a group of students with no indebtedness, four groups of students were formed and investigated. The formation of groups was based primarily on achieving groups of relative comparable size. The no default group was selected at random from the undergraduate student population from an archived data set in the Office of Institutional Research. The three groups of students with delinquent accounts were described as Group A) students with delinquent accounts of less than $500 (low), Group B) students with delinquent accounts of at least $500 and less than $1,500 (medium), and Group C) students with delinquent accounts of at least $1,500 (high). Group D (No Default) consisting of students enrolled in Spring 2001 that had no indebtedness or a delinquent balance was less than $50 represented the undergraduate student population. Comparisons were made between each of the groups with delinquent accounts, and all groups with delinquent accounts were compared to the group with no indebtedness.

Procedures

This study was given exempt status by the Oklahoma State University Institutional Review Board (see Appendix A). Permission to use delinquent student accounts from the Spring 2001 semester that were sent to a collection agency was obtained from the Bursar and Director of Student Loans and Debt Management (see Appendix B). Data for this study were obtained from a database of undergraduate students enrolled in Spring 2001 from the Office of Institutional Research and from a list of accounts that were sent to a collection agency by the Office of the Bursar of undergraduate students enrolled in Spring 2001.

The undergraduate students that were enrolled in Spring 2001 that were indebted to the university were identified from the accounts that were sent to the collection agency on December 21, 2001. Those undergraduate students enrolled in Spring 2001 that had no indebtedness to the university were randomly selected from the undergraduate database in the Office of Institutional Research.

The students that were indebted to the university had been systematically selected by the Office of the Bursar's using the following procedures: undergraduate students enrolled in Spring 2001 were sent to a collection agency if their delinquent balance was over $50.00, if they had no consecutive payments on account, and if there was no response to the two collection letters in regard to making special payment arrangements that are acceptable to the Office of the Bursar. The first collection letter sent was as a reminder that the student had a past due account. If there was no response to the first letter, then a second letter was sent on delinquent accounts which stated that a financial hold had been placed on enrollment, transcripts, diploma and all academic records. Additionally, if payment was not received or if special payment agreements were not made on the account, then it would be sent to a collection agency. Once an account is referred to a collection agency, the account holder is responsible for all charges incurred by the University (up to 33% of the original debt) and, in some cases, court costs and attorney fees. Delinquent account information is disclosed to credit reporting agencies, which could endanger the students' credit rating on a local and/or national level. This delinquency is contributed to unpaid charges for tuition and fees, textbooks, health center, wellness center, athletic tickets, room and board, library fines, parking fines, and financial aid charge back for overpayment of loans and grants. The students who were randomly selected from the student population in Spring 2001, either had no indebtedness to the university or their balance was under $50.00.

A variety of analyses was performed to compare how the group of 254 undergraduate students who were sent to a collection agency differed from the group of 254 undergraduate students from the general student population. These analyses were performed on various dimensions that were of interest to the author and that were available from the archived data from the Office of Institutional Research and the Office of the Bursar.

Data Analysis

A series of eight Chi-Square tests were conducted on the following categorical variables: gender, marriage status, traditional/non-traditional status, resident/non-resident/non-international status, classification, enrollment by college, full-time/part-time status, and independent status to examine their relationship to the level of indebtedness across the four financial status groups (low, high, medium, and no default). The Chi-Square statistic provides a measure of how much the observed and expected frequencies differ from one another (Shavelson, 1996). Further, Shavelson states that the Chi-Square test for a one-way design has one independent variable with two or more levels, subjects are counted in one cell of the design, and the dependent variable is a count in the form of frequencies, proportions, probabilities, or percentages.

Analyses of variance procedures were conducted on the following ten dependent variables to assess differences between the four financial status groups (low, high, medium, and no default); ACT, high school GPA, high school rank, high school size, registered hours, completed hours, college GPA, Spring 2001 registered hours, Spring 2001 completed hours, and Spring 2001 college GPA. Analyses of variance were conducted using .05 alpha level of statistical significance. The purpose of the analysis of variance is to compare the means of two or more groups to determine whether the observed differences on the dependent variables between the groups represent a chance occurrence or a systematic effect (Shavelson, 1996). This test compares groups that differ on one independent variable with two or more levels. Shavelson states that the F-ratio observed can be compared with the value of F-ratio critical in order to reject or fail to reject the null hypothesis.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the relationship of the level of indebtedness of students to a number of personal characteristics. Interest in this study was based upon observations that various levels of indebtedness among students seemed to impact their success differently. This indebtedness also affects other students at a university, as unpaid tuition and other debts are ultimately passed on to all students. This study sought to explore some variables that are related to indebtedness and to student success.

Results Related to Hypothesis

The research question addressed in this study was:

1. What variables are related to students' levels of indebtedness to the university?

In order to compare groups of students at different levels of indebtedness with one another and to a group with no indebtedness, four groups of students were formed and investigated. The formation of groups was based primarily on achieving groups of relative comparable size. The no default group was selected at random from the undergraduate student population from an archived data set from the Office of Institutional Research. The three groups consisted of students with delinquent accounts: Group A) students with delinquent accounts of less than \$500 (low), Group B) students with delinquent accounts of at least \$500 and less than \$1,500 (medium), Group C) students with delinquent accounts of at least \$1,500 (high), and Group D) (No Default) consisted of students enrolled in Spring 2001 that had no indebtedness or whose delinquent balance was less than $50. Comparisons were made between each of the groups with delinquent accounts, and all groups with delinquent accounts were compared to the group with no indebtedness. The groups were compared on a variety of descriptive variables.

This study was designed to provide an examination of the relationship of the level of indebtedness of students to a number of personal characteristics in a higher education setting. The following index of variables was used (a) gender, (b) marital status, (c) ACT, (d) high school GPA, (e) high school rank, (f) high school size, (g) registered hours, (h) completed hours, (i) college GPA, (j) Spring 2001 registered hours, (k) Spring 2001 completed hours, (l) Spring 2001 college GPA, (m) traditional/non-traditional status, (n) resident/non-resident/non-resident international status, (o) classification, (p) enrollment by college, (q) full-time/part-time student status, and (r) independent status. The relationship of these variables to the financial status of students were examined individually and reported in the following sections.

Gender

In order to examine the relationship of financial status groups to gender, a Chi-Square test for independence was performed. Table 1 provides a summary of the level of indebtedness as related to gender. Additionally, Table 1 presents a summary of row percentages for each cell entry. The relationship between financial status and gender was not statistically significant, χ^2 (3, N = 508) =3.53, $\underline{p} > .05$. There was no significant relationship between gender and level of indebtedness.

Table 1

Summary of Gender x Level of Indebtedness

	Low		Medium		High		No Default		Total
Gender	N	%	N	%	N	%	N	%	N
Female	42	19.80	31	14.60	25	11.80	114	53.80	212
Male	65	22.00	41	13.90	50	16.90	140	47.30	296
Total	107	21.10	72	14.20	75	14.80	254	50.00	508

Marital Status

In order to examine the relationship of financial status groups to marital status, a Chi-Square test for independence was performed. Eight students were eliminated from analysis because students did not indicate status. Table 2 provides a summary of the level of indebtedness as related to marital status. Additionally, Table 2 presents a summary of row percentage for each cell entry. The relationship between financial status and marital status was not statistically significant, χ^2 (3, N = 500) = 1.49, $p > .05$. There was no significant relationship between marital status and level of indebtedness.

Table 2

Summary of Marital Status x Level of Indebtedness

	Low		Medium		High		No Default		Total
Status	N	%	N	%		%	N	%	N
Married	12	20.70	11	19.00	8	13.80	27	46.60	58
Single	95	21.50	58	13.10	67	15.20	222	50.20	442
Total	107	21.40	69	13.80	75	15.00	249	49.80	500

ACT Scores

In order to examine total ACT scores in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 3. ACT scores were only available for 353 subjects. ACT scores were not available for transfer students. Descriptive statistics for the sample used in the analysis of variance are included in Appendix C.

Table 3

Analysis of Variance Summary Table - ACT

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	499.93	3	166.64	8.89*	.000
Within Groups	6539.98	349	18.74		
Total	7039.90	352			

*p < .05

These mean differences on ACT scores across the financial status groups were found to be statistically significant ($F(3, 349) = 8.89$, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 4.

Table 4

Tukey HSD Significance Matrix with Mean Differences on ACT

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	-.17	-----		
High	.09	.25	-----	
No Default	-2.42*	-2.25*	-2.50*	-----

*p < .05

These findings, suggest a statistically significant difference in ACT scores between students who were not in default and all three groups of students who were in default. There were no statistically significant differences among means of students who were in financial default.

High School GPA

In order to examine high school GPA in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 5. Data on high school GPA was not available for 223 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix D.

Table 5

Analysis of Variance Summary Table - High School GPA

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	9.72	3	3.24	12.82*	.000
Within Groups	71.00	281	.25		
Total	80.72	284			

*p < .05

These mean differences on high school GPA's across the financial status groups were found to be statistically significant ($F(3, 281) = 12.82$, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD was performed. The comparisons of mean differences are summarized in Table 6.

Table 6

Tukey HSD Significance Matrix with Mean Differences on High School GPA

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	.18	-----		
High	.29	.11	-----	
No Default	-.21*	-.39*	.50*	-----

*$p < .05$

These findings, suggest a statistically significant difference in high school GPA between students who were not in default and all three groups of students who were in default. There were no statistically significant differences among means of students who were in financial default.

High School Rank

In order to examine high school rank in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 7. Data on high school rank were not available for 225 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix E.

Table 7

Analysis of Variance Summary Table - High School Rank

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	22173.47	3	7391.16	.851	.467
Within Groups	2423983.84	279	8688.11		
Total	2446157.31	282			

These mean differences on high school rank across the financial status groups were found not to be statistically significant ($F\ (3, 279) = .851$, $p > .05$). Because the group means were not statistically different, a post hoc test was not performed.

High School Size

In order to examine high school size in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 8. Data on high school size were not available for 225 subjects. Descriptive statistics for the sample used in the analysis of variance are included in see Appendix F.

Table 8

Analysis of Variance Summary Table - High School Size

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	731253.30	3	243751.09	6.52*	.000
Within Groups	10437093.88	279	37408.94		
Total	11168347.18	282			

*$p < .05$

These mean differences on high school size across the financial status groups were found to be statistically significant ($F(3, 279) = 6.52$, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 9.

Table 9

Tukey HSD Significance Matrix with Mean Differences on High School Size

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	-31.70	-----		
High	38.77	70.47	-----	
No Default	-97.02*	-65.32	135.79*	-----

*$p < .05$

These findings, suggest a statistically significant difference in high school size between students who were not in default and the low group of students who were in default as well as between the high group of students who were in default and students who are not in default. There were no statistically significant differences among means of students who was in financial default.

Registered Hours

In order to examine registered hours in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 10. Data were only available for 507 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix G.

Table 10

Analysis of Variance Summary Table - Registered Hours

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	107179.24	3	35726.41	17.82*	.000
Within Groups	1008627.43	503	2005.22		
Total	1115806.67	506			

*$p < .05$

These mean differences on registered hours across the financial status groups were found to be statistically significant ($F(3, 503) = 17.82$, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 11.

Table 11

Tukey HSD Significance Matrix with Mean Differences on Registered Hours

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	-.41	-----		
High	22.97*	23.38*	-----	
No Default	-18.28*	-17.87*	41.25*	-----

*$p < .05$

These findings, suggest a statistically significant difference in registered hours between students who were not in default and all three groups of students who were in default. There are significant differences among means of students between the high group and both low and medium groups who were in financial default.

Completed Hours

In order to examine completed hours in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provide in Table 12. Data were available for only 507 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix H.

Table 12

Analysis of Variance Summary Table - Completed Hours

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	151024.31	3	50341.44	22.99*	.000
Within Groups	1101274.29	503	2189.41		
Total	1252298.60	506			

*$p < .05$

These mean differences on completed hours across the financial status groups were found to be statistically significant ($F (3, 503) = 22.99$, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD was performed. The comparisons of mean differences are summarized in Table 13.

Table 13

Tukey HSD Significance Matrix with Mean Differences on Completed Hours

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	6.22	-----		
High	28.73*	22.51*	-----	
No Default	-19.61*	-25.83*	-48.34*	-----

*$p < .05$

These findings, suggest a statistically significant difference in completed hours between students who were not in default and all three groups of students who were in default. There are significant differences among means of students between the high group and both low and medium groups who were in financial default.

College GPA

In order to examine college GPA in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 14. Descriptive statistics for the sample used in the analysis of variance are included in Appendix I.

Table 14

Analysis of Variance Summary Table - College GPA

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	130.58	3	43.53	82.74*	.000
Within Groups	265.13	504	.53		
Total	395.71	507			

*$p < .05$

These mean difference on college GPA across the financial status groups were found to be statistically significant (F (3, 504) = 82.74, $p < .05$. Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 15.

Table 15

Tukey HSD Significance Matrix with Mean Differences on College GPA

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	.11	-----		
High	.38*	.27	-----	
No Default	-.85*	-.96*	1.22*	-----

*p < .05

These findings, suggest a statistically significant difference in college GPA between students who were not in default and all three groups of students who were in default. There are significant differences among means of students in the low group and in the high group who were in financial default.

Spring 2001 Registered Hours

In order to examine Spring 2001 registered hours in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 16. Data were only available for 506 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix J.

Table 16

Analysis of Variance Summary Table - Spring 2001 Registered Hours

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	392.70	3	130.90	12.92*	.000
Within Groups	5086.76	502	10.13		
Total	5479.46	505			

*$p < .05$

These mean differences on Spring 2001 registered hours across the financial status groups were found to be statistically significant ($F(3, 502) = 12.92$, $p < .05$. Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 17.

Table 17

Tukey HSD Significance Matrix with Mean Differences on Spring 2001 Registered Hours

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	.47	-----		
High	-1.26*	-1.73*	-----	
No Default	-1.70*	-2.18*	-.44	-----

*p < .05

These findings, suggest a statistically significant difference in Spring 2001 registered hours between students who were not in default and both the low and medium groups of students who were in default. There are also significant differences among means of students between the high group and both low and medium groups who were in financial default.

Spring 2001 Completed Hours

In order to examine Spring 2001 completed hours in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 18. Data were available for only 506 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix K.

Table 18

Analysis of Variance Summary Table - Spring 2001 Completed Hours

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	7026.74	3	2342.25	104.12*	.000
Within Groups	11293.39	502	22.50		
Total	18320.13	505			

*$p < .05$

These mean differences on Spring 2001 completed hours across the financial status groups were found to be statistically significant ($F(3, 502) = 104.12$, $p < .05$. Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 19.

Table 19

Tukey HSD Significance Matrix with Mean Differences on Spring 2001 Completed Hours

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	.29	-----		
High	2.37*	2.08*	-----	
No Default	-6.53*	-6.81*	-8.90*	-----

*p < .05

These findings suggest a statistically significant difference in Spring 2001 completed hours between students who were not in default and all three groups of students who were in default. There are significant differences among means of students between the high group and both low and medium groups who were in financial default.

Spring 2001 College GPA

In order to examine Spring 2001 college GPA in relationship to the level of indebtedness across the four financial status groups, an analysis of variance was performed. A summary of the analysis of variance is provided in Table 20. Data were available for only 502 subjects. Descriptive statistics for the sample used in the analysis of variance are included in Appendix L.

Table 20

Analysis of Variance Summary Table - Spring 2001 College GPA

Source	Sum of Squares	df	Mean Square	F	Exact Probability
Between Groups	356.08	3	118.69	96.91*	.000
Within Groups	609.97	498	1.23		
Total	966.05	501			

*$p < .05$

These mean differences on Spring 2001 college GPA across the financial status groups were found to be statistically significant (F (3. 498) = 96.91, $p < .05$). Because the group means were statistically different, a post hoc test, Tukey's HSD, was performed. The comparisons of mean differences are summarized in Table 21.

Table 21

Tukey HSD Significance Matrix with Mean Differences on

Spring 2001 College GPA

Levels of Indebtedness	Low	Medium	High	No Default
Low	-----			
Medium	-.03	-----		
High	.50*	.53*	-----	
No Default	-1.51*	-1.48*	-2.01*	-----

*$p < .05$

These findings, suggest a statistically significant difference in Spring 2001 college GPA between students who were not in default and all three groups of students who were in default. There are significant differences among means of students between the high group and both low and medium groups who were in financial default.

Traditional/Non-Traditional Status

In order to examine the relationship of financial status groups to traditional/non-traditional status, a Chi-Square test for independence was performed. Table 22 provides a summary of the level of indebtedness as related to traditional/non-traditional status. The subjects from age 19 to age 24 were totaled for each level of indebtedness for all financial status groups and divided by total number of students to calculate the percentage for each cell for traditional age students. The subjects from age 25 to age 58 were totaled for each level of indebtedness for all financial status groups and divided by total number of students to calculate percentage for each cell for non-tradition age students. Additionally, Table 22 presents a summary of row percentages for each cell entry. The relationship between financial status and traditional/non-traditional status was found to be statistically significant, χ^2 (81, N = 508) = 147.50, p < .05.

Table 22

Summary of Traditional/Non-Traditional Status x Level of Indebtedness

	Low		Medium		High		No Default		Total
Classification	N	%	N	%	N	%	N	%	N
Non Traditional	44	25.30	43	24.70	30	17.20	57	32.80	174
Traditional	63	18.90	29	8.70	45	13.50	197	59.00	334
Total	107		72		75		254		508

Resident/Non Resident/Non Resident International Status

In order to examine the relationship of financial status groups to resident/non resident, a Chi-Square test for independence was performed. Table 23 provides a summary of the level of indebtedness as related to resident/non resident/international status. Additionally, Table 23 presents a summary of row percentages for each cell entry. The relationship between financial status and resident/non resident was found to be statistically significant, χ^2 (3, N = 508) = 55.46, p < .05.

Table 23

Summary of Resident/Non Resident/Non Resident International Status x Level of Indebtedness

	Low		Medium		High		No Default		Total
Classification	N	%	N	%	N	%	N	%	N
Non Resident	15	10.20	5	3.40	17	11.60	110	74.80	147
Resident	92	25.50	67	18.60	58	16.10	144	39.90	361
Total	107		72		75		254		508

Classification

In order to examine the relationship of financial status groups to classification, a Chi-Square test for independence was performed. Table 24 provides a summary of the level of indebtedness as related to classification. Additionally, Table 24 presents a summary of row percentages for each cell entry. The relationship between financial status and classification was found to be statistically significant, χ^2 (12, N = 508) = 43.95, $p < .05$.

Table 24

Summary of Classification x Level of Indebtedness

	Low		Medium		High		No Default		Total
Classification	N	%	N	%	N	%	N	%	N
Freshman	22	18.30	23	19.20	27	22.50	48	40.00	120
Sophomore	16	16.70	10	10.40	17	17.70	53	55.20	96
Junior	17	15.90	5	4.70	16	15.00	69	64.50	107
Senior	52	28.30	33	17.90	15	8.20	84	45.70	184
Total	107		71		75		254		507

Enrollment by College

In order to examine the relationship of financial status groups to enrollment by college, a Chi-Square test for independence was performed. Table 25 provides a summary of the level of indebtedness as related to enrollment by college. The other category consists of the following colleges: Agriculture, Education, General University, and Human Environmental Science. These colleges were combined because of the small number of students participating from these colleges. Additionally, Table 25 presents a summary of row percentages for each cell entry. The relationship between financial status and enrollment by college was found to be statistically significant, χ^2 (18, N = 508) = 54.67, $p < .05$.

Table 25

Summary of Enrollment by College x Level of Indebtedness

	Low		Medium		High		No Default		Total
Colleges	N	%	N	%	N	%	N	%	N
Arts and Sciences	39	26.20	24	16.10	23	15.40	63	42.30	149
Business Administration	21	18.80	19	17.00	18	16.10	54	48.20	112
Engineering	14	20.60	8	11.80	5	7.40	41	60.30	68
Other	33	73.40	21	45.20	29	61.40	96	219.90	179
Total	107	21.10	72	14.20	75	14.80	254	50.00	508

Full-Time/Part-Time Student Status

In order to examine the relationship of financial status groups to full-time/part-time student status, a Chi-Square test for independence was performed. Data were not available for one subject. Table 26 provides a summary of the level of indebtedness as related to full-time/part-time. Additionally, Table 26 presents a summary of row percentages for each cell entry. The relationship between financial status and full-time/part time was found to be statistically significant, χ^2 (3, N = 507) = 25.66, $p < .05$.

Table 26

Summary of Full-Time/Part-Time Student Status x Level of Indebtedness

	Low		Medium		High		No Default		Total
Status	N	%	N	%	N	%	N	%	N
Full-Time	88	19.90	51	11.50	69	15.60	235	53.00	443
Part-Time	19	29.70	20	31.30	6	9.40	19	29.70	64
Total	107		71		75		254		507

Independent Status

In order to examine the relationship of financial status groups to independent status, a Chi-Square test for independence was performed. Table 27 provides a summary of the level of indebtedness as related to independent status. Data were not available for 184 subject on the independent status variable. Additionally, Table 27 presents a summary of row percentages for each cell entry. The relationship between financial status and independent status was found to be statistically significant, χ^2 (3, N = 324) = 13.35, p < .05.

Table 27

Summary of Independent Status x Level of Indebtedness

	Low		Medium		High		No Default		Total
Classification	N	%	N	%	N	%	N	%	N
Dependent	51	24.60	26	12.60	23	11.10	107	51.70	207
Independent	31	26.50	29	24.80	18	15.40	39	33.30	117
Total	82		55		41		146		324

Locale

In order to examine the relationship of financial status groups to enrollment by college, a Chi-Square test for independence was performed. Data were not available for ten subjects. In order to determine locale, the author divided students' state of residence by northeast, southeast, northwest, and southwest. The total number of subjects were added for each level of indebtedness for all financial status groups for each geographical location and divided by total number of subjects to calculate the percentage for each cell. The distributions for southeast and southwest was very large compared to the distributions for northeast and northwest. Due to these distributions, Chi-Square was not calculated.

Summary

Several analyses were conducted to examine the possible relationships of the following variables to the financial status of students: (a) gender, (b) marital status, (c)

ACT, (d) high school GPA, (e) high school rank, (f) high school size, (g) registered hours, (h) completed hours, (i) college GPA, (j) Spring 2001 registered hours, (k) Spring 2001 completed hours, (l) Spring 2001 college GPA, (m) traditional/non-traditional status, (n) resident/non-resident/non-resident international status, (o) classification, (p) enrollment by college, (q) full-time/ part-time student status, and (r) independent status. A series of eight Chi-Square tests and ten analyses of variance were performed to examine the relationships that might exist among those variables.

Six of the eight Chi-Square tests were significant. The relationships on gender and marital status were found not to be statistically significant. These findings indicate that a relationship does not exist between gender and marital status and the level of indebtedness of students to the university.

A series of six Chi-Square tests were conducted on the following categorical variables: traditional/non-traditional status, resident/non-resident/non-resident international, classification, enrollment by college, full-time/part-time student status, and independent status to examine their relationship to the level of indebtedness across the four financial status groups (low, high, medium, and no default). The relationship between these variables and indebtedness were statistically significant in all of these cases.

Nine of the ten analyses of variance that were conducted were found to have group mean differences that were statistically significant, and post hoc tests were performed. High school rank was found not to be statistically significant. These findings indicate no relationship exist between high school rank and the level of indebtedness of students to the university.

A series of four analyzes of variance were conducted on the following variables: registered hours, completed hours, Spring 2001 completed hours, and Spring 2001 college GPA to examine the relationship to the level of indebtedness across the four financial status groups (low, high, medium, and no default). The mean differences on these variables were found to be statistically significant. The results of the post hoc analyzes indicate that a relationship exists between students who are not in default and all three groups of students who are in default. There are significant differences among means of students between the high group and both low and medium groups who are in financial default.

An analyzes of variance were conducted on ACT scores and high school GPA to examine their relationship to the level of indebtedness across the four financial status groups (low, high, medium, and no default). The mean differences on these variables were found to be statistically significant in all cases. The post hoc analyzes indicate that a relationship exists on these variables between students who are not in default and all three groups of students who are in default. There were no statistically significant differences in respect to levels of indebtedness among means of students who are in financial default on these variables.

An analysis of variance was conducted on high school size to examine the relationship to the level of indebtedness across the four financial status groups (low, high, medium, no default). The mean differences on high school size was found to be statistically significant. The post hoc analysis indicate there is a relationship on high school size between students who are not in default and the low group of students who are in default as well as between the high group of students who are in default. There were no statistically significant differences among means of students who are in financial default.

An analysis of variance was conducted on college GPA to examine the relationship to the level of indebtedness across the four financial status groups (low, high, medium, no default). The mean differences on college GPA were found to be statistically significant. The post hoc analysis indicate there is a relationship on college GPA between students who are not in default and all three groups of students who are in default. There are significant differences among means of students between the high group and the low group who are in financial default.

An analysis of variance was conducted on Spring 2001 registered hours to examine the relationship to the level of indebtedness across the four financial status groups (low, high, medium, and no default). The mean differences on Spring 2001 registered hours were found to be statistically significant. The post hoc analysis indicate there is a relationship on Spring 2001 registered hours between students who are not in default and the low and medium groups of students who are in default. There are statistically significant differences among means of students between the high group and both low and medium groups who are in financial default.

CHAPTER V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the relationship of the level of indebtedness of students to a number of personal characteristics in a university setting. This study assumes that a relationship exists among these personal characteristics to the level of students' indebtedness across the four financial status groups (low, medium, high, and no default). To consider the relationship of personal characteristics to the financial status of students, this study focused on the possible relationships between the level of indebtedness of students to various descriptive variables in a higher education setting. The following index of variables was used (a) gender, (b) marital status, (c) ACT Score, (d) high school GPA, (e) high school rank, (f) high school size, (g) registered hours, (h) completed hours, (i) college GPA, (j) Spring 2001 registered hours, (k) Spring 2001completed hours, (l) Spring 2001 college GPA, (m) traditional/non-traditional status (n) resident/non-resident/non-resident international status, (o) classification, (p) enrollment by college, (q) full-time/part-time student status, and (r) independent status.

Students who withdraw from a university often leave a past due balance on their Bursar account that they are unable or unwilling to pay. These student loans automatically go into repayment if students are not continuously enrolled. These students cannot obtain a transcript from the university to enroll in another university until their debt to the university has been paid in full. Additionally, once student accounts are turned over to a collection agency this unpaid debt to the university also affects the students' credit rating.

Students who succeed academically and financially are more focused on attending college rather than making decisions about repaying their student loans (Christman, 2000). Student loans automatically go into repayment six months after graduation. Often, students obtain a college degree with the expectation that future financial returns from acquired skills and increased income will outweigh the cost of their education. These students are starting their career in debt.

The research question addressed in this study was:

1. What variables are related to students' levels of indebtedness to the university?

Several analyses were conducted to consider the possible relationships between the level of indebtedness of students to a number of personal characteristics. A series of eight Chi-Square tests and ten analyses of variance were performed to examine the relationships that might exist among the variables.

Discussion

The literature on student development suggests an integrated perspective on learning and personal development. From this perspective, a successful educational experience simultaneously increases cognitive understanding and sense of self, personal maturity, and interpersonal effectiveness (King & Magolda, 1996). A student may have made financial commitments in one stage that he/she would not make as he/she achieves self-directedness. Chickering's (1969) first three vectors are prerequisites for the establishment of identity. By the time the student comes to terms with his/her real self, he/she may owe thousand of dollars which could impact a decision for a career choice. In these economic times, students are faced with a difficult situation pursuing preparation for life and career while getting deeper and deeper in debt.

It is not surprising in this study that freshmen were more indebted to the university than sophomores, juniors and seniors. Students in their first year are away from home for the first time and are independent of parental supervision. They may have no conception of financial obligations. The new environment may be so overwhelming that students do not put forth effort academically. These freshmen are exploring who they are; they are just beginning to find their unique identities.

As these personal and environmental challenges face students, they may be unable to cope with the responsibility for their financial well-being. This may result in the students incurring unnecessary and unmanageable debt. This state of indebtedness could be compounded by the student withdrawing from the semester because he/she was failing courses. For some students, their withdrawal from the university has made them ineligible for financial aid to pay their current semester charges, and, for other students, it has put a financial hardship on them and their parents. Student affairs practitioners' should focus their efforts on addressing the students' development; physically, socially, emotionally, spiritually, and intellectually.

Results in this study indicated that resident students were more indebted to the university than non-resident and non-resident international students. This is a somewhat interesting finding in that the cost of attending the university is less for resident students than for non-resident or non-resident international students. Perhaps, students who travel to another state or another country are more mature or more financially responsible. Further investigation into this finding would be useful.

It is not surprising that independent students are more indebted to the university than students with dependent status. This may be because these students have a family to support and other financial obligations which would lead one to believe that they would have a greater indebtedness to the university. Perhaps, an explanation for the results related to independent and dependent status is that independent students may not have received sufficient financial aid to meet their financial obligations and college expenses or that their obligations are more extensive.

It was surprising that there was not a statistically significant relationship between financial status and marital status. It would seem that married students would have more financial obligations such as mortgages or rent to pay, health insurance to pay for the family, and the expense of college for one or more in the household. This study was limited in that of the 500 students in the study there were only 58 married students.

Locale was not explored due to the distribution for the southeast and southwest regions being much larger than the northeast and northwest regions. A further study of regions broken down differently could have a relationship to student indebtedness.

Results of the analysis of variance indicated that ACT scores and high school GPA were related to student indebtedness. Either a high ACT score or a high GPA decreases the probability of student indebtedness. This could further be studied with an exploration of student success and retention.

There was a statistically significant relationship among Registered Hours, Completed Hours, College GPA, Spring 2001 Registered Hours, Spring 2001 Completed Hours, and Spring 2001 College GPA. Conclusions could be drawn from the study that students' commitment to a college career as demonstrated by number of hours enrolled and GPA earned impacts student indebtedness. If these variables are indicators of involvement or commitment, then, there seems to be a relationship between involvement with the university and development, if one assumes that lack of indebtedness is an indicator of development. This finding would be congruent with Astin's (1984) theory of involvement.

Previous research suggested (Tinto, 1975) that the primary reason for student withdrawal was the lack of academic or social integration at a particular campus. According to Williams and Winston (1985), students involved in organized student activities, organizations and services "showed statistically significantly greater developmental task achievement in the areas of interdependence, educational plans, career plans, and lifestyle plans" (p. 56) than those who are not involved. This study indicated that part-time students compared to full-time students were more indebted to the university. Part-time students may have full-time jobs, family obligations, and have no time for involvement in campus activities. Knowledge of the factors contributing to indebtedness could aid the university by possible prevention of the indebtedness or retention of the student.

Conclusions

Non-traditional students were identified in this study as being more indebted to the university. This indebtedness could be due to non-traditional students having more family obligations and, therefore, being unable to meet personal financial obligations as well as their financial obligation to the university. Perhaps, if more financial aid and scholarships were available to these students, they would be able to fulfill their financial obligation to the university. Additionally, childcare programs at the university might help to reduce personal expense. Generally, these students do not have the same opportunity of involvement in programs that traditional students have at the university. Additionally, they have less opportunity to be assimilated into the university environment.

Resident students were identified as having more debt to the university than non-resident and non-resident international students. Intrusive counseling is based on the philosophy that it is the advisors responsibility to reach out to at-risk students and engage them in the advisement process (Thomas, Farrow, & Martinez, 1998). Therefore, intrusive counseling is a process in which counselors and academic advisors take an active role in establishing contact with students. These counselors and academic advisors are proactive in providing students with information about academic and personal support service programs and they provide students with guidance. Intrusive counseling implemented at the resident halls or in special workshops may help in reducing this indebtedness. These interventions could consist of forming a group and discussing students' personal financial issues as well as their financial obligation to the university.

This intrusive advising could also take the form of prevention to provide information to students before they get in trouble financially. The financial counseling described above could be conducted by financial counselors from the Office of the Bursar and the Financial Aid Office. The counselors who provide this service should be trained in student development. The Office of the Bursar and Financial Aid Office could conduct workshops throughout the year with the goal of informing and educating students concerning indebtedness. Financial counselors in the Office of the Bursar could be proactive in assisting students in developing a budget that would be reasonable for them. For students who have a large debt, they could be assisted in establishing a monthly payment plan so their debt would be paid by the end of the semester. This assistance with budget planning will help students become successful financially.

The workshops should be developed with consideration given to student development and available financial aid programs. Financial Aid counselors can assist students proactively by educating them about financial aid and assisting them in completing the Free Application for Federal Student Aid (FAFSA) form in a timely manner. These counselors can also give students information and requirements on scholarships that are available at the university.

Freshmen were more indebted to the university in this study. Freshmen are on their own for the first time. They have had no experience with financial obligations. They are probably entering the early stages of student development. These students may not have established a support group on campus. Some students may come from low-income families or are first generation college students. These students' parents cannot explain the higher education process, therefore, making the student's adjustment more difficult. These parents have no concept of the financial aid process, the appropriate study skills, or the college culture. These factors may affect freshmen student indebtedness.

Training faculty and upper level students as mentors for incoming freshman may help students acclimate to the university environment. Additionally, financial counselors from the Office of the Bursar and Financial Aid Office could visit orientation classes to give students an overview of the qualifications for financial aid. They would know what is expected of them financially to comply with policies of the Bursar Office. These financial counselors should be trained in intrusive counseling techniques. Students should be assisted in understanding the consequences of indebtedness to the university as related to their academic career and their future.

Part-time students were more indebted to the university than full-time students. Part-time students may have a full-time job or part-time job in addition to taking classes at the university. This may limit the time they spend on studying for their classes and may lead to withdrawal from the university. Additionally, these students may not take advantage of student services offered at the university during the workday such as counseling, financial aid and health services. If part-time students are dependents (under 24 years of age) their eligibility for financial aid may be limited. It may not be enough to cover their college expenses plus living expenses. Passage of legislation to increase financial aid for dependent and independent part-time students may help in decreasing the indebtedness to the university.

Independent students were more indebted to the university than dependent students. Independent students probably have other financial obligations such as credit card debt and a family to support. Programs conducted by financial counselors in the Office of the Bursar throughout the year could assist students in preparing for the financial aspect of their college career.

The Office of the Bursar needs to be proactive in offering students alternatives in paying their bursar account. These alternatives could be not charging monthly finance charges if students are making monthly payments on past due balances or writing off some of the finance charges if a certain amount is paid. New policies could be implemented at the Office of the Bursar. Additionally, guidelines should be followed by the Office of the Bursar in not allowing students to enroll for future semesters that do not have sufficient financial aid to cover their past balances and future semester charges.

Policies should correlate with student development theories. Freshmen are on their own for the first time. Most are still financially dependent on parents. The university encompasses an environment where immature students have easy access to entertainment, food, and products and the students are allowed to charge to their Bursar accounts. Perhaps, the university could better serve students by providing a debit system in the above instance. That is, a student pays a given amount, and he/she cannot charge on the debit card once that amount has been reached until he/she deposits more money in the account.

Students that are allowed to enroll with a low high school GPA or a low ACT score should be identified and assisted by an academic counselor in the service area. These counselors should monitor these students' academic progress continuously throughout each semester. Additionally, these counselors should provide weekly meetings with students individually to discuss any problem they may have that hinder them from succeeding in obtaining a college education. These counselors need to be trained in intrusive counseling techniques. It would be useful for counselors to know student development theories and university financial aid policies. The university might assume more responsibility for education of students through these counselors.

Recommendations for Research

The following research recommendations are presented as a result of the study:

1. This study did not address social class or first generation college students in relation to their indebtedness. It is recommended for future research that social class and first

generation college students be evaluated in relation to the role of finances in their choice and persistence decisions. This study would provide valuable information to the institution in increasing student retention.

2. This study indicated a relationship between high school size and indebtedness. Knowledge of how high school size impacts indebtedness would help advisors and counselors in the Office of the Bursar and the Financial Aid Office. The researcher suspects more indebtedness occurs with students from smaller schools. These schools are in the rural areas in the Southwest. This knowledge would assist university personnel in targeting intrusive counseling concerning financial responsibility. It is recommended that further research evaluate rural and urban locations in relation to their financial status of students. The data for this study were collected in the Southwest where smaller high schools are in rural areas and larger high schools are in the cities. Data collected from other areas of the United States could indicate the relationship between inner city and suburban populations to financial indebtedness.
3. This study did not examine student financial aid. Data were not available. It is recommended that future research include student's financial aid. This directly impacts indebtedness of many students. Examining this data could help federal and state governments and universities rethink the disbursement of financial aid.

Recommendations for Practice

The following recommendations for practice are presented as a result of this study:

1. The data indicated that ACT scores, high school GPA, and high school size are related to student indebtedness. It is recommended that intrusive counseling practices

be implemented at the high school level. This counseling should include recommendations concerning financing a college education.

2. It is further recommended that practitioners provide preventive programming to assist students in becoming and staying financially responsible.
3. Admission standards at colleges and universities should be reviewed. It is recommended ACT scores and high school GPA standards be set at a level indicated by the data to facilitate student success. These standards should be met by the student.
4. Completed college hours and college GPA were factors related to indebtedness. It is recommended that intrusive counseling be implemented at the time of student's request for financial assistance. This counseling should be continuous, personal, and specific to the individual. Counselors should be cognizant of data relating to indebtedness, retention, and career success. Counselors should also be trained in student development. Universities and colleges should assume partial responsibility for student indebtedness.

Summary

The findings of this study indicated a relationship between ACT, high school GPA, high school size, registered hours, completed hours, college GPA, Spring 2001 registered hours, Spring 2001 completed hours, Spring 2001 college GPA, traditional/non-traditional status, resident/non-resident/non-resident international status, classification, enrollment by college, full-time/part-time student status, and independent status. Student indebtedness has consequences for the individual student and impacts the entire university population. It is hoped that this study will assist universities and colleges to examine factors impacting student indebtedness. College and universities could use this data to review polices and procedures, admission standards, and counseling practices with emphasis on decreasing student indebtedness.

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APPENDIX A

Institutional Review Board Approval

Oklahoma State University
Institutional Review Board

Protocol Expires: 9/8/2003

Date: Monday, September 09, 2002 IRB Application No ED0319

Proposal Title: AN EXPLORATION OF PREDICTORS OF FINANCIAL DELINQUENCY AMONG UNDERGRADUATE COLLEGE STUDENTS

Principal Investigator(s):

Marcia Dickman
435 Willard
Stillwater, OK 74078

Joy Meyer
113 Student Union
Stillwater, OK 74078

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson

Carol Olson, Chair
Institutional Review Board

APPENDIX B

Approval From Office of the Bursar to Use Collection Agency Accounts

OSU

Office of the Bursar
113 Student Union
Stillwater, Oklahoma 74078-7020
405-744-5993

To Whom It May Concern:

This letter provides support and approval for Joy Meyer's research in using delinquent accounts of undergraduate students that were sent to a collection agency on December 21, 2001, by the Office of the Bursar. My understanding is that the Office of Institutional Research will use the social security number to pull the variables needed in her study and that numbers will be assigned to the data when returned to her for analysis. This support and approval is contingent upon the research being approved and supervised by the Institutional Review Board.

It is anticipated that this research will be of assistance to the Office of the Bursar at Oklahoma State University as well as to the field in general. Please contact me if more information is needed.

Sincerely,

6-17-03

Robert E. Dixon
Bursar and Director of
Student Loans and Debt Management

APPENDIX C

Descriptive Statistics for Analysis of Variance on ACT Scores

Descriptive Statistics for Analysis of Variance on ACT Scores

Levels of Indebtedness	N	Mean	SD
Low	76	21.86	4.50
Medium	42	22.02	3.89
High	39	21.77	4.39
No Default	196	24.27	4.34
Total	353	23.21	4.47

APPENDIX D

Descriptive Statistics for Analysis of Variance on High School GPA

Descriptive Statistics for Analysis of Variance on High School GPA

Levels of Indebtedness	N	Mean	SD
Low	57	3.30	.58
Medium	36	3.12	.59
High	31	3.01	.54
No Default	161	3.51	.44
Total	285	3.36	.53

APPENDIX E

Descriptive Statistics for Analysis of Variance on High School Rank

<u>Descriptive Statistics for Analysis of Variance on High School Rank</u>

Levels of Indebtedness	N	Mean	SD
Low	57	79.63	104.00
Medium	36	101.33	114.31
High	29	71.28	73.13
No Default	161	75.09	87.01
Total	283	78.95	93.14

APPENDIX F

Descriptive Statistics for Analysis of Variance on High School Class Size

Descriptive Statistics for Analysis of Variance on High School Class Size

Levels of Indebtedness	N	Mean	SD
Low	57	215.49	173.87
Medium	36	247.19	215.35
High	29	176.72	134.70
No Default	161	312.52	203.30
Total	283	270.75	199.01

APPENDIX G

Descriptive Statistics for Analysis of Variance on Registered Hours

Descriptive Statistics for Analysis of Variance on Registered Hours

Levels of Indebtedness	N	Mean	SD
Low	107	84.42	49.73
Medium	72	84.83	58.28
High	75	61.45	51.83
No Default	253	102.70	34.88
Total	507	90.21	46.96

APPENDIX H

Descriptive Statistics for Analysis of Variance on Completed Hours

Descriptive Statistics for Analysis of Variance on Completed Hours

Levels of Indebtedness	N	Mean	SD
Low	186	86.03	52.63
Medium	72	79.81	61.18
High	75	57.29	47.33
No Default	253	105.64	38.63
Total	507	90.68	49.75

APPENDIX I

Descriptive Statistics for Analysis of Variance on College GPA

Descriptive Statistics for Analysis of Variance on College GPA

Levels of Indebtedness	N	Mean	SD
Low	107	2.12	.80
Medium	72	2.01	.82
High	75	1.74	.82
No Default	254	2.97	.63
Total	508	2.47	.88

APPENDIX J

Descriptive Statistics for Analysis of Variance on Spring 2001 Registered Hours

Descriptive Statistics for Analysis of Variance on

Spring 2001 Registered Hours

Levels of Indebtedness	N	Mean	SD
Low	107	12.49	3.56
Medium	72	12.01	4.10
High	75	13.75	3.04
No Default	252	14.19	2.73
Total	506	13.45	3.30

APPENDIX K

Descriptive Statistics for Analysis of Variance on Spring 2001 Completed Hours

Descriptive Statistics for Analysis of Variance on

Spring 2001 Completed Hours

Levels of Indebtedness	N	Mean	SD
Low	107	6.01	5.64
Medium	72	5.72	5.69
High	75	3.64	4.75
No Default	252	12.54	3.97
Total	506	8.87	6.02

APPENDIX L

Descriptive Statistics for Analysis of Variance on Spring 2001 College GPA

Descriptive Statistics for Analysis of Variance on Spring 2001 College GPA

Levels of Indebtedness	N	Mean	SD
Low	106	1.34	1.30
Medium	72	1.37	1.31
High	74	.84	1.09
No Default	250	2.86	.94
Total	502	2.03	1.39

VITA #2

Joy B. Meyer

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN ANALYSIS OF THE RELATIONSHIP OF FINANCIAL INDEBTEDNESS TO STUDENT CHARACTERISTICS

Major Field: Applied Behavioral Studies

Specialization: Student Personnel Administration

Biographical:

Education: Received Bachelor of Science degree in Business Administration from Oklahoma State University, Stillwater, Oklahoma, in July 1992; received Master of Science degree in Counseling and Student Personnel with specialization in Student Personnel Services from Oklahoma State University, Stillwater, Oklahoma, in May 2000; Completed the requirements for the Doctor of Philosophy degree in Applied Behavioral Studies, with specialization in Student Personnel Administration, at Oklahoma State University in May, 2003.

Experience: Financial Counselor, Office of the Bursar, Oklahoma State University, 1999 to present; Senior Accountant, Office of the Bursar, Oklahoma State University, 1996 to 1999; Administrative Assistant, Applied Behavioral Studies in Education, Oklahoma State University, 1987 to 1996; Bursar, Business Office, Langston University; Assistant Purchasing and Housing Director, Business Office, Langston University.

Professional Memberships: National Association of Student Personnel Administrators; The Honor Society of Phi Kappa Phi