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DIFFERENTIAL TUITION BY UNDERGRADUATE MAJOR: ITS USE, AMOUNT,
AND IMPACT AT PUBLIC RESEARCH UNIVERSITIES

by

Glen R. Nelson

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
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Major: Education Studies

Under the Supervision of Professor Alan Seagren

Lincoln, Nebraska

May, 2008

DIFFERENTIAL TUITION BY UNDERGRADUATE MAJOR: ITS USE, AMOUNT,
AND IMPACT AT PUBLIC RESEARCH UNIVERSITIES

Glen R. Nelson, Ph.D.

University of Nebraska, 2008

Adviser: Alan Seagren

The purpose of the study was to examine differential tuition by undergraduate major at 165 public research universities. The study focused on: the emergence and prevalence of this type of differential tuition; the programs or majors for which differential tuition existed and the amount of the differential; the dates the differentials were considered or implemented; the reasons for implementing or not implementing; the impacts of the adoption and implementation of differential tuition; and how the incremental revenues were used. The study was a descriptive study using the pragmatic mixed-method approach which included a survey instrument completed by chief business officers, a review of institutional websites, and interviews with selected chief business officers to describe the practice of differential tuition by undergraduate program or major at public research institutions.

There were 74 institutions, or 45% which had differential tuition for 17 undergraduate programs. The differential for non-medical related programs ranged from \$2 to \$1,896 per term and from \$2 to \$194 per credit hour. The average rate of differential tuition by undergraduate program was 10.8% of resident undergraduate tuition. The most prevalent programs with differential tuition by undergraduate program

were Business and Engineering, followed by Architecture, Education, Sciences, Other, Fine Arts, Health Related, Computer Science, Journalism, Honors, Agriculture, and Liberal Arts. Plus the medical related programs of Nursing, Pharmacology, Dental Hygiene, and Physical Therapy. Between 2003 and 2008, 25 institutions implemented, and 26 considered but did not implement, differential tuition. The reasons for implementing or not implementing centered on the issues of revenue and access. There were two differing views on the impact of differential tuition by undergraduate program on the choice of major by undergraduate students. This divergence of opinion suggests further study to determine the impact of choice of major by undergraduate students. Public research institutions were studied; further research is needed on the prevalence of this type of differential at the other sectors of public college and universities.

Acknowledgement

As I completed this dissertation, I reflected on my past eleven years in higher education. None of the experiences or the Ph.D. would have been accomplished without the support of a number of people. First and foremost, I am indebted to my wife Patti and our five children, Meagan, Christopher, Nicole, Allison, and Joel for their support of this endeavor. They gently nudged me forward to completion, tolerated my need to study, provided technical assistance when needed, and moved with me through several universities. I could not have completed this dissertation without them.

When I left the corporate world and entered higher education as an administrator eleven years ago I was not sure what I would find. I was academically trained to be manager in the accounting and finance world, one in which numbers drive decisions. There was no time for committees and thoughtful contemplation. Early in my tenure I was counseled by a number of mentors to explore a Ph.D. in higher education leadership. I am thankful to the following four gentlemen who took an interest in my career and education: the late Dr. Melvin Jones, Dr. Kim Phelps, Dr. Doug Zatechka and Mr. James Main, all senior administrators at the University of Nebraska in the late 1990s. At their urging I met with Dr. Alan Seagren to learn more about the higher education leadership program. He explained that the program would not only teach me to become a researcher but would prepare me to be a senior administrator in this new foreign world of higher education administration. With his counsel I entered the program. The program did indeed bridge theory with practice and there was a symbiotic relationship between my

coursework and job experiences. At times during the past ten years the lines became blurred between academic exercises and real world experiences, each benefiting from the other and transforming me into a more effective higher education administrator and researcher. The coursework for the program was interesting, fun, and applicable; however, I struggled to find a topic for my dissertation. Dr. Seagren always stressed the applicability of the program to real world application. I wanted to find a topic that would not only demonstrate my mastery of the research tools, but one which was timely and would have a meaningful impact within higher education. After several attempts I settled on the topic in this dissertation. The topic revealed my metamorphosis from a corporate finance person who solely looked at numbers to a higher education administrator who has become aware of the impact of numbers or dollars on students and their life choices. Access to higher education was never on my radar prior to entering higher education as a career. This study provided an important foundation for research into access issues related to pricing via differential tuition by undergraduate program or major.

I have benefited from working with each of the members of my program committee and wish to thank them for their part in this accomplishment. The teaching of higher education law from Dr. Don Uerling greatly added to the work I did with contractual issues at three universities. Dr. Les Digman helped to provide my base understanding of management science as an undergraduate and has again been involved in my education as a member of this committee. Dr. Ron Joekel and Dr. Seagren were not only instructors who added to my knowledge, but became guides and mentors to me over the past ten years. They kept my program on track, but more importantly became trusted

advisors who were interested in my career and provided valuable input when necessary. I would not have completed this program without their assistance in both the academic and professional arenas.

I am also grateful to the assistance provided by Tiffany Corbett, Cindy Deryke, and Elizabeth Dickenson. Tiffany provided assistance collecting data and transcribing interviews. Cindy helped guide me through the program throughout the years and provided assistance in assembling and preparing this document. Elizabeth served as my editor, providing a sounding board when thinking about the data, encouragement when the task seemed daunting, and valuable feedback in the writing of this dissertation.

As this chapter closes on my academic career I am not sure what is next, but I am confident that completion of the program has positioned me to be a competent researcher and more effective higher education leader.

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CHAPTER I

STATEMENT OF THE PROBLEM

For well over a century, the American higher education system has set the world standard for academic excellence and equitable access for all citizens. The Morrill Act of 1862, which created the land grant university, guarantees that all citizens who can profit from higher education will have access to it. Today, however, there are signs that this far-sighted social contract may soon be broken. (Rand Corporation & Council for Aid to Education, 1997)

This chapter provides a description of the problem created by the advent of differential tuition by undergraduate major, the purpose for this study, the associated research questions, and the significance of the research. Key definitions are provided and delimitations and limitations are identified along with assumptions and biases.

The Problem

The Morrill Act, establishing land grant institutions, set the expectation of public higher education as a public good to which all citizens should have access. Prior to the 1970s, public university tuition policy in the United States generally reflected this expectation, with the majority of the cost of instruction provided by state funding (Toutkoushian, 2001). Tuition consisted of one rate for all students regardless of major or class rank. Thus, a student was limited in the selection of his/her undergraduate major or field of study by his/her academic achievement, aspirations, family background, and college experience rather than economic considerations (Center for Studies, 2005; St. John & Asker, 2001).

Fiscal pressures on public institutions caused by a combination of declining state support and continued increases in costs, caused administrators to push for tuition

increases in excess of inflation and search for new revenue streams to replace the lost state support (Mumper, 2001; Paulsen, 2001; Rand Corporation & Council for Aid to Education, 1997; Toutkoushian, 2001; Yanikoski & Wilson, 1984).

A new revenue stream was created using tuition differentials. Prior to 1970, tuition differentials were primarily found in non-resident versus resident rates and for professional programs such as medicine and law (Center for Studies, 2005). The tuition landscape changed between 1970 and 2007 to include additional types of tuition differentials, such as degree objective (graduate versus undergraduate). Although there was a difference in the cost of delivery for graduate students compared to undergraduate students, most institutions prior to 1970 charged the same tuition rate for graduate and undergraduate courses. During the 1970s, differential pricing based upon degree objective resulted in graduate tuition rates exceeding undergraduate rates (Saupe & Stephens, 1974; Yanikoski & Wilson, 1984).

The advent of Responsibility Centered Budgeting (Whalen, 1991) and cost-based models such as the Florida Bank in the 1990s gave more credence to the concept of linking revenues (tuition) and costs. Some argued a uniform tuition level is a fair methodology for spreading costs of the institution equally over all students (Southern Regional Education Board, 1976). Yanikoski and Wilson (1984) and Weinberg (1977) disagreed and put forth compelling arguments that a uniform tuition policy was not a fair methodology for spreading higher education costs to students. They asserted students in low cost areas of study were subsidizing the students in high cost areas. This position was supported by campus budgeting exercises, similar to the costing exercises completed by

companies in the for-profit business sector, which identified various costs of the institution by college, department, center, or component. The costs identified by college, department, center or component were compared to the revenues generated by college, department, center or component.

Within this backdrop of declining state fiscal support, rising institutional costs, and a search for new sources of revenue, a new form of differential tuition was considered in the pricing of undergraduate higher education, *the varying of tuition rates by major or field of study* (Center for Studies, 2005). The University of Nebraska's plan to charge engineering students a premium of \$40 per credit hour in the fall of 2007 and the University of Wisconsin's plan to charge business majors a \$500 per semester premium in the fall of 2007 were two such examples (Glater, 2007). The Arizona Board of Regents (Arizona State Board, 2007) and the University of Wisconsin Regents (University of Wisconsin, 2007) had both prepared guidelines and policies regarding the implementation of undergraduate differential tuition by program or major in 2007.

Although the University of Illinois at Urbana-Champaign and the University of Colorado had been charging differentials by undergraduate major for over 10 years and 20 years respectively, this type of differential did not appear to be widespread. The University of Illinois eliminated its upper and lower division tuition differentials in 1994 and replaced this type of differential with a differential for engineering majors (Sutusky, 1992). In 2007, a resident undergraduate at the University of Illinois pursuing a business, chemistry or engineering degree paid 34% (\$3,400) more per year than the same resident undergraduate student studying political science (Paying by the Program, 2007).

During the 1990s and the first 7 years of the 21st century, concern for access to higher education had increasingly become a topic of discussion by governing boards, legislators, and researchers. On a national education policy level, *Breaking the Social Contract* (Rand Corporation, 1997) and the recently released *Spelling Commission Report* (U.S. Department of Education, 2006) both highlighted access as a key concern. In addition, both reports cited the potential for higher education to “price out” a progressively larger segment of the population. The relationship between price and perceived cost of attendance acting as a barrier to entry for some students and as a factor in institutional selection for others had been well documented (Behrman, Kletzer, McPherson, & Morton, 1992; Black & Sufi, 2002; Hilmer, 1998; Humphrey, 2000; Perna, Steele, Woda, & Hibbert, 2004). A review of the literature presented in Chapter II of this study highlighted the lack of research examining student choice of undergraduate major based upon tuition differentials by undergraduate major within an institution. This assertion was supported by Ward and Douglass’ observation, “We know relatively little regarding how changing fee (tuition) patterns among and within public universities will affect student choices” (Center for Studies, 2005).

The concept of justifying a higher differential tuition for specific undergraduate majors because of the student’s future earnings capacity might have been a market driven solution to a business problem, but did it limit access to a post-secondary public education and provide another example of the breaking of the social contract described in the opening quote? To answer this question, research was needed to identify the number of institutions using undergraduate differential tuition by program or major and whether

the existence of differential tuition by program or major impacted the field of study and/or vocational choice of students in general, and specifically that of lower socioeconomic status (SES) students.

Purpose Statement

The purpose of the study was to examine tuition at 165 public research universities, specific to differential tuition by resident undergraduate program or major to determine:

1. the emergence and prevalence of this type of differential tuition,
2. the programs or majors for which differential tuition existed and the amount of the differential,
3. the reasons for implementation of differential tuition, and
4. the impacts of the adoption and implementation of differential tuition as identified by chief business officers.

Research Questions

1. For public research institutions which used or considered using differential tuition by undergraduate program or major:
 - a. How many institutions used or considered using differential tuition by undergraduate program or major?
 - b. Which institutions had implemented differential tuition?
 - c. When was differential tuition by undergraduate program or major implemented at the institutions which had differential tuition?
 - 1) What were the reasons for implementing differential tuition?

- d. When was differential tuition by undergraduate program or major considered by a governing board but not implemented?
 - 1) What were the reasons for governing boards electing not to implement differential tuition?
2. For those institutions which had undergraduate tuition differentials by program or major:
 - a. Which programs or majors had differentials?
 - b. What was the amount of the differential in dollars and percentage of undergraduate resident tuition?
 - c. What changes were anticipated to the differential tuition policy?
3. What were the impacts of the implementation of differential tuition?
4. How were the increased revenues from differential tuition used?

Definitions

Differential Tuition

Differential tuition was defined as the purposeful variation in the published undergraduate tuition rates by course, major or program of study. The study did not distinguish between differentials that were charged to upperclassmen (i.e., juniors and seniors) versus differentials that were charged to all levels of class standing within a given major or program. Any differential based upon course (that is not a course fee), major or program was classified as an occurrence of differential tuition for this study. Differential tuition was a form of price discrimination, different rates for the same

services (i.e., baccalaureate degree from State University) charged to different students (Weinberg, 1977).

Sticker Price

Sticker price referred to the university's published tuition rate. This was the amount a student would pay in the absence of financial aid, grants, scholarships, or waivers.

Pricing, Tuition

Pricing and tuition were used interchangeably and referred to the resident undergraduate published sticker price per credit hour, term, or year, **not discounted** for waivers, grants, scholarships, financial aid, or other awards.

Public Research Institutions

This study examined public universities with Carnegie Classification of: Doctoral/Research – Extensive and Doctoral/Research – Intensive categories 15 and 16. These 165 universities were comprised of the public flagship institutions as well as additional institutions that met the Carnegie Classifications.

Course Fees

Course fees are fees that were course specific, identified to cover course materials, and not specifically tied to a major or program. Examples of a course fee were a lab fee for a chemistry course or a materials fee for an art course. A course fee was not considered a component of differential tuition for this study

Undergraduate Program or Major

Undergraduate program or major was defined as a collection of courses for which differential tuition had been identified by an institution. It might have been a specific major field of study, or a program within a college or university, or all of the courses within a given college, such as the school of business.

Amount

The amount was defined as the difference in the tuition rate in dollars between an undergraduate program or major with differential tuition and one without a differential in tuition for a resident student.

Percentage Difference

The percentage difference was calculated by dividing the resident undergraduate tuition rate, per term or credit hour, for a program or major with differential tuition by the resident undergraduate tuition rate which did not have a tuition differential.

Impact

The impact of implementation of differential tuition was defined as the perceived impacts of differential tuition on the campus community as experienced and described by the chief business officers who completed the survey instrument.

Delimitations, Limitations, Assumptions, and Biases

Delimitations of the study

This scope of this study was framed within the following delimitations:

1. The study involved the 165 public research institutions identified in Appendix A and was not representative of the tuition practices at other universities or sectors of higher education.
2. The targeted respondents to the survey were the chief business officers (CBO) of each institution and the perceptions of the impacts of differential tuition were from the CBO perspective.
3. The impact of differential tuition on students from a student perspective was not examined in this study.
4. The study measured tuition differentials based upon sticker price rather than the net cost to the student after financial aid.
5. The study made no distinction between differential tuition applied only to upperclassmen versus differentials that had been applied to all students in a program regardless of class standing.

Limitations of the study

Limitations are factors which may affect the study but are not under the control of the researcher (Mauch & Birch, 1998). There were 95 completed responses to the survey instrument, representing 59% of the study population. Respondents from 31 institutions self-reported having differential tuition by program or major. These institutions represented 42% of the 74 public research institutions with differential tuition by undergraduate program. The 43 institutions which had differential tuition by undergraduate program but did not self-report or complete the survey were not represented in the data for research questions 2c, 3 or 4. Data were available from 24 of

the 43 institutions to provide support for the answer to research question 1c. Data were available for these 43 institutions from their websites to support research questions 1a, 1b, 2a, and 2b. Of the 67 non-respondents to the survey 35 did not have differential tuition by undergraduate program or major and information from their institution was not in the data supporting research questions 1d and 3.

The sample size for the survey questions supporting research question 3 were between 21 and 31 respondents or 28% to 42% of the population of institutions with differential tuition by undergraduate program or major. Two of the follow-up questions in the telephone interviews involved only two or three respondents and may have limited the ability to generalize the conclusion to the population. Where this occurs it is noted in Chapter IV.

The experience of the respondents may have caused limitations to the data. The respondent may have lacked of direct knowledge of impacts related to the implementation. A CBO may have delegated the survey to a subordinate, the subordinate might have been knowledgeable in the descriptive data but not aware of the implications of the differential. For this study, 47% respondents were the chief business officer or an equivalent executive and 16% of the respondents had titles below the rank of director.

Assumptions

Based upon recent articles and the experiences of the researcher as a higher education administrator, differential tuition by undergraduate program or major was assumed to exist at some research university institutions, was not widespread, but had

been increasingly used during the past several years. Another assumption was low socioeconomic status students might have been adversely impacted by differential tuition.

Biases

The researcher believed the study to be free of biases and offered the following disclosures. The researcher began the study with the belief that differential tuition by undergraduate major or program was in existence at a number of public universities, but was unaware of the extent of the use of differential tuition. The Oregon State Board of Higher Education was currently debating the use of differential tuition by undergraduate major or program as an ancillary topic to their discussion of eliminating programmatic resource fees. The researcher was a senior administrator with the Oregon University System.

Significance of the Study

Prior to researching the impact of differential tuition by undergraduate major or program on low SES students and student choice of major, the research community needs to understand which institutions use this type of differential tuition, the majors or programs where the differentials are found, and the amount of the differential. The literature review in Chapter II highlighted the relevant literature on this topic and identified the lack of research on differential tuition by undergraduate major or program.

During the search for information, senior individuals in the research departments at the National Association of College and University Business Officers (NACUBO), the College Board, and the National Association of State and Land Grant Universities and Colleges (NASLGUC) were contacted. The researchers at all three organizations

expressed an interest in understanding the issue of differential tuition by undergraduate major and commented on the lack of data and published research available on the topic (J. Shedd, personal communication, July 18, 2007; C. Daulton, personal communication, May 23, 2007; W. Delatter, personal communication, May 23, 2007; D. Chow, personal communication, October 26, 2007; and S. Bernstein, personal communication, October 26, 2007). Dr. Jay Kenton, NACUBO Board member, identified the study of differential tuition as one of his top three priorities for NACUBO research in 2008 (J. Kenton, personal communication, July 10, 2007).

The results of this study established a baseline picture of undergraduate differential tuition by program within public research universities in the 2007-08 academic year. The research identified which public research institutions had differentials, the programs which had differentials, the amount of the differential in dollars and percentage of base resident undergraduate tuition, and why differential tuition was adopted and implemented. The research also identified impacts related to the implementation of differential tuition and established a platform to launch further studies and research.

Organization of the Study

In Chapter I an overview of the study is presented by describing the change in tuition structure from the 1960s to today. The adoption and implementation of differential tuition by undergraduate program or major was one of the changes in tuition structure. The purpose of the study, the research questions, limitations of the study, and the significance of the study are presented in Chapter I.

In Chapter II a review of the literature related to differential tuition by undergraduate major or program is presented. The literature review identified and described research focused on the financial aspect and practical application of differential tuition, as well as the economic theory and social impacts of this pricing methodology. The literature review identified the lack of research specific to differential tuition by undergraduate program or major and the need for this study.

The rationale for selection of the mixed method research methodology used to gather data to answer the research questions is presented in Chapter III. The three methods used to gather data for the study, the survey instrument, web-based research, and the telephone interview are described.

The data collected for the study and the analysis of the data are presented in Chapter IV. The data from the three methods are presented for each of the research questions. In Chapter V, an overview of the dissertation, summary of findings, conclusion, and recommendations for future research are presented.

Summary

Tuition, a rate that was once uniform in many universities, became a complex and sometimes elusive price paid by students depending on numerous factors. The rate of tuition within a given institution may have varied by class standing, graduate or undergraduate status, residency, type of professional program, time of class offering, and more recently by undergraduate major or program. Depending on one's perspective, tuition was seen as a source of revenue for an institution or as a cost a student must incur

to receive an education. From the student perspective, Mumper found the level of tuition impacted access to higher education (Mumper, 1996).

This study identified the number of public research institutions which had implemented differential tuition by undergraduate program, the fields of study for which differential tuition existed, the amount of the differential in dollars and percentage of the base resident undergraduate tuition rate, and the reasons for adoption and implementation of the differential. The study serves as a base for further research of issues involving differential tuition by undergraduate major or program, which may include exploring the impact of differential tuition on low socioeconomic status students.

CHAPTER II

LITERATURE REVIEW

As long as demand for higher education remains inelastic with respect to price, differential tuition pricing may be an effective device for raising additional revenue for colleges and universities. However, it may not be suitable for middle-income parents who may want to send their children to high priced , high quality schools. (Weinberg, 1978, p.10).

The writer in the *New York Times* some 30 years ago identified the horns of the dilemma faced by public university administrators when they considered adopting differential tuition. Implementation of differential tuition may have raised additional revenues, but it may also have impacted access for certain segments of students. A review of the literature on this topic yielded research that focused on defining the types of differential tuition and the practical application of differential tuition, as well as the economic theory and social impacts of this pricing decision.

The social science databases were searched using key words such as ‘tuition’, ‘differential tuition’, ‘tuition rates’, ‘tuition policies’, ‘student selection’, and ‘student choice’ to identify relevant literature on differential tuition. Despite the importance of tuition as the primary driver of price in the higher education market, only a limited amount of research on differential tuition was found with very few articles or studies published in recent years. However, three divisions were identified from the research that was found: structural, economic influence, and description of the landscape. The structural category encompassed articles focused on describing the various forms of differential tuition and their application. The economic influence category included research concerning economic theory as it related to differential tuition and the social

impacts that resulted from differential tuition. The description of the landscape category identified research that contained descriptive statistics and information describing the use of differential tuition by institutions.

In this chapter, the literature is reviewed within one of the three categories. The first section of the literature review focuses on the articles in the structural category. These articles aptly described the various forms of differential tuition and provided an historical context to the evolution of the forms of differential tuition. In the second section of the chapter the research as it relates to the economic influences of differential tuition is described. In the third section, the research which described the differential tuition landscape as it related to undergraduate major or program is identified and discussed. The chapter concludes with a summary of the lack of literature related to differential tuition by undergraduate program or major and of how this study added to the body of work.

Structural

Within the realm of identification and discussion of the various forms of differential tuition at the public university level, Yanikoski and Wilson (1984) offered a comprehensive overview of the forms of differential tuition that were prevalent when they reviewed the landscape in 1984. They identified action, by a number of institutions, to institute some form of tuition differentials in response to economic pressures of the late 1970s and early 1980s. The descriptors of the types of differential tuition were still appropriate for today. The primary forms of tuition differentials identified in the literature were comprised of: (a) Resident/Non-resident, (b) Graduate/ Undergraduate, (c) Peak

Load, (d) Upper Division/Lower Division, (e) Class Standing, and (f) Types of Institutions Within a System. Absent from this list was a tuition differential by undergraduate major or program. Perhaps more telling was the lack of recent literature or research focused on identifying the various types of tuition structures used by higher education in recent years. Figure 1 depicts the research literature within the structural category. A discussion of the research articles depicted in Figure 1 follows.

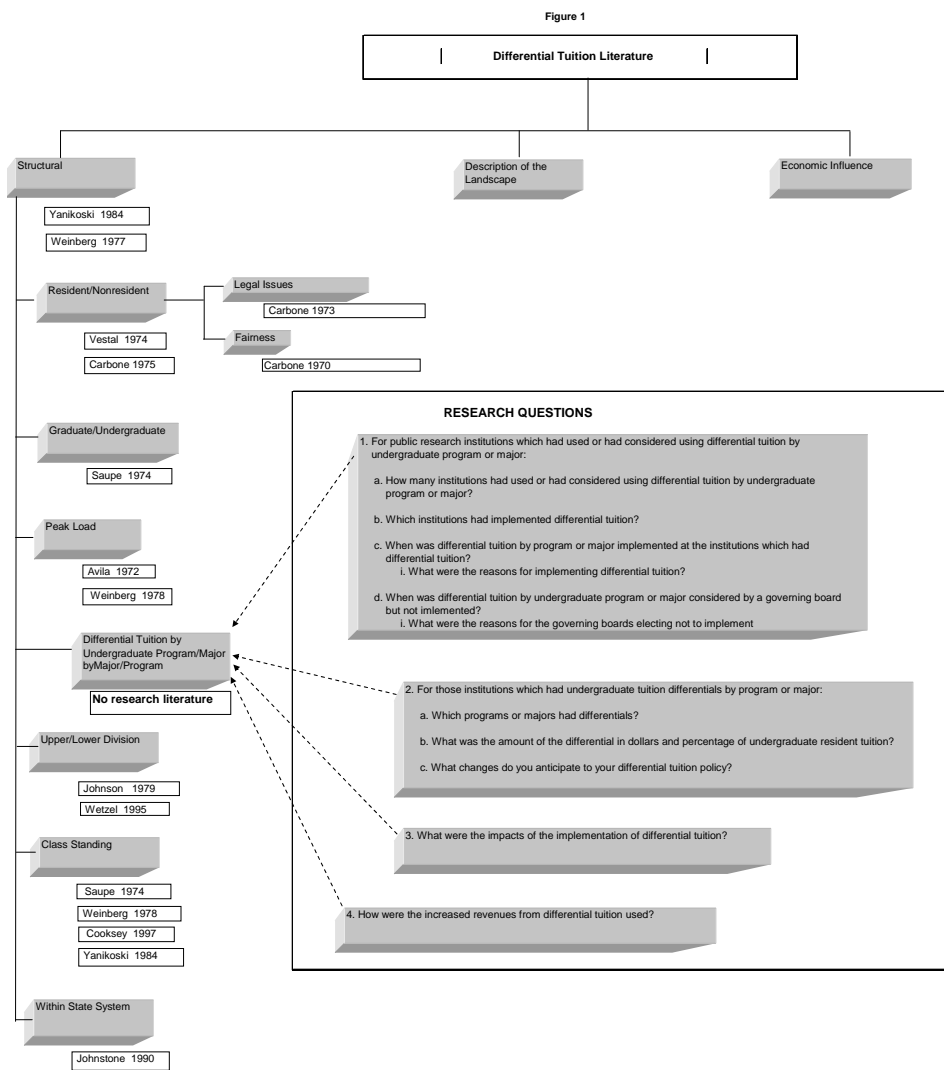


Figure 1. Differential tuition literature, structural.

Resident/Non-resident

One of the earliest forms of tuition differentials, a premium charged to non-residents compared to residents, was easy to justify from a fiscal perspective. States subsidized the cost of undergraduate education for their residents; therefore, it made fiscal sense to recover this cost from the non-resident student (Mumper, 2001; Southern Regional Education Board, 1976).

Carbone and Jenson (1971) conducted a survey of 117 state and land grant universities to determine the extent of tuition differentials based upon state of residency, whether these differentials were used to limit access to a group of students, and how widespread the application of non-resident tuition was. The results of the survey identified widespread implementation of tuition differentials based upon residency and the difference in tuition between residents and non-residents was substantial in all parts of the country.

Despite the widespread use of differentials for non-resident students and the apparent fiscal logic of this differential, several articles appeared in the 1970s which questioned the appropriateness charging non-resident students a higher tuition (Carbone, 1970, 1973; Vestal, 1974). The issues concerning resident versus non-resident tuition were not only focused on the legality of charging non-residents higher tuition and the concept of fairness, but also on the rules and regulations for classifying students as non-residents. Vestal (1974) identified five questions when he examined and discussed the rules and law for classifying students by residency:

1. Is it constitutionally permissible for a state to charge higher tuition for non-residents than residents?
2. Can a state have an arbitrary period of non-residency?
3. What of a provision that a student can obtain residency classification only by becoming a non-student for a period of time?
4. What of a provision that a student, once classified as a non-resident, can never gain residency classification?
5. Assuming a state can classify according to residency what factors can be considered in making that decision?

The judicial system ultimately upheld the state's right to impose different rates of tuition for non-resident students and upheld the state's ability to establish criteria for the determination of residency status (Carbone, 1973). The issue of fairness or equity was addressed in an earlier article. Carbone stated, "There is a lack of evenness in the criteria for classifying students. This variance is so great that a student coming into a state may be classified as a non-resident student in one college and a resident in another" (Carbone, 1973, p. 22). His report recommended public colleges and universities within any given state reach one common accord covering the definition of a non-resident student and develop standard operating procedures for their classification. In addition, the article noted a lack of reciprocity programs between states for the waiving of non-resident status.

Graduate/Undergraduate

In the early 1970s, a tuition premium for graduate studies was not a widespread practice (Saupe & Stephens, 1974; Southern Regional Education Board, 1976).

The traditional and predominate basis for assessing student tuition and fees at public colleges and universities involve a standard rate for all students who enroll for some minimum number of credits hours with graduated rates for students enrolling for smaller credit loads, but no increase in rate for students enrolling for more than the minimum number of credit hours and no differential by student level (graduate/undergraduate). (Saupe & Stephens, 1974, p. 3)

Saupe and Stephen's study (1974) found that 25% of the surveyed land grant universities charged a differential for graduate students and less than 10% charged a differential for upper division undergraduates. This early study suggested that universities were forced to consider higher tuition for graduate students because of the increased emphasis on pegging revenues to the education delivery cost per student. A 1976 study of institutions in the 14 states governed by the Southern Regional Education Board found that most of the surveyed institutions applied the same rate to both graduate and undergraduate students (Southern Regional Education Board, 1976). By 1984, the practice of charging the same rate for graduates and undergraduates had fallen by the wayside as financial pressures forced business officers and governing boards to begin seeking additional revenue. The acknowledgment of a cost differential for providing graduate and professional level degrees and charging a premium over undergraduate tuition became a standard practice (Yanikoski & Wilson, 1984).

Peak Load

Peak load differentials were implemented to utilize the university physical plant more efficiently and effectively. This type of differential ran counter to the argument that

colleges and universities need capital dollars to expand their physical plant to serve more students. The theory supporting this differential assumed the existence of excess physical capacity on campus outside a narrow corridor between 8:30 am and 3:30 pm. With this differential, the hours of course delivery were expanded so that more students were served. With the additional course times, it was possible to drive demand away from peak times through a premium tuition rate charged for courses offered within peak hours. The result was a greater utilization of the physical plant, more revenue per student, and a savings of capital dollars by not constructing new buildings based upon peak loads (Avila, 1972; Weinberg, 1978). Literature which described the number of institutions applying this type of differential was not found.

Upper Division/ Lower Division

An analysis of the relationship between instructional costs and differential tuition from a policy perspective looking at public institutions within the state of Washington yielded the observation that if tuition rates were set on the basis of cost of instruction, lower division students would pay a lower rate than upper division students (Johnson, 1979). Based upon this model, Johnson postulated that the tuition rate for lower division students at a four year institution would have been similar to the tuition rate for community colleges within the state. If the cost of instruction was less for lower division students than for upper division students, and all students were paying the same tuition, lower division students would have produced more net income or margin for the institution. The cost to deliver instruction per student was low and these students were classified as low cost/high margin students, whereas, the upper division students were

classified as high cost/low margin students. While this methodology from Johnson (1979) presented a fairness argument for establishing tuition, the economic impact may have been to strip off high margin/low cost students from four year institutions, having left high cost/low margin students and fewer students to share in the fixed costs of the four year institutions. The end result would have been to drive the upper division costs even higher. A study of a pilot program at Virginia Commonwealth University (Wetzel, 1995) found that the direct enrollment impacts of an upper level tuition differential in the school of business was minor, with an offsetting indirect enrollment impact associated with a perceived quality improvement. The study was limited to one institution and did not consider the existing demand within the marketplace or if the program was at capacity.

Class Standing

The application of differential tuition based on class standing is similar to upper division/lower division differentiation. Class standing of the student (i.e., freshman, sophomore, junior, or senior) was the basis for the differential rather than the level of the course (Weinberg, 1978).

Although this type of differentiation cited by Weinberg (1978) was reported in use at the University of Michigan, University of Minnesota, and University of Washington in the early 1980s by Yanikoski and Wilson (1984), and is mentioned by Saupe and Stephens (1974), it has received little mention in recent literature.

An economic model constructed by Cooksey (1997) examined the revenue impact of increasing tuition by class standing versus an overall tuition increase. As a student progresses toward the degree objective, the price elasticity becomes greater, and the

students at higher class standings will be more willing to absorb tuition increases. By introducing greater tuition increases to upperclassmen, schools may be able to keep the freshman level tuition down, thereby increasing access and increasing enrollments.

Successful implementation of this strategy would allow a school to increase revenue at a greater rate than would be achievable by an across the board increase (Cooksey, 1997).

Types of Institutions Within a System

Tuition at the State University of New York's 29 State operated campuses (i.e., excluding only the 30 community colleges and 5 statutory colleges of Cornell and Alfred Universities) must, by State Education law, be the same for all New York residents "pursuing like degrees. (Johnstone, 1990, p. 7)

Policies or state laws such as the one cited above for New York did not recognize the potential difference in cost of instruction or cost drivers unique to a given campus.

The debate to differentiate tuition by campus in New York in the early 1990s led to several articles which discussed the pros and cons of this issue. Not all states had a unified tuition policy such as New York's. Differentials between various institutions within a state system were used by some states to manage enrollments having made some campuses more attractive based upon cost. Other state systems recognized the cost differences that are unique to some campuses within their system, such as a research university, and varied tuition based upon the cost of instruction.

Structural Summary

Although a review of the literature revealed the existence of "traditional" tuition differentials for summer school, part-time students, continuing education, on campus versus off campus instruction, distance versus on-line instruction (Weinberg, 1977), there was little to no research specifically focused on these types of differentials. A void

existed in the literature on the practice of applying differentials by undergraduate major or program. Both Yanikoski and Wilson (1984) and Weinberg (1978) cited tuition by undergraduate major or program as a potential form of differential, but neither pursued it with substantive research.

The current study provided a definition of differential tuition by undergraduate program, identified the number of public research universities that used this type of differential, identified the academic programs that used this type of differential and then identified the range of the differential in terms of dollars and percent of resident undergraduate tuition. The results of the study filled a void identified in the literature review.

Economic Influence

The majority of literature on differential tuition was focused under the broad category of economic influences. Within this category, the literature was subdivided into sub-categories: mechanical and social. The mechanical sub-category consisted of literature focused on the economic theory for creating, setting, and adopting differential tuition. The social sub-category consisted of literature focused on the economic theory of human capital and the interrelationship between tuition, market forces, and individual choice. Figure 2 depicts the literature and groupings within the economic influences category. A mapping and discussion of the literature from each grouping and sub-grouping identified the interrelationship of differential tuition and its impact on students. In addition, this exercise identified a void in the literature describing the impact of differential tuition by undergraduate major or program on student choice.

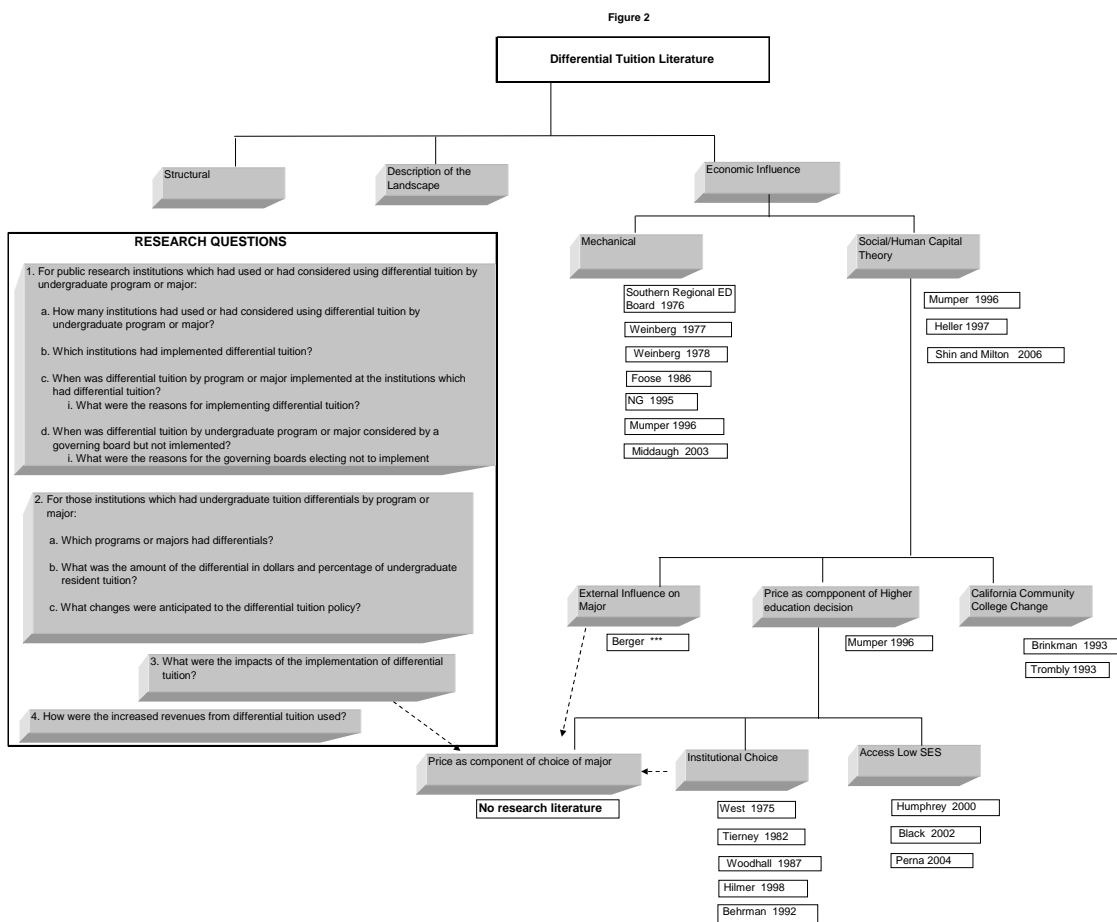


Figure 2. Differential tuition literature, economic influence.

Mechanical

The research in the 1970s and 1980s focused on economic theory as it related to differential tuition and raised the question of measuring the elasticity of demand for higher education and potentially exploiting this demand curve to maximize revenue generation. Economists studying tuition rates focused their early studies on the elasticity of demand with respect to price (tuition). The Southern Regional Education Board (1976) reported that state policy makers were increasingly looking at tuition and how it was

being set in the wake of decreased funding from limited state budgets. The Board discussed a new phenomenon of pegging tuition to a set percentage of the cost of instruction.

In response to rising costs, Weinberg (1977, 1978) looked at a number of ways to finance higher education. His discussion of price discrimination, an economic term for differential tuition, as a means to increase revenue was academic in nature and he concluded that tuition differentials would only work if there were other sources of aid for middle and lower income students to meet the higher costs created by differentials. He discussed the possibility of charging different rates for the same services to different classes of students. Rates could be differentiated by class rank, upper/lower division, peak times, department or college within a university, and part-time versus full-time enrollment. He also discussed a two-tier system with a base rate coupled to a 20 year repayment mechanism to generate future revenues. To maximize revenue through the use of price discrimination an institution needed the following three factors:

1. It must be able to segment the market,
2. the price elasticity of demand must be below unity, and
3. implementation must be reasonable and easily attained.

Weinberg (1977, 1978) concluded that the first two parameters could be met easily, but the third would be very difficult to overcome. A logical extension of using the cost of instruction as the basis for setting tuition would be to extend this algorithm to individual colleges, programs, or courses. The implementation of this level of application would

have been extremely difficult, and might have been be a deciding factor to forego implementing a tuition differential by major or program.

The research effort then shifted to understanding the role of tuition as it related to both cost and the net price paid by students. This led researchers down the path of tuition discounting or rebating. The practice of discounting, commonplace in the private institutions, operated on the premise that the demand for higher education in general and at specific institutions is inelastic with respect to price. Economic theory with respect to price and demand suggests that it is possible to set the price at a point that will maximize revenues while still providing enough aid or “discount” to lower income students so as not to hinder access. This practice was in effect a form of differential tuition based on an ability to pay (Foose & Meyerson, 1986).

Tuition setting based upon cost of instruction evolved into to a more revenue based approach which tried to balance the goal of maximizing revenue, without limiting access, but still covered the cost of education. Within this framework four reasons were suggested for schools to adopt differential pricing;

1. It is a form of price discrimination and when demand is inelastic gross revenue will increase.
2. Differential pricing is more equitable as it will allow access for low socioeconomic status students.
3. Differential pricing is considered another form of progressive taxation.
4. Differential pricing is a form of self help.

The combination of these reasons seeks to balance the need for revenue and the desire for access (Weinberg, 1977).

In the last quarter of the 21st century universities experienced students shifting from low cost to higher cost majors (Mumper, 1996). Mumper reported that the student shifts did not happen in the concert with accompanying *pro rata* tuition increases, thus institutions were faced with greater costs on the same revenue. Since all students paid the same level of tuition, these shifts in student demand presented colleges with higher costs without generating additional tuition revenues. This student shift in selection of majors caused some institutions to look beyond economic theory and to begin implementing forms of differential tuition other than the traditional graduate/undergraduate and resident/non- resident differentials. The decision to implement differential tuition was primarily based upon fiscal factors rather than desired academic outcomes and policy (Ng & Wong, 1995). The Open Learning Institute of Hong Kong implemented a differential fee policy that identified fiscal and academic objectives (Ng & Wong, 1995). The implementation was successful and the institution was able to meet both objectives. The administration employed economic analysis to determine the price elasticity of upper division courses and set two levels of fees based upon the analysis. The Institute subsequently experienced both revenue and enrollment increases. The decision to implement was primarily a cost-based decision rather than an educational policy decision, but it did meet both objectives.

The early literature examining the economic aspects of differential tuition was focused on economic theory relative to price and cost, and the fiscal decisions associated

with implementation. The economic theory is clear, but the practice of identifying the true cost of delivery and subsequently basing tuition on this cost, has been more elusive. Three decades after the effort to tie tuition to instructional cost began, the National Center for Educational Statistics determined that cost and price are not interchangeable constructs, and a strong relationship between them has not been found (Middaugh, Graham, & Shahid, 2003).

Social Factors

While the Open Learning Institute of Hong Kong was an example of successfully implementing differential tuition in response to an economic model, other researchers began to expand the economic analysis beyond the demand function and mechanics of maximizing revenue from an inelastic source, to application of the human capital theory of economics as introduced by Becker (1962). The theory postulates that when facing a college enrollment choice, students will respond rationally in a way that will maximize their return, comparing the cost of their education to the future monetary benefits they will accrue (Shin & Milton, 2006). The bulk of research during the last 15 years encompassing differential tuition has involved various themes growing out of the human capital theory and the impact of tuition and price as a determinant of student choice and actions.

Tuition and Price as Determinants

Leslie and Brinkman completed a meta analysis of 25 articles published between 1962 and 1982, and reported on the negative correlation between tuition and enrollments within higher education (Heller, 1997). Heller updated the Leslie and Brinkman review in

1997, asking if the findings were applicable to students in 1997 and if additional information had been uncovered. His conclusion was a resounding affirmation of the findings of previous literature, “as the price of college goes up, enrollment tends to go down” (Heller, 1997, p. 649). He found that enrollments were subject to tuition sensitivity and financial aid sensitivity. The literature also indicated price and financial aid sensitivity varied by income groups, races, and higher education sectors. These studies supported the human capital theory and the conclusion reached by Mumper:

Net price is not only related to whether students will go to school, it is related to where they will go to school. As net prices rise, the enrollment of lower income students tends to shift to less expensive colleges. (Mumper, 1996, p. 195)

West (1975), 20 years earlier in 1975, shared a statement similar to Mumper’s conclusion. He indicated that most national and state-wide studies gave prominence to tuition differential when students chose their college or university. The case for a linkage between price and institutional choice has been made by several researchers (Behrman et al., 1992; Hilmer, 1998; Tierney, 1980). Tierney (1980) focused on the relationship between the net price of tuition and attendance at post-secondary institutions, while Hilmer (1998) and Behrman et al. (1992) developed models measuring the influence of tuition on student choice of attendance.

A further bifurcation of the research into the human capital theory category focused on the impact of tuition or price on potential enrollment of low socioeconomic status and minority students (Black & Sufi, 2002; Humphrey, 2000; Perna et al., 2004). Heller (1997) identified these segments of students as being more price sensitive than the general student body. In addition, a barrier to entry into higher education or certain

institutions is created by an apparent lack of understanding by the student or their family of how financial aid works and the true net cost of college as compared to the list price.

Shin and Milton (2006) stated that tuition alone was not a sole determinate, but a factor within a complex economic system, of a student's choice to enroll in college, at which college, or not to attend a post-secondary institution. They developed a model which identified economic factors such as the level of tuition, unemployment, and competition from other schools within the sector. Different students are more sensitive to high ranges of tuition than low ranges. Once making the decision to enroll in college, students are more sensitive to relative levels of tuition than absolute levels.

The action or reaction of students to price was not only an American phenomenon. When Britain, Australia, and Canada moved to full costing of higher education for foreign students, a student shift to France and Germany occurred, where there was no cost differential. Recovery to prior patterns did not occur until targeted scholarships or funds were in place (Woodhall, 1987).

Other examples of tuition driving student behavior included the decision of the California Community College System to charge a higher tuition rate to those who already possessed a bachelor degree. This policy change resulted in a 50% drop in attendance by this segment of students, a 9% overall decrease in enrollment, and supported the linkage between price and attendance. In addition, the literature documenting this case examined the issue of access and the role price played in limiting access (Brinkman, 1993; Trombley, 1993).

External Influence on Choice of Major

The human capital theory suggested that rational individuals may have chosen their major based upon perceived economic returns on their investment. Berger (1992) examined the private returns of specific college majors and the role it may have played in these choices. His findings identified engineering majors as those with the highest starting salaries, followed by business and sciences majors in the middle, and with liberal arts at the low end of the spectrum. Although starting with high salaries, the rate of increase in wages for engineering graduates was much smaller than those in the other fields. Over a 15-year period the gap in earnings was closed for all groups except the liberal arts majors, but the remaining gap between engineering and liberal arts majors was much smaller than at the start of their respective careers (Berger, 1992). This analysis weakened the argument of proponents of differential tuition who based their reasoning on the student's future potential to support a larger debt load.

Economic Influence Summary

The research on human capital theory was clear and consistent in regard to price impacting:

1. lower SES students to a greater degree than the general population,
2. the decision of some students to attend a post-secondary institution, and
3. what level of post-secondary school a student may have been channeled to or chosen.

These findings suggested a potential unintended consequence from the policy of achieving increased revenues through the introduction of differential tuition by

undergraduate program or major. An extension of the three findings in the above summary to situations of differential tuition by program, suggested that lower SES students or minority students may have been inadvertently steered away from potentially high paying fields. No published studies which examine this connection were found.

This study identified conflicting perceptions by administrators regarding the impact of differential tuition by undergraduate program on access and choice issues for low SES students. The study generated data to support further examination of the impact of differential tuition by undergraduate program on low SES students.

Survey of the Landscape

The primary themes identified within the literature were centered on the application of differential tuition and the economic and social theories associated with differential tuition. A third theme characterized the extent of differential tuition in the public higher education sector. There was very little published research for this theme. The lack of research was not only for differential tuition by undergraduate program or major, but for all types of differential tuition. Yanikoski's research, of 24 years ago, identified some campuses that were involved in differential tuition by field or major, but was primarily focused on cataloging the types of differential in use or under discussion at that time (Yanikoski & Wilson, 1984). Recent surveys of tuition and fees focused on net pricing and tuition discounting (College Board, 2006; Young, Olds, & Kelley, 1996). However, a report published by WICHE in November 2007 addressed differential tuition within the western states for the first time. The summary stated:

Innovative pricing strategies such as differential tuition have been growing in popularity as institutions and states try to respond to the challenges of adequately funding a high quality post-secondary education. **For the first time**, this survey attempted to take an initial step to better understand the extent to which institutions are employing differential tuition pricing policies. (Western Interstate Commission for Higher Education, 2007)

The WICHE study identified a number of institutions in 15 western states which had used differential tuition by program.

The results from the current study identified the number of public research institutions which used differential tuition by undergraduate major nation wide and will add to the research published by WICHE to identify the prevalence of this type of tuition.

Summary

An examination of Figure 3 highlighted the absence of several key pieces of scholarly research to answer the research question(s). No current research existed identifying the descriptive statistics of differential tuition by program or major. The question of which institutions charged differential tuition, how widespread the practice was, which programs or majors were impacted, and what the magnitude of the differential was in terms of real dollars and percentage of base tuition, could not be answered from the current body of research.

Research existed explaining the relationship between tuition or price and the student decision to pursue higher education or college selection, as well as the impact price has had on the decision making process and enrollment behavior of lower SES students. Collateral research as to the impact of price on the selection of a college major or field of study was noticeably absent. The present study was designed to provide a description of the current landscape related to differential tuition by undergraduate

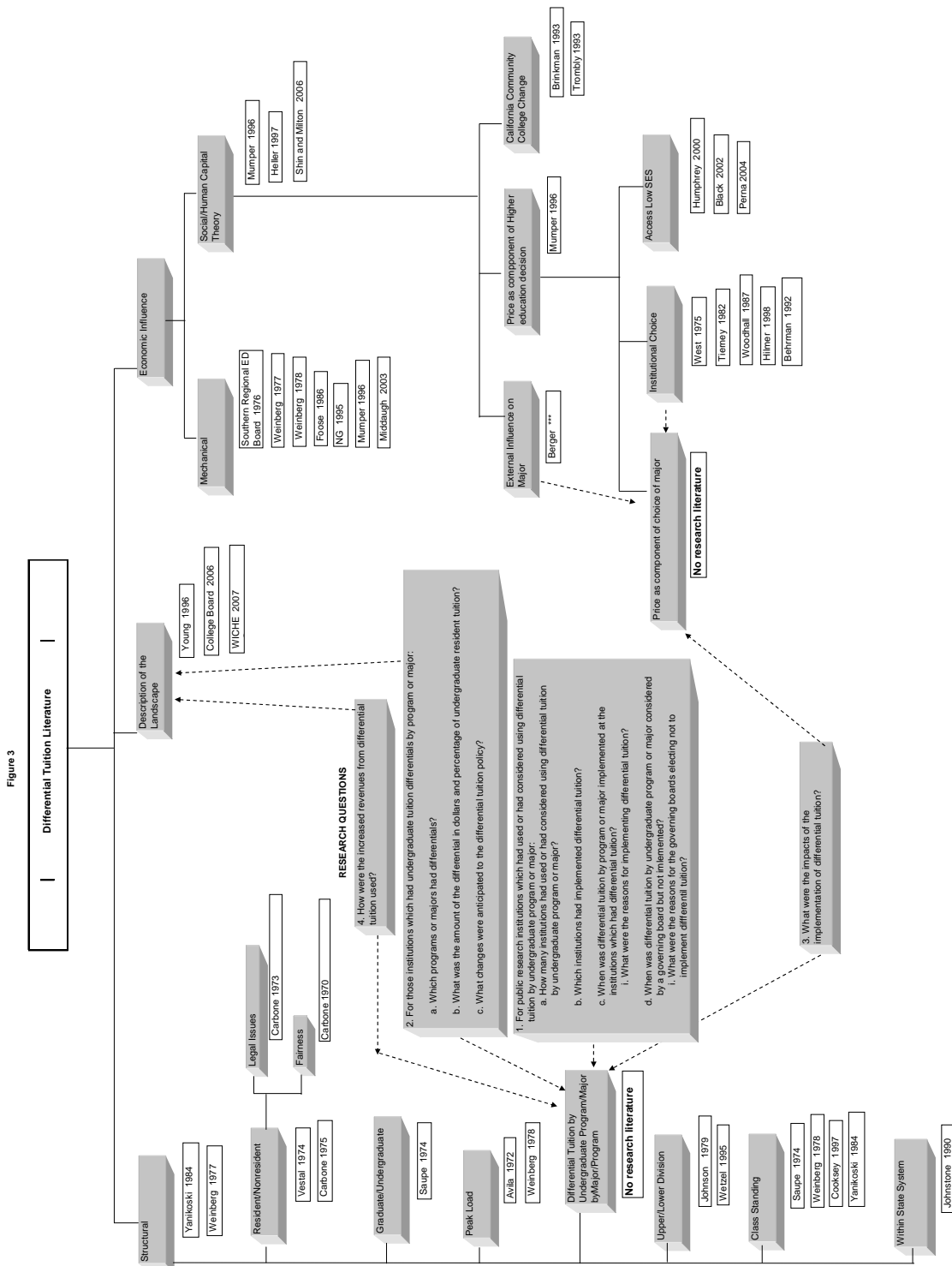


Figure 3. Differential tuition literature.

program within public higher education and the identification of issues for future research into the possible impact of differential tuition by undergraduate program on the enrollment of low SES students.

CHAPTER III

METHODOLOGY

Variable fees (tuition) at the graduate and undergraduate levels are a topic of discussion in the US and the EU as part of a larger movement towards increasing the role of fees (tuition) in the funding of public universities . . . much of the movement toward increased fees (tuition) in places such as the US and the UK are being pursued incrementally, without an adequate discussion of the long-term implications either for students or for how universities fund academic programs. (Center for Studies, 2005)

This chapter is organized by describing the need for research, the purpose of the study, and methodology or type of study chosen. The research questions are stated and a description of the study is outlined to identify how the study will provide data to answer the research questions. The development of the survey instrument and telephone interview protocol is described and the ethical considerations for this study are discussed.

Need for Research

Creswell (1998) indicated that a gap exists between those who conduct the research and practitioners in the education field. He asserted that the gap suggests the need for educational research to address timely and current problems within higher education, and identified this type of research as the pragmatic methodology. The *New York Times* highlighted new differential tuition levels and policies appearing in higher education (Paying by the Program, 2007). This article provided additional support to the reported shift by a number of programs and institutions to the adoption of differential tuition by undergraduate major or program and the lack of adequate research which addressed the long-term implications of this shift (Center for Studies, 2005). Prior to

studying the long-term implications of the tuition policy shift, an inventory of the current status of differential tuition needed to be established.

Purpose of the Study

The purpose of the study was to examine tuition at 165 public research universities, specific to differential tuition by resident undergraduate program or major to determine:

1. the emergence and prevalence of this type of differential tuition,
2. the programs for which differential tuition existed and the amount of the differential,
3. the reasons for implementation of differential tuition, and
4. impacts of the adoption and implementation as identified by chief business officers.

Type of Study

Creswell (1998) described one type of pragmatic study, the mixed-method, as the following:

In a mixed-method study the researcher uses both qualitative and quantitative methods in a single study to explore a research problem (in an educational setting). The qualitative and quantitative methods may be sequenced consecutively or concurrently, and differential weights may be applied to each segment. The purposes for combining both in a single study varies, from expanding initial, exploratory findings, to developing an instrument to measure variables. (p. 58)

When he classified dissertation categories, Bryant (2004) characterized a study that intentionally sets out to capture and describe a phenomenon as a descriptive study (p. 296).

This study was a descriptive study which described the phenomenon of differential tuition by undergraduate program or major at public research institutions. The study addressed a timely and current problem within higher education and employed a pragmatic mixed-method approach that utilized a survey instrument, web-based research, and telephone interviews. The research literature, reviewed for Chapter II, did not find studies which gave a comprehensive picture of the use of differential tuition by undergraduate major or program or studies which identified the impacts of differential tuition on students and the university community.

Research Questions

1. For public research institutions which used or considered using differential tuition by undergraduate program or major:
 - a. How many institutions used or considered using differential tuition by undergraduate program or major?
 - b. Which institutions had implemented differential tuition?
 - c. When was differential tuition by undergraduate program or major implemented at the institutions which had differential tuition?
 - 1) What were the reasons for implementing differential tuition?
 - d. When was differential tuition by undergraduate program or major considered by a governing board but not implemented?
 - 1) What were the reasons for governing boards electing not to implement differential tuition?

2. For those institutions which had undergraduate tuition differentials by program or major:
 - a. Which programs or majors had differentials?
 - b. What was the amount of the differential in dollars and percentage of undergraduate resident tuition?
 - c. What changes were anticipated to the differential tuition policy?
3. What were the impacts of the implementation of differential tuition?
4. How were the increased revenues from differential tuition used?

Description of the Study

The study identified, documented, and discussed the occurrences of differential tuition by undergraduate major within public research institutions. The study population, listed in Appendix A, included the 165 public research intensive and extensive institutions defined by Carnegie Classifications 15 and 16. As a descriptive study, there was no hypothesis to accept or reject, but a survey instrument and telephone script were developed to gather data to answer the research questions. The following steps were taken to gather the data for this study:

1. A survey instrument was developed with the assistance of a panel of experts.
2. A pilot survey was administered to the Chief Business Officer (CBO) of seven institutions. Three did not complete the survey, but provided verbal feedback.
3. The tuition and fee responses to the pilot survey were validated by a review of the institution's website.

4. The survey was updated and refined based upon feedback and analysis of the data from the pilot.
5. An invitation to participate in the survey was sent via e-mail to the Chief Business Officer of the 161 institutions which did not complete the pilot survey instrument. The e-mail contained a link to the survey instrument.
6. The survey was open for data collection from December 21, 2007 to February 11, 2008. Follow-up invitations were sent on January 12, 2007 and January 27, 2007 to CBOs who had not participated at that point in time.
7. The survey data were analyzed for descriptive statistics and trends and issues.
8. A review of the websites of the survey non-respondents was conducted to gather tuition data. The institutions which had completed surveys in the pilot test were treated as non-respondents and their websites were reviewed for published tuition data.
9. A telephone interview protocol was developed to clarify selected survey responses based upon responses to the survey instrument.
10. Eleven telephone interviews were conducted, recorded, transcribed and coded.
11. The data from all three sources were analyzed and a summary of findings, conclusion and recommendation for further research was developed.

Development of the Survey Instrument

The review of literature identified a lack of data on the current use of differential tuition by undergraduate program or major and no specific survey instruments which could have been used to collect the data were found. Based on the review of the literature

it was apparent that a description of the current environment for differential tuition needed to be identified and described prior to studying the impacts of the differential on low socioeconomic status students. Which institutions used differential tuition by undergraduate program or major, which programs or majors had used this type of differential, and the amount of the differential could be used by a researcher to select institutions for a study of the impact of differential tuition on low SES students. General discussions concerning differential tuition by undergraduate program or major were held with a panel of experts and a number of senior level administrators. The panel consisted of two university chief business officers, two senior research professionals from the National Association of College and University Business Officers (NACUBO), two research professionals from the College Board, and faculty members from the dissertation committee. These conversations and the review of the literature served as input to the development of the purpose of the study and the research questions.

The survey questions were then developed to support the research questions. The initial survey design identified two surveys, an initial “postcard” survey identifying whether or not an institution had differential tuition by undergraduate program or major and a longer survey to be completed by the respondents to the postcard survey whose institutions had differential tuition. The panel of experts reviewed the survey questions and offered feedback which resulted in some of the questions being refined and the design was changed to one survey instrument which utilized branch and skip logic. The change to one survey was recommended to reduce the time necessary to collect the data, allow for more data to be collected from those institutions without differential tuition, and

reduce the “annoyance” factor by only approaching the CBOs with one survey instrument rather than two. With two survey instruments the response rate might have been lower.

After the survey instrument was developed, it was pilot tested with a group of chief business officers (CBOs) representing seven institutions, four with differential tuition by undergraduate major or program and three without differential tuition by undergraduate major or program. Two CBOs representing institutions without differential tuition did not complete the pilot but returned emails stating that his/her institution did not have differential tuition. Another CBO who did not complete the survey, provided verbal feedback to the researcher. A review of the campus web-sites was completed to validate the responses in the pilot survey in regard to the existence and amount of the differential tuition rates by undergraduate major or program. Based upon the feedback from the CBOs, several questions were reworded; more importantly, the survey invitation was carefully worded to explain the survey more clearly and to maximize responses from participants.

The survey instrument, in Appendix B, contained 50 questions and was constructed with branch and skip logic to ensure no respondent was required to answer all 50 questions. The questions asked for descriptive statistics on differential tuition as well as the respondent’s opinions and observations concerning the impacts of differential tuition on their university community. Respondents from campuses without differential tuition had a maximum of 14 questions to complete: respondents from campuses with differential tuition by undergraduate major or program had a maximum of 42 questions to complete.

Survey Questions 1 through 5 asked for data about the respondent. Survey Questions 6 through 14 and Question 39 were designed to gather data to answer the sub-parts of Research Question 1. These survey questions gathered data to identify which institutions had differential tuition by undergraduate program or major, which programs or major the differential was in, when the differential was implemented or discussed and not implemented, and the reasons why the differential was implemented or not implemented. In addition, 10 through 13 asked for data concerning programmatic, college or course fees. This was necessary because a respondent might have indicated their institution did not have differential tuition, yet the institution had fees by program or major that fit the definition of differential tuition for this study.

Survey Questions 11 through 13 and 15 through 20 asked for data to support Questions 2a and 2b, which identified the programs or majors with differential tuition, the amount of the differential and the resident undergraduate tuition rate. Survey Questions 21 through 26 asked the respondents for data related to anticipated changes in differential tuition policy, either adding more programs, removing programs, or changing the rate, and the associated reasons for any of these changes. Survey Questions 27 and 28 sought data to determine if the differential tuition rate had changed since implementation and why. Survey Questions 29 through 31 asked for the incremental revenue derived by differential tuition and the total revenue generated on the campus. These data were used to determine the level of fiscal impact the differentials had on the institution's total revenue. Survey Questions 32 and 33 asked the respondents to identify where the incremental revenue from differential tuition by undergraduate program or major was

allocated and what, if any, special uses were predetermined. Survey Questions 34 to 38 asked respondents to indicate impacts of differential tuition by undergraduate program or major on total enrollment, enrollment by program and enrollment of low socioeconomic status students. Survey Questions 40 and 41 asked the respondents for information regarding the involvement of constituent groups in the adoption and implementation process and the reaction of these groups to adoption and implementation of differential tuition by undergraduate program or major. Survey Questions 42 and 43 asked for data on the impact of differential tuition to the state appropriation. Survey Questions 44 and 45 asked the respondents if they would recommend implementation of differential tuition by program or major again, and why. Survey Questions 46 through 48 asked the land grant respondents if differential tuition by undergraduate program or major had impacted their institution's mission. Survey Question 49 asked respondents if they believed differential tuition by undergraduate program or major would become a common type of differential. Survey Question 50 asked respondents for any additional comments concerning differential tuition by undergraduate program or major. The survey question number associated with the research questions is shown in Table 1.

Development of the Telephone Interview

After the data from the survey were compiled and reviewed, the responses to 7 survey questions (Numbers 14, 24, 32, 33, 36, 38, and 41) were identified as needing further clarification. The respondents who provided a specific answer to one of the seven survey questions became eligible for a telephone interview. A respondent could have

Table 1

Survey Question Supporting Research Question

Survey Question	Respondent Information	Research Question											
		1a	1b	1c	1c(i)	1d	1d(i)	2a	2b	2c	3	4	
1-5	X												
6		X	X										
7		X											
8						X							
9							X						
10		X	X										
11		X	X						X				
12		X	X					X					
13		X	X					X	X				
14				X									
15									X				
16								X	X				
17								X					
18								X	X				
19								X					
20								X	X				
21-26										X			
27-31											X		
32												X	
33													X
34											X		
35											X		
36											X		
37											X		
38											X		
39					X								
40-50											X		

been asked for additional information in regards to seven possible survey questions. The respondents were ranked from high to low by the number of survey questions associated with their answers. For example, State University was identified as needing to be asked for additional information related to Questions 36, 38 and 41, and therefore had a numeric score of 3 out of 7 possible questions. After sorting the respondents from high to low, and choosing the top 15 institutions, more than 50% of the potential respondents for each of the seven questions were selected for the telephone interview. Respondents from 15 institutions were selected by this method. In addition, two respondents whose responses were outliers were chosen for the telephone interview. Of the 17 respondents identified for telephone interview, 11 agreed to participate (see Appendix C for the telephone interview protocol).

Ethical Considerations

This study involved human subjects completing a web-based survey form. Some subjects also participated in a telephone interview. Human subjects participating in research are afforded protections including informed consent, confidentiality and privacy, assessment of risks and benefits. The Institutional Review Board (IRB), an internal administrative body of the University of Nebraska-Lincoln, is responsible for reviewing and authorizing study protocols for research involving human subjects. The IRB reviewed and approved the protocols for this study and issued the approval letters found in Appendix D.

Risks and Benefits

There were no known risks to participants in this study and no direct benefits. However, the information gathered in the study may help the university community understand the issues associated with differential tuition more clearly.

Informed Consent

Participants in the survey received the informed consent document on the first page of the web-based survey and acknowledged reading and understanding the document by keying his/her name onto the form. The participants were informed that the survey responses specific to tuition rates, majors or programs charging differential tuition and the amount of tuition may be identified by campus, but all other responses would be aggregated for reporting and individual responses will remain anonymous to ensure confidentiality. The informed consent document is on the first page of the survey in Appendix B. The participants in the telephone interview received an informed consent document via e-mail when asked to participate in the phone interview. The participant indicated they read and understood the informed consent document by returning an email to the researcher stating they read and understood the document. The respondent was also asked during the telephone interview if he/she had read and understood the informed consent document. The informed consent document for the telephone interview is in Appendix E.

Confidentiality and Privacy

The survey instrument was a web-based form, hosted by a third party known as SurveyMonkey. The contract between the researcher and SurveyMonkey specified the

security measures employed by SurveyMonkey. The servers holding the responses were kept in a locked cage with security protocols required for access. The researcher instructed SurveyMonkey to destroy the data set after it was transmitted to the researcher. The researcher received a data file of the responses and will keep the digital media in a locked cabinet for a period of three years, and then destroy the data. The identity of the respondent stays with the data.

The telephone interviews were recorded and transcribed. The transcription was emailed to the interviewee for verification, or member check. Upon receipt of an acknowledgment from the interviewee or receipt of a corrected transcription, the tape recordings were destroyed. The transcriptions will remain with the digital data in a locked cabinet for three years, after which they will be destroyed. A research assistant transcribed the telephone interviews and assisted with data collection and analysis. The research assistant obtained Collaborative Institutional Training Initiative (CITI) certification and signed a confidentiality agreement.

Summary

The methodology for this study, as outlined within the chapter, met the definition of both a descriptive study and the pragmatic mixed-method approach. This study used both quantitative (survey), (web-site review) and qualitative (interview) methods to study a timely and current policy issue which effected higher education. The methodology employed by this generated data to answer the research questions that were posed in support of the purpose of the study. The data obtained in the study allowed the researcher to identify the prevalence and emergence of differential tuition by undergraduate

program, the programs for which differential tuition existed, the amount of the differential in dollars and percentage of resident undergraduate tuition, reasons for implementation of differential tuition, and the impacts of the adoption and implementation as identified by chief business officers.

CHAPTER IV

DATA

I have serious concerns about adding differential tuition by undergraduate programs if it would impact a student's choice of education. I do wonder and am concerned that the differential we added in engineering could detract from someone enrolling in the program. (Vice President Budget, 2008)

In this chapter, the data collected from the study will be presented, analyzed, and interpreted. The analysis of the data begins with a presentation of the profile of the respondents to the survey instrument. Each research question will then be addressed by presenting, analyzing and interpreting the responses from the appropriate survey instrument question(s). The presentation of data for each research question will also include any data obtained from a search of the institution's website and/or telephone interview.

Purpose

The purpose of the study was to examine tuition at 165 public research universities, specific to differential tuition by resident undergraduate program or major to determine:

1. the emergence and prevalence of this type of differential tuition,
2. the programs or majors for which differential tuition existed and the amount of the differential,
3. the reasons for implementation of differential tuition, and
4. the impacts of the adoption and implementation of differential tuition as identified by chief business officers.

The data collected to address the purpose of the study and answer the research questions were generated from three sources. The primary source consisted of the responses to the survey instrument. The responses were reviewed and several issues were identified for further exploration using a follow-up telephone interview. The second source of data was the responses provided by the respondents to the telephone interview. The third source of data was public information obtained from the websites of the institutions whose representative did not respond to the survey instrument. Data specific to tuition rates, supplemental fees, and year of implementation of differential tuition were gathered from the institution's website. The research questions were:

1. For public research institutions which used or considered using differential tuition by undergraduate program or major:
 - a. How many institutions used or considered using differential tuition by undergraduate program or major?
 - b. Which institutions had implemented differential tuition?
 - c. When was differential tuition by undergraduate program or major implemented at the institutions which had differential tuition?
 - 1) What were the reasons for implementing differential tuition?
 - d. When was differential tuition by undergraduate program or major considered by a governing board but not implemented?
 - 1) What were the reasons for governing boards electing not to implement differential tuition?

2. For those institutions which had undergraduate tuition differentials by program or major:
 - a. Which programs or majors had differentials?
 - b. What was the amount of the differential in dollars and percentage of undergraduate resident tuition?
 - c. What changes were anticipated to the differential tuition policy?
3. What were the impacts of the implementation of differential tuition?
4. How were the increased revenues from differential tuition used?

The survey questions associated with each research question were identified in Table 1 on page 46.

Data Presentation, Analysis, and Interpretation

The data will be presented, analyzed and interpreted in this section. The profile of the respondents to the survey instrument is presented in the first sub-section followed by a sub-section for each research question.

Profile of the Respondents

There are 165 public research institutions as defined by Carnegie Classifications 15 and 16 in the United States. The possible number of respondents to the survey is listed in Table 2, and the sample population was 161 institutions.

Respondents from four of the institutions participated in the pilot study which tested the survey instrument. These institutions did not participate in the survey but the tuition data for their institutions were used. The total possible completed survey responses represented 161 institutions. Three institutions reported no undergraduate

Table 2

Study Population

Public Research Institutions	Number of Institutions
Carnegie Classifications 15 and 16	165
Institutions Used for Pilot Survey	<u>4</u>
Institutions Receiving Survey Invitations	161
Institutions with No Undergraduate Programs	(3)
Institutions Used for Pilot Study	<u>4</u>
Public Research Institutions with Undergraduate Programs	162

programs. The total number of public research institutions with undergraduate programs was 162.

The survey responses were received from December 21, 2007 through February 11, 2008. There were 101 initial responses to the survey invitations sent to the Chief Business Officers (CBOs) at 161 institutions. Table 3 lists the number of completed responses.

Six of the responses were removed from the survey data for the following reasons:

1. Three of the respondents indicated that the mission of their institution was exclusively graduate education, therefore their responses were eliminated.
2. Two respondents indicated that their institution had differential tuition, but did not complete any other questions. These two survey responses were eliminated and were treated as non-respondents.

Table 3

Survey Responses

	Public Research Institutions	
	Number	%
Participants Sent Survey	161	
Total Responses	101	63
Less Institutions Removed:		
Institutions with no undergraduate programs	3	2
Responded “yes” to differential tuition, completed no other questions	2	1
Reported differential tuition, but response didn’t meet definition of differential tuition	<u>1</u>	<u>1</u>
Total Responses Removed	<u>6</u>	<u>4</u>
Completed Responses	95	59
Survey Non-respondents	60	37

3. One respondent reported that his/her institution had differential tuition by program or major, but the differential reported did not meet the definition of differential tuition for this study. This response was removed from the results and the institution was classified as non-respondent.

Survey Questions 1 through 5 gathered information about the respondents.

Questions 1, 3, 4, and 5 requested contact and campus information about the respondent:

Survey Question 1 requested, “Name of person completing the survey.”

Survey Question 3 requested, “Campus/Institution.”

Survey Question 4 requested, “Email address of respondent.”

Survey Question 5 requested, “Telephone number of respondent.”

Survey Question 2 requested, “Title of the person completing the survey.” The survey invitations were sent to the CBO or Vice President of Finance at each institution. In some cases, the CBO or VP delegated the responsibility for completion of the survey to another administrator. The profile of the respondents by level of management is identified in Table 4.

Table 4

Title of Respondents

	Number	%
Vice President	45	47
Associate/Assistant VP	22	23
Director	13	14
Non-Director	14	15
Blank	1	1
Total	95	100

Senior level administrators, vice presidents and associate or assistant vice presidents represented 67 of the respondents or 70% of the institutions. Directors, middle management, represented 13 of the respondents or 14% of the institutions. Respondents with titles below director level accounted for 14 respondents or 15% of the institutions, and one respondent did not identify his/her title.

In summary, there were 165 public research institutions identified as the study population, 4 were represented in the pilot survey, which resulted in invitations to

participate in the survey being sent to representatives of 161 institutions. Respondents from 95 institutions (59%) completed the survey instrument. Three respondents indicated their institution did not have an undergraduate program. Therefore, the total number of public research institutions which had undergraduate programs was 162. Senior and middle management represented 80 respondents or 84% of the institutions, with senior management having represented 70% of the institutions. It was important to have representation from middle and senior level administrators who may have been closer to the policy decisions, thus having been in a better position to provide answers to a number of the survey questions.

Research Question 1a – How many public research institutions used or considered using differential tuition by undergraduate program or major?

A review of campus websites and the respondents to Survey Questions 6, 7, 10, 11, 12, and 13 provided data to answer Research Question 1a. The respondents to Survey Questions 6 and 7 provided data which identified the number of institutions which had considered using, but had not implemented, differential tuition by undergraduate program or major.

Survey Question 6, “For the 2007-08 academic year does your campus employ differential tuition by undergraduate major or program of study?” was completed by 95 respondents. The responses are presented in Table 5.

Nearly one-third, or 31 institutions (33%) were identified by respondents as having used differential tuition by undergraduate major or program in academic year

Table 5

Institutions Which had Differential Tuition in 2007-08

	Response Count	Response Percent
Yes	31	33
No	64	67
Total	95	100

2007-08 and 64 institutions (67%) were reported as not having used differential tuition by undergraduate major or program.

Survey Question 7, “Has the topic of differential tuition by undergraduate major or program been discussed by your governing board?” was asked of the 64 respondents who reported that their institution did not have differential tuition in Survey Question 6. The responses are presented in Table 6.

Table 6

Differential Tuition Discussed by Governing Board

	Response Count	Response Percent
Yes	29	45
No	35	55
Total	64	100

The topic of differential tuition by undergraduate major or program had been discussed by the governing boards of 29 of the 64 respondents’ (45%) institutions, while

35 respondents (55%) reported their institution’s governing board had not discussed differential tuition by undergraduate program or major.

Survey Question 10, “At some institutions, undergraduate tuition may be established with one rate. However, significant fees may vary by undergraduate major or program, in effect acting as differential tuition. Does your campus employ supplemental fees based on undergraduate major or program? (do not consider course based fees in answering this question)” was completed by 63 of the 64 respondents who indicated their campus did not have differential tuition. The data are presented in Table 7.

Table 7

Institutions Reported as Having Supplemental Fees, But Not Having Differential Tuition by Undergraduate Program or Major

	Response Count	Response Percent
Yes	17	27
No	46	73
Total	63	100

For the purposes of this study, differential tuition is a term or concept that describes an incremental amount of cost to the student over and above a base level of tuition. The term does not have a standard definition in today’s higher education environment. One telephone survey respondent, a CBO speaking of differential tuition said, “Here at (deleted) University when we refer to ‘differential tuition’ we call them fees, program fees. It’s basically tuition.” Not all of the respondents who had “program”

fees or supplemental fees equated them with differential tuition as this CBO had. Survey Question 10 was presented to the 64 respondents who indicated 'no', they did not have differential tuition, to determine if these institutions had fees that acted in the same manner as differential tuition. Almost three-quarters of the respondents (73%) representing 46 institutions indicated their institution did not have supplemental fees by major or program. Respondents from 17 institutions (27%) reported 'yes' their institution had supplemental fees by major or program. One respondent did not answer the question.

The 17 respondents who indicated their institution had supplemental fees by undergraduate major or program were asked to identify the programs, majors and associated fees in Survey Questions 11, 12, and 13. The data were compiled and a determination was made by the researcher to classify 11 of the 17 institutions as ones which had differential tuition by undergraduate program or major. The institutions were classified as having used differential tuition because they had fees by program or major in one or more programs or fields ranging from 2% to 32% of their published tuition rate. The reported fees at six of the institutions were not deemed to be representative of differential tuition. The fees identified for these institutions included lab fees, small course fees, and fees for weekend/executive courses. The 11 institutions identified in this manner were combined with the 31 institutions identified in Question 6 as having had differential tuition by undergraduate program or major, to total 42 institutions having had differential tuition by undergraduate program or major or 44% of the 95 respondent institutions. A review of the website for the one institution not responding to Question 10

indicated the institution did not have either differential tuition by program or major or supplemental fees which could be interpreted as differential tuition.

There were no respondents to the survey instrument from 60 institutions (see Table 3), three survey respondents had incomplete responses, and the four institutions which participated in the pilot did not participate in the survey. The 67 institutions from these three groups comprised the non-respondent category. The website for the institution of each non-respondent was searched for information on academic year 2007-08 tuition and fee rates. From this group, 32 institutions (48%) were identified as having differential tuition.

Research Question 1a asked, "For public research institutions which had used or had considered using differential tuition by undergraduate program or major: How many institutions had used or had considered using differential tuition by undergraduate program or major?" The data presented in Table 8 identifies the number of institutions which had differential tuition by undergraduate program or major in academic year 2007-08.

Tuition data for all 162 public research institutions were obtained in the study. The data provided by the respondents to the survey instrument combined with the data obtained by a review of each non-respondent's institution's website identified 74 institutions, or 46% of the 162 public research institutions with undergraduate programs as having used undergraduate tuition differentials by program or major in academic year 2007-08. There were 88 public research institutions with undergraduate programs which

Table 8

Source of Data Identifying Institutions Which Had Differential Tuition by Undergraduate Program or Major

	# of Institutions	% of Total
Self-reported in survey (Survey Question 6)	31	42
Survey response 'no' to differential tuition, but reported supplemental fees that acted as differential tuition (Survey Questions 10 through 13)	11	15
Published tuition & fee schedules (search of websites)	<u>32</u>	<u>43</u>
Total institutions with differential tuition by undergraduate program or major	74	100

did not have differential tuition by undergraduate program or major. Respondents from 31 institutions (42%) self-reported the use of differential tuition by undergraduate program or major and 32 institutions (43%) which had differential tuition by undergraduate program or major did not participate in the survey. Respondents from 11 institutions (15%) indicated 'no' to tuition differentials, yet had fees by program or major that acted as differential tuition.

The data from the Survey Question 7 identified 29 institutions, 31% of the 95 institutions completing the survey, whose governing boards had discussed adoption of differential tuition, but had chosen not to implement this type of tuition structure. Of the 67 non-respondent institutions, 35 did not have differential tuition by undergraduate

major and it is unknown how many of their governing boards may have discussed implementation of differential tuition.

The review of the data related to Survey Question 1a indicated that at least 103 (74 + 29 institutions) of the 162, or 64% of the public research institutions with undergraduate programs had either adopted or considered adopting differential tuition by undergraduate program or major.

Research Question 1b - For public research institutions which used or considered using differential tuition by undergraduate program or major: Which institutions had implemented differential tuition?

The data gathered in answering Research Question 1a provided the basis for the answer to Research Question 1b. The 74 public research institutions which had differential tuition by undergraduate program or major are listed in Figure 4.

There were 51 land grant institutions included in the population and 29, or 57% of the land grant institutions, had differential tuition by undergraduate program. The study population included all 34 public AAU institutions, of which 53% had differential tuition by undergraduate program.

The map in Figure 5 shows the 15 states which did not have a research institution with differential tuition by undergraduate program in academic year 2007-08. Public research institutions with differential tuition by undergraduate program were identified in 35 states and 16 of those states had research institutions with and research institutions without differential tuition by undergraduate program or major.

Reported 'yes' in Survey (31)

Indiana U, Purdue U Indianapolis
 Indiana University, Bloomington
 Iowa State University
 Kansas State University
 Montana State University
 North Dakota State
 Penn State University
 Portland State University
 Purdue University
 Rutgers State University, Newark
 Temple University
 The University of Montana
 University of Arizona
 University of Arkansas at Little Rock
 University of Arkansas, Fayetteville
 University of Colorado, Denver
 University of Houston
 University of Illinois at U-C
 University of Iowa
 University of Kansas
 University of Kentucky
 University of Louisville
 University of Memphis
 University of Michigan, Ann Arbor
 University of Mississippi
 University of Missouri, Rolla
 University of New Hampshire
 University of Northern Colorado
 University of Utah
 University of Wisconsin, Madison
 Utah State University

Reported 'no' but**fees act as****Differential Tuition (11)**

Arizona State University
 Louisiana Tech University
 Oklahoma State University
 South Dakota State
 The Ohio State University
 University of Idaho
 University of Louisiana, Laf.
 University of Minnesota
 University of Rhode Island
 University of Texas, El Paso
 Wichita State University

Survey Non-response (29)

Clemson University
 Colorado State University
 Miami University
 Michigan Technological University
 Oakland University
 Rutgers State University, New Brunswick
 Tennessee State University
 Texas Woman's University
 University of Alabama, Birmingham
 University of Colorado, Boulder
 University of Georgia
 University of Hawaii, Manoa
 University of Illinois, Chicago
 University of Missouri, Columbia
 University of Missouri, Kansas City
 University of Missouri, St. Louis
 University of North Dakota, Main Campus
 University of South Alabama
 University of South Carolina
 University of South Dakota
 University of Tennessee, Knoxville
 University of Texas, Arlington
 University of Texas, Austin
 University of Texas, Dallas
 University of Toledo
 University of Wisconsin, Milwaukee
 Virginia Commonwealth University
 Virginia Tech University
 West Virginia University

Pilot Schools (3)

Oregon State University
 University of Nebraska-Linc
 University of Oregon

Figure 4. Institutions with differential tuition by undergraduate program or major.

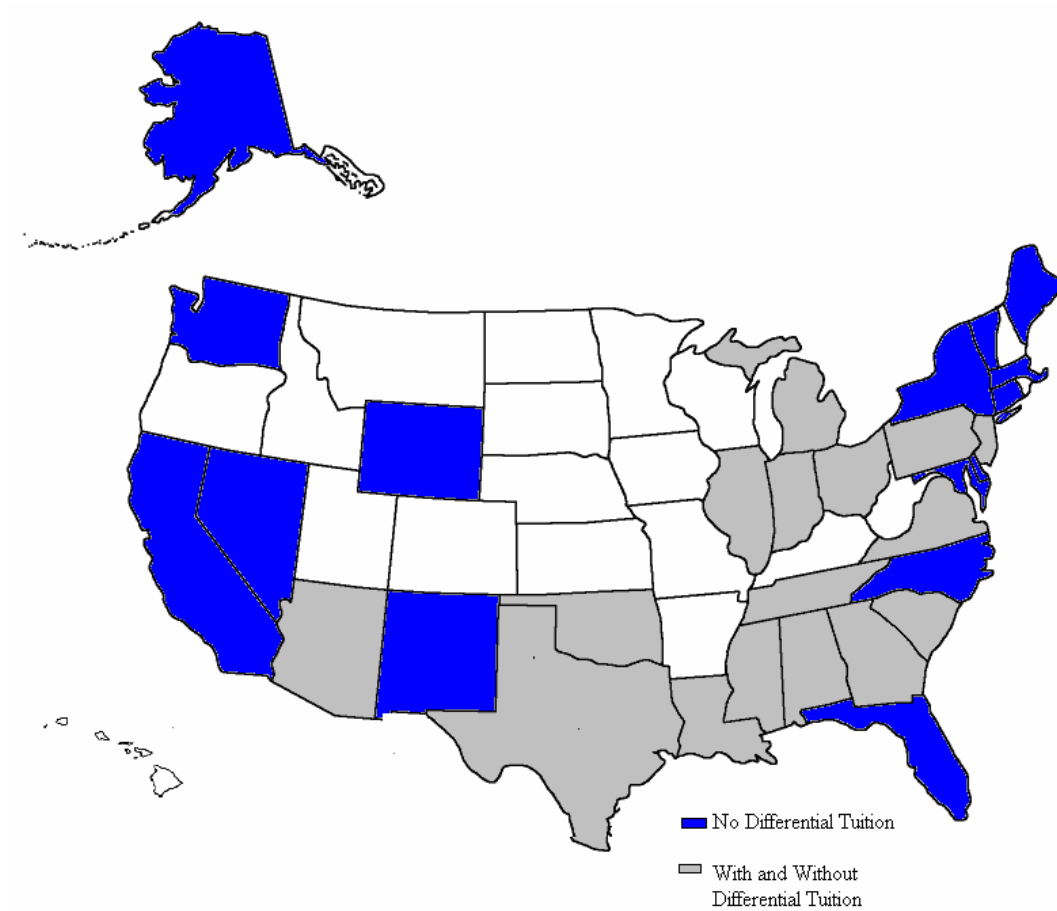


Figure 5. Differential Tuition by Undergraduate Program by State

The following states did not have a public research institution which used differential tuition by undergraduate program or major: Alaska, California, Connecticut, Delaware, Florida, Maine, Maryland, Massachusetts, Nevada, New Mexico, New York, North Carolina, Vermont, Washington, and Wyoming.

Research Question 1c - When was differential tuition by undergraduate program or major implemented at the institutions having differential tuition?

The answer to Research Question 1c was developed from responses to the survey instrument and a review of campus websites. The 31 respondents indicating their campus had differential tuition by undergraduate major or program in Survey Question 6 were asked Survey Question 14.

Survey Question 14 asked, “What academic year was the policy of differential tuition by major or program of study implemented?” Thirty-one respondents provided the year of implementation. The websites of the remaining 43 institutions which had tuition differentials were reviewed to obtain information regarding the implementation dates of differential tuition. Data were available for 24 of the 43 institutions, while not determinable at 19 institutions. The data in Table 9 identifies the number of campuses introducing differential tuition by five year intervals for 55 of the 74 campuses (74%).

Research Question 1c asked, “When was differential tuition by undergraduate program or major implemented at the institutions having differential tuition?” The data were grouped into five year intervals with five institutions having implemented differential tuition by undergraduate program or major prior to 1988 and also between 1988 and 1993. There were eight institutions which implemented differential tuition by undergraduate program or major between 1993 and 1998. From 1998 to 2003, 12 additional institutions implemented differential tuition by undergraduate program or major. During the most recent five year interval, 2003-2008, 25 institutions implemented

Table 9

Number of Institutions Implementing Differential Tuition by Undergraduate Program or Major by Year

Year of Implementation	Number of Institutions
Prior to 1988	5
1988-1993	5
1993-1998	8
1998-2003	12
2003-2008	25
Total	55

differential tuition by undergraduate program or major with three to seven new institutions added each year.

Research Question 1c(i) - What were the reasons for implementing differential tuition?

Survey Question 39 asked, “Why did your institution consider adopting tuition differentials?” This question was completed by 27 of the 31 respondents who indicated their institution had adopted differential tuition by undergraduate program or major. The complete list of responses is contained in Appendix F. The responses were coded and grouped into four categories. The four categories describing the considerations cited by the respondents for adopting differential tuition by undergraduate program or major are:

1. Cover direct costs

For this category, 15 respondents noted that certain programs were more expensive and there was a need to cover the higher costs from the students

who were enrolled in the programs. This method was used to align the tuition or revenue structure with the cost base.

2. Maintain or enhance quality

For this category five respondents indicated the reason for implementing differential tuition by major or program was providing funding to maintain or enhance quality through measures such as reducing class size, increasing programmatic opportunities, and hiring additional highly qualified/highly paid faculty.

3. Additional Revenue

The respondents of five institutions identified reasons which were focused on the ability to raise additional revenue for targeted initiatives and various schools and colleges.

4. Decline in State Support

The respondents of two of the institutions cited the need to raise additional revenue to offset declines in state funding. One VP bluntly stated, “State budget realities forced it.”

Over half of the respondents (55%) identified alignment of tuition revenue with expenses in high cost programs as a driver for the decision to implement differential tuition by undergraduate program or major. Respondents from five institutions (19%) indicated the differential was implemented to generate revenue for targeted initiatives within the affected colleges or schools. Respondents from five other institutions (19%) were more specific in regard to the targeted initiative and indicated the differential was

implemented to enhance or maintain quality within the programs or colleges. Two of the respondents (7%) cited the decline in state funding as the driver for the implementation of differential tuition by undergraduate program or major.

Research Question 1d -When was differential tuition by undergraduate program or major considered by a governing board but not implemented?

Survey Question 8 asked, “When was the topic of differential tuition by major or program discussed by your governing board?” This question was asked of the 29 respondents who answered ‘yes’ to Survey Question 7 (see Table 6). The data from Survey Question 8 is presented in Table 10.

Table 10

Campus Governing Boards Discussed but Did Not Implement Differential Tuition by Undergraduate Major or Program

Year Discussed	Number of Campuses
Prior to 1994	2
1995-1999	1
2000-2004	1
2005-2007	<u>25</u>
Total	29

The data in Table 10 show 25 of the 29 (86%) institutions which were reported to have discussed, but not adopted differential tuition by undergraduate program or major, held discussions on this topic very recently, between 2005 and 2007. The 25 institutions

were comprised of five institutions identified for 2005, six institutions for 2006, and seven institutions for 2007.

Respondents to the question reported one institution (3%) had discussed and not implemented differential tuition in the 2000-2004 time period and another institution (3%) was reported for the 1995-2000 time period. Respondents reported that two institutions (7%) had discussed but not implemented differential tuition by undergraduate program or major prior to 1995.

The data in Table 10 show the number of institutions considering differential tuition by undergraduate program or major had increased during the past three years. The data from Table 9 identified the number of institutions implementing differential tuition by years. The number of institutions which had implemented differential tuition by program or major had also increased in recent years, although the pattern of increases has been over a longer period of time. Combining data from both research questions identified an increased level of implementation and discussion of differential tuition by undergraduate major from 2003-2008. Although there was an increased level of discussion, the decision to implement or not to implement differential tuition by undergraduate program or major varied by institution.

***Research Question 1d(i) - What were the reasons for governing boards
electing not to implement differential tuition?***

Survey Question 9 asked the 29 respondents to Survey Question 8 “What were the major reasons differential tuition was not implemented by your institution’s board?”

Respondents for 26 of the institutions offered reasons their governing board chose not to implement differential tuition by program or major.

The responses were reviewed and grouped into four categories. The complete responses to Question 9 are in Appendix G. Respondents representing three institutions did not adequately answer the question. The four categories identified for the reasons for not implementing differential tuition provided by the remaining 26 respondents were:

1. Access and affordability

The respondents from nine institutions listed issues of equity, impact on limiting choice of major, and access and/or affordability as reasons for not implementing differential tuition.

2. Legislative Issues

Respondents from six institutions identified legislative issues as barriers in terms of the approval process. Two respondents referred to specific statutory language that prohibits differential tuition at the undergraduate level in their state (Ohio and Florida).

3. Procedural Issues

Respondents from four institutions identified potential procedural barriers. Issues concerning complexity of the rates and the cultural changes that might accompany adoption of differential tuition were cited as reasons for not adopting differential tuition. Peer market conditions and the impact on non-differential programs were also cited as reasons for not implementing differential tuition.

4. Under Consideration

Respondents from four institutions reported that their governing boards were still considering adoption of differential tuition, but had not moved forward on adoption or implementation.

Research Question 1d(i) asked, “What were the reasons for governing boards not electing to implement differential tuition?” The 23 respondents represented 29% of the 88 institutions which did not have differential tuition by undergraduate program or major. These responses offered four categories to address the research question. Access and affordability issues were cited by 9 of the 23 respondents (39%) as reasons their governing boards did not adopt differential tuition by undergraduate program or major. Legislative barriers were identified by 6 of the respondents (26%) as a reason not to adopt differential tuition. Procedural issues included the complexity of the rates and needed cultural changes were cited by 4 of the respondents (17.5%). Respondents for 4 institutions (17.5%) did not provide specific reasons why their campus governing board had not implemented differential tuition, but indicated the decision to implement or not implement was still being considered.

Research Question 2a - For those institutions that had undergraduate tuition differentials by program or major: Which majors or programs had differentials?

The data used to answer Research Questions 2a and 2b came from multiple sources. Responses to Survey Questions 11, 12, 13, 16, 17, 18, and 19 were aggregated with data collected from the websites of institutions which had been identified as having differential tuition by undergraduate program or major in Research Question 1b. The 74

institutions which were classified as having differential tuition by undergraduate program or major came from three groups. The three groups identified in Table 8 were:

Group 1: Survey respondents who indicated their institution used differential tuition (31 institutions);

Group 2: Survey respondents who indicated their institutions did not have differential tuition, but an examination of their fees classified the campus as using differential tuition (11 institutions); and

Group 3: Institutions identified, via the web, as having differential tuition (32 institutions).

The survey instrument asked respondents for undergraduate differential tuition rates for six programs or majors: Accounting, Business, Architecture, Education, Engineering, and Journalism. In addition, each respondent was asked to identify other undergraduate majors or programs which had differential tuition and the amount of the differential. The data from all three groups were aggregated and presented in Table 13. The following three sections discuss the data collection process and results for each of the groups.

Group 1 data collection

Respondents in Group 1, representing 31 institutions, completed Survey Questions 16, 17, 18 and 19, providing data on the majors or programs which had differential tuition.

Survey Question 16, requested “For the following undergraduate majors or fields of study, please identify the amount of the differential over your base tuition, and indicate

per Credit Hour(C), Quarter(Q), or Semester (S). Indicate NA if there is no differential. Categories: Accounting, Architecture, Business, Education, Engineering, and Journalism.” Example: Library Science - \$400 per semester.”

All respondents provided differential tuition information in one or more of the requested categories. The data were aggregated with the data from the other two groups and presented in Table 13.

Survey Question 17 asked, “Are there additional undergraduate majors that have differential tuition at your institution?” Respondents representing 16 institutions (52%) responded ‘no’ to Question 17. Respondents representing 15 institutions (48%) replied ‘yes’ to Question 17 and the 15 were then asked Survey Question 18.

Survey Question 18 stated, “Please identify additional undergraduate majors or fields of study which have differential tuition at your institution, by listing the undergraduate major or field of study, the amount of the differential over your base tuition, and indicating per Credit Hour(C), Quarter(Q), Semester (S).” The 15 respondents provided differential tuition rates for 34 additional programs or majors in addition to the 6 listed in Survey Question 16. The 34 additional programs or majors were combined with the additional programs or majors identified with groups 2 and 3 and the listing is in Appendix H.

Question 19, “Are there undergraduate programs on your campus, such as Distance Education or Honors Programs, that have differential tuition at your institution?” was asked of the 31 respondents who indicated that their campus had differential tuition. The responses are presented in Table 11.

Table 11

Distance Education or Honors Programs with Differential Tuition

	Response Count	Response Percent
Yes	8	26
No	23	74
Total	31	100

The respondents representing 23 institutions (74%) indicated their institution did not have undergraduate differentials for distance education or honors programs. Eight respondents (26%) indicated ‘yes’ their campus had undergraduate differentials for distance education or honors programs.

The eight respondents who answered ‘yes’ to Question 19, were asked in Question 20 to identify the program(s) and the amount of the differential and seven completed the question. Distance education programs were identified by six respondents but the differential varied by course and program, with only one respondent supplying a differential amount. One respondent indicated a differential for an honors program. This respondent represented the only institution of the 31 institutions (3%) which had differential tuition by undergraduate program.

Group 2 data collection

Survey respondents in group two had completed Survey Questions 11 and 13 to identify majors or programs at their institution which had supplemental fees.

Survey Question 11 stated “Please provide the range of your institution's supplemental fees by undergraduate major or program in the following categories:

Categories: Accounting, Architecture, Business, Education, Engineering, and Journalism.

Example: \$400/semester or \$40/credit hour.”

Survey Question 11 was asked of the respondents who indicated their campus did not have differential tuition by program or major in Survey Question 6. Supplemental fee rates for at least one of the six categories requested in Survey Question 11 were provided by 11 respondents.

Survey Question 13 was asked of those respondents who indicated in survey question 12 that other majors or programs at their institution had supplemental fees. Survey Question 13 stated, “Please indicate the additional undergraduate majors or programs which have supplemental fees and the range of the fees.” The eight respondents from Group 2 provided differential tuition rates for 17 additional programs or majors other than the six listed in Survey Question 11. The 17 additional programs or majors were aggregated with the additional programs or majors identified by Groups 1 and 3 and the listing is in Appendix H.

Group 3 Data Collection

The data for group three were obtained from the published tuition and fee schedules at the institution’s website. Question 16 identified six categories; Accounting, Architecture, Business, Education, Engineering, and Journalism for data collection. Of the 32 institutions in Group 3, 29 institutions had undergraduate differential tuition by program or major in more than one of the programs or majors listed in Survey Question 16. Tuition differentials were identified in 21 additional majors or programs not listed in Survey Question 16. The additional 21 programs or majors were aggregated with the

additional programs or majors identified with Groups 1 and 2 and the listing is in Appendix H.

Combining the data

Institutions classified as having differential tuition identified tuition differentials in 63 programs or majors not specified in the survey instrument. Of these 63 programs or majors, 39 were not identified by more than one respondent. The researcher combined the 63 reported programs or majors into 11 programs. The conversion table is listed in Appendix H. The survey instrument requested differential tuition data for the accounting major and business programs. In all instances, the accounting major was listed with the same differential tuition as the business program; therefore, the accounting major will not be presented discretely with the data. The data obtained for all three groups consisted of the identification of programs with differential tuition at an institution, the amount of the differential tuition, and the resident undergraduate base tuition for the institution. This data was also used to answer Research Question 2b.

The undergraduate programs which had tuition differentials and the number of institutions where the program and differential occur are presented in Table 12.

Business programs with undergraduate differential tuition were identified at 51 institutions, or 69% of the institutions which had undergraduate tuition differentials and 32% of all public research institutions. Engineering programs with differential tuition were identified at 48 institutions or 65% of the institutions which had undergraduate tuition differentials and 30% of all public research institutions. Nursing programs with

differential tuition appeared at 25 institutions or 34% of the institutions with differential tuition by undergraduate program. Architecture programs which had undergraduate

Table 12

Programs with Differential Tuition by Undergraduate Program

Program	Number of Campuses	% of Campuses with Differential Tuition	% of 162 Public Research Institutions with Undergraduate Programs
Business	51	69	32
Engineering	48	65	30
Nursing	25	34	16
Architecture	22	30	14
Education	17	23	11
Sciences	17	23	11
Other	15	20	9
Fine Arts	14	19	9
Health Related	12	16	7
Computer Science	11	15	7
Journalism	9	12	6
Pharmacy	8	11	5
Honors	5	7	3
Agriculture	6	8	4
Liberal Arts	4	5	2
Dental Hygiene	3	4	2
Physical Therapy	2	3	1

tuition differentials were identified at 22 institutions or 30% of the institutions which had undergraduate tuition differentials. Education and science programs with undergraduate tuition differentials were identified at 17 institutions or 22% of the institutions with undergraduate tuition differentials. The “other” category appeared at 20% of the institutions with undergraduate differential tuition. This category was a collection of

miscellaneous programs which are identified in Appendix H. Fine Arts programs with tuition differentials were identified at 14 institutions or 19% of the institutions with undergraduate tuition differentials. Health related programs with tuition differentials were identified at 12 institutions or 16% of the institutions with undergraduate tuition differentials. Computer Science programs with undergraduate tuition differentials were identified at 11 institutions or 15% of the institutions with undergraduate tuition differentials. Journalism programs with undergraduate tuition differentials were identified at 9 institutions or 12% of the institutions with undergraduate tuition differentials. Pharmacy programs with undergraduate tuition differentials were identified at 8 institutions or 11% of the institutions with undergraduate tuition differentials. Honors, agriculture, liberal arts, dental hygiene and physical therapy programs were each identified at less than six institutions, or less than 3% of the total public research institutions.

Research Question 2a asked, “For those institutions that had undergraduate tuition differentials by program or major which majors or programs had differentials?” The programs which had undergraduate tuition differentials are displayed in Table 12. In summary, business and engineering programs had undergraduate differential tuition in over two-thirds of the institutions which had undergraduate tuition differentials and nearly one third of the total number of public research institutions (32% and 30%) with undergraduate programs. Business programs which had tuition differentials appeared at twice as many institutions as the third most prevalent program, nursing, which appeared at 34% of the institutions. Architecture programs with differential tuition appeared at

30% of the institutions. Education and science programs with undergraduate tuition differentials appeared at slightly less than one quarter of the institutions with differential tuition. There were only six programs which had differential tuition by undergraduate program at more than 10% of the public research institutions; business, engineering, nursing, architecture, education and sciences.

Research Question 2b - For those institutions that had undergraduate tuition differentials by program or major: What was the amount of the differential in dollars and percentage of undergraduate resident tuition?

The data collected to answer Research Question 2b was obtained from responses to Survey Questions 11, 12, 13, 15, 16, 17 and 18 and a search of the websites for institutions not completing the survey instrument. The discussion of the data collection process from these survey questions was completed in the discussion of Research Question 2a, with the exception of Survey Question 15.

Survey Question 15, “What is your institution's published academic year undergraduate tuition rate for 2007-08? Assuming 15 credit hours per term” was completed by 31 respondents (100%). A review of the websites for the other 43 institutions with differential tuition by undergraduate program or major obtained the resident undergraduate base tuition. These data were used to calculate the differential for each program as a percentage of base resident undergraduate tuition.

The data in Table 13 present the amount of the differential tuition by undergraduate major by program for the 74 institutions with differential tuition. The differential tuition data in Table 13 was reported in absolute dollars. There was a wide

range between the high and low differentials both between and within programs. The range of the differential by term was \$2 - \$3,168 and the per credit hour

Table 13

Differential Tuition over Published Resident Tuition Rate by Program

Program	Differential Per Term		Differential Per Credit Hour		Combination of Per Credit Hour with Maximum Per Term		
	Range	# Campus	Range	# Campus	Per Credit	Per Term	# Campus
Business	\$40 - \$1,896	27	\$2 - \$86	23	\$10	\$100	1
Engineering	\$50 - \$1,896	23	\$2 - \$55	22	\$25-\$44	\$200 -\$443	3
Nursing	\$50 - \$1,067	20	\$10 - \$247	3	\$25	\$300	2*
Architecture	\$120 - \$827	15	\$14 - \$33	6	\$32	\$297	1
Education	\$52 - \$268	10	\$7 - \$33	7	NA	NA	0
Sciences	\$7 - \$1,896	10	\$4 - \$55	7	NA	NA	0
Other	\$60 - \$600	11	\$6 - \$36	4	NA	NA	0
Fine Arts	\$150 - \$1,073	9	\$5 - \$194	4	\$5	\$50	1
Health Related	\$75 - \$1,067	8	\$5 - \$10	4	NA	NA	0
Computer Science	\$105 - \$500	8	\$13 - \$40	2	\$35	\$350	1
Journalism	\$100 - \$187	5	\$6 - \$39	4	NA	NA	0
Pharmacy	\$472 - \$3,168	8	NA	0	NA	NA	0
Honors	\$100-700	5	NA	0	NA	NA	0
Agriculture	\$8 - \$500	2	\$6 - \$39	4	NA	NA	0
Liberal Arts	\$2 - \$89	3	NA	0	\$2	\$30	1
Dental Hygiene	\$95 - \$500	2	209	1	NA	NA	0
Physical Therapy	\$75 - \$1,800	2	NA	0	NA	NA	0
Total		168		91		10	
% Programs per term/ credit hour		62		34		4	

* one program at \$431 per term plus \$20/credit hour

range was \$2 - \$247. The range of the combination method was \$100 - \$443 per term and \$2 - \$44 per credit hour. The four medical related programs, nursing, pharmacy, dental hygiene and physical therapy are similar to professional programs and the pricing may behave differently than the traditional undergraduate programs. Removing these four programs from the analysis decreased the range of the per term differential to \$2 - \$1,896 and the per credit hour range to \$2 - \$194. The range in dollars provided one perspective in describing the differential, but it relied on the two extreme values for each. Another perspective, the range of differential tuition as a percent of resident undergraduate tuition, is presented in Table 14.

Table 14

Differential Tuition as a Percent of Published Resident Tuition by Program

Program	% Range Over Base Tuition	Mean
Liberal Arts	1 – 4	2%
Journalism	2 – 16	6%
Education	2 – 20	7%
Sciences	1 – 45	9%
Other	3 – 25	10%
Agriculture	3 – 16	10%
Health Related	2 – 21	10%
Architecture	3 – 33	11%
Computer Science	3 – 24	11%
Business	2 – 59	14%
Engineering	2 – 45	14%
Honors	7 – 45	18%
Fine Arts	3 – 82	19%
Mean		10.8%

The analysis of the data presented in Table 14 did not include the four medical related programs, nursing, pharmacy, dental hygiene, and physical therapy for the reasons stated in the discussion of Table 13. Appendix I lists the campus differentials as a percentage of resident undergraduate tuition by program. The range of the differential stated as a percent of resident undergraduate tuition was 1% to 82%. The range of the mean for each program was 2% to 19%. The average differential was 10.8% of resident undergraduate tuition. There were seven programs with average differentials less than the mean: liberal arts, journalism, education, sciences, other, and health related programs. Architecture, computer science, business, engineering, fine arts, and honors programs were all above the mean. On average, a student who attended an institution and selected a program with an undergraduate differential would have paid 10.8% more in tuition, nearly the equivalent of paying for an extra semester of tuition to obtain a four year degree. However, the range is still substantial depending on the program and institution chosen. The mean differential for business programs was 14%, yet a student may have been at the institution with a differential of 59%, three times higher than the average.

Research Question 2b asked, “For those institutions which had undergraduate tuition differentials by program or major: What was the amount of the differential in dollars and percentage of undergraduate resident tuition?” The data in Table 13 identifies the range in dollars of the differential by program and Table 14 identifies the range in percentage of resident undergraduate tuition per program.

There was a wide range in the differentials. Excluding the four medical related programs, the range was from \$2 - \$1,896 per term and \$2 -\$194 per credit hour. The

range of the differential stated as a percent of resident undergraduate tuition was 1% to 82%, while the range of the mean for each program was 2% to 19%. The average differential was 10.8% of resident undergraduate tuition.

Research Question 2c For those institutions which had undergraduate tuition differentials by program or major: What changes were anticipated to the differential tuition policy?

The data used to answer Research Question 2c were generated from responses to Survey Questions 21, 22, 23, 24, 25, and 26 and from the telephone interviews. The survey responses were limited to the 31 respondents who indicated their campuses had differential tuition by undergraduate program or major, representing 47% of the 74 public research institutions with resident undergraduate programs.

Survey Question 21, “Does your institution anticipate charging differential tuition in any additional majors or programs in the next two years?” The data are presented in Table 15.

Table 15

Anticipate Charging Differential Tuition in Any Additional Majors or Programs in the Next Two Years?

	Response Count	Response Percent
Yes	5	16
No	14	45
Unsure	12	39
Total	31	100

In response to the question five respondents (16%) indicated their institutions were considering adding programs or majors with differential tuition. No new programs or majors would be adopting differential tuition at the institutions of 14 of the respondents (45%), while 12 respondents (39%) were unsure.

Survey Question 22, “Which additional undergraduate majors or programs do you anticipate your institution will charge a differential tuition in the next two years?” The five respondents answering ‘yes’ to Survey Question 21 responded to Survey Questions 22 and 23.

The five respondents indicated adding the following programs: upper level business students, art and design, architecture, and social welfare programs. Two of the five respondents reported their campus had considered adding a tuition differential for engineering.

Survey Question 23, “Why will these majors or programs begin charging differential tuition?” Programmatic costs were identified by four of the five respondents (80%) as the reason for the potential adoption of differential tuition for these programs. Student demand for additional services was identified by one of the respondents as the reason for potential adoption of differential tuition.

Survey Question 24, “Does your institution anticipate removing the differential tuition from any of the majors or programs currently charging differential tuition in the next two years?” The responses are summarized in Table 16.

Table 16

Anticipate Removing Differential Tuition?

	Response Count	Response Percent
Yes	0	0
No	27	87
Unsure	4	13
Total	31	100

Of the 31 respondents reporting that their institution had differential tuition by undergraduate major or program, none of the respondents reported that their campus was planning to remove any of the existing tuition differentials by undergraduate major or program. Four respondents (13%) indicated they were unsure if differential tuition for any programs would be removed in the next two years.

In a telephone interview, two of the four respondents who indicated ‘unsure’ on question 24 were asked the following questions, “On question 24 you indicated that you were unsure if your institution would be eliminating differential tuition on any of the current programs or majors within the next two years.

- a. Is your campus considering removal of any differential tuition or fees?
- b. What factors would cause your campus to consider removing differential tuition?”

Both respondents stated that they were unaware of any differentials that might be eliminated in the next two years. One respondent indicated the campus would be undergoing a transition to a new budgeting model and the other respondent indicated the campus might restructure the tuition and fee schedule. In both cases, the respondent

indicated it was unlikely existing differentials would be removed even with these transitions.

There were no respondents to Survey Questions 25 and 26, because no one responded with a 'yes' to Question 24. Survey Question 25, "In which undergraduate majors or programs do you anticipate removing differential tuition?" Survey Question 26, "Why will the institution stop charging differential tuition for these majors or programs?"

The survey questions in this section were directed to the 31 respondents who self-reported their institution had differential tuition. The questions identified how many institutions had considered expanding differential tuition to more programs or majors, how many campuses had considered removing differential tuition and which programs or majors would be added to or removed and why. Additional differentials by program or major were not likely to be added in the next two years to the institutions of 14 of the respondents (45%), while 27 respondents (88%) indicated they did not anticipate removing differentials from any program or major in the next two years. Only five respondents (16%) indicated their institution might add additional differentials in the next two years. Although there was limited interest identified for adding differential tuition to new programs or majors, there were no respondents who indicated their institution might remove a differential and only four respondents (14%) who were unsure. Two of the respondents who were unsure believed it to be unlikely that any differentials would be removed.

***Research Question 3 - What were the impacts of the
implementation of differential tuition?***

The first two research questions focused on descriptive statistics (i.e., who had differential tuition? which programs? what was the amount of the differential? when was it implemented?). Research Question 3 examines impacts of the decision to implement differential tuition from the chief business officer's perspective. The primary source of data were the responses to the survey instrument by the 31 respondents who indicated their institution had differential tuition. These 31 respondents represent 47% of the public research institutions which had differential tuition by undergraduate program or major. In addition, some of the respondents provided data through a telephone interview.

The survey questions for Research Question 3 were created to elicit response in five broad categories:

1. impact to enrollments (Survey Questions 34, 35, 36, 37, and 38);
2. impact to finance and budgets (Survey Questions 27, 28, 29, 30, 31, 42, and 43);
3. impact on campus and community (Survey Questions 40, 41, 44, and 45);
4. impact to the land grant mission (Survey Questions 46, 47, 48, and 49); and
5. current and future observations (Survey Questions 49, and 50).

The responses to the survey questions in each area will be addressed in this section.

Impact to Enrollment

Implementation of differential tuition by undergraduate program or major is an adjustment to price. "Whether examining tuition, financial aid, or the net cost of

attendance, the evidence is very consistent and can be summarized in one sentence: As the price of college goes up, the probability of enrollment tends to go down” (Heller, 1997, p. 649). Survey Questions 34, 35, 36, 37, and 38 asked the respondents for information on how differential tuition impacted enrollments. The impact on enrollment was explored in three ways: total enrollment, program enrollments, and enrollment of low socioeconomic status (SES) students.

Impact on total enrollment. Survey Question 34, “Has differential tuition by undergraduate major or program impacted total undergraduate enrollment at your institution?” The responses to Survey Question 34 are presented in Table 17.

Table 17

Differential Tuition Impacted Total Undergraduate Enrollment?

	Response Count	Response Percent
Yes	0	0
No	19	63
Unsure	11	37
Total	30	100

The question received 30 responses. Differential tuition by undergraduate program or major had not impacted total undergraduate enrollment at 19 (63%) of the institutions, while 11 respondents (37%) were unsure of the impact and no one responded that it had any impact.

Survey Question 35, “How has differential tuition by undergraduate major or program impacted total undergraduate enrollment?” There were no responses because no one responded ‘yes’ to Question 34.

Impact on program enrollment. Survey Question 36, “In your estimation, has differential tuition by undergraduate major or program impacted enrollment within specific majors or programs at your institution?” The responses to Survey Question 34 are presented in Table 18.

Table 18

Differential Tuition Impacted Enrollment Within Specific Majors or Programs at Your Institution?

	Response Count	Response Percent
Yes	1	3
No	19	66
Unsure	9	31
Total	29	100

The survey question was completed by 29 respondents. Respondents from 19 institutions (66%) indicated no impact to enrollments, while 9 respondents (31%) were unsure. Enrollments within specific programs or majors were reported to have been impacted at one institution (3%).

A telephone interview was used to elicit additional feedback from six of the respondents who answered ‘no’ to Question 36. “

On question 36, “Has differential tuition by undergraduate major or program impacted enrollment within specific majors or programs at your institution?”, you answered ‘no’,

- a. How do you know that differential tuition had not impacted enrollment by specific majors or programs?”

All six respondents who were interviewed indicated they relied on anecdotal evidence to support their conclusion. One CBO stated “As the rates go up, the enrollment continues to go up because of the demand for the programs.” An AVP made a similar statement, “Enrollments did not plummet when the School of Business, the first one to go to a differentiated rate, implemented it, so it did not cause a decline in enrollment. So the assumption is that the demand was strong enough to withstand the imposition of the program fee.”

Survey Question 37 was a follow-up question to the ‘yes’ respondent in Question 36. The one respondent indicated the adoption of a tuition differential increased the enrollment in the program with the differential and decreased enrollment in programs without the differential. In a telephone interview with the respondent, he/she explained that the differential allowed more faculty to be hired, thus increasing the number of seats available in the program. There was an unmet demand for the program and students switched from lower priced programs to the higher priced program when more seats were available. No new students were added to the university as a result of the differential, but a shift between programs occurred.

Impact on enrollment of low socioeconomic status students. Survey Question 38, “In your estimation, has differential tuition by undergraduate major or program impacted enrollment of low socioeconomic status students within higher cost majors or programs at your institution?” The responses to Survey Question 34 are presented in Table 19.

Table 19

Differential Tuition Impacted Enrollment of Low Socioeconomic Status Students Within Higher Cost Majors or Programs at Your Institution?

	Response Count	Response Percent
Yes	1	3
No	13	45
Unsure	15	52
Total	29	100

The survey question was responded to by 29 of the 31 potential respondents. Of the 29 responses, one respondent (3%) indicated enrollment of low socioeconomic status (SES) students was impacted by the differential. Respondents from 15 institutions (52%) were unsure of the impact to enrollment of low SES students, while 13 of the respondents (45%) indicated there was no impact to enrollment of low SES students.

A telephone interview was used to elicit additional feedback from six of the respondents who answered ‘no’ to Question 38 and the one who answered ‘yes’. The respondents were asked the following three part question:

On question 38, “Has differential tuition by undergraduate major or program impacted enrollment of low socioeconomic status students within high cost majors or programs at your institution?” you answered ‘yes’ (or ‘no’).

- a. How do you know that differential tuition has or has not impacted enrollments by low socioeconomic status students within high cost majors or programs at your institution?”

All seven of the respondents (100%) stated that their answer was based upon anecdotal evidence.

- b. Has your institution completed any studies or surveys of students to measure the impact of the differential on the students’ decision making process?

All seven of the respondents (100%) stated that their campus community had not completed any studies or surveys of students to measure the impact of differential tuition on the students’ decision making process for the selection of program.

- c. Has your campus leadership considered the impact on access for low socioeconomic status students in relation to undergraduate tuition differential by major or program? If so, what were the outcomes? Are you instituting any initiatives to address this issue?

All seven of the respondents (100%) indicated the campus leadership had considered the impact of differential tuition on access for low SES students through the general financial aid programs at their campus. Only two of the respondents (25%) indicated that there were specific

funds or programs available to address financial aid needs of low SES students enrolled in programs with differential tuition.

Impact on enrollment summary. In this section, data from the survey questions identified the respondent's views on the impact of differential tuition by undergraduate program or major on enrollments. Nearly two-thirds (63%) of the respondents indicated differential tuition had not impacted total enrollment or enrollment by program or major at their institution. Respondents who were 'unsure' accounted for approximately one-third of the institutions, (37% impacted total enrollment, 31% impacted enrollment by program). There were no respondents who indicated total enrollment was impacted and only one respondent who reported an impact to enrollment by program or major. While 63% of the respondents indicated there was no impact to total enrollment and enrollment by program or major, 45% indicated there was no impact to enrollment of low SES students in programs with differential tuition. Slightly over half the respondents (52%) were unsure about the impact of differential tuition on low SES students. Only one respondent indicated differential tuition impacted enrollment of low SES students. Telephone interviews with respondents who indicated there was no impact on enrollment of low SES students in programs with differential tuition identified anecdotal evidence as the basis for their response. None of the respondents were aware of any studies or surveys at their institution measuring the impact of differential tuition by undergraduate program or major on student enrollment or choice of major. The respondents who were interviewed indicated the senior leadership team at their institution had discussed the impact of differential tuition on low SES students, but only two responding institutions

had additional financial aid money available to low SES students in programs with differentials.

Impact to Finance and Budget

The introduction of differential tuition by undergraduate program or major should increase tuition revenue unless student demand is effected, or other tuition or fees are decreased concurrently. Increased revenues generate impacts to the institution's budget. Survey Questions 27, 28, 29, 30, 31, 42, and 43 asked the respondents for information regarding potential impacts of differential tuition on finance and budget issues. The questions in the section are presented in three parts: change in differential tuition, revenue derived from differential tuition, and impacts on state funding.

Change in differential tuition. Survey Questions 27 and 28 asked for feedback concerning changes to the differential tuition rate since implementation. The responses to Survey Question 27, "Has the amount of the differential changed since first implemented?" are represented in Table 20.

Table 20

Amount of the Differential Changed?

	Response Count	Response Percent
Yes	25	81
No	6	19
Total	31	100

There were 31 responses to Survey Question 27. The differential had changed at 25 institutions (81%) since it was first implemented, while the respondents from 8 institutions (19%) reported no change since implementation.

Survey Question 28, “What factors have influenced the change in the differential?” was addressed by 23 of the 25 respondents (92%) who answered ‘yes’ in Question 27. The responses were coded and grouped into five categories. The complete responses are listed in Appendix J. The five categories describing the respondent’s identification of the factors that influenced the change in the amount of the differential were:

1. Increased Costs/Inflation

Increased costs associated with the underlying programs served as a driver for increasing the amount of the differential at ten of the institutions.

2. Peers & Market Forces

Respondents from four institutions referred to market conditions in regard to the tuition levels charged at peer institutions, the high starting salaries of graduates from some programs, and program growth as factors that contributed to the increase in the differential.

3. Declining State Support

Respondents from four institutions pointed to a decline in state support, combined with inflationary costs, as a driver for increases to the tuition differential.

4. Proportional Increase

Respondents from three institutions reported that the differential had increased in the same proportion as other tuition on their campus.

5. Planned Increases

Respondents from two institutions stated that the increased differential was in accordance with planned increases set forth at the initial implementation of the differential.

Costs increases due to inflationary pressures were cited by 10 respondents (44%), and 4 respondents (17%) commented on the external influences of peers and potentially high starting salaries of graduates. A decline in state funding was mentioned by 4 respondents (17%). These three categories, which represented 78% of the respondents, identified economic pressures influencing the decision to increase the amount of the differential. The remaining two categories were related to process. The increase in the differential tuition rate at three institutions (13%) was reported to be in the same proportion as the general tuition increase. The increase in the differential at two institutions (9%) was reported as part of the implementation plan.

Revenue derived from differential tuition. Survey Questions 29, 30 and 31 asked for information regarding the incremental revenue generated by differential tuition as compared to total tuition revenue.

Survey Question 29, “Did the implementation of your differential tuition model yield additional revenue?” The responses to the question are presented in Table 21.

Table 21

Did the Differential Tuition Model Yield Additional Revenue?

	Response Count	Response Percent
Yes	28	90
No	0	0
Unsure	3	10
Total	31	100

This question was completed by 31 respondents with 28 respondents (90%) indicating additional revenue was generated from the implementation of differential tuition by undergraduate program or major, and 3 of the respondents (10%) reporting they were unsure if the implementation of differential tuition yielded additional revenue.

The responses to Survey Questions 30 and 31 provided data for the presentation in Table 22. Survey Question 30, “In total dollars, what is the estimated additional revenue generated from differential tuition by undergraduate major or program in 2006-07?” was asked of the 28 respondents who indicated ‘yes’ to Question 29. The question was completed by 23 of the 28 respondents, 82% of the ‘yes’ respondents to Question 29. However, only 22 respondents provided the dollar impact for their campus.

Survey Question 31, “Please provide the total dollar amount of your institution's operating budget generated from tuition in fiscal year 2006-07” collected data from the 28 respondents who indicated ‘yes’ to Question 29. The institution's fiscal year 2006-07 operating budget generated from tuition was provided by 26 respondents (93%).

Table 22

Incremental Revenue and Operating Budget

	<u>Question 30</u>	<u>Question 31</u>	
	2006-07 Incremental Revenue From Differential Tuition	2006-07 Operating Budget Generated from Tuition	Incremental Revenue as % of Tuition
1	Did Not Provide	602,000,000	NA
2	Did Not Provide	777,367,000	NA
3	Did Not Provide	240,000,000	NA
4	Did Not Provide	186,744,100	NA
5	\$ 30,000	\$ 108,934,320	Less than 1%
6	100,000	170,296,000	Less than 1%
7	136,028	57,906,505	Less than 1%
8	1,000,000	182,000,000	1%
9	1,091,982	178,480,410	1%
10	1,400,000	211,000,000	1%
11	400,000	55,000,000	1%
12	1,282,514	152,000,000	1%
13	750,000	78,900,000	1%
14	8,000,000	727,137,194	1%
15	1,400,000	114,200,000	1%
16	1,600,000	113,000,000	1%
17	6,249,526	420,447,510	1%
18	6,845,670	456,663,000	1%
19	6,000,000	374,000,000	2%
20	1,400,000	73,000,000	2%
21	1,860,738	87,743,290	2%
22	6,000,000	184,000,000	3%
23	3,000,000	71,700,000	4%
24	12,800,000	248,100,000	5%
25	5,000,000	53,000,000	9%
26	25,000,000	265,000,000	9%
Total	\$ 91,346,458	\$ 4,382,508,229	2%

The data in Table 22 indicated that incremental revenue generated from the undergraduate differentials by major or program at these 22 institutions ranged from less than 1% to 9% of tuition revenue in 2006-07, with an average increment of 2% of tuition revenue. The incremental revenue for three institutions was less than 1%, while the incremental revenue for five institutions was more than 2%.

Impacts on state funding. Survey Question 42, “In your estimation, has the implementation of differential tuition by undergraduate major or program at your institution impacted the amount of state funding your institution receives?” The responses to the question are presented in Table 23.

Table 23

Did Differential Tuition Impact the Amount of State Funding Your Institution Receives?

	Response Count	Response Percent
Yes	1	3
No	26	90
Unsure	2	7
Total	29	100

Survey Question 24 was completed by 29 respondents. The level of state funding was not impacted by the implementation of differential tuition as reported by 26 respondents (90%), while two respondents (7%) were unsure of the impact and one respondent (3%) indicated an impact in the amount of state funding received by his/her institution.

Survey Question 43, “Please describe the impact on your state funding” was completed by the one respondent to Question 42. The response stated “State funding has not kept pace with funding requirements at the University, and continues to fall relative to the amount that tuition has risen over the years.” This response implied that differential tuition is not causing state funding to decrease.

Impact to finance and budget summary. The survey questions in this section collected data relating to the impacts of differential tuition by undergraduate program or major related to finance and budget. Respondents to the survey instrument indicated tuition differentials had increased on 81% of their campuses since their adoption. The respondents identified five factors which drove the increase in rates. These factors can be further grouped into economic and process influences. Economic influences, primarily driven by inflation and a decline in state appropriations were cited by 78% of the respondents. The process influences, internal decisions to periodically increase tuition rates, were cited by 22% of the respondents. Ninety percent of the respondents indicated the adoption of differential tuition provided additional revenue. The incremental revenue generated from undergraduate differential tuition by major or program, at the 22 institutions represented in the responses to the survey instrument, averaged 2% of institutional tuition revenue. The average incremental revenue for 14 of the 22 institutions (64%) was between 1% and 2% and for five institutions between 3% and 9%. The respondents indicated state funding at their institutions had not been impacted by the implementation of differential tuition.

Impact on Campus and Community

Survey Questions 40, 41, 44, and 45 asked the respondents for information regarding the impact of differential tuition on campus and community constituents. Additional data were gathered from respondents through a telephone interview.

Constituent involvement. Survey Question 40, “What was the level of involvement of the following groups in establishing differential tuition at your campus? Students, Faculty, Administration and Governing Board.” The responses are displayed in Table 24.

Table 24

Level of Involvement

	Active Participants in Decision Process		Consulted by the Decision Makers		Provided Unsolicited Input		Did Not Participate		Response Count
Students	(12)	44.4%	(11)	40.7%	(0)	0.0%	(4)	14.8%	27
Faculty	(16)	59.3%	(9)	33.3%	(1)	3.7%	(1)	3.7%	27
Administration	(25)	92.6%	(2)	7.4%	(0)	0.0%	(0)	0.0%	27
Governing Board	(23)	85.2%	(4)	14.8%	(0)	0.0%	(0)	0.0%	27
Parents	(0)	0.0%	(2)	9.1%	(10)	45.5%	(10)	45.5%	22
Legislative Officials	(0)	0.0%	(3)	13.0%	(6)	26.1%	(14)	60.9%	23
Governor’s Office	(0)	0.0%	(4)	17.4%	(4)	17.4%	(15)	65.2%	23
Others	(0)	0.0%	(4)	22.2%	(2)	11.1%	(12)	66.7%	18
Answered Question									27

There were 27 respondents to Survey Question 40. The groups identified in Question 40 represent internal and external constituencies. The internal constituency was comprised of students, faculty, administration, and governing boards. The external

constituencies were comprised of parents, legislative officials, governor's office staff, and others.

The data for the internal constituents indicated students at 12 institutions (44%), faculty at 16 institutions (59%), administration at 25 institutions (93%), and governing boards at 23 institutions (85%) were active participants in the decision process. At most institutions where members of these four groups were not active participants they were consulted by the decision makers. The data indicated students at 11 institutions (41%), faculty at 9 institutions (33%), administration at 2 institutions (7%) and governing boards at 4 institutions (15%) were consulted by decision makers during the decision process to establish differential tuition by undergraduate major. The internal groups were either active participants or were consulted by the decision makers at the majority of the institutions; students at 85% of the institutions, faculty at 92% of the institutions, administration and governing boards at 100% of the institutions.

The data for the external constituents indicated parents at two institutions (9%), legislative officials at three institutions (13%), governor's office staff at four institutions (17%), and others at four institutions (22%) were consulted by decision makers during the decision process to establish differential tuition by undergraduate major. However, the data for external constituents indicated none of the groups were active participants in the decision process. Parents at ten institutions (46%), legislative officials at six institutions (26%), governor's office staff at four institutions (17%), and other parties at two institutions (11%) provided unsolicited input to the decision makers during the process to establish differential tuition by undergraduate program or major. Parents at ten

institutions (37%), legislative officials at 14 institutions (52%), and governor's office staff at 15 institutions (56%) did not participate in the decision to establish differential tuition by undergraduate program or major.

The internal constituents as a group were either active in the decision making process or were consulted by the decision makers at 23 of the 27 institutions. The external constituents as a group did not participate in the process at nearly 50% of the institutions. Parents, who as a group were identified as not being involved in the decision making process, were only consulted by the decision makers on two campuses (9%), but provided unsolicited input on ten campuses (46%).

Survey Question 41, "What was the reaction, if any, of the following groups to the implementation of differential tuition by undergraduate major or program on your campus: positive, negative, no reaction." The groups identified in Question 41 represent internal and external constituencies. The internal constituency was comprised of students, faculty, administration, and governing boards. The external constituencies were comprised of parents, legislative officials, and governor's office staff. The responses to the survey question are presented in Table 25.

The data for the internal constituents indicated students at 13 institutions (54%), faculty at 16 institutions (64%), administration at 21 institutions (84%) and governing boards at 21 institutions (84%) had positive reactions to the implementation of differential tuition by undergraduate program or major. Students at four institutions (17%), faculty at two institutions (8%), administration at no institutions (0%), and governing boards at one institution (4%) had negative reactions to the implementation of

Table 25

Reaction to Differential Tuition by Undergraduate Major Program

	Positive Reaction	Negative Reaction	No Reaction	Response Count
Students	(13) 54%	(4) 17%	(7) 29%	24
Faculty	(16) 64%	(2) 8%	(7) 28%	25
Administration	(21) 84%	(0) 0%	(4) 16%	25
Governing Board	(21) 84%	(1) 4%	(3) 12%	25
Parents	(0) 0%	(5) 24%	(16) 76%	21
Legislative Officials	(0) 0%	(1) 5%	(19) 95%	20
Governor's Office	(0) 0%	(0) 0%	(20) 100%	20
Answered Questions				25

differential tuition by undergraduate program or major. The data indicated no reaction, either positive or negative, to the implementation of differential tuition by undergraduate program or major from students at seven institutions (29%), faculty at seven institutions (28%), administration at four institutions (16%), and governing boards at three institutions (12%).

The data indicated that none of the external constituents had a positive reaction to the implementation of differential tuition by undergraduate program or major. The data indicated parents at five institutions (24%) and state legislative officials at one institution (5%) had negative reactions to the implementation of differential tuition by undergraduate program or major. The data indicated no reaction, either positive or negative, to the implementation of differential tuition by undergraduate program or major from parents at 16 institutions (76%), state legislative officials at 19 institutions (95%), or governor's office staff at 20 institutions (100%).

Over three-quarters of the groups, both internal and external constituents, were reported to be either positive or indifferent in their responses to the implementation of differential tuition by undergraduate program or major. The group identified by the most institutions as having had a negative reaction to the implementation of differential tuition by undergraduate program or major was the parents at five institutions, or 24% of the total. Students at four institutions (17%) represented the second most cited group with a negative reaction.

Two respondents who indicated in Survey Question 40 students were involved in the decision making process, but who reported negative reactions from the students on Survey Question 41, and two respondents who reported parent participation on Survey Question 40 and negative parent and/or student reactions on Survey Question 41, were selected for a telephone interview. The respondents were asked, “Given the level of involvement the parents or students had or did not have (specific to the respondent’s institution) and their reaction to the implementation of differential tuition by undergraduate program or major:

- i. Can you explain why they parents and/or students reacted negatively?
- ii. Could you have handled the parent/student involvement differently to reduce the negative reaction?
- iii. Do you believe the reaction would have been different if the students or parents had been involved in the decision making process?

Three of the four respondents indicated that even with additional student or parent involvement the outcome would have been the same. These respondents also indicated

their process was inclusive but that you cannot please all constituencies. One respondent indicated there could have been more parent and student involvement in their process, but indicated that additional involvement might not have lessened the negative responses.

Recommend implementation again. Survey Question 44, “If your campus had to make the decision to implement differential tuition by undergraduate major or program again, would you recommend implementation?” Table 26 presents the data for this survey question.

Table 26

Would You Recommend Implementation?

	Response Count	Response Percent
Yes	23	88
No	3	12
Total	26	100

The question was completed by 26 of the respondents. Respondents from 23 institutions (88%) indicated they would recommend implementation again and three respondents (12%) would not recommend implementation.

Survey Question 45, “Please elaborate on your response,” was completed by 19 of the 26 respondents (73%) who completed Survey Question 44. Responses were provided by 17 of the respondents indicating ‘yes’ to Question 44 and two respondents who indicated ‘no’ to Question 44. The responses were coded and grouped into five categories. The complete responses are listed in Appendix K. The five categories which

described the respondents' identification of issues influencing their decision to recommend implementation of differential tuition by undergraduate major or program were:

1. High Cost of Programs

Respondents from eight institutions (42%), all of whom indicated they would recommend implementation again, identified the need to match revenues with costs of high cost programs as justification of their position.

2. Decreased State Support

Respondents from four of the institutions (21%), who indicated they would recommend implementation again, cited the decline in state support as a contributing factor in their decision. One respondent stated "It is necessary to cover the higher costs of these programs in lieu of state support."

3. Fairness (Opposing views)

Respondents from two institutions (10%), who indicated they would recommend implementation of differential tuition, mentioned equity or fairness as the justification for allocating the costs of higher priced programs to those who took the higher priced programs. One respondent (5%), who indicated he/she would not recommend implementing again, suggested raising tuition across all programs in a uniform manner.

4. Reluctant Yes

Respondents from two institutions (11%) said they would recommend implementation again, but indicated that they might not personally be in favor

of differential tuition by undergraduate major or program. The respondents did not explain why they were not in favor of differential tuition.

5. Internal politics

Respondents from two institutions (11%) identified the campus political process as either helping to support or eliminate differential tuition.

Of the 19 institutions represented, 12 respondents, or 63%, cited the fiscal realities of declining state support and the need to generate funding for high cost programs as reasons they would recommend implementation of differential tuition if faced with the decision to do so again. Respondents from three institutions (15%), two in favor of implementing again and one opposed all cited fairness issues from a student perspective. Respondents from two institutions (11%) identified the fiscal realities of needing differential tuition but expressed a personal bias against implementation. Respondents from two institutions (11%), one in favor and one not in favor, discussed the campus climate as impacting their decision.

Of the 31 institutions which were reported as having differential tuition by undergraduate program or major, nine reported implementing the differential within the last four years. Respondents from seven of these institutions were selected for an interview and five chose to be interviewed. The interview question was:

“You indicated in your response to question 14 that your campus has implemented differential tuition within the last 4 years. What worked well during the process? What didn’t work well? What would you do differently if you had to implement again?”

Of the five interviewees, three respondents (60%) indicated the implementation went well, one (20%) indicated his institution's implementation did not go well, and one (20%) respondent indicated he/she did not have the background to answer the question. Communication, by involving the campus community, and adequate planning were two areas identified by the respondents as processes that worked well during implementation. One respondent contrasted the implementation of two differentials at his/her institution and indicated the implementation of a differential phased in over three years created more issues than a similar differential completely implemented in one year. None of the respondents offered an alternative to their implementation strategy.

Impact on campus and community summary. The campus and community survey questions and the telephone interview questions obtained data regarding the level of involvement in the decision making process by various groups and the impacts on those who manage the implementation. The groups identified in Questions 40 and 41 represented internal and external constituencies. The internal constituency was comprised of students, faculty, administration, and governing boards. The external constituencies were comprised of parents, legislative officials, governor's office staff, and others. The level of involvement of the internal constituents in the decision making process for implementing differential tuition at the respondent's institution was much higher than the level of involvement by the external constituents. As a group, parents were the least involved in the decision making process, whether having had direct involvement in the process or having been consulted by the decision makers. Parents were the group with the highest negative reaction according to the respondents. The respondents indicated a

propensity to implement differential tuition again, primarily for reasons of rising costs and decreasing state funds. Communication and adequate planning were identified by the respondents as necessary for the implementation of a differential tuition structure.

Impact to the Land Grant Mission

Survey Questions 46, 47, 48, and 49 asked the respondents for information regarding the impact of differential tuition on the land grant mission.

Survey Question 46, “Is your institution a land grant institution?” The responses are presented in Table 27.

Table 27

Land Grant Institution?

	Response Count	Response Percent
Yes	16	57
No	12	43
Total	28	100

The survey question was completed by 28 of the 31 respondents (90%) who indicated their institution had differential tuition in Survey Question 6. This group of respondents represented 16 land grant institutions which self-reported having had differential tuition by undergraduate program or major, out of 29 public research land grant institutions which had differential tuition by undergraduate program or major.

Survey Question 47, "Has the implementation of differential tuition by undergraduate major or program had an impact on you land grant mission?" The data are presented in Table 28.

Table 28

Differential Tuition Impacted Land Grant Mission?

	Response Count	Response Percent
Yes	0	0
No	14	100
Total	14	100

The question was completed by 14 of the 16 respondents (82%) from land grant institutions, with all respondents replying 'no', differential tuition by undergraduate program or major does not impact the land grant mission.

Survey Question 48, "Please describe the impact of differential tuition by undergraduate major or program on the land grant mission of your campus" received no responses as all 14 of the respondents to Question 47 indicated that there was no impact.

Current and Future Observations

Survey Questions 49 and 50 were not specific to the previous areas and asked the respondents to provide feedback regarding the current and future state of differential tuition by undergraduate program and major.

Survey Question 49, “Do you envision the policy of differential tuition by undergraduate major or program becoming a common differential such as the graduate/undergraduate differential?”

The data for responses to question 49 is presented in Table 29.

Table 29

Differential Tuition by Undergraduate Major or Program Becoming a Common Differential?

	Response Count	Response Percent
Yes	16	59
No	11	41
Total	27	100

Survey Question 49 was completed by 27 of the respondents. Respondents representing 16 institutions (59%) indicated differential tuition by undergraduate program or major will become a commonplace tuition structure, while respondents from 11 institutions (41%) indicated this type of differential will not become a common tuition structure.

Survey Question 50, “Please add any comments or issues regarding the use and impact of differential tuition by undergraduate major or program for your campus that was not captured in this survey.” Survey Question 50 was completed by 35 of the 95 survey participants (37%). The responses were coded and grouped into nine categories. The complete list of responses is contained in Appendix L. The categories are:

Legislative Constraints, Common Definition, Future, Acceptance, Cost, Access, Upper/Lower Division, Technology Fee, and Other.

1. Legislative Constraints

Respondents from five institutions (14%) mentioned legislative hurdles that prevented their campuses from adopting differential tuition. The respondents identified two states which had prohibited differential tuition.

2. Common Definition

Respondents from four institutions (11%) indicated the term differential tuition is called by another name at their campus. Academic service fees, program fees, college enrichment, college excellence fees and technology fees were identified by the respondents as being synonymous with differential tuition.

3. Future

Respondents from three institutions (9%) discussed potential implementation of differential tuition in the near future. A respondent (3%) identified interest on his campus, but he/she did not indicate differential tuition would be adopted there.

4. Acceptance

Respondents from two institutions (6%) discussed student involvement and acceptance or non-acceptance of the concept of differential tuition. A respondent (3%) identified a concern that differential tuition might signal the public a university valued one degree more than another.

5. Cost

Respondents from three institutions (9%) identified cost differences to deliver programs as a driver in the decision to implement differential tuition.

6. Access

Respondents from two institutions (6%) raised the issue of access and affordability in relation to differential tuition at the undergraduate level.

7. Upper/Lower Division

Respondents from two institutions (6%) offered observations on differentials between upper and lower division courses.

8. Technology Fee

Respondents from two institutions (6%) commented on technology fees.

9. Other

Responses by ten respondents (27%) offered a variety of comments that were not in the categories listed above and were not specific to differential tuition at the resident undergraduate level.

The responses were varied. Legislative constraints were cited the most frequently:

however, there were only five responses in the category (14%).

In summary, Research Question 3 asked, “What were the impacts of the implementation of differential tuition?” The data were parsed into the following sub-categories to describe the various impacts of differential tuition by undergraduate major or program: impact to enrollments, impact to finance and budgets, impact on campus and

community, impact to the land grant mission, and current and future observations. A summary of each of the impacts was provided at the end of each sub-section.

Research Question 4 How were the increased revenues from differential tuition used?

Survey Questions 32 and 33 addressed the uses of the incremental revenue derived from differential tuition.

Survey Question 32, “Please estimate the percentage allocation of the additional revenue from differential tuition by undergraduate major or program.” The data from the responses are presented in Table 30.

Table 30

Percentage Allocation of the Additional Revenue from Differential Tuition

Number of Respondents	General Fund	College Housing the Major or Program	Department Housing the Major or Program	Other
13		100%		
6	100%			
1	0%		100%	
1	4%	81%		15%
1	20%	80%		
1	45%	55%		
1		80%		20%
24				

The survey question was completed by 24 respondents. Respondents from 13 of the institutions (54%) indicated that the additional revenue derived from differential tuition was allocated to the college housing the major or program associated with the differential. Respondents from six of the institutions (25%) reported 100% of the revenue

flowed to the university's general fund. A respondent from one institution (4%) identified the department housing the major or program as the recipient of 100% of the incremental revenue. Respondents from four of the institutions (17%) reported revenue sharing formulas which directed over half of the incremental revenue to the college housing the major or department and the remainder being allocated the general fund or other funds.

A response to the survey instrument from one respondent indicated that 100% of the incremental revenue was not allocated to the general fund, college or department, but to other funds. The respondent was contacted during the telephone interview and asked to explain what was in the "other" category. The respondent indicated 100% of the incremental revenue went to the college therefore his/her response was reclassified to 100% going to the college housing the differential tuition. The two respondents who classified a percentage of the incremental revenue as "other" were contacted during the telephone interview and asked for clarification. In both cases the revenue was allocated to financial aid, with the allocation being split between the general student body and students in the program generating the revenue. The percentage distribution in both cases was not known.

Survey Question 33, "Please indicate if the additional revenue derived from differential tuition by undergraduate major or program is earmarked for the following specific purposes: Teaching, Financial Aid, Student Services, Equipment, Research, Technology, Distance Education, Service, and Other." The data are presented in Table 31.

Table 31

Additional Revenue Derived from Differential Tuition by Undergraduate Major or Program is Earmarked for the Following Specific Purposes:

Number of Institutions	Yes	No	Unsure	No Response	Total Responses
Teaching	20	3	2	2	27
Equipment	14	6	4	3	27
Technology	12	6	5	4	27
Financial Aid	10	7	4	6	27
Student Services	8	9	4	6	27
Distance Education	6	12	4	5	27
Other	6	8	6	7	27
Service	5	10	6	6	27
Research	4	12	3	8	27

% of Institutions	Yes	No	Unsure	No Response	Total
Teaching	74%	11%	7%	7%	100%
Equipment	52%	22%	15%	11%	100%
Technology	44%	22%	19%	15%	100%
Financial Aid	37%	26%	15%	22%	100%
Student Services	30%	33%	15%	22%	100%
Distance Education	22%	44%	15%	19%	100%
Other	22%	30%	22%	26%	100%
Service	19%	37%	22%	22%	100%
Research	15%	44%	11%	30%	100%

Survey Question 32 was completed by 27 respondents. Twenty of the respondents (74%) reported that some of the additional revenue was earmarked for teaching. Over half of the institutions, 14 or 52%, reported the incremental revenue was being earmarked for equipment. Expenditures for technology was the third most identified category, with 12 institutions earmarking incremental revenue from differential tuition for this purpose.

Financial aid as a recipient of some of the differential was identified by ten respondents or 37% of the institutions. Student services was identified by respondents from 8 institutions (30%) as a recipient of differential tuition. Distance education and 'other' was identified for six respondents representing 22% of the institutions. Service was identified by respondents from five institutions (19%) and research was identified by four institutions (15%).

Respondents from three institutions were contacted during the telephone interview and asked to further define "other". "Other" was defined by one respondent as being allocated to the general fund, another indicated plant funds and the third identified specific scholarship funds rather than financial aid.

Research Question 4 asked, "How were the increased revenues from differential tuition used?" The data identified where the incremental revenues were allocated and how the revenue was expended. The data indicated over half of the institutions (58%) allocated 100% of the incremental revenue to the college or department housing the program and another 12% of the campuses allocated 80% or more of the revenue to the college housing the program. The institution's general fund was allocated 100% of the incremental revenue at six institutions (25%). The remaining 5% was allocated to financial aid and ultimately across the three categories. The incremental revenues were identified for specific purposes at the institutions which had differential tuition and responded to the survey. Expenditures for teaching were earmarked by nearly three-quarters of the campuses, 74%, followed by equipment at 52% of the institutions and

technology at 44% of the institutions. Incremental revenue from differential tuition was only earmarked for financial aid at 37% of the campuses.

Chapter IV Summary

In this chapter, the data was presented, analyzed, and interpreted. The analysis of the data began with a presentation of the profile of the respondents to the survey instrument. Each research question was addressed by presenting, analyzing and interpreting the responses from the appropriate survey instrument question(s). The presentation of data for each research question included data obtained from a search of the institution's website and/or telephone interview as well as the survey instrument.

CHAPTER V

SUMMARY

(8) Provided, That the moneys so invested or loaned shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section 5 of this Act), and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this Act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes on the several pursuits and professions in life. (Morrill Act of July 2, 1862, ch.130, 12 Stat.503,7 U.S.C.301 et.seq.)

In this chapter an overview of the dissertation will be presented, followed by a summary of findings, conclusions, and recommendations for future research.

Overview of the Dissertation

The 1997 Rand Corporation & Council for Aid to Education report entitled “Breaking the Social Contract” presented a number of forces which converged on higher education and had the potential to limit the affordability of an undergraduate education to fewer citizens. The above passage from Section 8 of the Morrill Act highlighted the purpose of land grant institutions, if not all of public higher education, which is accessibility for the masses. Accessibility to public higher education is a matter of resources. The economic currency which allows one to enter higher education is in the form of tuition. Tuition can be seen as a source of funds from the administrator’s point of view, and a cost from the student’s point of view.

A decline in state support, combined with inflationary pressures had caused administrators to seek higher levels of tuition and new revenue streams to meet the rising

costs (Mumper, 2001; Paulsen, 2001; Rand Corporation & Council for Aid to Education, 1997; Yanikoski & Wilson, 1984). Tuition differentials were one such revenue stream.

Tuition in public higher education which was once a single rate for graduate and undergraduates alike had become more complex. Prior to 1970, tuition differentials for professional programs such as medicine and law and for non-resident students were the first type of differentials to be commonly used. Between 1970 and 2007 a variety of tuition differentials were introduced. Yanikoski and Wilson's (1984) study of tuition cataloged the variety of differentials which were utilized in public higher education. Their study identified factors such as class standing, graduate or undergraduate status, residency, type of professional program, time of class offering, and undergraduate major or program which served as the basis for differentiating tuition.

Tuition from the student's perspective was identified by Mumper (1996) as a component of a student's decision to enter higher education. West (1975) and Tierny (1980) identified price as a factor impacting the institutional choice of the student.

Differential tuition served as a source of new or additional revenue, but were there unintended consequences? Undergraduate tuition for a business major at the University of Colorado – Boulder was 58% more than tuition for a liberal arts major. If tuition or price impacted a student's college selection or decision to attend college, is it possible that differential tuition by program or major will steer students away from higher costing programs? In order to study the impact of differential tuition by undergraduate program on student enrollment, the research community needed to know which institutions used

this type of differential, which programs had differential, and the amount of the differential.

Purpose of the Study

The purpose of the study was to examine tuition at 165 public research universities, specific to differential tuition by resident undergraduate program or major to determine:

1. the emergence and prevalence of this type of differential tuition,
2. the programs or majors for which differential tuition existed and the amount of the differential,
3. the reasons for implementation of differential tuition, and
4. the impacts of the adoption and implementation of differential tuition as identified by chief business officers.

The research questions designed to address the purpose were:

1. For public research institutions which used or considered using differential tuition by undergraduate program or major:
 - a. How many institutions used or considered using differential tuition by undergraduate program or major?
 - b. Which institutions had implemented differential tuition?
 - c. When was differential tuition by undergraduate program or major implemented at the institutions which had differential tuition?
 - 1) What were the reasons for implementing differential tuition?

- d. When was differential tuition by undergraduate program or major considered by a governing board but not implemented?
 - 1) What were the reasons for governing boards electing not to implement differential tuition?
2. For those institutions which had undergraduate tuition differentials by program or major:
 - a. Which programs or majors had differentials?
 - b. What was the amount of the differential in dollars and percentage of undergraduate resident tuition?
 - c. What changes were anticipated to the existing differential tuition policy?
3. What were the impacts of the implementation of differential tuition?
4. How were the increased revenues from differential tuition used?

Differential tuition was defined as the purposeful variation in the published undergraduate tuition rates by course, major or program of study. The study did not distinguish between differentials that were charged to upperclassmen (i.e., juniors and seniors) versus differentials that were charged to all levels of class standing within a given major or program. Any differential based upon major or program was classified as an occurrence of differential tuition for this study.

The data collected for this study provided answers to the four research questions. The data were also used to support the 12 conclusions discussed in this chapter and provided a platform of information for future research.

Literature Review

A search of the social science databases used key words such as 'tuition', 'differential tuition', 'tuition rates', 'tuition policies', 'student selection', and 'student choice' to identify relevant literature on differential tuition. The research that was found was divided into three categories: structural, economic influence, and description of the landscape.

The articles related to the structural category provided information which described the various forms of differential tuition and their application. The forms of differential tuition included differentials based upon residency, graduate versus undergraduate status, time of day or peak load, upper division versus lower division status, and class standing. The articles and studies provided well documented examples of the types of differentials; however, only two articles were published after 1990. The most comprehensive work was the study completed by Yanikoski and Wilson (1984). Although there was a mention of differential tuition by major or college, no definitive research on this type of differential was found.

The economic influence category was student focused and included research on economic theory and the social impacts that resulted from differential tuition. The research was more current than the studies in the structural category. Articles by Mumper (1996) and Behrman et al. (1992) and others identified a negative correlation between tuition or price and the selection of a higher education institution, while Hilmer (1998) and Heller (1997) identified a correlation between the level of tuition and a prospective student's decision to pursue an undergraduate degree. The research also identified tuition

and perceived price as a barrier to entry into higher education for low socioeconomic status (SES) students (Black & Sufi, 2002; Humphrey, 2000; Perna et al., 2004). While the research was more current and plentiful in this category, no research was found exploring the impact of differential tuition by program or major on the student decision making process or impacts on low SES students.

The description of the landscape category identified research that contained descriptive statistics and information describing the use of differential tuition by institutions. Recent surveys of tuition and fees focused on net pricing and tuition discounting in addition to the average tuition at an institution. The annual survey of tuition and fees at public colleges and universities in the west published by the Western Interstate Commission for Higher Education (WICHE) included data on differential tuition for the first time. The report indicated the collection of differential tuition data was in response to the growing application of differential tuition by undergraduate major or program. The WICHE study was limited to 14 states in the Western United States. The report was the only current research identified which addressed differential tuition, however it was limited to two questions, 'do you have differential tuition by undergraduate major or program?' and 'do you have differential tuition by year in college?'

A review of literature from each category identified a lack of research which examined differential tuition by undergraduate program or major. No research was found documenting the prevalence of this type of differential on a national scale. In addition no research was found documenting the impact of differential tuition by undergraduate

major on the student decision making process in regard to selection of major or career field.

Methodology

The current study was a descriptive study which utilized a survey instrument, research of institution's websites, and interviews to determine the practice of differential tuition by undergraduate program or major at public research institutions. Based upon a lack of published research and a recognized need for this information by higher education administrators, this study addressed a current problem and was classified as a descriptive study utilizing the pragmatic mixed-method approach.

A survey instrument was developed by consulting a panel of experts, receiving input from the dissertation committee, and feedback from a pilot test. The survey instrument contained 50 questions and asked for data on differential tuition as well as the respondent's opinions and observations concerning the impacts of differential tuition on his/her university community. The survey instrument was web-based and was accessible with a link from the e-mail invitation to participate.

For those institutions whose representative did not respond to the survey instrument, tuition and fee data were collected by a search of the non-respondent institutions' website. The combination of data obtained from the survey and the website reviews ensured collection of the descriptive data elements for all institutions in the study population.

After the data from the survey were compiled and reviewed, the responses to several questions were identified as needing further clarification. A telephone interview protocol was developed to elicit feedback from selected respondents of those questions.

Summary of Findings

This section will summarize the findings by research question. The study population will be presented followed by each research question.

Study Population

The study population was the 165 public research institutions defined by Carnegie Classifications 15 and 16, Research Extensive and Intensive Institutions. The Chief Business Officers from four institutions completed the pilot survey. Data specific to programs and the amount of differential tuition for these four institutions were used in the analysis. An invitation to participate in the survey instrument was sent to chief business officers at 161 of the institutions. Respondents from 95 institutions or 59% completed the survey instrument. The titles of the respondents indicated 80 of the surveys or 70% were completed by a senior administrator.

The study population of 165 institutions included three institutions which did not have undergraduate programs, and therefore were excluded from the analysis. Tuition data for 162 public research institutions with undergraduate programs were obtained for 95 institutions from the responses to the survey instrument and for 67 institutions by a review of the institution's website.

Research Questions

Research Question 1a. For public research institutions which used or considered using differential tuition by undergraduate program or major: How many institutions used or considered using differential tuition by undergraduate program or major?

Differential tuition by undergraduate program was used by 74 public research institutions or 46% of the institutions in academic year 2007-08. The study identified 29 institutions or 18% of public research institutions which had considered but not adopted differential tuition by undergraduate program. These 103 institutions which adopted or considered using differential tuition by undergraduate program represent nearly two-thirds of the public research institutions in this study.

Recent interest in this type of differential tuition by governing boards was not only evidenced by the growing number of institutions which implemented differential tuition by undergraduate program, but also by the number of governing boards which discussed and chose not to implement differential tuition by undergraduate program or major. While 21 institutions had adopted differential tuition by undergraduate program between academic year 2003-04 and 2007-08, governing boards at 26 institutions had discussed and not adopted differential tuition. Despite the increased interest in differential tuition by program or major, governing boards are choosing two divergent solutions with a similar number of institutions in each group. The trade off appeared to be rooted in the issue of access verses the issue of revenue.

Research Question 1b - For public research institutions which used or considered using differential tuition by undergraduate program or major: Which institutions had implemented differential tuition?

There were 74 institutions which had differential tuition by undergraduate program in academic year 2007-08. The institutions were located in 36 states. Land grant and American Association of Universities (AAU) institutions were both represented in the study. Of the 51 land grant universities in the public research university population, 29 or 57% were identified as having differential tuition by undergraduate program. The study included all 34 public AAU member institutions of which 18 or 53% had differential tuition by undergraduate program or major.

Public research institutions in 14 states did not have differential tuition by undergraduate program. Respondents in one state cited state law as preventing undergraduate differential tuition by program, yet another institution in that state had fees by college which acted as a tuition differential.

Research Question 1c - For public research institutions which used or considered using differential tuition by undergraduate program or major: When was differential tuition by undergraduate program or major implemented at the institutions which had differential tuition?

The implementation date was determined for 55 of the 74 institutions. Differential tuition by program or major had been used for over 20 years; however, the use was not widespread, with less than 5 institutions reporting differential tuition by program or major prior to 1988. The number of institutions which adopted and implemented

differential tuition by undergraduate program had increased rapidly in recent years. During the five academic years from 1992-93 to 1997-98, eight institutions added differential tuition by undergraduate program. Another 12 institutions added differential tuition between 1997-98 and 2002-03. Of the 74 institutions with differential tuition by undergraduate program or major, 25 institutions or 34%, adopted this type of tuition differential between academic years 2003-04 and 2007-08.

Research Question 1c(i) - For public research institutions which used or considered using differential tuition by undergraduate program or major: What were the reasons for implementing differential tuition?

The respondents to the survey indicated revenue generation as a primary driver in adopting differential tuition by undergraduate program or major. The reasons for the revenue generation varied. Over half of the respondents cited the need to match revenues to the expenses incurred by higher costing programs. Others identified additional revenue needed to maintain or enhance quality in targeted programs, while general needs for specific colleges or programs were also mentioned. A decline in state support was also cited as a cause for the need to implement differential tuition by undergraduate program or major.

Research Question 1d - For public research institutions which used or considered using differential tuition by undergraduate program or major: When was differential tuition by undergraduate program or major considered by a governing board but not implemented?

The level of interest by governing boards in differential tuition by undergraduate program had increased dramatically from 2005 to 2007. The number of governing boards which had considered but did not implement differential tuition by undergraduate program or major was reported to be four prior to 2005. During the three year period from 2005 to 2007, governing boards at 25 institutions considered but did not implement differential tuition by undergraduate program or major.

Research Question 1d(i) - For public research institutions which used or considered using differential tuition by undergraduate program or major: What were the reasons for governing boards electing not to implement differential tuition?

The reasons cited for not implementing differential tuition by undergraduate program or major were placed into four categories, access and affordability, legislative issues, procedural issues, and under consideration. Over half of the respondents cited student centered issues as the reason differential tuition was not implemented. The primary student centered issues included the potential for limiting access, limiting choice of major, and equity as a result of tuition differentials. Other student centered issues expressed by respondents indicated concern about the impact on students from the cultural change needed to accompany differential tuition and the complexity associated with differing rates. Legislative barriers were cited by 26% of the respondents. Although the decision not to implement had been made at 17% of the institutions, the governing boards were interested in further discussions, but no reasons were given for the decision not to implement.

Research Question 2a For those institutions which had undergraduate tuition differentials by program or major: Which programs or majors had differentials?

The data were identified with differential tuition by undergraduate programs or colleges rather than differentials by specific majors. There were 17 programs identified with differential tuition by undergraduate program. Nursing, pharmacy, dental hygiene, and physical therapy, all medical related programs, had pricing structures similar to other professional programs. The program category 'other' included 13 different programs which were used at either one or two institutions. The 12 remaining programs with differential tuition by undergraduate program were business, engineering, architecture, education, sciences, fine arts, health related, computer science, journalism, honors, agriculture, and liberal arts. The most prevalent programs with differential tuition by undergraduate program were business at 51 institutions and engineering at 48 institutions. These two programs with differentials were used at over two-thirds of the institutions which had undergraduate tuition differentials and nearly one third of the total number of public research institutions, more than double the occurrence of nursing or architecture programs. Architecture programs with an undergraduate tuition differential were used at 22 institutions or 30% of the institutions with differential tuition. Differential tuition for education and various science programs were used at 17 institutions, less than one-quarter of the institutions with differentials. Undergraduate tuition differentials were used for fine arts, health related, computer science and journalism programs at 12% to 19% of institutions with tuition differentials. Honors, agriculture, and liberal arts programs were used at less than 10% of the institutions with undergraduate tuition differentials.

Research Question 2b - For those institutions which had used undergraduate tuition differentials by program or major: What was the amount of the differential in dollars and percentage of undergraduate resident tuition?

The amount of the differential was expressed in one of three ways: a per term charge, a per credit hour charge, or a combination of per term and per credit hour charge. The range of the differential between institutions was significant. The range of the per term differential was \$2 - \$1,896 and the per credit hour range was \$2 - \$194. The amount of the differential stated as a percent of resident undergraduate tuition, was 1% to 82%.

The average differential was 10.8% of resident undergraduate tuition. A student who attended an institution and selected a program with an undergraduate differential would have paid an average of 10.8% more in tuition than his/her peers on campus, nearly the equivalent of paying for an extra term of tuition to obtain a four year degree. The range of the differential was substantial depending on the program and institution chosen. The mean differential for engineering programs was 14%, yet a student may have paid a differential of 45% at one institution, three times higher than the average differential at one of the other institutions. In each program area there were two to six institutions which had significantly higher differentials than the average differential for that program. The differentials for programs at these institutions were two to three times higher than the average differential for the same program. The differential for business programs at six institutions ranged from 30% to 59% compared to the average business program differential of 14%.

Research Question 2c - For those institutions which had undergraduate tuition differentials by program or major: What changes were anticipated to the differential tuition policy?

Nearly half of the respondents indicated their institutions would not adopt differentials for additional programs or majors in the next two years, while 39% were unsure. While the possibility of adding tuition differentials for other programs existed for more than half the institutions, 27 respondents (88%) indicated removal of a tuition differential from a program in the next two years would not happen. Programmatic costs were cited by four of the five respondents who indicated their institution would be adopting additional differentials. This reason was consistent with the reasons identified by respondents from institutions for adding undergraduate differential tuition in Research Question 1c(i). Student demand for additional services was identified by one institution as the reason for adding an undergraduate tuition differential.

Research Question 3 - What were the impacts of the implementation of differential tuition?

The findings for Research Question 3 are presented in five broad categories: (a) impact to enrollments, (b) impact to finance and budgets, (c) impact on campus and community, (d) impact to the land grant mission, and (e) current and future observations.

Impact to enrollments. In general, total enrollment and enrollment in programs with differential tuition was not reported to be impacted by the implementation of differential tuition by undergraduate program or major. Increased enrollment in a program which had introduced a tuition differential was reported by one institution. The

increase was attributed to the incremental revenue producing funding for growth in capacity which was filled with preexisting unmet demand.

Nearly two-thirds of the respondents indicated there was no impact to total enrollment and enrollment by program or major, while slightly less than half of the respondents indicated no impact to enrollment of low socioeconomic status (SES) students in programs with differential tuition. Only one respondent indicated differential tuition impacted enrollment of low SES students. When contacted for further clarification, the respondent indicated his/her answer regarding impact to low SES students was based upon anecdotal evidence.

Selected respondents who indicated the implementation of differential tuition did not impact low SES students based their response on anecdotal evidence. None of the respondents who participated in the interview were aware of any studies or surveys at their institution measuring the impact of differential tuition by undergraduate program on student enrollment or choice of major. The respondents further indicated the senior leadership team at their institution had discussed the impact of differential tuition on low SES students, but only two respondent institutions allocated additional financial aid money for low SES students in programs with differentials.

Impact to finance and budgets. Respondents whose institutions had experienced increases in the differential tuition rate since it was implemented identified the factors which influenced the change in rates. The amount of the increases identified by 78% of the respondents were the result of economic factors such as, inflation, market conditions driven by peers or potentially higher starting salaries of graduates of the programs, and

continued decline in state appropriations. The other responses indicated the increases were proportional to general tuition increases or were planned increases as part of the implementation.

Implementation of differential tuition by undergraduate program generated additional revenue for the institutions which implemented the differential. The incremental tuition revenue for 2006-07 ranged from \$30,000 to \$25,000,000 or less than 1% to 9%. The incremental revenue generated by undergraduate differential tuition averaged 2% of total tuition revenue per institution.

The respondents indicated the continued decrease in state funding was a cause for implementation of differential tuition by undergraduate program. However, none of the respondents indicated implementation of differential tuition by undergraduate program had impacted the amount of state funding.

Impact on campus and community. The survey respondents indicated they would implement differential tuition again. The need to generate funding for high cost programs was cited by 42% of the respondents while 21% identified declining state support as reasons to implement again. The other one-third of the respondents was less unified in their response. The issue of fairness was mentioned by two respondents in favor of undergraduate tuition differentials, and one respondent opposed to differentials. Respondents from two institutions indicated they would recommend undergraduate tuition differentials but were not personally in favor of differential tuition and two respondents reported internal politics impacting the decision to implement, one favorable

the other not favorable. Communication and adequate planning were identified by the respondents as necessary for the implementation of a differential tuition structure.

The campus community consisted of an internal constituency and an external constituency. The internal constituency was comprised of students, faculty, administration and the governing board. The external constituency was comprised of parents, legislative officials, governor's staff and others. The level of involvement of the internal constituency in the decision making process for implementing differential tuition was much higher than the level of involvement by the external constituency. The internal constituents were either active participants or consulted by the decision makers in the process to adopt differential tuition at nearly all of the respondent institutions. The external constituency was not identified as being active participants in the process at any of the institutions and was identified as being consulted by the decision makers in less than one fifth of the institutions. Parents were the least involved group in the decision making process whether having had direct involvement in the process or having been consulted by the decision makers. However, parents were reported to have provided unsolicited input to the process at nearly half of the institutions. Parents were also the group with the highest negative reaction to implementation of differential tuition by undergraduate program.

Impact to the land grant mission. There were 51 land grant institutions in the study population and 29 had differential tuition by undergraduate program while 22 did not. The respondents from 14 of the land grant institutions who completed the land grant

portion of the survey instrument indicated that differential tuition by undergraduate program did not impact the land grant mission.

Current and future observations. The survey respondents whose institutions had differential tuition by undergraduate program did not anticipate removal of a differential. At the same time 41% of this group indicated differential tuition by undergraduate program would not become a common practice such as the graduate/undergraduate differential.

The survey instrument asked for additional comments or observations concerning differential tuition by undergraduate program or major. The question yielded 35 responses which were grouped into nine categories. The categories were Legislative Constraints, Common Definition, Future, Acceptance, Cost, Access, Upper/Lower Division, Technology Fee, and Other. The responses in most categories were similar to issues identified in other research questions. One new issue was identified which had not been discussed elsewhere in the study, the need for a common definition.

A common definition may be needed for further research on differential tuition by undergraduate program or major. Four respondents identified this as an issue. Respondents to the survey instrument, representing 11 institutions, indicated their institution did not have differential tuition by undergraduate major, but were found to have fees which acted as differential tuition, but were called by other names. The results published in the WICHE report (2007) underscored the importance of establishing a common definition of differential tuition. Three institutions were reported as not having undergraduate differential tuition by program on the WICHE report but respondents from

those institutions reported having had differential tuition by undergraduate program in this study. Five institutions were reported as not having differential tuition by undergraduate program on the WICHE report, yet the institutions had significant program fees and were considered as having differential tuition for this study.

Research Question 4 - How were the increased revenues from differential tuition used?

Over half of the institutions allocated 100% of the incremental revenue from the tuition differential to the college or department housing the program, while 13% of the institutions allocated approximately 80% of the incremental revenue to the college or department housing the program with the differential. The full amount of the incremental revenue was allocated to the general fund at 25% of the institutions.

Although the incremental dollars were allocated to the college or department at a large percentage of the institutions, the dollars were earmarked for specific purposes at some of the institutions. The incremental dollars were earmarked for teaching expenditures at 74% of the institutions. Equipment and technology needs were identified at 52% and 44% of the respondents' institutions. Incremental funds were earmarked for financial aid on 37% of the campuses, half as many institutions which earmarked the funds for teaching.

Conclusions

This section of the chapter identifies conclusions which were drawn from the study. There were 12 conclusions.

1. Differential tuition by undergraduate program was a topic of interest by governing boards from 2003-2008.

2. Use of differential tuition by undergraduate program had increased from 2003 to 2008 and became more prevalent within the population of public research institutions.
3. Business and engineering were the most prevalent programs with differential tuition by undergraduate program.
4. Differential tuition by undergraduate program averaged 10.8% of resident undergraduate tuition for non-medical related programs for academic year 2007-2008.
5. The tuition differential in dollars and as a percentage of resident undergraduate tuition was not a consistent amount or rate across institutions or programs.
6. The incremental revenue generated from differential tuition by undergraduate program averaged 2% of an institution's total tuition revenue in 2006-07.
7. The majority of institutions with differential tuition by undergraduate program returned the incremental revenue generated by the differential to the college or department housing the program.
8. Higher costs in selected programs combined with a decline in state appropriation led to the adoption and/or increase in differential tuition by undergraduate program.
9. The adoption and implementation of differential tuition by undergraduate program did not impact the amount of state appropriation.

10. The primary reasons for institutions not adopting differential tuition by undergraduate program or major were concern for student access or legislative prohibitions.
11. A common agreement on the impact of differential tuition by undergraduate program or major on low socioeconomic status students did not exist.
12. There was no common definition of differential tuition by undergraduate program or major.

Recommendations for Future Research

The purpose of this study was to identify the landscape and environment related to differential tuition by undergraduate major. The study established the emergence and prevalence of differential tuition by undergraduate program. This form of differential tuition was no longer used by a small number of institutions and had the potential to impact a significant number of students. The public research institutions which had differential tuition by undergraduate program, the programs with these differentials, and the amount of the differentials were identified in the study. In addition, potential impacts of differential tuition were identified. The data and information describing the landscape established a platform for future research. The analysis of the data presented in this study generated the following four topics for further research.

1. Does the implementation of differential tuition by undergraduate program impact student choice of major or career path? Is the impact greater for low SES students than other students?

2. This study was limited to public research institutions. What was the prevalence of differential tuition in other public higher education sectors, such as non-research public institutions, urban based institutions, or community colleges?
3. What is the financial aid policy at institutions with differential tuition by undergraduate program and does the policy mitigate or exacerbate the impact of the differential on student choice of major?
4. What are the reasons or factors which contribute to the wide range of differentials between programs and between institutions?

Summary

This chapter presented an overview of this study, a summary of findings, identified 11 conclusions, and highlighted four areas for further study. The study documented the emergence and prevalence of differential tuition by undergraduate program within public research institutions, identified which public research institutions had differential tuition by undergraduate program, the programs which had differentials, and the amount of the differentials. The study also examined impacts of the differentials. Chapter I began with a quote discussing access to higher education or the potential limitation of access to a growing number of individuals. This chapter began with a section of the Morrill Act which identified the role of land grant institutions in ensuring access to higher education. The data from the study identified a divergence of opinion of the impact of differential tuition by undergraduate programs on access to higher education. Representatives of land grant institutions which had differential tuition by

undergraduate program indicated no impact to enrollment of low SES students and no impact to their mission. Governing boards from 26 institutions considered implementation of differential tuition by undergraduate program or major between 2003 and 2008, but did implement the differential. The majority of the governing boards did not implement the differential due to concerns of limiting access and student choice. Although representatives from institutions with differential tuition by undergraduate program indicated no impact to enrollments based upon anecdotal evidence, does implementation of differential tuition by undergraduate major add to the breaking of the social contract? This perhaps is the next question to be answered.

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APPENDIX A

INSTITUTIONS TO BE SURVEYED

Institutions to be Surveyed

Alabama Agricultural & Mechanical University
Arizona State University
Auburn University
Ball State University
Bowling Green State University
Central Michigan University
Clemson University
Cleveland State University
College of William and Mary
Colorado State University
CUNY Graduate School & University Center
East Carolina University
East Tennessee State University
Florida Atlantic University
Florida International University
Florida State University
George Mason University
Georgia Institute of Technology
Georgia State University
Illinois State University
Indiana State University
Indiana University at Bloomington
Indiana University of Pennsylvania
Indiana University-Purdue University Indianapolis
Iowa State University
Jackson State University
Kansas State University
Kent State University
Louisiana State University and A&M College
Louisiana Tech University
Miami University
Michigan State University
Michigan Technological University
Middle Tennessee State University
Mississippi State University
Montana State University
New Jersey Institute of Technology
New Mexico Institute of Mining & Technology
New Mexico State University Main Campus
North Carolina State University
North Dakota State University
Northern Arizona University
Northern Illinois University
Oakland University
Ohio University Main Campus
Oklahoma State University
Old Dominion University
Oregon State University
Penn State University Park
Portland State University
Purdue University

Rutgers, State University of N. J. N. Brunswick Campus
Rutgers, State University of N. Jersey Newark Campus
San Diego State University
South Carolina State University
South Dakota State University
Southern Illinois University Carbondale
SUNY at Albany
SUNY at Buffalo
SUNY at Stony Brook
SUNY Binghamton University
SUNY College of Environmental Science and Forestry
Temple University
Tennessee State University
Texas A&M University
Texas A&M University – Commerce
Texas A&M University-Kingsville
Texas Southern University
Texas Tech University
Texas Woman's University
The Ohio State University Main Campus
The University of Akron, Main Campus
The University of Alabama
The University of Memphis
The University of Montana
The University of South Dakota
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Alaska Fairbanks
University of Arizona
University of Arkansas at Little Rock
University of Arkansas Main Campus
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
University of California, San Francisco
University of California, Santa Barbara
University of California, Santa Cruz
University of Central Florida
University of Cincinnati Main Campus
University of Colorado at Boulder
University of Colorado Denver & Health Sciences Center
University of Connecticut
University of Delaware
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Houston
University of Idaho
University of Illinois at Chicago
University of Illinois at Urbana-Champaign

University of Iowa
University of Kansas
University of Kentucky
University of Louisiana at Lafayette
University of Louisville
University of Maine
University of Maryland
University of Maryland Baltimore
University of Maryland, Baltimore County
University of Massachusetts
University of Massachusetts Boston
University of Massachusetts Lowell
University of Michigan-Ann Arbor
University of Minnesota-Twin Cities
University of Mississippi
University of Missouri-Columbia
University of Missouri-Kansas City
University of Missouri-Rolla
University of Missouri-St. Louis
University of Nebraska-Lincoln
University of Nevada, Reno
University of Nevada-Las Vegas
University of New Hampshire
University of New Mexico Main Campus
University of New Orleans
University of North Carolina at Chapel Hill
University of North Carolina at Greensboro
University of North Dakota Main Campus
University of North Texas
University of Northern Colorado
University of Oklahoma Norman Campus
University of Oregon
University of Pittsburgh
University of Puerto Rico-Rio Piedras Campus
University of Rhode Island
University of South Alabama
University of South Carolina
University of South Florida
University of Southern Mississippi
University of Tennessee, Knoxville
University of Texas at Arlington
University of Texas at Austin
University of Texas at Dallas
University of Texas at El Paso
University of Toledo
University of Utah
University of Vermont
University of Virginia
University of Washington
University of Wisconsin-Madison
University of Wisconsin-Milwaukee
University of Wyoming
Utah State University

Virginia Commonwealth University
Virginia Polytechnic Institute and State University
Washington State University
Wayne State University
West Virginia University
Western Michigan University
Wichita State University
Wright State University Main Campus

APPENDIX B

SURVEY INSTRUMENT

Differential Tuition by Undergraduate Major or Program

Participant Information



COLLEGE OF EDUCATION
Department of

Informed Consent Form

Project: Differential Tuition by Undergraduate Major: It's use, amount, and impact at public research universities.

IRB # 2007128574EX

The purpose of this survey is to determine the number of public research institutions who have implemented differential tuition by undergraduate program or major, the fields of study for which differential tuition exists, and the amount of the differential. In addition, the research will identify impacts and issues associated with the application of differential tuition. This survey is being sent to the Chief Business Officer at each of the 165 public research universities in the U.S.

The survey instrument should take between 5 and 30 minutes to complete. There are no known risks or discomforts associated with this survey instrument. There may be no direct benefit to you in responding to the survey; however, the information gathered in the study may help the university community better understand the issues associated with differential tuition. The results of this survey will be presented in my dissertation and prepared for professional publications and presentations at professional conferences. Information specific to tuition rates, majors or programs charging differential tuition, and the amount of the tuition may be identified by campus. All other information obtained from this survey will be aggregated to report trends and themes, and your individual responses will remain anonymous to ensure your confidentiality. If a name or institution is needed to go with a quote, the participant will be contacted by the researcher to obtain permission to be cited before the quote is used.

You may ask questions concerning this research and have those questions answered before agreeing to participate in or during the study. My name is Glen Nelson and I can be reached at (541) 737-3647. My advisor, Dr. Al Seagren, can be reached at (402) 472-0972. Sometimes study participants have questions or concerns about their rights. In that case, you should call the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

Your participation is voluntary. There is no compensation provided to complete the survey. You are free to withdraw from the research at any time without affecting your relationship with the investigator, the University of Nebraska-Lincoln, the Oregon University System, or your campus.

You are voluntarily making a decision whether or not to participate in this research study. By completing items one through four on this page you are certifying that you have decided to participate in this survey having read and understood the information presented here and that you are the person completing the survey.

1. Name of person completing the survey

2. Title of person completing the survey

3. Campus/Institution

4. Email address of respondent

Differential Tuition by Undergraduate Major or Program**5. Telephone number of respondent****Differential Tuition**

For this survey "Differential Tuition" is defined as the purposeful variation in the published undergraduate tuition rates by course, major, or program of study.

*** 6. For the 2007-08 academic year, does your campus employ differential tuition by undergraduate major or program of study?** Yes No**Differential Tuition***** 7. Has the topic of differential tuition by undergraduate major or program been discussed by your governing board?** YES NO**Governing Board****8. When was the topic of differential tuition by major or program discussed by your governing board?** 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997 1996 1995 1994 1993

Differential Tuition by Undergraduate Major or Program

- 1992
 1991
 1990
 prior to 1990

Governing Board

9. What were the major reasons differential tuition was not implemented by your institution's board?

Supplemental Fees

*** 10. At some institutions, undergraduate tuition may be established with one rate. However, significant fees may vary by undergraduate major or program, in effect, acting as differential tuition.**

Does your campus employ supplemental fees based on undergraduate major or program? (do not consider course based fees in answering this question)

- YES
 NO

Supplemental Fees

11. Please provide the range of your institution's supplemental fees by undergraduate major or program in the following categories:

Example \$400/semester or \$40/credit hour

Accounting	<input type="text"/>
Architecture	<input type="text"/>
Business	<input type="text"/>
Education	<input type="text"/>
Engineering	<input type="text"/>
Journalism	<input type="text"/>

*** 12. Are there other majors or programs that have supplemental fees at your institution?**

- Yes
 No

Additional Supplemental Fees

Differential Tuition by Undergraduate Major or Program

13. Please indicate the additional undergraduate majors or programs which have supplemental fees and the range of the fees.

Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>
Major/Program and fees	<input type="text"/>

Differential Tuition

*** 14. What academic year was the policy of differential tuition by major or program of study implemented?**

- 2007-2008
 2006-2007
 2005-2006
 2004-2005
 2003-2004
 2002-2003
 2001-2002
 2000-2001
 1999-2000
 1998-1999
 1997-1998
 1996-1997
 1995-1996
 1994-1995
 1993-1994
 1992-1993
 1991-1992
 1990-1991
 before 1990

Tuition

Differential Tuition by Undergraduate Major or Program

15. What is your institution's published academic year undergraduate tuition rate for 2007-08? Assuming 15 credit hours per term. (Use tuition and mandatory fees if you normally communicate tuition and fees as one number)

Resident

Non-resident

Amount of Differential Tuition

16. For the following undergraduate majors or fields of study, please identify the amount of the differential over your base tuition, and indicate per Credit Hour(C), Quarter(Q), or Semester (S). Indicate NA if there is no differential.

Example: Library Science - \$400 per semester

Accounting

Architecture

Business

Education

Engineering

Journalism

17. Are there additional undergraduate majors that have differential tuition at your institution?

Yes

No

Amount of Differential Tuition

Differential Tuition by Undergraduate Major or Program

18. Please identify additional undergraduate majors or fields of study which have differential tuition at your institution, by listing the undergraduate major or field of study, the amount of the differential over your base tuition, and indicate per Credit Hour(C), Quarter(Q), Semester (S).

Example: Library Science - \$400 per semester

Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
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Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	
Major/Amount/Term	

Undergraduate programs

19. Are there undergraduate programs on your campus, such as Distance Education or Honors Programs, that have differential tuition at your institution?

- Yes
 No

Undergraduate programs

Differential Tuition by Undergraduate Major or Program

20. Please identify undergraduate programs which have differential tuition at your institution, by listing the undergraduate program, the amount of the differential over your base tuition, and indicate per Credit Hour(C), Quarter(Q), or Semester (S).

Example: Distance Education - \$400 per semester

Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>
Program/Amount/Term	<input type="text"/>

Differential Tuition - Future Additions

21. Does your institution anticipate charging differential tuition in any additional majors or programs in the next two years?

- YES
- NO
- UNSURE

Differential Tuition - Future Additions

22. Which additional undergraduate majors or programs do you anticipate your institution will charge a differential tuition in the next two years?

23. Why will these majors or programs begin charging differential tuition?

Differential Tuition - Removal

Differential Tuition by Undergraduate Major or Program

24. Does your institution anticipate removing the differential tuition from any of the majors or programs currently charging differential tuition in the next two years?

- YES
 NO
 UNSURE

Differential Tuition - Removal

25. In which undergraduate majors or programs do you anticipate removing differential tuition?

26. Why will the institution stop charging differential tuition for these majors or programs?

Changes in the differentials

27. Has the amount of the differential changed since first implemented?

- YES
 NO

Changes in the differential

28. What factors have influenced the change in the differential?

Additional Revenue

29. Did the implementation of your differential tuition model yield additional revenue?

- YES
 NO
 UNSURE

Additional Revenue

Differential Tuition by Undergraduate Major or Program

30. In total dollars, what is the estimated additional revenue generated from differential tuition by undergraduate major or program in 2006-07?

31. Please provide the total dollar amount of your institution's operating budget generated from tuition in fiscal year 2006-07.

Additional Revenue

32. Please estimate the percentage allocation of the additional revenue from differential tuition by undergraduate major or program.

University General Fund	<input type="text"/>
College housing the effected major or program	<input type="text"/>
Department housing the effected major or program	<input type="text"/>
Other	<input type="text"/>

Additional Revenue

33. Please indicate if the additional revenue derived from differential tuition by undergraduate major or program is earmarked for the following specific purposes:

	YES	NO	UNSURE
Teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Aid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distance Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Total Undergraduate Enrollment

34. Has differential tuition by undergraduate major or program impacted total undergraduate enrollment at your institution?

YES
 NO
 UNSURE

Total Undergraduate Enrollment

Differential Tuition by Undergraduate Major or Program

35. How has differential tuition by undergraduate major or program impacted total undergraduate enrollment?

- Increased
- Decreased

Enrollment by Major or Program

36. In your estimation, has differential tuition by undergraduate major or program impacted enrollment within specific majors or programs at your institution?

- YES
- NO
- UNSURE

Enrollment by Major or Program

37. How has differential tuition by undergraduate major or program impacted enrollments within specific majors or programs at your institution?

	Increased	Decreased	No Change	Unsure
Majors or programs with differential tuition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Majors or programs without differential tuition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enrollment by Major or Program

38. In your estimation, has differential tuition by undergraduate major or program impacted enrollment of low socioeconomic status students within higher cost majors or programs at your institution?

- YES
- NO
- UNSURE

Implementation

39. Why did your institution consider adopting tuition differentials?

Implementation

Differential Tuition by Undergraduate Major or Program

40. What was the level of involvement of the following groups in establishing differential tuition at your campus?

	Active Participants in Decision Process	Consulted by the Decision Makers	Provided Unsolicited Input	Did Not Participate
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Governing Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legislative Officials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Governor's Office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Implementation

41. What was the reaction, if any, of the following groups to the implementation of differential tuition by undergraduate major or program on your campus:

	Positive Reaction	Negative Reaction	No Reaction
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Governing Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legislative Officials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Governor's Office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Implementation

42. In your estimation, has the implementation of differential tuition by undergraduate major or program at your institution impacted the amount of state funding your institution receives?

- YES
- NO
- UNSURE

Implementation

43. Please describe the impact on your state funding

Implementation

Differential Tuition by Undergraduate Major or Program

44. If your campus had to make the decision to implement differential tuition by undergraduate major or program again, would you recommend implementation?

YES

NO

45. Please elaborate on your response.

Implementation

46. Is your institution a land grant institution?

YES

NO

Implementation

47. Has the implementation of differential tuition by undergraduate major or program had an impact on your land grant mission?

YES

NO

Implementation

48. Please describe the impact of differential tuition by undergraduate major or program on the land-grant mission of your campus.

Implementation

49. Do you envision the policy of differential tuition by undergraduate major or program becoming a common differential such as the graduate/undergraduate differential?

YES

NO

Additional Comments

Differential Tuition by Undergraduate Major or Program

50. Please add any comments or issues regarding the use and impact of differential tuition by undergraduate major or program for your campus that was not captured in this survey.

END

Thank you for your participation in this survey. If you have any questions or comments, I can be reached at glen_nelson@ous.edu or (541)737-3647

APPENDIX C

TELEPHONE INTERVIEW PROTOCOL

Telephone Interview Protocol

The telephone interview will be taped. Upon completion of transcribing the phone calls, the transcript will be sent to the participant for “member check” verification. Upon verification of the transcript, the tapes will be destroyed. Depending upon the responses to the initial survey, the participant will be asked questions from the list in the following proposed telephone script. None of the respondents will be asked all of the following questions.

Telephone Script:

“Hello, my name is Glen Nelson and I am a Ph.D. candidate at the University of Nebraska-Lincoln (UNL) and the Assistant Vice Chancellor for Budget Operations for the Oregon University System. Thank you for participating in my survey of differential tuition by undergraduate major or program several weeks ago. Based upon your response in the survey, I would like to ask you several follow-up questions to gain additional information and/or clarification. Thank you for returning the email verifying that you have read and understand the informed consent document. With your approval I will be recording and transcribing this interview. Your responses will remain anonymous and your campus will not be identified, unless I request and receive your permission to attribute this information to you. You may stop the interview at any point without affecting your relationship with me, UNL, or your campus. Do I have your permission to tape this interview?”

If the response is 'no' then continue with, "thank you for your time and for completing the survey."

If the response is 'yes', then continue with, "thank you for completing the survey. I know your time is valuable and your participation is yielding important information on this topic that will be of interest to others in our field."

1. Please state your name, title, and institution.

(Not all questions will be asked of the interviewee)

2. On question 36, "Has differential tuition by undergraduate major or program impacted enrollment within specific majors or programs at your institution?", you answered "No"
 - a. How do you know that differential tuition has not impacted enrollments by specific majors or programs?
 - b. Are there any other comments you wish to make concerning the impact of differential tuition on enrollments within specific programs or majors at your institution?
3. On question 38, "Has differential tuition by undergraduate major or program impacted enrollment of low socioeconomic status students within high cost majors or programs at your institution?", you answered "No" (or "Unsure")

If the answer was 'no', then

- a. How do you know that differential tuition has not impacted enrollments by low socioeconomic status students within high cost majors or programs at your institution?"

- b. Has your institution completed any studies or surveys of students to measure the impact of the differential on the student's decision making process?
- c. Has your campus leadership considered the impact on access for low socioeconomic status students in relation to undergraduate tuition differential by major or program? If so, what were the outcomes? Are you instituting any initiatives to address this issue?
- d. Are there any other comments you wish to make concerning the impact of differential tuition on enrollments of low socioeconomic status students within high cost majors or programs at your institution?"

If the answer was 'unsure'

- 1) What factors are causing you to be unsure of the impact of differential tuition on enrollments of low socioeconomic status students within high cost majors or programs at your institution?"
- 2) Has your campus leadership considered the impact on access for low socioeconomic status students in relation to undergraduate tuition differential by major or program? If so, what were the outcomes? Are you instituting any initiatives to address this issue?
- 3) Are there any other comments you wish to make concerning the impact of differential tuition on enrollments of low socioeconomic status students within high cost majors or programs at your institution?"

4. On question 32 you indicated that that 'X'% of the additional revenue from differential tuition is allocated to "other" purposes rather than the campus general fund, or the college or department budget housing the effected major or program. What is included in "Other"?
5. On Question 33, you indicated that that additional revenue from differential tuition is allocated to Financial Aid.
 - a. Are there specific requirements to earmark dollars for financial aid?
 - b. What are the requirements?
 - c. Are there other comments you wish to make on the relationship between differential tuition and financial aid at your institution?
6. On question 33, you indicated that that additional revenue from differential tuition is allocated to "other" purposes rather than Financial Aid, Student Services, Equipment, Research, Technology, Distance Education, or Service. Can you further define "Other"?
7. On question 24 you indicated that you were unsure if your institution would be eliminating differential tuition on any of the current programs or majors within the next two years.
 - a. Is your campus considering removal of any differential tuition or fees?
 - 1) If yes, which ones and for what reasons?
 - b. What factors would cause your campus to consider removing differential tuition?

8. For Respondent # 19

a. You indicated on question 41 that both parents and students reacted negatively to tuition differentials and in question 40 that neither party was included in the decision making process.

1) Do you believe the reaction would have been different if the groups would have been included?

9. For Respondent # 16

a. You indicated on question 41 that both parents and students reacted negatively to tuition differentials and in question 40 that only the parents participated were included in the decision making process.

1) Can you explain why they parents reacted negatively?

2) Could you have handled the parent involvement differently to reduce the negative reaction?

3) Do you believe the reaction would have been different if the groups would have been included?

10. For Respondent #8:

a. You indicated on question 41 that parents reacted negatively to tuition differentials and in question 40 that parents were involved in the decision making process.

1) Can you explain why they parents reacted negatively?

2) Could you have handled the parent involvement differently to reduce the negative reaction?

11. For respondent # 63 and #66
 - a. You indicated on question 41 that students reacted negatively to tuition differentials and in question 40 that students were involved in the decision making process.
 - 1) Can you explain why the students reacted negatively?
 - 2) Could you have handled the student involvement differently to reduce the negative reaction?
12. You indicated in your response to question 14 that your campus has implemented differential tuition within the last 4 years.
 - a. What worked well during the process?
 - b. What didn't work well?
 - c. What would you do differently if you had to implement again?
13. For respondent #87
 - a. You indicated that your institution has differential tuition by undergraduate major and it was implemented in 2003, yet no differentials were listed. Please elaborate further on your response . . . Why is differential tuition is no longer in use at your institution.
14. Please share any comments or observations you have concerning differential tuition by undergraduate major or program

“Thank you for your time and comments on this important and timely issue. Your response will be transcribed and the transcript emailed to your for your review. Upon

receipt of your verification of the transcript, the recording of this interview will be destroyed. Do you have any questions?"

Thank you again, good bye"

APPENDIX D

IRB APPROVALS



HUMAN RESEARCH PROTECTIONS
Institutional Review Board

December 21, 2007

Glen Nelson
Dr. Alan Seagren
141 TEAC
(0360)

IRB# 2007-12-8574 EX

TITLE OF PROJECT: **Differential Tuition by Undergraduate Major: It's use, amount, and impact at public research universities**

Dear Glen:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. This project has been approved by the Unit Review Committee from your college and sent to the IRB. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

Date of EX Review: 12/20/07

You are authorized to implement this study as of the Date of Final Approval: 12/21/07. This approval is Valid Until: 12/20/08

- I. Please include the IRB approval number on the on-line informed consent form.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board. For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email at shorstman1@unl.edu.

Sincerely,

Dan R. Hoyt, Chair
for the IRB



HUMAN RESEARCH PROTECTIONS
Institutional Review Board

February 26, 2008

Glen Nelson
Dr. Alan Seagren
141 TEAC
(0360)

IRB# 2007-12-8574 EX

TITLE OF PROJECT: **Differential Tuition by Undergraduate Major: Its use, amount, and impact at public research universities**

Dear Glen:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

1. It has been approved to add a telephone interview.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email shorstman1@unl.edu.

Sincerely,


Dan R. Hoyt, Chair
for the IRB

APPENDIX E

INFORMED CONSENT TELEPHONE INTERVIEW



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Interview Informed Consent Form

Project: Differential Tuition by Undergraduate Major: Its use, amount, and impact at public research universities.

IRB # 2007128574EX

You recently completed a survey instrument designed to determine the number of public research institutions who have implemented differential tuition by undergraduate program or major, the fields of study for which differential tuition exists, and the amount of the differential. In addition, the research identified impacts and issues associated with the application of differential tuition. This survey instrument was sent to the Chief Business Officer at each of the 165 public research universities in the U.S.

The purpose of this telephone interview is to ask clarifying questions concerning responses you have provided in the web based survey. These questions should take between 5 and 15 minutes to answer. There are no known risks or discomforts associated with this interview. There may be no direct benefit to you in responding to the questions; however, the information gathered in the study may help the university community better understand the issues associated with differential tuition. The results of this interview and study will be presented in my dissertation and prepared for professional publications and presentations at professional conferences. Information obtained from this telephone interview will be aggregated to report trends and themes, and your individual responses will remain anonymous to ensure your confidentiality. If a name or institution is needed to go with a quote, the participant will be contacted by the researcher to obtain permission to be cited before the quote is used. The telephone interview will be recorded. The recorded conversation will be transcribed. I will send you a copy of the transcript for your verification. After receiving your verification of the transcript and validating any changes, the tapes will be destroyed.

You may ask questions concerning this research and have those questions answered before agreeing to participate in or during the interview. My name is Glen Nelson and I can be reached at (541) 737-3647. My advisor, Dr. Al Seagren, can be reached at (402) 472-0972. Sometimes study participants have questions or concerns about their rights. In that case, you should call the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

Your participation is voluntary. There is no compensation provided to complete the interview. You are free to withdraw from the research at any time without affecting your relationship with the investigator, the University of Nebraska-Lincoln, the Oregon University System, or your campus. You are voluntarily making a decision whether or not to participate in this research study. By returning the email to me, you are certifying that you have decided to participate in this telephone interview having read and understood the informed consent form presented to you.

APPENDIX F

SURVEY QUESTION 39, WHY IMPLEMENT DIFFERENTIAL TUITION?

SURVEY QUESTION 39, WHY IMPLEMENT DIFFERENTIAL TUITION?

Respondent Comment

Cover direct costs

- 81 Cost of operations, particularly faculty salaries
 To ensure funding for high cost course offerings with students in these degree
 67 programs primarily bearing the additional costs.
 66 To help meet expenses that vary by program
 63 Acknowledged the need to cover direct costs.
 54 program growth, faculty recruitment & retention, costs
 51 To cover the higher costs of these programs.
 48 Business, music, and nursing have higher instructional costs
 43 To address the differential cost of providing instruction in those areas
 The tuition differentials reflect separate programs with different instructional costs.
 Therefore, these programs have different tuition rates. One rate is not a "base" for the
 42 other.
 Better align costs with program expenses. To raise additional revenue for the various
 41 schools and colleges.
 38 Student demand; cost of the program
 At the time, it was seen as a means to provide additional resources to a high cost
 33 program.
 31 To better reflect cost of instruction
 16 differential costs by program
 8 Additional costs associated with offering these programs.

Maintain or enhance quality

- 95 To maintain quality in high-cost programs.
 To enhance the quality of engineering programs by reducing class sizes, increasing
 student-faculty interaction, providing new and upgraded labs, increasing financial aid,
 94 and introducing new academic programs in emerging fields.
 35 program quality and cost
 Very high salaries of B-School faculty; need to hire additional tenure-track B-School
 34 faculty to maintain B-School accreditation
 opportunity to charge additional tuition by specific school and involve students in
 advocating for paying additional tuition in return for additional programmatic
 26 opportunities

Additional Revenue

- 72 Additional revenue by the college for targeted initiatives.
 As a method of generating more tuition revenue when charging a different amount to
 the lower division classes (Freshman and Sophomore) as opposed to the upper
 52 division (Junior and Senior).

- 37 Needed additional source of revenue.
- 40 Additional revenue opportunity during extended period of budget austerity
- 19 Fiscal challenges to the institution

Decline in State Support

- Differentials were first adopted in mid 90s; I was not here at this time so can't speak to initial adoption. Last 5 years have seen dramatic growth in both the number and amount of differentials and this growth has largely resulted from the need to increase tuition revenue to compensate for large reductions in state tax support in the early part of this decade and relatively flat state support over the last several years.
- 87 Pure and simple---we are a very high cost institution because we are 85%
 - 10 engineering and hard sciences---state budget realities forced it.

APPENDIX G

SURVEY QUESTION 9 REASONS FOR NOT IMPLEMENTING

SURVEY QUESTION 9 REASONS FOR NOT IMPLEMENTING

Respondent Comment

Access and affordability

79	The potential that students would choose their major based on cost.
65	Concern of financial impact to students and their families.
25	Concern for tuition cost unduly influencing student choice of major. Concern that lower income students may steer away from higher cost undergraduate majors.
55	Affordability
3	Access to areas of study should not be limited by economic means of the students enrolled. Certain programs are much more expensive than others and if we can position appropriate levels of financial aid to remove that concern, we will revisit this topic with our board of trustees.
39	Fairness to students
47	Not yet convinced that a Land Grant State Institution should adopt this course of action
1	Primarily philosophical. Administration argued that tuition pays for the degree from (State) University and the University's degrees are of equal value. Secondary issue is what to do with the additional revenue. Should it be allocated to the program or should it be held centrally to offset higher program costs.
44	The Board of Regents voted to allow it, but the decision rests at each (state)campus. (campus) administration decided against it to prevent forcing students to elect majors based upon what they could afford.

Legislative issues

64	Currently, tuition is established by the (state) Legislature. The (State) Board of Governors, the constitutionally created governing board of the Public Universities is involved in litigation that, if successful, would give the BOG authority over tuition and this may include differential tuition by program.
69	Issues around undergraduate tuition authority for the state Requires state legislative approval; no formal request submitted
20	The state of Ohio budget bill contains language that requires all undergraduates at a public college or university to pay the same tuition.
62	State law does not currently allow for differential tuition rates.
14	There are many factors to consider. A few are: 1) public policy implications, 2) state law (is it permissible?) 3) impact on program demand, 4) internal budgetary allocation implications, 5) implications for tuition discounting

Procedural Issues and impacts

- 9 Peer market conditions
- 22 Impact on the non-professional colleges and schools
- 76 The board was not ready for the cultural change that would be required.
- 5 Complexity

Under Consideration

It is being considered. The institution's board wanted more information. Additionally the State of (deleted) has instituted a guaranteed tuition program that significantly
85 impacts differential tuition implementation.

80 Still in the early stages of discussion

The (state) board is a system board. Other institutions in the system have differential tuition, but we elected not to go that route at this time. We may add differential tuition to new health professions programs we are planning to offer, but
56 they will not be offered for two years or so.

The concept of differential tuition has been approved by our Board of Regents, however, individual proposals by the colleges have not yet been approved. We anticipate approval at our March 2008 Board meeting for implementation of
23 differential tuition in FY 2009 for select colleges.

Didn't answer question

- 71 The discussion was to confirm the decision to eliminate it.
 - 83 Governing board did not want to implement
-

Differential tuition has been implemented in some graduate programs in the University System of Maryland. I am not aware of any undergraduate majors in the system that have differential tuition. I was not present during any prior discussion of
60 the issue with the Board.

APPENDIX H

PROGRAM MATRIX

PROGRAM MATRIX

Major or Program	Number of Campuses	Group
Agriculture (CPSC & NRES) - general	5	AG
Agriculture (ANSC, FSHN, & TSM/ABE)	1	AG
Arts & Sciences	4	Science
Biological Sciences	3	Science
Chemistry/Life Science	4	Science
Earth and Mineral Sciences	1	Science
Geosciences	1	Science
Natural Science & Math	3	Science
Science (Behavior, Botany, Zoology)	7	Science
Actuarial Science	1	Business
Economics	3	Business
Entrepreneurship	1	Business
Finance	1	Business
Human Resource Management	1	Business
International Business	1	Business
Legal Studies Business	1	Business
Management	1	Business
Marketing	1	Business
MIS	1	Business
Real Estate	1	Business
Restaurant Management	1	Business
Risk Management	1	Business
Computer Science	5	Comp Science
Graphic and Interactive Design	1	Comp Science
Information Science and Technology	1	Comp Science
Technology	1	Comp Science
Art, Fine	5	Fine Arts
Jewelry/Metals	1	Fine Arts
Media & Theater Arts	6	Fine Arts
Music	9	Fine Arts
Painting and Drawing	1	Fine Arts
Photography	1	Fine Arts
Printmaking	1	Fine Arts
Sculpture	1	Fine Arts
Athletic Training	1	Health

Dental Hygiene	3	Health
Food Science and Human Nutrition	2	Health
Health and Human services	1	Health
Health Information Management	1	Health
Health, Nutrition & Exercise Science	2	Health
Health Professions	3	Health
Kinesiology	1	Health
Nutrition	1	Health
Public Health	2	Health
Recreation & Leisure Services	1	Health
Rehab & Human Services	1	Health
Liberal Arts	3	Liberal Arts
Nursing	25	Nursing
Design and Merchandising	1	Other
Human Environmental Science	1	Other
Interior Design	2	Other
Landscape Architecture	1	Other
Environmental & Biological Science	2	Other
Forensic Identification	1	Other
Human Development & Family	1	Other
Hotel & Restaurant Management	1	Other
Social Work	2	Other
Agri Business - Golf Course Mgmt	1	Other
Aeronautical Management	1	Other
Construction Management	1	Other
Communications	2	Other
Pharmacy	7	Pharmacy
Physical Therapy	2	Physical Therapy

APPENDIX I

INSTITUTION DIFFERENTIAL BY PROGRAM

 INSTITUTION DIFFERENTIAL BY PROGRAM

 % Differential Tuition over Base

Agriculture

Colorado State University	3
University of Arkansas, Fayetteville	5
West Virginia University	9
University of Illinois at U-C	12
Oklahoma State University	15
University of Missouri, Columbia	16
Agriculture Mean	10

Architecture

University of Texas, Austin	3
Louisiana Tech	3
University of Kentucky	4
Temple University	5
University of Arkansas	6
University of Houston	6
The Ohio State University	6
University of Minnesota	6
Kansas State University	7
University of Oregon	8
University of Kansas	8
University of Illinois at U-C	10
University of Memphis	10
University of Wisconsin, Milwaukee	11
University of Hawaii, Manoa	12
University of Colorado, Denver	12
University of Arizona	12
University of Nebraska –Lincoln	14
University of Illinois, Chicago	15
Montana State University	18
University of Idaho	18
North Dakota State University	33
Architecture Mean	10

Business

Temple	2
Rutgers, New Brunswick	2
University of Colorado, Denver	2
University of Arkansas at Little Rock	3
Louisiana Tech	3
University of Toledo	4
Rutgers, Newark	4
Virginia Commonwealth	6
University of North Dakota	6
Penn State University	6

	% Differential Tuition over Base
University of Houston	6
University of Kentucky	6
Miami	7
University of Northern Colorado	7
Portland State University	7
University of New Hampshire	8
Montana State University	8
Kansas State University	8
University of Illinois, Chicago	8
University of Wisconsin, Milwaukee	9
Oregon State University	9
Colorado State University	9
Indiana U, Purdue U Indianapolis	10
Arizona State University	10
University of Oregon	10
Wichita State University	11
Tennessee State University	11
University of Minnesota	11
University of Hawaii, Manoa	12
Ohio State University	12
University of Memphis	12
University of Texas, Arlington	13
Purdue University, West Lafayette	13
Indiana University, Bloomington	14
University of Arkansas, Fayetteville	14
University of Missouri, Columbia	14
U of Missouri, St. Louis	14
West Virginia	15
University of Wisconsin, Madison	16
University of Arizona	16
University of Texas, Austin	16
Clemson	17
Oklahoma State University	18
The University of Montana	22
University of Missouri, Rolla	23
University of South Dakota	30
Utah State University	31
University of Utah	35
University of Kansas	40
University of Illinois at U-C	45
University of Colorado, Boulder	59
Business Mean	14
Computer Science	
University of Houston	3
Penn State University	6
Colorado State University	6

	% Differential Tuition over Base
Oregon State University	7
University of New Hampshire	8
University of Oregon	8
North Dakota State University	10
Michigan Tech	11
University of Texas, Dallas	15
Temple University	21
Portland State University	24
Computer Science Mean	11
Dental Hygiene	
University of Michigan, Ann Arbor	4
University of Hawaii, Manoa	19
University of Colorado, Denver	124
Education	
University of Texas, El Paso	2
Louisiana Tech	3
University of Toledo	3
University of Minnesota	3
University of Oregon	3
University of North Dakota	3
University of Missouri, Kansas City	4
North Dakota State University	4
West Virginia University	5
University of Texas, Austin	5
University of Arkansas, Fayetteville	5
University of Texas, Dallas	6
University of South Carolina	7
University of Kansas	8
University of Missouri, Columbia	14
Oklahoma State University	15
South Dakota State University	20
Education Mean	7
Engineering	
Utah State University	2
University of Louisville	3
University of Texas, Arlington	4
University of Minnesota	4
Montana State University	5
University of Toledo	5
The Ohio State University	6
University of Houston	6
University of Rhode Island	6
Penn State University	6
Colorado State University	6
University of South Carolina	7

	% Differential Tuition over Base
University of Michigan, Ann Arbor	7
University of New Hampshire	8
University of South Alabama	8
Purdue University West Lafayette	8
University of Wisconsin, Milwaukee	9
University of Tennessee, Knoxville	10
University of Memphis	10
Wichita State University	10
Michigan Tech	11
Rutgers, New Brunswick	11
University of Arizona	12
University of Texas, Austin	12
University of North Dakota	12
Virginia Tech University	12
North Dakota State University	13
University of Colorado, Denver	14
University of Texas, Dallas	15
Kansas State University	15
University of Kansas	16
West Virginia University	16
University of Arkansas, Fayetteville	16
University of Iowa	19
Iowa State University	19
University of Missouri, Columbia	22
University of Missouri, St. Louis	22
University of Missouri, Kansas City	22
University of Missouri, Rolla	23
University of Nebraska –Lincoln	24
South Dakota State University	24
Portland State University	24
University of Illinois, Chicago	25
Oklahoma State University	26
Oregon State University	30
Virginia Commonwealth University	31
University of Colorado, Boulder	38
University of Illinois at U-C	45
Engineering Mean	15
Fine Arts	
Colorado State University	3
West Virginia University	3
Portland State University	3
University of Oregon	6
Oregon State University	7
The Ohio State University	8
University of Texas, Austin	8
University of Northern Colorado	9

	% Differential Tuition over Base
Montana State University	9
University of Colorado, Denver	9
Indiana University, Bloomington	20
Temple University	21
University of Missouri, Kansas City	82
University of Missouri, Columbia	82
Fine Arts Mean	19
Health Professions	
University of Kentucky	2
Colorado State University	3
University of Toledo	4
University of Arkansas, Fayetteville	5
University of Michigan, Ann Arbor	5
University of North Dakota	7
University of Illinois, Chicago	11
South Dakota State University	11
North Dakota State University	11
University of South Carolina	19
Temple University	21
University of Alabama, Birmingham	21
Health Professions Mean	10
Honors Programs	
University of South Carolina	7
Portland State University	7
The University of Montana	14
Oregon State University	17
University of Oregon	45
Honors Mean	18
Journalism	
University of Houston	2
University of Minnesota	3
Colorado State University	3
University of Colorado, Boulder	4
West Virginia University	5
The University of Montana	6
University of Kansas	6
University of Oregon	8
University of Missouri, Columbia	16
Journalism Mean	6
Liberal Arts	
Louisiana Tech	1
Portland State University	2
Oregon State University	3
University of Colorado, Denver	4
Liberal Arts Mean	2

 % Differential Tuition over Base

Nursing

University of Alabama, Birmingham	1
Oakland University	2
University of Texas, El Paso	2
The Ohio State University	4
Louisiana Tech	4
University of Missouri, St. Louis	4
University of Toledo	4
University of Missouri, Kansas City	4
University of Northern Colorado	5
University of Louisiana, Lafayette	7
University of Texas, Austin	8
Montana State University	8
University of Texas, Arlington	8
University of North Dakota	10
North Dakota State University	12
Indiana University, Bloomington	13
University of Wisconsin, Milwaukee	13
Indiana U- Purdue U Indianapolis	16
Penn State University	20
Temple University	21
University of Illinois, Chicago	26
South Dakota State University	33
University of Hawaii, Manoa	39
University of South Dakota	58
University of Colorado, Denver	147
Nursing Mean	19

Other

Colorado State University	3
University of Oregon	4
University of Rhode Island	4
University of Houston	4
West Virginia University	5
Rutgers, New Brunswick	6
University of Texas, Austin	6
University of North Dakota	7
North Dakota State University	10
South Dakota State University	11
University of Georgia	14
Oregon State University	14
University of Missouri, Columbia	15
Oklahoma State University	20
Arizona State University	25
Other Mean	10

 % Differential Tuition over Base

Pharmacy

Rutgers, New Brunswick	11
University of Texas, Austin	34
University of Rhode Island	35
University of Toledo	41
University of Mississippi	88
North Dakota State University	100
The University of Montana	117
Oregon State University	213
Pharmacy Mean	80

Physical Therapy

University of Kentucky	2
University of Rhode Island	28

Sciences

Louisiana Tech	1
University of Houston	1
Oregon State University	1
University of Toledo	2
University of Texas, Austin	3
The Ohio State University	3
Colorado State University	3
University of Oregon	6
Penn State University	6
University of Arkansas, Fayetteville	7
University of Illinois, Chicago	7
Clemson	9
University of Wisconsin, Milwaukee	9
University of Texas, Dallas	15
Oklahoma State University	16
University of Missouri, Rolla	23
University of Illinois at U-C	45
Sciences Mean	9

APPENDIX J

SURVEY QUESTION 28, FACTORS INFLUENCING CHANGE

SURVEY QUESTION 28, FACTORS INFLUENCING CHANGE

Respondent	Comments
Increasing Costs/Inflation	
95	Cost of hiring qualified adjunct and permanent faculty, and costs of operations have increased.
67	Increased cost for faculty salaries and operating costs.
61	Increases in Cost
72	Inflation
43	Inflationary costs of equipment
42	Programs with tuition differentials (actually they are different tuition rates) charge tuition rates to keep pace with program/instructional costs. BS Nursing and Dental Hygiene programs are part of the (deleted) Medical Campus. While they share part of their administrative budget with (deleted)Downtown Campus (general/typical campus setting), each campus has separate instructional and program budgets.
33	Rising costs of instruction
81	Rising operating cost.
8	Cost of program; demand for program
16	We have added to differential tuition by program to partially fund new construction
Peers & Market Forces	
48	Changes in tuition costs at peer programs
87	Differential increases have been impacted by reduced state tax support in recent years, high cost of instruction in certain areas, high starting salaries of graduates in certain programs
66	Cost to support the various programs; market conditions
54	Program growth, faculty recruiting & retention
Declining State Support	
30	Declining state appropriations, growth, equipment needs, need for additional faculty positions
51	Program costs; Level of state support
10	Originally only applied to engineering. Budget pressure led to changes.
52	The university uses different pricing strategies for certain programs and courses. In addition, we differentiate the pricing between freshmen and sophomores to junior and seniors (lower and upper division courses). Change could come due to budget cuts, etc.
Proportional Increase	
37	Increased in proportion to the undergrad resident tuition increases.
26	Since undergraduate differentials first went into place in fall 2003, we have indexed it to increase by the same % as tuition each year. Otherwise, the school has to make the same case to increase the differential as it did to institute it originally.
41	(University) Board of Trustees approves an across the board percentage increase. That is also applied to the differential portion. So the differential portion grows by that percentage each year.
Planned Increases	
94	Planned increments over several years.
34	The change was part of the original plan at implementation.

APPENDIX K

SURVEY QUESTION 45, REASONS TO IMPLEMENT AGAIN

SURVEY QUESTION 45, REASONS TO IMPLEMENT AGAIN

Question 45

Respondent	Implement Again?	Comment
Due to High Cost of Programs		
10	YES	A question of financial reality
48	YES	Differential fees subsidize high cost of instruction in Business (driven by high faculty salaries) and Music and Nursing (driven by small class size)
19	YES	Differential tuition makes sense for financial reasons.
35	YES	For specific programs it makes sense.
16	YES	it is a fact of life that some programs are more expensive to deliver than others.
95	YES	It is necessary to maintain the quality of our higher cost programs, and students were involved from the beginning.
63	YES	Needs to be expanded to other, costly academic programs.
61	YES	The increase in tuition was needed to cover additional cost of the program.
Decreased State Support		
87	YES	Differential tuition growth has been one of the means the institution has managed to keep funding at comparable level in time of declining or flat state general revenue support.
67	YES	Assuming the same environmental considerations - state funding limitations and the need to fund programs at competitive levels.
51	YES	It is necessary to cover the higher costs of these programs in lieu of state support.
8	YES	Cost of offering these expensive programs with high demand must be covered by someone, and the state was not stepping forward.
Fairness (Opposing Views)		
66	YES	Has provided an equitable means to allocate program costs to those benefiting by the program.
72	YES	Easy to Sell vs. Across the Board.
40	NO	If possible, we would elect to raise undergraduate tuition uniformly--for all programs. However, we do not have that authority.
Reluctant Yes		
34	YES	I would favor it only if a very strong case could be made for it. I don't like the idea generally speaking.
26	YES	In the discussion of reaction, I replied "no reaction" because the real response was mixed. It was both positive and negative (more on the lines of "regret that we had to take such action"). If left to me, we would not have done it as broadly or in the same way, but it wasn't up to me. We have a new provost and I doubt he would pursue the same strategy, but he feels that he cannot roll the differentials back.

Respondent	Implement Again?	Comment
Internal Politics		
33	NO	A recent change in budgeting policy has created an all funds model where only 55% of the tuition and differential monies are returned to the campus and school. Along with decreasing state subsidies, this has caused faculty and administration to question the effectiveness of tuition differentials.
54	YES	now that we have opened the door, more colleges / programs are posturing to establish a differential. Administration, Colleges & governing boards see it as a way to generate revenue to grow / support specific programs
Considered a non response		
94		This is a decision outside my responsibilities.

APPENDIX L

SURVEY QUESTION 50, GENERAL COMMENTS

Survey Question 50, General Comments

Respondent	Comments
Legislative Constraints	
12	We have discussed the concept, but in (State) the State captures most of this revenue, so unless that is changed the benefits of differential tuition to invest in the program would not be possible.
2	Under (State) law this would be very difficult to implement at this time. The subject has been discussed and likely will continue to be a topic that is considered.
15	Differential tuition is prohibited by the State Department of Higher Education
82	State of (...) current legislation does not permit the establishment of differential tuition
29	Differential tuition is a subject we have discussed internally as a procedure to begin to implement Responsibility Centered Management. However, our state constitution requires a 2/3 approval by both the house and senate of any tuition or fee increase which greatly limits our ability to implement any increase.
Common Definition	
57	Our supplemental are college-based and include technology fees, collegiate excellence fees, and facility and equipment fees.
8	Please note that the "differential tuition" listed for (university) earlier in the survey are listed on our web site as "Program Fees", but essentially are tuition.
35	The differentials are assessed as a "program fee" on top of the regular instructional fee (tuition). Answers given for the (university) campus only. (City) campus also has differentiated undergraduate program fees.
90	(University) does not have fees based on the major of the student but does have college tech fees and college enrichment fees based on enrollment in courses taught by most colleges. These are over and above what we consider "normal" course fees. They are defined as academic services fees in our state regent system. please email or call me if you have any questions.
Future	
20	Discussion is currently underway in the planning of the (university) system regarding differential tuition. There is strong support among the public universities for providing the campuses with authority to implement differential tuition.
23	(University) differential tuition proposal that will be presented to our Board of Regents in March 2008 is based on the following methodology: 1) Differential tuition will be charged on the basis of major and not by course. 2) Differential tuition will be charged only for upper division undergraduate students. 3) Differential tuition will be charged only in long semesters and not in summer school. 4) Colleges that charge differential tuition will establish college or department committees with substantial student representation to advise the dean on how differential tuition revenues are expended. 5) The legislatively mandated set-asides for need-based student financial aid will be expended in the colleges collecting the funds.

Respondent	Comments
4	There has been some discussion at the campus level about differential tuition but it has never been recommended to the (state) Board of Regents, nor do I anticipate that it will be.
76	We have two requests by deans to re-examine the question (Engineering and Business). It will not be part of the FY08/09 tuition setting, but it could be considered for subsequent years.
Students	
26	Almost all of our differentials also apply to the graduate programs, they are for all courses in a school. The first differential was in engineering and targeted to equipment (in fact, it was an equipment fee, not originally seen as a differential). The first real differential was for Law School. It was followed soon after in the PharmD (a first professional degree) based upon the new 6 year curriculum. The College of Liberal Arts had a discussion of a college-wide differential, but could not garner support from their students, so it was not pursued.
54	Students have not been happy about the additional money they have to pay, but have generally bought into the philosophy that this is the only way to support/maintain/grow their programs / college. There are also graduate tuition differentials in Business, Education & Engineering. While the differential has been small to this point, business especially is implementing significantly larger increases in the coming years.
22	Differential tuition s supported on campus by the Dean of the College of Business and Technology and opposed by the other academic deans. They fear that charging a higher price for business and engineering classes will tell the public that the University "values" those areas of study over others.
Cost	
3	While we do have individual course fees for may courses offered, our Aviation program is a major that stands out. Certain course will add \$25,000 or more to the cost of a degree because of the significant cost associated with maintaining, fueling and insuring a fleet of aircraft.
91	Our curriculum is highly focused on technological fields - and the use of technology in all programs does not warrant a differential at this time
77	Even within one major, costs differ according to course, so our choice has been to align the fees as closely as possible with where the expense takes place
Access	
84	We have implemented differential fees for professional graduate programs. The issue of differential fees at the undergraduate level has only been discussed at the peripheral level. Campuses in the University of (state) system have a very high percentage of need-based students. Financial aid considerations are an important part of the differential tuition question.
5	The fees are primary tied to courses and not majors. I don't think differential tuition has an impact on a student's decision as to major but it makes a significant difference to the college relative to resources to provide the instruction.

Respondent	Comments
Upper/Lower Division	
38	Differential was implemented only for upper level students in engineering
51	In 1985 (university) instituted a tuition surcharge for upper division and graduate students enrolled in the Colleges of Engineering, Earth and Mineral Sciences and Agriculture Engineering. The surcharge was assessed in addition to tuition and was implemented to address the higher costs associated with these programs. In the years that followed, other higher-cost programs were assigned a surcharge. In 2003 all surcharges were incorporated into tuition rates thereby creating the current upper division differential tuition structure. The 2007-2008 rate schedules can be found at http://tuition.psu.edu/Rates2007-08/TuitionAndFees2007-08.aspx . Please note that only limited majors have differential rates. All of the questions in this survey were answered for (campus) only and reflect the tuition surcharge history.
Tech Fees	
70	Technology fees have been in place for a number of years. Undergraduate program fees began four years ago. To date, we have limited initial undergraduate program fee to \$50/qtr with annual increases limited to \$50, as well.
78	We use a technology fee with our distance education programs
Other	
18	The campus does have course material fees.
92	Differential tuition utilized at the graduate level but not at the undergraduate level at our institution.
1	I assume you did not ask about differential tuition by level or by year of admission because the study is limited to only one form of differentiation?
47	Our College of Law also has a professional fee associated with that program
37	You captured it all.
86	We do charge non-residents of (state) higher fees for both undergraduate and graduate programs, however, these fees are the same for all undergraduate programs
64	This is a very timely topic. I would appreciate a link to your research when completed. Thank you.
16	We also charge a reduced differential tuition at our College of Technology. The COT tuition is about 40% less than the main campus tuition.
66	The published tuition and fee rate that was provided early in the survey included a weighted average of the differential tuition. Therefore some programs will cost more than the published rate and some will cost less.
36	The (university) does not apply differential tuition by undergraduate major or program. However, beginning in Fiscal Year 2005 the University applied a differential by including a \$1,000 increase for all first-time, in-state, undergraduate students on the Main campus and a partial increase was applied to this same grouping at its' regional campuses.