ASSESSING CHANGE IN MEDICAL EDUCATION:
A CASE STUDY

by

Colleen O'Connor Grochowski

Copyright © Colleen O'Connor Grochowski 2003

A Dissertation Submitted to the Faculty of the
CENTER FOR THE STUDY OF HIGHER EDUCATION
In Partial Fulfillment of the requirements
For the Degree of
DOCTOR OF PHILOSOPHY
WITH A MAJOR IN HIGHER EDUCATION
In the Graduate College
THE UNIVERSITY OF ARIZONA
2003
As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Colleen O'Connor Grochowski entitled Assessing Change in Medical Education: A Case Study and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Dissertation Director - Gary Rhoades
STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgement of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder.

SIGNED: [Signature]
ACKNOWLEDGEMENTS

I have learned so much from so many along the way. Without any one of them, I would be incomplete. I am indebted to them all. Those listed below bear special attention.

It all started with Barbara Reed Hartmann, Ph.D. She encouraged me to go to graduate school, and it is in large part because of her that I persisted. I am blessed to have had Dr. Hartmann as my first mentor and inspiration.

Tracy Gaudet, MD has been a continual source of energy and hope. Her tireless commitment to transforming medical education fueled my passion to understand how educational innovation occurs. I also am grateful to Dr. Gaudet for her belief in me and for the opportunities she has provided to me.

Most recently, I have had the honor of working for Nancy Alexander Koff, Ph.D. Dr. Koff generously taught me about the administration of a medical education program and the unique challenges encountered in reform initiatives of such programs. Because of her generosity, I feel ready to move on. I am truly indebted to Dr. Koff.

Gary Rhoades, Ph.D., my advisor and chair of my committee, also was generous with his teaching. He was patient and skillful in shaping and guiding my research into a study of practical value. My career will be enriched by the intellectual growth that resulted from my time with Dr. Rhoades.
DEDICATION

I dedicate this work to my family. First and foremost, to my husband, Chris. Chris lovingly took responsibility for every aspect of keeping our home and our family together and functioning, making it possible for me to go to school while simultaneously working full time and raising two children. Without his complete support, I could never have achieved so much.

To my children, Zac and Christian – their patience and loving support were a true gift to me. They had to endure a lot having a mom who was always studying. They are a greater source of pride and joy to me than even this completed dissertation!

To Cat and John, and Paul and Carolyn and the girls – their constant encouragement and pride in me fed my soul.

To my husband’s parents, Joan and Dan Grochowski, who have taken me in as their own. I wish the first Dr. Grochowski could be here to see this, but I believe he’s smiling down on us.

And to my parents – who have nurtured this dream I had to earn a Ph.D. since I was 17 years old. They never doubted I could do it, and they supported me every step of the way in so many wonderful ways.

To my family – I love you all so much and will forever be grateful to you for your love, support, and encouragement. By earning this doctorate, I have achieved a dream. Thank you for helping make this dream come true.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>ABSTRACT</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHAPTER 1 THE PROBLEM</strong></td>
<td>10</td>
</tr>
<tr>
<td>Introduction</td>
<td>10</td>
</tr>
<tr>
<td>History/Background</td>
<td>11</td>
</tr>
<tr>
<td>Literature</td>
<td>17</td>
</tr>
<tr>
<td>Conceptual Frameworks</td>
<td>18</td>
</tr>
<tr>
<td>Research Questions and Propositions</td>
<td>19</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>21</td>
</tr>
<tr>
<td>Organization</td>
<td>22</td>
</tr>
<tr>
<td><strong>CHAPTER 2 LITERATURE REVIEW</strong></td>
<td>24</td>
</tr>
<tr>
<td>Theoretical Constructs</td>
<td>25</td>
</tr>
<tr>
<td>Power</td>
<td>25</td>
</tr>
<tr>
<td>Leadership</td>
<td>27</td>
</tr>
<tr>
<td>Professionalism/Jurisdiction</td>
<td>31</td>
</tr>
<tr>
<td>Resource Dependence</td>
<td>32</td>
</tr>
<tr>
<td>Academic Capitalism</td>
<td>34</td>
</tr>
<tr>
<td>Change in Medical Education</td>
<td>36</td>
</tr>
<tr>
<td>Council, Commission and Foundation Initiatives</td>
<td>37</td>
</tr>
<tr>
<td>Barriers to Change</td>
<td>47</td>
</tr>
<tr>
<td>Models of Change</td>
<td>48</td>
</tr>
<tr>
<td>Financial Aspects of Higher Education</td>
<td>52</td>
</tr>
<tr>
<td>Resource Dependent Nature of Higher Education</td>
<td>52</td>
</tr>
<tr>
<td>Patterns of Resource Allocation</td>
<td>54</td>
</tr>
<tr>
<td>Mission-Based Management</td>
<td>57</td>
</tr>
<tr>
<td>Effects of Managed Care</td>
<td>59</td>
</tr>
<tr>
<td>Resource Allocation and Curricular Innovation</td>
<td>62</td>
</tr>
<tr>
<td>Summary</td>
<td>65</td>
</tr>
<tr>
<td><strong>CHAPTER 3 STUDY DESIGN</strong></td>
<td>66</td>
</tr>
<tr>
<td>Sampling</td>
<td>69</td>
</tr>
<tr>
<td>Characteristics of the Case</td>
<td>73</td>
</tr>
<tr>
<td>Time Frame</td>
<td>75</td>
</tr>
<tr>
<td>Methodology</td>
<td>76</td>
</tr>
<tr>
<td>Interviews</td>
<td>76</td>
</tr>
<tr>
<td>Documents</td>
<td>84</td>
</tr>
<tr>
<td>Surveys</td>
<td>91</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS – Continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaining Entrée and Access/My Relationship to the Data</td>
<td>91</td>
</tr>
<tr>
<td>Data Management and Analysis</td>
<td>94</td>
</tr>
<tr>
<td>CHAPTER 4 APPROVED CURRICULAR ENHANCEMENTS</td>
<td>100</td>
</tr>
<tr>
<td>Introduction</td>
<td>100</td>
</tr>
<tr>
<td>Problem Based Learning</td>
<td>103</td>
</tr>
<tr>
<td>Longitudinal Clinical Curriculum</td>
<td>110</td>
</tr>
<tr>
<td>Basic Science Curriculum</td>
<td>115</td>
</tr>
<tr>
<td>Orientation to the 3rd Year</td>
<td>118</td>
</tr>
<tr>
<td>Interdisciplinary Seminars</td>
<td>121</td>
</tr>
<tr>
<td>Cancer Prevention Education</td>
<td>124</td>
</tr>
<tr>
<td>Geriatric/Gerontology Education</td>
<td>133</td>
</tr>
<tr>
<td>CHAPTER 5 CURRICULAR ENHANCEMENTS NOT APPROVED</td>
<td>141</td>
</tr>
<tr>
<td>Introduction</td>
<td>141</td>
</tr>
<tr>
<td>Organ-Based Basic Sciences</td>
<td>141</td>
</tr>
<tr>
<td>Years III/IV Continuum</td>
<td>146</td>
</tr>
<tr>
<td>Sub-Internship</td>
<td>149</td>
</tr>
<tr>
<td>Anesthesiology/Ophthalmology Clerkship Rotations</td>
<td>151</td>
</tr>
<tr>
<td>CHAPTER 6 BROADER ISSUES AFFECTING CURRICULAR CHANGE</td>
<td>161</td>
</tr>
<tr>
<td>Introduction</td>
<td>161</td>
</tr>
<tr>
<td>Financial Issues</td>
<td>161</td>
</tr>
<tr>
<td>The Research Agenda</td>
<td>176</td>
</tr>
<tr>
<td>Organizational Issues/Structure of the Institution</td>
<td>180</td>
</tr>
<tr>
<td>Effects of the Dean</td>
<td>184</td>
</tr>
<tr>
<td>Effects of the Department Heads</td>
<td>189</td>
</tr>
<tr>
<td>Effects of the Faculty</td>
<td>191</td>
</tr>
<tr>
<td>Effects of the Students</td>
<td>196</td>
</tr>
<tr>
<td>CHAPTER 7 CONCLUSIONS</td>
<td>199</td>
</tr>
<tr>
<td>Summary of Findings</td>
<td>199</td>
</tr>
<tr>
<td>Implications for Research</td>
<td>208</td>
</tr>
<tr>
<td>Application to Practice</td>
<td>213</td>
</tr>
<tr>
<td>Summary</td>
<td>222</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>224</td>
</tr>
</tbody>
</table>
ABSTRACT

Despite a 70-year long call for reform of the structure of medical education, the process by which one becomes a physician has remained remarkably unchanged since the early 1900s. This case study was undertaken to identify the factors that facilitated and inhibited attempts at curricular reform in a state College of Medicine at a Research I institution in the southwest. The theoretical lenses of resource dependency, academic capitalism, professionalism/jurisdiction, power, and leadership were used to identify and understand the interrelatedness of the internal and external factors influencing change in medical education.

Based on the theoretical constructs underlying the study, several propositions were outlined a priori. The findings indicated support for the propositions: the dean's support of reform initiatives was a key factor in the success of the initiatives; and conversely, those initiatives that were not actively and verbally supported by the dean did not tend to be approved; the dean influenced the agenda by taking key proposals for reform off the agenda; faculty were most resistant to those proposals that would have required them to relinquish their curricular jurisdiction to a central curriculum authority; faculty further maintained jurisdiction over their courses by simply choosing not to use materials made available to them through educational grants; the tenuous financial situation of the institution at the time affected the dean's and the faculty members' willingness to be involved in and support curricular reform efforts as they were under increasing pressure to increase their income-generating activities; and furthermore, the resource allocation patterns of the institution did not support reform initiatives.
The findings highlighted two themes that were not accounted for in the propositions. The first indicated that the quality of the working relationship transcended jurisdictional boundaries that would have been expected from the professionalism/jurisdiction framework underlying the study. The second indicated that the efforts of a single individual could transcend all of the theoretical constructs underlying the study.

Lastly, based on the findings of the study, several strategies were developed that may be useful to consider when attempting curricular reform.
CHAPTER 1

THE PROBLEM

Introduction

Medical education is a complex process with many phases. To become a physician, in most cases, the student first must earn a four-year bachelor’s degree. Upon successful application and acceptance into a medical school, the student then embarks on four years of undergraduate medical education. Next comes a year of internship, followed by two to four years or more of residency in the field of medicine in which the student wishes to practice. Once in practice, the physician is expected to continue on a journey of life-long learning, facilitated by participation in required continuing medical education (CME) programs.

With advances in science, technology, and the cognitive sciences, each of the phases of medical education has been the target of reform attempts from various constituencies. The focus of the present study is on the undergraduate medical education phase. The literature on reform efforts in undergraduate medical education reveals a 70-year long call for change. However, the basic structure of medical education remains remarkably similar to that which existed in the 1930s. Relatively little of the espoused reform has taken hold. This study was undertaken to identify those factors that facilitate and inhibit academic change through the use of various theoretical lenses.
History/Background

A little more than 100 years ago, medical education was neither standardized nor characterized by strong quality control mechanisms, and higher education was not even a requirement for becoming a doctor. The principal path to becoming a doctor was through apprenticeship with a practicing doctor – usually an eclectic (botanical doctor) or a homeopath. If one did chose to go to medical school, the academic program was only four months and the total educational program was two years in length. The educational program did not include laboratory experience, and students were not required to pass all of their courses – only most of them. Charles Eliot, then president of Harvard University wrote,

The ignorance and general incompetency of the average graduate of American medical schools, at the time when he receives the degree which turns him loose upon the community, is something horrible to contemplate... The whole system of medical education in this country needs thorough reformation (Starr, 1982).

Thus began a major transformation of American medical education.

Under Eliot’s leadership, Harvard extended its academic year to nine months and the total educational program to three years. It added laboratory experiences to the educational program and required students to pass all of their classes. Over the next decade, leading institutions followed Harvard’s lead. In 1893, Johns Hopkins became the first medical school to require a Bachelor’s degree of its entering students, embodying the concept of medical education as a field of graduate study rooted in basic science/research and hospital medicine. It built a teaching hospital in which students learned the practice of clinical medicine. It gave birth to the model of medical education that still exists
today: two years of basic science education followed by two years of clinical science education.

As leading universities were raising academic standards in the late 1800s through the early 1900s, proprietary and commercial colleges continued to be open access, letting in the "unwelcome" to the profession of medicine (Starr, 1982). They were increasing the competition with universities and damaging the status of the physician. "Medicine would never be a respected profession until it sloughed off its coarse and common elements" (Starr, 1982, p. 117). A group of physicians created the American Medical Association (AMA) and undertook action to professionalize the field of medicine, including the implementation of licensing boards. Proprietary schools could not afford to ignore the new state licensing requirements (their graduation certificates became meaningless and students lost the incentive to enroll), nor could they afford to comply with the new requirements (more stringent entry requirements, longer period of training, more expensive facilities, laboratories, and equipment). Some of the propriety and commercial schools merged with existing university medical schools, and others committed fraud by pretending to comply with the new standards (Starr, 1982).

In the early 1900s, the AMA hired the Carnegie Foundation to investigate the quality of American medical schools. Carnegie assigned the task to Abraham Flexner, a layman with a background in education. Flexner visited every medical school in the country and in 1910 issued the now infamous report entitled, *Medical Education in the United States and Canada*, commonly referred to as the "Flexner Report" (Flexner, 1910). Flexner saw a great discrepancy developing between medical science and medical
education. Science had progressed and education had not kept up. In his report, Flexner recommended that the first class schools be strengthened on the model put forth by Johns Hopkins, a few schools from the middle ranks be raised to the Johns Hopkins standard, and the remainder of the schools be closed all together. Flexner asserted that the country was oversupplied with badly trained doctors and it needed fewer, better-trained physicians. Essentially, Flexner hastened the death of small medical colleges that were already suffering from the economic realities of upgrading their educational program (Starr, 1982).

The years of Eliot, Johns Hopkins and Flexner were the last years in which substantial change in the basic structure of medical education occurred. The model put forth by Johns Hopkins in the late 1800s and endorsed by Flexner in the early 1900s still exists today: two years of basic science education followed by two years of clinical science education. Though it can be argued that these reform years significantly improved the standards of medical education and the practice of medicine, educators since that time have repeatedly called for continual renewal and change in medical education.

Prominent among those calling for reform was Willard Rappleye, MD, then the director of the Association for American Medical College’s Commission on Medical Education. In 1932, Dr. Rappleye issued criticisms of medical education, including the following:

- Great rigidity, overcrowding of the curriculum and a lack of a proper balance in training
• Too much emphasis on specialized medicine and rare diseases – not enough attention given to the ordinary needs of most patients (primary care)

• Medical students needed to understand the larger social and economic problems and trends with which medicine must deal

• Clinical instructors needed to be outstanding teachers, not just outstanding researchers

• The four years of medical school were not integrated

• The major purpose of training was not a collection of details and facts, but the intelligent and discriminating use of knowledge that was applicable to a given problem

• The presentation too early in medical sciences of too many details, often of temporary, miscellaneous and inconsequential value...and the artificial segregation of the subjects (Swanson, 1993).

Many of the criticisms issued by Dr. Rappleye in 1932 have been reiterated over and over in reports on the status of medical education issued in 1910, 1932, 1940, 1953, 1965, 1966, 1970, 1973, 1982, 1984, 1989, 1991, 1992 (Enarson and Burg, 1992), and 1993 (Swanson, 1993). Regardless, the basic structures of medical education have remained essentially the same for the past 70 years (Bloom, 1988). The efforts to reform medical education seem to have had little impact.

Today, medical education occurs within the complex structure of academic medical centers (AMCs). The responsibilities of AMCs are great. Not only are they responsible for the tripartite mission of the institution – teaching, research, and clinical
care – but also for the health care of those residing in their region and state. Adding to the complexity of AMCs is the influence of multiple factors on them and the educational programs at the colleges of medicine associated with them. Most influential in this environment on the viability of AMCs is the organization and financing of health care. The advent of health maintenance organizations (HMOs) and other forms of managed care has had a significant negative impact on the financial status of AMCs. This is particularly true of the case at hand, in that the institution under study in this research is located in a state marked by a particularly extensive penetration of HMOs. As AMCs realize declining revenues due to the managed care plans and in the face of increasing costs, college of medicine faculty have been pressured to focus their efforts on the two revenue-generating activities included in the institutions tripartite mission: research and clinical care. Consequently faculty members have little time or energy left to contribute to the third mission of education.

There are many other factors that contribute to this resistance to change in medical education program. These factors include the disciplinary structure of the basic and clinical sciences, the lack of a central curriculum authority and budget, the conflicting interests of external organizations responsible for the continuum of medical education, and the lack of sufficient incentives and rewards for participating in educational endeavors. Other barriers include the general inertia on the part the faculty, the belief that the educational process is not all that bad to begin with, and the contention that there are no data to indicate that changing the process of medical education will improve the quality of physicians (Swanson, 1993).
In most cases, medical education is located within larger organizations (academic medical centers) whose first priority is efficiency, not necessarily student-centered education. Though it is often administrators who push for change, they often are not the same administrators who control how the resources are allocated. From an efficiency perspective, it is a more efficient use of faculty members’ time to deliver lectures on the basic sciences than to facilitate laboratory experiences or individual instruction. With the appropriate amount of resources, teaching faculty probably would prefer smaller classes and more small-group and one-on-one teaching. Similarly, it is more efficient for residents to be the primary clinical educators of third and fourth years of medical students, freeing the clinical faculty to pursue their graduate instruction, patient care, and research interests – interests that have rewards and prestige attached. In addition, faculty members are under enormous pressure to be financially productive through funded research and increased patient care.

In spite of the complexity of AMCs and the multifaceted nature of their interactions with the external environment, there have been efforts by AMCs across the nation to address the criticisms leveled at medical education and overcome the barriers. Each attempt yields a different story based on the uniqueness of each institution. The intent of the current study is to uncover the story of attempted curricular change at a large state medical school housed within a Research One institution – a medical school ripe with data from past and present change efforts. This study will focus on the efforts of those who played a role in the change processes. As such, the respondents in this study for the most part supported the proposed changes. The major reform efforts were largely
unsuccessful at this institution, and there is insight to be gained from those who tried to effect these changes.

**Literature**

In order to understand the unfolding story of academic change at this institution, I examined the literature on curricular change in medical education. There is a long history of attempted reform published in academic medicine literature. I paid particular attention to efforts sponsored by the Association of American Medical Colleges (AAMC). The AAMC is a national organization that in partnership with the American Medical Association accredits colleges of medicine. As previously indicated, the AAMC has been active in encouraging and facilitating curricular reform. Many of their efforts are sponsored through partnerships with educational councils, commissions, and foundations. The literature is full of the processes and outcomes of AAMC-sponsored national level initiatives to enhance and change medical education. Additionally, much has been published by individual institutions that have undertaken their own initiatives. The medical education change literature was helpful in developing my research questions and in guiding my data analysis.

I also examined the medical education change literature for models of change under the assumption that without a sound and well-articulated model, reform efforts would be doomed from the start. I wanted to be able to judge the quality of the model employed by the case at hand and assess its impact on the outcomes of the curricular reform efforts.
The final sector of the literature that I accessed for this study was about the financial aspects of higher education, in general, and medical education, in particular. I would have lacked insight in my data analysis without this literature base given the interaction between the external health care environment and the financial status of academic medical centers.

**Conceptual Frameworks**

What makes this study distinct from others is the use of particular theoretical constructs in attempting to understand the process and outcomes of the change initiatives, both large and small. The following theoretical constructs are employed in this study. Lukes' (1978) three dimensions of power were used to examine the process and effect of debate, agenda control, and culturally embedded power on the change process. Bland et al.'s (2000) conceptualization of leadership was used to specifically examine the role and effect of the medical school dean in the reform effort. Abbott's (1988) framework of jurisdiction was used to gain insight into the willingness of the faculty to engage in and support curricular reform. Lastly, this study employed the use of two conceptualizations addressing the financial aspects of reform. Specifically, Pfeffer and Salancik's (1978) theory of resource dependency was used to describe the resource-dependent nature of medical education. Slaughter and Leslie's (1997) theory of academic capitalism was used to understand faculty members' behaviors in the context of decreasing resources and increasing pressure to generate revenue simultaneous to curricular reform efforts. Though none of these theories are specifically tailored for change processes, I believe
they will be helpful in understanding the processes and outcomes of the varying attempts to change the educational program at this particular institution.

Research Questions and Propositions

Based within these constructs, my specific research questions are the following:

- What supported and inhibited the implementation of curricular change in the undergraduate medical education program at the University College of Medicine (a pseudonym)?
  - What role did power play?
    - What was the effect of organizational power structures?
    - What was the effect of individual power/professionalism?
    - What was the effect of leadership?
  - How did members define and protect their jurisdiction?
  - How did the external financial situation of health care affect reform efforts?
  - How did decisions regarding resource allocation influence the implementation and sustainability of curricular change?

The story that unfolds will be unique to this institution; however, it may help guide future attempts at change in this, and other, institutions. Based on the theoretical constructs underlying this study, I developed working propositions about what I would find:

- Proposition 1 (based on Lukes' [1978] conceptualization of power): Consistent with Lukes' second dimension of power, the Dean would control the agenda.
Consistent with Lukes' first dimension of power, there would be debate among the faculty and significant resistance to the proposed curricular reforms. In response to faculty opposition, the Dean would take some key proposals off the agenda.

- Proposition 2 (based on Bland et al.'s [2000] characterization of leadership): The extent of change that occurred would be a function of the extent of the Dean's commitment to the proposed changes.

- Proposition 3 (based on Abbott's [1988] concept of professionalization and jurisdiction): In order to maintain jurisdiction over "their" part of the curriculum, faculty members would resist efforts to integrate the curriculum and centralize the authority over the curriculum.

- Proposition 4 (based on Pfeffer and Salancik's [1978] concept of resource dependency and on Slaughter and Leslie's [1997] concept of academic capitalism): Prioritizing the financial status of the institution over curricular change, the Dean would pressure faculty to increase their income-generating activities, resulting in the faculty members' increased concern about financial viability and decreased concern with educational innovation.

My goal was to determine the degree to which these factors interact and the extent of their individual and combined influence. I anticipated that my findings would identify themes or factors that transcend the organization of this medical school, and thus may apply to other schools, regardless of their similarity or difference in structure. To explore these notions, I undertook a case study of University College of Medicine. As part of the
case study, I conducted a narrative analysis of curriculum and curricular reform documents dating back to 1994 (when a comprehensive effort to change the curriculum was underway). The documents included reports from the reform initiative undertaken in the 1990s, minutes from the educational committees, and approved proposals for educational grants. I interviewed committee and subcommittee chairmen from the curricular reform initiative, deans, associate deans, and assistant deans involved in the educational program and in finance in the University College of Medicine, and principal investigators from the funded educational grants. To corroborate some of the information obtained in interviews, I conducted a survey of course and clerkship directors.

Limitations of the Study

Many in the field of medicine prefer hard science based on quantitative analysis. This study was qualitative in nature. I chose a qualitative analysis because I wanted to be able to identify and document patterns and inconsistencies in order to understand the issues as a complex whole. A qualitative design allowed me the flexibility to obtain data from a variety of sources and the ability to assess the interrelationships and interactions of the various actors within the institution.

There are two other limitations to this study. This first is that it focused on just one institution, making generalizations to other institutions difficult. However, most colleges of medicine are so different in their structures and programs that it would be difficult to find any two institutions exactly the same. And as just indicated, I hoped to identify general underlying themes and propositions that could be considered and applied to other schools regardless of their differences.
The second limitation relates to one source of data for this study. Subjects interviewed for this study were people who played active roles in attempting to change the educational program at this college of medicine. Given their involvement, they were largely supportive of the proposed changes. A broader understanding may have been gained by interviewing people who were active in opposing the reforms, although their voices tended to come through in the interview data and were often captured in the documents analyzed for this study.

In spite of these limitations, I believe this case study offers an excellent opportunity to understand the factors that facilitate and inhibit change at a large state-run university medical school. Additionally, the theoretical constructs employed by this study offer an opportunity to understand the attempts and processes of change in a way that has not previously been articulated. What will hopefully result is a set of recommendations academic medical centers may consult when considering change in their own institutions.

Organization

Chapter 2 summarizes a review of the literature related to the various aspects of this study. It includes a full description of the theoretical constructs underlying the study, an outline of national reform initiatives funded by educational councils, commissions and foundations, a sampling of reported outcomes from individual institution reform initiatives, and a review of the literature addressing the financial aspects of medical education. Chapter 3 describes the methodology and organization of the research. Chapters 4 through 6 present data findings using the theoretical constructs underlying this
study. Chapter 4 discusses findings related to curricular changes that were approved, Chapter 5 discusses findings related to curricular changes that were not approved, and Chapter 6 discusses findings related to broader issues affecting curricular change. Chapter 7 presents a summary of the findings in relation to the propositions outlined above. It discusses the implications for research of this study, and outlines emergent strategies for successful curricular change in medical education.
CHAPTER 2
REVIEW OF THE LITERATURE

Many aspects of the present study can be found represented in the literature: discussion around attempted changes in medical education at a local and/or national level, the effect of the financial status of the external health care market on medical education, the patterns of resource allocation in higher education, in general, and medical education, in particular, and theoretical constructs including power, leadership, professionalism/jurisdiction, resource dependency and academic capitalism. The goal of this study is to examine the interaction among all of these aspects and their resulting influence on the process of change in medical education.

This chapter will consist of three sections. The first section will consist of a descriptive review of the theoretical constructs underlying the current study.

The second section will start with a general accounting of the literature around changing medical education. It will include a review of Dexter's 1994 study of the Comprehensive Curriculum Analysis and Planning Project - a previous attempt to change medical education at this particular institution. It also will include a review of the major initiatives conducted by educational councils, commissions, and foundations as well as a sampling of the outcomes of change efforts reported in the literature by individual institutions. Included will be an exploration of commonly identified barriers to medical education, as well as a presentation of models of curricular change described in the literature.
The third section of this chapter will address the financial aspects of higher education and medical education. It will start with a discussion of the resource dependent nature of higher education (specifically public research universities – similar to the case at hand) and public medical schools, and outline the typical resource allocation patterns in medical education. Next it will present a summary review of the literature related to the effect of managed care on academic medical centers. In conclusion, it will examine the literature for examples of resource allocation patterns and their effect on curricular innovation in medical education.

**Theoretical Constructs**

**Power**

Steven Lukes (1978) put forth a theory of power that contains three dimensions. According to his theory, the first dimension of power involves issues of open debate about behavior and differences of opinion that are observable. It occurs in the formal institutional setting and is coercive. As Lukes (1978) states, this view of power “involves a focus on behavior in the making of decisions on issues over which there is an observable conflict of (subjective) interests, seen as express policy preferences, revealed by political participation” (p. 15). In the realm of curricular change, an example of the first dimension of power would be the open debate and discussion that occurs among the general faculty about curricular changes that are being proposed.

The second dimension of power is less observable. There is conflict, but power lies in the ability to control the agenda. The focus is on formal political settings or behind-the-scenes agenda setting. The second dimension of power also includes
"nondecision-making" – the thwarting or suppression of potential issues that could challenge the values or interests of the decision maker (Lukes, 1978). An example of the second dimension of power would be the Vice President of a college of medicine mandating that all financial resources be allocated according to the principles of mission-based budgeting. The Vice President does not make himself available for input from others prior to making the decision. Those within the organization who are impacted by the decision (department chairs, for example) may complain to one another about the decision, but they do not have the power or the will to put the topic on the agenda for open debate.

The third dimension of power moves into a different, more encompassing realm. The third dimension is a cultural view of power. It is imbedded in the culture and subjects everyone to its power. It does not necessarily involve observable conflict, though a contradiction may exist between the interests of those in power and the interests of those they exclude (Lukes, 1978). People adhere to the cultural expectations without any real conscious awareness that processes could or should be different. It is perpetuated and people believe it is the way it is supposed to be whether they like it or not. It is not in the formal political setting of the institution, but woven throughout organizational and societal culture. In his 1994 study of the effect of attempted curricular change on the culture of a medical school's faculty, Dexter cites the exclusion of the lay/public voice from the curricular renewal process as an example of Lukes’ third dimension of power. Dexter argued that the cultural power of professional medicine resulted in the faculty members’ belief that they knew better than the public what public
health care issues were most important. This presumption was "so deeply integrated...the notion that the public might be interested in medical education, or have something to offer to faculty deliberations, was effectively unconsidered" (Dexter, 1994, p. 191).

A construct that is sometimes treated as synonymous with power is that of leadership. Leadership appears in the literature as critical to change efforts (Bland et al., 2000; Inglehart, 1998; Dean, Acker-Hocevar and Laible, 1997; Swanson, 1993) and will be discussed more fully below. Lukes' conceptualization of power offers a useful lens through which to examine how those in leadership positions in medical education use and exert their power. Do those in leadership positions allow for open debate about proposed curricular changes? Do they abort proposed change by deleting it from the agenda? Do they maintain the status quo such that ideas for change do not arise?

Leadership

The literature in higher education is ripe with issues related to leadership. Two of the more seminal pieces on the effect of leaders in higher education have been offered by Birnbaum (1989) and Trow (1987). The authors offered differing views on the influence of those in a formal position of leadership, university presidents. Both views of leadership have elements of importance. Birnbaum (1989) viewed university presidents as largely symbolic and described their leadership as a social attribute. Though his 10-year study of the relationship between changes in presidential leadership and faculty perception of institutional functioning, Birnbaum found that institutions do not change significantly whether their presidents change or not. He believed university presidents
rarely impacted the institution, but believed them to be symbolically important to the institution in coordinating their activities and representing them to external constituencies. Birnbaum further purported that the tendency to attribute power and influence to the leader may serve the function of providing a sense of control to the institution and community: If things are going poorly, change the president – an action that may only be symbolic.

Trow (1987), on the other hand, viewed presidents’ leadership as real and necessary for success. According to Trow, university presidents exercise their leadership through control over the budget, control over discretionary resources, the power to set institutional priorities, and the power to take departments into receivership. Trow maintained that the capacity of the American college and university to adapt to new circumstances was astonishing, and he attributed this capacity to the ability of the institutional leader. However, he went on to say that the American college president had lost the near-absolute authority it once had due to the rise of the research university and the emergence of a genuine academic profession.

The literature on curricular change in medical education – the focus of the current study – appears more consistent with the beliefs offered by Trow. It clearly articulates the importance of the active support of the institutional leader, in most cases the college dean. Bland and her colleagues (2000) systematically searched and synthesized the literature on curricular change and identified a consistent set of characteristics associated with successful change. They found that leadership was one of the characteristics most often cited as affecting curricular change. Bland et al. (2000) reported “numerous
researchers note the importance of the leader’s clear and repeated communication of the organization’s innovative vision... Again, it is the leader’s responsibility to continually fuel the momentum for change” (p. 588).

In 1990, the Association of American Medical Colleges, in partnership with the Charles E. Culpeper Foundation, surveyed the deans of North American medical schools to assess curricular change. The findings included repeated reference to the importance of the dean’s commitment to articulating and implementing curricular change (Swanson, 1993).

In the early 1990s, the Robert Wood Johnson (RWJ) Foundation encouraged medical schools to improve the process of medical education. Eight schools participated in the initiative funded by the RWJ Foundation. Extensive evaluation of the schools’ processes and outcomes were conducted and reported in the literature. An entire chapter was devoted to issues of leadership and governance. Consistent with other reports, the active support of the dean was a key element to successful curricular change. According to Kaufman (1998), a recurrent theme at the institutions involved in the RWJ initiative “was that successful leaders defined and promulgated the vision of their educational reform” (p. S11). The author went on to say,

At most institutions, the formal leaders played lesser roles in designing the innovations than in giving the green light to innovative faculty members, determining which aspects of the innovations should take priority so that overriding concerns of faculty members could be addressed, and helping craft incentives and rewards to foster the desired changes (p. S12).

In 1997, a national forum of private-sector and academic leaders was convened by the AAMC in partnership with the Robert Wood Johnson Foundation to discuss the
The criticality of the dean’s support of and commitment to curricular change is well established by these comprehensive, and in most cases, national studies. Many of the studies cited here went on to list specific characteristics of institutional leaders where curricular change was successfully implemented. For the purposes of this study, the characteristics summarized by Bland et al.’s (2000) meta-analysis will provide the conceptual framework for my data analysis. The characteristics of leaders involved in successful curricular change included being a visionary and a champion with the ability to mobilize others and maintain momentum, utilizing an assertive participative leadership style including sharing power and building trust, being an effective communicator, being flexible, but not so flexible that the integrity of the project is compromised, and having the ability to view the organization through more than one perceptual frame (Bland et al., 2000).
Professionalism/Jurisdiction

Another force that exerts considerable influence in colleges of medicine is the faculty. The effect of the faculty can be considered through the conceptualization of professionalism. Sociologists of professions characterized professionals as those who commanded a specialized body of knowledge informed by theory, who were licensed or accredited, functioned autonomously in their use of their area of specialty, and were guided by a code of ethics and a tradition to serve society (Slaughter and Leslie, 1997). By the 1980s, this earlier view of professionals was challenged by process theorists of professionalization who argued that,

Professionals were defined as much by their organizational ability and political power as by their expertise; they were deemed professionals when they were able to win jurisdictional wars and create monopolies of practice which ensured them prestige, power, and high salaries (Slaughter and Leslie, 1997, p. 4).

Abbott (1988) defines qualities that allow professionals to maintain their jurisdiction: the ability to diagnose or classify a problem, the ability to reason about the problem, and the ability to treat the problem. Clearly, by these conceptualizations, medical educators would be seen as professionals and would be expected to take a powerful stance against attempts to change or encroach upon their areas of expertise, especially if it involved “outsiders” trying to force them to change their curriculum.

Bloom (1988) observed this existence of jurisdictional boundaries in his study of the resistance to change in medical education. He argued that jurisdictional issues were the universal explanation for the resistance to change in medical education, especially in times when education is subordinated to the operational requirements of the institution, as is the case today:
The protection of territorial domains supersedes the achievement of educational goals as the driving force of the institution. We refer to the phenomenon as the dominance of structure over ideology... Therefore, the medical school strives to maintain the integrity of its basic educational (or socialization) function, even as, in the background, the territorial struggles among its separate domains uses up most of the energies of its faculty and staff (p. 301).

The notions of professions and jurisdictions are reinforced by governance structures in medical education that reward individuality (Inglehart, 1998), as well as the concept of academic freedom. Academic freedom “translates not only into a paradigm of intellectual freedom but also one of unfettered allocation of time of the faculty member” (Nonnemaker and Griner, 2001, p. 9). Essentially, academic professionals believe they possess a level of expertise that validates their monopoly of knowledge and their freedom of activity. This study will include an examination of how these beliefs affected the change process at one particular institution attempting curricular innovation.

Resource dependence

Public universities are resource dependent institutions, relying on external agents (e.g. state governments) for a large share of their income. Throughout the country, state revenues for higher education, including medical education, have dramatically decreased. Within academic medical centers (AMCs), the advent of health maintenance organizations has resulted in lower clinical revenues, which historically funded the educational program. As clinical departments within the college of medicine struggle to stay financially viable, less attention and emphasis has been put on education and more emphasis has been focused on those activities that generate revenue, specifically research and clinical care. The shift in focus toward research and clinical care that resulted from decreasing state revenues to higher education can be understood through the framework
of resource dependency theory. According to Pfeffer (1982), those departments or activities that generate money have become more critical and central to the institution, and consequently are allocated more of the institution’s resources.

Resource dependency theory also acknowledges the political dimensions of the relationship between the environment (health care) and the organization (academic medical centers) (Pfeffer, 1982; Pfeffer and Salancik, 1978). Accordingly, resource allocation is a political process, not necessarily a rational or need-based process. This political relationship can be extrapolated down to the level of academic medical center (environment) and its departments (organization). This is particularly apparent in most colleges of medicine where allocations are based on historical relationships, negotiations, and deals with those in power. These relationships are power relationships between those who control the critical resources and those who need it – another aspect of resource dependency theory (Pfeffer, 1982; Pfeffer and Salancik, 1978).

Resource dependency theory further postulates that patterns of internal activity are shaped by patterns of resource allocation. Specifically, internal behaviors of organizational members can be understood most clearly by referencing the actions of its external agents. Those who provide the resources have the potential for power over the institution. This may be evident in AMCs as faculty members put aside their own values to take on the agendas of the granting agencies. Accordingly, organizations are not self-directed entities, but instead are “other-directed, involved in a constant struggle for autonomy and discretion, confronted with constraint and external control” (Pfeffer and Salancik, 1978, p. 257).
Changes in numerous external factors, such as declining financial support from governments for institutions of higher education, the recession of the economy, the growing federal deficit, and the reduction in money for research and development, have produced among universities a greater reliance on alternative revenue suppliers (Slaughter, 1993). According to Slaughter and Leslie (1997),

The end result is a measurable shift in faculty effort from activities financed by government block grants and tuition, specifically instruction and related activities, to activities designed to generate revenues in competitive, marketlike areas and satisfy the conditions of those awards (p. 71).

Academic Capitalism

The changes in national policy and reductions in state allocations that prompted universities to create strategies for adapting to fiscal stresses brought on by decreasing revenue streams can be understood through the framework of academic capitalism (Slaughter and Leslie, 1997). Universities are getting involved with industry in research and development activities, and are shifting their attention to research with patentable outcomes (Feller, 1993, Slaughter and Leslie, 1997). Academic capitalism acknowledges the encroachment of the profit motive into the academy through market-like behaviors on the part of the institution or the professorial to secure external monies. The dependence on resources for survival has shifted academic research agendas toward economic competitiveness, instead of basic science and the discovery of new knowledge. Research that generates income is valued by the institution and seen as productive. Faculty members acknowledged this shift in value in a study conducted by Slaughter and Leslie (1997). The authors found that university faculty,
Still considered basic research the bedrock of science, but they saw entrepreneurial research as folded into that stratum, forming a new composite. Merit was no longer defined as being acquired primarily through publication; rather it encompassed at least in part success with market and marketlike activities (p. 21).

The profit motive that is permeating the academy threatens to erode the quality of the educational program as faculty members focus more on revenue generating behaviors. Slaughter and Leslie (1997) described a cost-benefit taxonomy for faculty that revealed that prestige and relations with external bodies (funding sources) are the most important issues for faculty in the face of declining research dollars and increased competition for resources. Faculty now must compete with each other for competitively-based funds and are drawn away from curiosity-driven basic research toward applied research. From the resource dependency perspective, it is clear why education and enhancing the education program (non-revenue-generating activities) are not the primary foci of faculty struggling to survive in the institution.

Colleges of medicine certainly have experienced a change in financial status since the advent of managed care and the trend of declining state allocations. The behaviors predicted by the academic capitalism conceptualization have been observed in medical education and documented in the literature. Bloom (1988) described a new entrepreneurship in medical schools where links are forged with corporate for-profit institutions involving research in new areas of biotechnology for private corporations and the delivery of hospital and ambulatory care. Ludmerer (1985) described the extent of such developments in excess of $100 million in 1985 – almost 30 years ago! As state allocations have decreased, the extent of entrepreneurial relationships has continued to
increase. Because corporate-university alliances will supplement, not replace, the traditional structure of medical education (Bloom, 1988), coupling the concept of academic capitalism with resource dependency will provide a useful framework for interpreting the processes and outcomes of resource allocation as they relate to curricular change in medical education.

**Change In Medical Education**

Medical education has remained essentially unchanged in its structure since the late 1800s despite fairly widespread consensus among American medical school deans that fundamental change is needed (Cantor et al., 1991). The last significant change in the process of medical education occurred in response to Flexner's 1910 report on the state of medical education in the United States and Canada. Based on a review of all of the medical schools in these two countries, the Flexner reported called for the closing of 100 of the 131 medical schools in existence at the time due to poor educational quality, false advertising, and an existing glut of poorly trained physicians. Flexner recommended that the remaining 31 schools be brought up the standards used by the Johns Hopkins model of medical education. The model called for two years of classroom-based basic science education followed by two years of clinical science education. This is the model still in existence today. Though many saw it as effective in improving the quality of medical education in the beginning decades of the 1900s, issues with the structure and process of medical education began to arise soon thereafter. The call for reform became clearly articulated in 1932 by Willard Rappleye, MD, then the director of the Association of American Medical Colleges (AAMC) commission on
medical education. According to Rappleye's report, medical education was rigid, overcrowded, contained too many lectures, and overemphasized rote memorization (Swanson, 1993).

The criticisms leveled by Dr. Rappleye over 70 years ago continue to be reiterated by medical educators today. Though advances in science have resulted in substantial changes in content knowledge, research, and clinical practice, the process and structure of medical education remains essentially unchanged since Rappleye's report. While some schools have implemented some of the changes called for by Dr. Rappleye, most have accomplished little more than curricular tinkering while steadfastly resisting comprehensive curricular change (Ludmerer, 1999). Bloom (1988) refers to this phenomenon as "reform without change." According to Bloom, medical schools have become complex social organizations supported largely by income from research and clinical practice. Consequently, education has become subservient to the operational needs of the research and clinical missions of academic medical centers with little incentive for faculty to participate in educational reform efforts (Bloom, 1988).

Nonetheless, since Dr. Rappleye's 1932 report, several councils, commissions, and foundations have undertaken major initiatives examining the process and outcomes of medical education as well as organized efforts to improve medical education. Several of these initiatives are examined here.

**Council, Commission and Foundation Initiatives**

In preparation for the 21st century, the Association of American Medical Colleges (AAMC) convened a Panel on the General Professional Education of the Physician and
College Preparation for Medicine in 1981. Its purpose was to assess the current approaches to medical education and to develop recommendations for improvement in assuring that each physician – regardless of subspecialty – obtains a common foundation of knowledge, skills, values, and attitudes. Faced with advances in biomedical knowledge and technology, the increasing understanding of the effects of lifestyle on health, and the changing economic environment of healthcare, the Panel asserted that changes in medical education were needed. In 1984, the panel issued its report, known as the GPEP Report (Muller, 1984), outlining broad educational strategies that it judged would meet the needs of physicians in the years ahead. The GPEP report recommendations fell into five general categories. Because the GPEP Report became the standard against which many future curricular initiatives were measured, its recommendations are outlined below.

The first section addressed issues related to the purposes of a general professional education. The recommendations included limiting the amount of factual information the students were expected to memorize, more clearly describing the level of knowledge and skills students must attain to enter graduate medical education, educating students about the changing demographics and modifications occurring in the health care system, and emphasizing health promotion and disease prevention. The second area of the GPEP report addressed issues related to the baccalaureate education. Its recommendations included broadening the program to include a study in the natural and the social sciences, as well as the humanities, modifying admissions requirements to require only essential courses, requiring scholarly endeavor and effective writing skills, selecting students based on their abilities in independent learning, analytical thinking, caring attitudes, and
the desire to contribute to society, and improving communication between medical
schools and college faculties about the selection criteria. The third area of the GPEP
report addressed issues related to acquiring learning skills. Its recommendations included
adopting evaluation methods to identify students’ abilities to learn independently,
reducing the amount of scheduled time to allow for the pursuit of independent learning,
reducing lecture hours/passive learning, promoting independent learning and problem
solving, using appropriate evaluation methods to evaluate students’ analytical skills, and
incorporating information sciences and computer technology in the medical education
program. The fourth area of the GPEP report addressed issues related to clinical
education. Its recommendations included defining the required level of clinical
knowledge, skills, values, and attitudes required, defining appropriate clinical settings,
both ambulatory and inpatient, for the required clinical clerkships, providing adequate
preparation and the necessary time for those responsible for guiding and supervising
medical clerks, developing explicit criteria for the systematic evaluation of students’
clinical performance, providing appropriate guidance to students in their professional
education and development, and integrating the basic and clinical sciences. The fifth and
final section of the GPEP reported addressed issues related to faculty involvement in
medical education. Its recommendations included creating a central, interdisciplinary
team of faculty to create, implement and evaluate a comprehensive educational program,
providing a budget and resources to support the educational program, providing time for
faculty/student mentoring, encouraging and providing support for faculty to teach outside
their disciplines, providing support for the personal development of each medical student,
providing institutional leadership through the support and commitment of deans and department chairs to improving medical education (Muller, 1984).

Other major initiatives and resulting recommendations for changing medical education occurred in the ten years following the GPEP report. They included "Clinical Education and the Doctor of Tomorrow" sponsored by the Josiah Macy, Jr. Foundation (Gastel & Rogers, 1988). Its report made the following recommendations: centralize control of and funding for the curriculum, make residency programs the responsibility of medical schools, report the National Board of Medical Examiners scores and Medical College Admission Test scores as pass/fail in order to facilitate educational innovation, conduct more training in ambulatory settings, require a period of community service as part of becoming a doctor, and require medical students to pass a comprehensive, performance-based clinical examination (Gastel and Rogers, 1989). These recommendations for enhancing the undergraduate medical education program were consistent with the GPEP's recommendations, yet provided a bit more detail.

In 1991, the Pew Charitable Trust issued a report entitled, "Healthy America: Practitioners for 2005 – An Agenda for Action for U.S. Health Professional Schools." The report called for an increased emphasis on community health, more interdisciplinary issues and primary care in the core curricula, teaching the skills of problem-solving and information management skills, established educational outcomes emphasizing life-long learning skills, administrative and management structures that foster creativity and innovation, faculty development and reward systems, and continued improvement in minority representation in health education (Shugars, O’Neill and Bader, 1991). This
report aptly demonstrates how calls for curricular change evolve and yet stay strikingly consistent over time. Some of the recommendations stemming from the Healthy America report were exactly parallel to those dating back to the 1930's, while others were linked to the needs of the time – in this case, to graduate more primary care physicians.

The process of learning the basic sciences was the focus of a 1992 Robert Wood Johnson Foundation Report, "The Sciences of Medical Practice." As others before it, this report called for centralized control over the curriculum as well as changes in medical education. Specifically, the Foundation advocated for the sciences of medical practice to be integrated throughout the entire course of study, including the development of interdisciplinary and interdepartmental courses in which clinical problems are encountered in the context of biomedical advances, and effective evaluation techniques that would include interdisciplinary and interdepartmental examinations. Other areas of emphasis were to include behavioral, social, probabilistic and information sciences, as well as ethics, and the increased use of ambulatory settings allowing opportunities for students to understand the longitudinal course of illness and its science base (Robert Wood Johnson Foundation Commission on Medical Education, 1992). This last recommendation emerged from the effects of managed care. Students were no longer able to participate in the full course of a patient’s illness in hospital settings given the financial pressures exerted by managed care to reduce the length of hospital stays.

Ten years after the GPEP committee and others issued their recommendations, the AAMC launched an initiative to investigate the degree to which medical schools had implemented the recommendations. The project was called Assessing Change in Medical
Education – The Road to Implementation, or ACME-TRI. The project compiled the recommendations for curricular change put forth by the various foundations and educational boards into twelve recommendations. It then surveyed 143 deans of allopathic medical schools in North America to query them about whether the twelve recommendations for curricular change had been implemented in their institution, and what facilitated or inhibited the process of change. Eighty-four schools, or 58.7%, responded to the survey. The results indicated that some schools had implemented some of the changes, but generally found a postponement of educational reform as a result of the academic medicine culture that does not give students’ education a high priority (Swanson, 1993). This was a powerful finding especially when considered in light of Cantor et al.’s 1991 survey which found that 68% of medical school deans believed that fundamental changes in medical education was needed.

One of the critical aspects of the GPEP was its recommendation that all schools delineate a coherent and comprehensive set of learning objectives to guide the medical study education program. Through the ACME-TRI project, the AAMC found that few schools had achieved this recommendation. To remedy the situation, an AAMC task force issued a report with a set of objectives medical schools could use in developing their own objectives. The reports, issued in three installments from 1998 through 1999 were entitled, “Medical School Objectives Project” and are commonly referred to as MSOP. The intent of the MSOP Project was to set forth program-level learning objectives that medical school deans and faculties could use as a guide in reviewing their medical student education programs and to suggest strategies they might employ in
implementing changes in those programs. Recognizing that educational programs should be dynamic and responsive, the project's goal was to assist medical schools in aligning their educational programs with evolving societal needs, practice patterns, and scientific developments.

The MSOP-I report outlined the knowledge, skills, and attitudes that medical students should possess at the time of graduation (MSOP-I, January, 1998). The subsequent reports addressed contemporary issues in medicine. MSOP-II addressed the need to include/enhance education in medical informatics and population health (MSOP-II, June, 1998). MSOP-III addressed the importance of physicians to be effective communicators with their patients, patients' families, and with other members of the health care team (MSOP-III, October, 1999). All three MSOP reports outlined specific learning objectives. In so doing, the MSOP reports articulated and provided a template for change.

Enarson and Burg (1992) reviewed 15 major studies of medical education reform conducted from 1906 through 1992 and produced an overview of the reform initiatives. They found the recommendations produced by these initiatives fell into three categories: the method of medical school instruction, the internal structure of medical schools, and the relationship between medical schools and external organizations and agencies. Recommendations related to method of instruction included ensuring students receive a broad general education in both clinical and basic sciences; clearly articulating objectives and designing curricula to achieve the objectives; integrating the sciences of medical practice throughout the educational program; emphasizing lifelong learning skills not just
rote memorization of factual material; including behavioral, social, probabilistic, and information sciences and ethics; learning about health and disease prevention; expanding educational sites beyond tertiary care hospitals; and meeting the needs of ongoing changes in the organization, financing, and provision of health care (Enarson and Burg, 1992).

The authors summarized the recommendations related to the internal structure of medical schools to include better integration of the continuum of medical education from pre-professional education through post-graduate and continuing medical education; giving control of the curriculum to a central interdisciplinary and interdepartmental group; and defining a budget designated specifically for the medical education program (Enarson and Burg, 1992). Recommendations related to the third category, the relationship of medical schools with external organizations and agencies, included integrating accreditation of the institutions responsible for the continuum of medical education; decreasing the reliance on external examinations to evaluate students’ educational progress; creating a single pathway to licensure including developing a single examination at the end of medical school to assess students’ ability to provide patient care; and reporting as pass/fail the National Board of Medical Examiners examination and the Medical College Admission Test (Enarson and Burg, 1992). Enarson and Burg’s study was helpful in summarizing and categorizing the calls for change in medical education that had been – and continue to be – sounded for nearly 75 years. It provides a useful template by which to assess efforts to enhance the medical education program.
In spite of the nationwide call for comprehensive curricular change in medical education, the literature described above indicates that change is slow in coming. There are, however, stories of change in individual institutions. In a study conducted by the AAMC in partnership with the Milbank Memorial Fund, ten institutions with planned curricular change were asked to relate their experiences. Their stories related common themes: attempts to incorporate new subjects into the curriculum, efforts to eliminate redundancy and achieve greater coordination between the basic and clinical sciences, the implementation of new educational strategies, and more small group work (Ludmerer, 2000). A review of the institutions’ stories indicated that while some schools were successful in implementing changes in the first two years of medical school, the second two years went largely unchanged (Ludmerer, 2000; Whitcomb, 2000). Additionally, the ten studies did not address three of the most fundamental challenges facing medical education today: the difficulty in being a both a teacher and a cutting-edge researcher in the “molecular revolution,” the lack of student preparation for the management of patients with chronic diseases, and the impact of today’s market forces on the learning environment of clinical education (Ludmerer, 2000).

A comprehensive curricular analysis and renewal process was undertaken at the institution under study in this research during the 1990’s. The project was called the Comprehensive Curriculum Analysis and Planning Project (CCAPP). An examination of the initial stages of CCAPP was the subject of Dexter’s 1994 dissertation. Through his observations of and participation in the Comprehensive Curriculum Analysis and Planning Project, Dexter studied the influence of the larger culture on the culture of the
college of medicine, whether and how the culture of the institution changed as a result of the larger cultural influence, and the roles of the individuals in the institution’s cultural change. Dexter’s study focused on the first few stages of the CCAPP where an educational philosophy and curriculum consistent with the philosophy was developed (his study did not extend to the actual implementation phase of CCAPP). Dexter (1994) found that faculty members within the College attempted to resist external influences by reinforcing their group membership and cultural solidarity through rituals, myths and symbols, and by exhibiting a defensive posture and justification for current practices.

Clearly, the council, commission and foundation initiatives and their resulting recommendations described above outlined ample reasons and strategies for change. Yet the literature on national and individual institution initiatives continues to indicate that change is slow and non-comprehensive. Ludmerer (1999) succinctly summarized the overall status of change in medical education:

Almost everywhere, the curriculum suffered from rigidity, overcrowding, too many lectures, and an excessive emphasis on rote memorization. From 1982 to 1993, nine official reports from foundations, educational bodies, and professional task forces criticized medical education for these defects (as had ten earlier reports from 1910 to 1972, beginning with the Flexner report). A century of curriculum reform had shifted hours of instruction here and modes of instruction there, but schools had yet to introduce a true student-centered educational program that made active, self-directed learning the core of the experience (p. 307).

The questions become, why hasn’t change occurred in medical education and what are the barriers preventing effective curricular change? Many of the barriers have been articulated in the literature and will be outlined in the next section of this chapter.
Barriers to change

Previous research has outlined the most common barriers to change. Some are structural, others are more cultural in nature. Examples of both types of barriers were articulated by Enarson and Burg’s (1992) study of major curricular change initiatives. Most of the cultural barriers have to do with the faculty and include the effects of managed care requiring greater clinical productivity; the de-prioritizing of education in the tripartite mission of the institutions, with the focus being on revenue generating activities (research and clinical education); and the lack of sufficient institutional incentives and rewards for participating in educational endeavors resulting in an insufficient critical mass of educators who are willing and able to participate in curricular reform. Structural barriers include disciplinary structure of the basic and clinical sciences; the lack of a central curriculum authority and budget; and the conflicting interests of organizations responsible for the various aspects of medical education (e.g., LCME, USMLE, ACGME, certification boards, and state licensing agencies). Bloom (1988) underscored the significance of the disciplinary structure of basic and clinical sciences in preventing curricular change. He identified the fundamental need for medical education to be more experiential and learner centered to enable physicians to gain the skills needed to be lifelong learners in the rapidly changing field of medical science. Bloom argued the mission of this reform is being undermined by the discontinuity between basic science and clinical medicine.

The ACME-TRI study (Swanson, 1993) revealed many of the same barriers to curricular reform, as well as some additional ones: faculty members’ inertia; the
perception that there is no evidence that curricular changes will provide the necessary improvements; lack of leadership; lack of oversight of the educational program; and limited resources and no defined budget for medical students’ education. Based in the belief that changes in medical education are possible in spite of today’s climate of tight budgets and a changing health care environment, the ACME-TRI report included strategies for overcoming commonly cited barriers. The inclusion of these strategies adds to the value of the ACME-TRI report in making it a “living document” – a document that engenders action.

The council, commission and foundation reports are useful in that they target that which should change in medical education, and even provide specific strategies for doing so. Yet the actual implementation of the change requires a bit more attention to the daily reality of each institution. Accordingly, when an institution attempts curricular change, it is useful to have a model in place to guide and assess the timeline and process. This level of detail does not appear in the foundation reports, but is evident in descriptions offered by individual institutions (see, for example, Dexter, 1994; Irby, 2000; Wile & Smith, 2000; Mennin, 2001).

Models of Change

When translating national calls for curriculum change into plans for action within individual institutions, having an explicit model for change is helpful in guiding the process. Scholars of academic medicine have put forth models for change. Some examples from the literature are described here to illustrate the importance of a working model for change. Brooks, Orgren and Wallance (1999) recognized the consistency of
their curricular change process with the eight stages of organizational change put forth by John Kotter, from the Harvard Business School:

   Establishing a sense of urgency; creating a guiding coalition; developing a vision and strategy; communicating the change in vision; empowering broad-based action; generating short-term wins; consolidating gains and producing more change; and, anchoring new approaches in the culture (1999, p. 84).

The authors of this study described these principles as key in embracing an institutional change to train more generalists (Brooks, Orgren & Wallace, 1999).

In the mid to late 1990s, eight schools were involved in an initiative funded by the Robert Wood Johnson Foundation to prepare physicians for the future through educational innovations. The nature of the innovations offered by the eight schools varied in shape and size, yet the process of change proved to be complex in all of the schools. Guiding the processes was the following model based on Lewin’s three-stage model for organizational change: In Stage One, leaders plan the innovation and create a climate for change, including preparing the participants for change, launching a vision that is flexible, widely communicated, inclusive, and supported by the institution’s leader(s); in Stage Two, leaders make the change with commitment, patience, and perseverance while emphasizing inclusion and shared ownership; and, in Stage Three, they reinforce the new order with steadfast support for the organization’s leaders (Lindberg, 1998).

Another author from the Robert Wood Johnson initiative discussed a four-stage model of change when illustrating the pivotal role of communication in an educational reform process. The four stages are as follows: recognizing the need for change,
planning change, implementing change, and institutionalizing innovations (Dannefer, Johnston & Krackov, 1998).

The final model to be described here is Mennin's model for sustaining change in medical education. According to Mennin (2001), the stages of change begin with an awareness and recognition of the need for change. This can come from outside or within the institution. The role of the leader is to make change permissible and desirable. The next stage entails the development of a broad vision leading to a well-developed and specific plan. The formal leader articulates the vision. The details of the specific plan are developed by broad-based faculty and staff. The third stage is the implementation phase. The implementation phase is an iterative cycle of implementation, reflection and evaluation, revision, and implementation. The final stage is the adoption (or rejection) phase. Either the change is incorporated by faculty into the larger picture of the institution, or the change fails to take hold. Even in failure, there are valuable lessons to be learned (Mennin, 2001).

As previously mentioned, the institution under examination for this study conducted a curricular review project in the 1990's called the Comprehensive Curricular Analysis and Planning Project (CCAPP). A striking feature of CCAPP was the sequential stage model of change that was developed and implemented. It is the most explicit of all of the models I found in the literature. A description of the model is included here as this institution was the focus of the current research.

The CCAPP model started with an effort to create a cultural framework in which a willingness to consider change was established. The model called for the creation of a
steering committee that oversaw and drove the process. Several other groups were built into the model. They were, in sequential order, the Philosophy Group, whose charge was to identify the educational philosophy of the college and issue a Statement of Ideals for Medical Education; the Analysis Group, who compared the current curriculum to the Statement of Ideals and issued a Report on the State of the Curriculum; the Proposal Group, who drafted proposals to align the curriculum with the Statement of Ideals; the Analysis Group, who assessed the coherence of the proposals to the statement of Ideals and the feasibility of each proposal; and the Implementation Group, who was to develop strategies for the execution and integration of proposals into the educational program.

The CCAPP model was designed to encourage a sense of institutional community and an ownership by the general faculty to the proposed changes. The model enabled a large number of various stakeholders to be directly involved in the process. At the conclusion of each stage, formal approval from the General Faculty was sought before moving on to the next stage.

Consistent with all of the models described, support of the school's leader was also key to the success of each stage of the model. Support was necessary in various ways: through the communication of the renewed vision of the College's educational program, through the mediation of conflict around the proposed changes, and through the allocation of necessary resources.

While many of these models appear simplistic, it is important to understand that change does occur in stages and over time. Developing or implementing a change model at the beginning of the change process can guide the leaders of the innovation.
The financial requirements of academic medical centers was and is of central concern, not only in the day-to-day operations of the institutions, but also in times of attempted innovation. This is even more critical today, in the light of the financial environment in which medical education exists. A brief description of the financial aspects of higher education follows, concluded by a discussion of the financial status of medical education within public institutions of higher education.

Financial Aspects Of Higher Education

Resource dependent nature of higher education

Public research universities are resource dependent (Slaughter, 1993) looking to a variety of sources for their funding. Federal funding is given in the form of student financial aid and/or research dollars. This source of money is particularly critical for research universities. The federal government is the largest funding source of campus-based research, though a disproportionate amount of federal funding goes to a small percentage of colleges and universities. Only the top 100 doctorate granting institutions receive 80% of the federal research and development money (Gladieux, Hauptman & Knapp, 1994). This tendency of the research dollars to go to the same schools benefits medical education as many of the top 100 doctorate granting institutions house colleges of medicine.

State revenues are another major source of funding for higher education. In most cases, the state pays the largest share of the cost of higher education (Slaughter, 1990; Breneman and Finney, 1997), though state governments are experiencing deficits in part as a result of the federal government shifting certain responsibilities and costs to the
states in the 1980s. State governments tend to see higher education as just one of the state-sponsored activities that is discretionary in nature. Across the country, higher education spending as a share of the state outlay is generally experiencing the largest decline in the states’ budgets (Breneman and Finney, 1997).

Because of decreasing higher education shares of state budgets, the process of state allocations to higher education is becoming increasingly more political. The state is no longer simply a source of money, but a player in its own right with an unpredictable agenda (Slaughter, 1990). Changing economic conditions, such as the growth of technology as a dynamic profit sector, the falling rate of profit, and increased competition in international markets, are causing leaders of higher education to look beyond the state as a source of income. Acknowledging that decision making about funding higher education has become subordinate to global economic success, leaders of corporate and academic institutions have had to develop a closer alliance. Businesses are seen as potential sponsors of research, science as a stimulus of economic development, and universities as entrepreneurial actors (Slaughter, 1990). These notions are consistent with the construct of academic capitalism described above.

In addition to federal and state funding, tuition is another significant source of revenue. With the decrease in state allocations, there is greater institutional dependence on tuition revenues. According to Leslie and Slaughter (1997), tuition and fees accounted for 21% of revenues of all institutions of higher education in the US in 1981, increasing to 25% in 1991. An increasing trend in the percent of revenues coming from tuition is also evident when looking at just public institutions of higher education, ranging
from 12.9% in 1981 to 15.1% in 1991. The trend was similar for private colleges and universities, yet tuition was a much greater percentage of the overall revenues. In 1981, tuition accounted for 36.6% of private institutions’ revenues, and 40.4% of their revenues in 1991. As costs per students rise (instruction costs, administrative costs, and faculty costs), institutions have raised tuition. Some scholars of higher education support increasing tuition is a means for assuring quality education, while others argue that higher tuition inhibits enrollment of low-income students. In 1993, the Committee on Economic Development advocated for raising low tuition and fees to capture federal student aid. However, some observers of tuition policy note tuition is rising faster than federal student aid, federal aid is more likely to be in the form of loans than grants, and the aid that is available is being spread over more students (Gladieux, Hauptman & Knapp, 1994). Regardless of the access versus quality debate, tuition provides discretionary revenues, the least restrictive of all revenues, for universities.

The fiscal transformation of the 1990’s, including a dramatic decrease in state revenues, fewer federal grant programs and more federal loans, and rising tuitions has resulted in fiscal challenges for students and institutions alike.

Patterns of resource allocation

In general, there are two classes of budgetary funds: general and restricted. Restricted funds are usually those gained through grants, contracts, and restricted gifts. General funds come from state allocations and are largely discretionary. Internal mechanisms and politics effect how money gets allocated internally. Budget allocations
in colleges of medicine typically are handled confidentially with individual departments being quite uninformed about who is receiving what (Nonnemaker and Griner, 2001).

Institutional resource allocation plays a critical role in the tripartite mission of higher education. Specific to instruction, internal resource allocation affects the resources that are available to hire faculty and determine their workload. The quality of faculty and the extent of their workload, in turn, affect productivity (Volk, Slaughter and Thomas, 2000). Recognizing the importance of resource allocation, a number of conceptualizations have been developed to understand resource allocation patterns in higher education.

Hackman (1985) developed a theory of resource allocation based on the concept of centrality. In her study of six New England colleges and universities, she found that units whose purposes most closely matched the central mission of the organization affected internal resource allocations, environmental power, institutional power, and resource negotiation strategies. Specifically, Hackman (1985) found that units who are central/core to the mission of the institution are able to secure external funding, and/or have relative influence over other units and will be allocated more internal resources.

Volk, Slaughter and Thomas (2000) found patterns of resource allocation to be consistent with concepts of feminism. They found that departments with large percentages of female faculty and large numbers of undergraduate students, received a disproportionately smaller share of state resources than other units. The departments focused on graduate level teaching, with the most grants and contracts, and who were closest to the market, received a greater share of institutional resources. The authors
concluded that institutional resources were not used to reward and incentivize effective/efficient teaching; rather allocations reflected pre-existing structures of prestige and resulted in increased stratification in workload and rewards among departments. Resource allocation patterns were shaped by gender, race, power, and service to external political and economic constituents. Differences in political economic power explained most of the variance in resource allocation among departments.

The political nature of internal resource allocation was investigated in a case study conducted by Pfeffer and Salancik (1974). The authors indicated that resource allocation decisions were political in nature and based on the relative power of the units as well as bureaucratic criteria. Power was defined as a unit's ability to affect decisions so that they conformed more closely to what the department wanted. Power also was inferred by unit representation on major recurring university committees that had responsibility for allocating resources or for addressing educational or student policy issues. The bureaucratic criterion used in this study was instructional workload. The authors found a significant correlation between the number of instructional units (workload) and resource allocation, contrary to Volk, Slaughter and Thomas’ [2000] findings, and between subunit power and resource allocation outcomes. In their final analysis, the authors asserted that subunit power influenced resource allocation decisions only to the extent that such decisions were not constrained by other internal or external realities (e.g., state legislatures, and/or the interdependent nature of the subunits).

Traditional medical school budgetary practices are based on historical patterns (Whitcomb, 2002). Many researchers of general higher education also have noted that
the best predictor of this year's budget is last year's budget (Dempster and Wildavsky, 1966, in Pfeffer and Salancik, 1974). This process of resource allocation does little to facilitate innovation and change, and often results in faculty members choosing to bypass opportunities to participate in educational activities as they focus their efforts on income-generating activities (Whitcomb, 2002).

In the mid 1990s, some schools attempted to link resource allocation decisions to academic outputs (e.g., MacDougall and Ruedy, 1995; Allcorn and Winship, 1996; and, Inglehart, 1997). These activities were the precursor to mission-based budgeting, an element of mission-based management that was endorsed by the Association of American Medical Colleges in the late 1990s.

**Mission-Based Management**

In response to declining revenues and increasing competition, medical schools are developing resource allocation models to assure support for all core mission-related activities (Ridley, Skochelak and Farrell, 2002). Mission-based management (MBM) is one such model. MBM is emerging among colleges of medicine across the nation and is endorsed by the Association of American Medical Colleges (AAMC). Mission-based management provides structures and procedures for tracking and managing resources on a mission-specific basis. Its primary objective is to preserve the academic mission of medical schools. Accordingly, mission-based management is a “process for organizational decision-making that is mission-driven, ensures internal accountability, distributes resources in alignment with organization-wide goals, and is based on timely, open, and accurate information” (AAMC, 2000, p. 2). MBM is based on an open book
philosophy and provides a concrete plan for funding all identified institutional priorities. It requires schools to examine the contributions of faculty members, divisions, and departments across all of the relevant missions of the school (e.g., education, research, and clinical care). Contributions, or productivity, are measured against clearly articulated and published benchmarks. Funds are allocated based on the contributions of each unit, allowing schools to link revenues to expenses by mission. MBM takes the mystery out of the resource allocation process, and it provides a mechanism to ensure that all three of the missions of the medical school, including education, are measured and funded.

Several medical schools have reported in the literature on the success of mission-based management in bolstering the schools financially and enhancing the resources allocated to the academic mission of the schools. The following two examples, taken from the literature, are offered as support for this assertion. At the University of Wisconsin Medical School, the advantages of MBM increased academic productivity at both the department and individual faculty level, increased interest and energy to participate in educational programs, increased ease in recruiting faculty to teach the medical students, and increased budget allocations for curricular revisions (Ridley, Skochelak and Farrell, 2002).

The University of Florida College of Medicine found that the MBM process required their institution to understand the intent of its revenues, measure the productivity of its faculty, learn the true costs of its missions, and make wise investment (subsidy) decisions (Watson and Romrell, 1999). The efforts proved critical to their success in implementing a continuous curriculum renewal process (Watson, et. al, 1998).
Effects of Managed Care

Changes in financing and delivery of health care have had significant effects on medical education. The health care delivery system is changing from a fee-for-service payment system to capitated managed care. The changes impact the clinical practice of medicine, the structure and organization of academic medicine, and the training of future physicians (Tomasa, 1998). In the fee-for-service system that was predominant until the 1970s and 1980s, clinical care revenues provided the primary source of income for medical schools (Ludmerer, 1999). This reality began to shift as fee-for-service costs began to rise in the 1960s and 1970s. By the 1980s, concern about health care costs dominated the health care debate. Prepayment capitation plans, based in a competitive marketplace, emerged as an alternative and eventually took hold. In 1973, the government enacted the federal HMO Act requiring employers with 25 or more employees to offer federally qualified health maintenance organization (HMO) plans as an option to indemnity coverage, increasing HMOs' market share. By 1995, over 50 million Americans received health care through HMOs (Ludmerer, 1999). According to Ludmerer (1999),

Prospective payment immediately changed the rules of hospital economics. Efficiency now mattered...Financial success depended much more heavily than before on lowering costs, utilizing resources more efficiently, and better management. Most important of all, financial success depended on seeing a greater number of patients quickly (p. 351).

The financial effects of prepaid/managed care on teaching hospitals were profound. HMOs became a big business as they adopted a profit-making stance that attracted private and corporate investors. HMOs avoided using teaching hospitals
because of the higher costs associated with major educational and research programs and state-of-the-art facilities required for seeing the sickest patients. Occupancy rates and the number of admissions to teaching hospitals declined, forcing hospitals to close beds. The strengths of academic health centers were in direct conflict with HMOs trends: hospitalization instead of ambulatory care, and specialists instead of primary care physicians. As for-profit hospitals were shifting their mission to making money, teaching hospitals were increasingly staffed by specialists and seeing a greater proportion of severely ill patients, as well as uninsured and indigent patients (Tomasa, 1998).

Other resource streams to AMCs were declining at the same time AMCs were adjusting to the reduction in clinical revenues brought on by managed care. State and local allocations in support of medical education were decreasing. Federal reimbursement for the overhead expenses of medical research was falling. Acknowledging the financial jeopardy of academic health centers nationwide, a 1996 Task Force Report from the Association of American Medical Colleges (AAMC) confirmed that medical schools could expect decreased clinical support from hospitals, a decreased willingness or ability of volunteer faculty to teach without compensation, and an increased need for faculty to generate clinical revenues to underwrite time in teaching and research. The financial viability of AMCs was significantly threatened.

Ludmerer (1999) cites as indisputable the adverse effect of managed care on medical education and academic medical centers. With market forces demanding lower prices, clinical revenues declined, making it harder for AMCs to cross-subsidize education and research from their clinical revenues (Nonnemaker and Griner, 2001).
Prior to the spread of managed care, faculty practice represented the most important source of income for medical schools, with approximately 28% of clinical revenue directly funding academic programs (Ludmerer, 1999). Deeply discounted payments by insurers resulted in lower margins on faculty practice plans. Consequently, discretionary funds used to support academic programs dramatically decreased. Medical schools, especially those in areas with a high penetration of managed care, were forced to layoff faculty and close educational programs. A “dangerous” situation was being created:

The main research and development unit of the American health care system – the academic health center – was being allowed to wither as cost-containing mechanisms designed for the hospital industry as a whole ignored its special needs and mission...the prospect of having well-trained doctors and improved health care in the future was starting to diminish (Ludmerer, 1999, p. 357).

In an environment of managed care, medical school leaders and faculty members are required to devote more time to generating patient care revenues, which ultimately detracts from one of the core missions of the university: education (Nonnemaker and Griner, 2001). Additionally, managed care has produced a change in the nature and quality of medical education. The educational value of inpatient wards began to deteriorate as patients’ length of stay decreased by 25-50 percent and procedures typically done in the hospital were moved to ambulatory settings (Ludmerer, 1999). Student opportunities to learn problem-solving skills, gain clinical experience and acquire clinical judgment diminished. Educational experiences in ambulatory settings were also compromised as managed care dictated throughput of patients – speed and volume at the expense of quality medical education. Students were less likely to observe the qualities of physician thoroughness, attentiveness to detail, questioning, listening, thinking and
caring, as these qualities take time – something that managed care was not willing to
afford (Ludmerer, 1999).

Academic health centers have responded in a variety of ways to the financial
constraints brought on by managed care. Their strategies included seeking new sources
of income by increasing their ties to industry (consistent with the principles of academic
capitalism [Slaughter and Leslie, 1997]), redesigning their faculty practice plans,
scrutinizing their own management practices, reducing the size of their residency
program, limiting the number of tenured positions awarded, developing hospital
consortia, and/or establishing affiliations with primary and secondary care hospitals and
physician practices (Ludmerer, 1999). More significantly, however, was the increased
pressure for faculty to do more patient care to keep the medical school and teaching
hospital financially viable. The clinical mission of academic health centers took priority
over the academic and research missions.

Resource Allocation And Curricular Innovation

Managed care has relegated the educational mission of AMCs to the place of
lowest priority in the tripartite mission, behind clinical care and research. There is a
growing presence of articles in the medical education literature specifically addressing
the challenges of funding the educational program in the face of dwindling resources
(Cohen, 1997; Ginzberg, 1997; Inglehart, 1997; Whitcomb, 2002). An even bigger
challenge faced by AMCs is how to be innovative and improve medical education in this
financial environment. The intersection of resource allocation and curricular innovation

As discussed in Chapter 1, faculty members often are reluctant to more fully engage in educational activities, as their participation often is not rewarded. Faculty salaries and promotion/tenure are based on their ability to generate income, through clinical care and/or research, for the institution. In the mid 1990s, mission-based management was endorsed by the AAMC as a means to preserve the academic mission of medical schools. MBM requires that faculty effort be quantified and resources be allocated according to productivity. This philosophy provided a mechanism for funding the educational mission of medical schools. The implementation of MBM seemed to be a logical strategy for medical schools to pursue in their efforts to balance and prioritize their various mission-related activities, including education, given the financial stresses that schools were experiencing in the 1990s (Whitcomb, 2002). MBM was seen as an important development in raising the academic mission to a level equivalent with the research and clinical care missions. Though only a few schools across the country have fully implemented MBM, it is recognized as a valuable mechanism in rewarding the efforts and contributions of faculty to the academic mission.

Quantifying faculty involvement in education has proved more challenging than quantifying efforts in research and clinical care. According to Whitcomb (2002), there is no single, or best, approach for quantifying teaching effort – it is more reasonable for each school to adopt an approach that best serves its particular needs at the time. Mallon and Jones (2002) conducted a study of 41 medical schools that used metric systems to
quantify faculty activity and productivity in teaching. They found that schools used various educational metric methods, with approximately half basing the metric on relative-value-units, and the other half on contact hours. Regardless of the educational metric method used, the simple fact that schools were engaged in the assessment of faculty activity, including teaching, highlighted the 41 schools’ commitment to and appropriate support of the educational mission and a quality educational program.

The University of Florida College of Medicine at Gainesville was one of the schools to move to mission based budgeting. In the early to mid 1990s, the UF College of Medicine initiated several significant curricular enhancements. Authors of the published description of the change process cited the implementation of MBM as the most important factor leading to sustained change (Watson, et al., 1998). One year later, Watson and Romrell (1999) reported that changing the budgeting process was more difficult than changing the curriculum. They likened the shift to MBM to that of “removing a graveyard” (p. 627). In spite of the related difficulties, the authors described the institution’s success in measuring productivity and quality, and making rewards for educational effort possible. MBM allowed their institution to understand what was happening in each of their missions, know how well each mission was being carried out, and identify where resources should be invested. The process enabled the school to improve its financial health and to achieve curricular innovation.

Much of the literature on curricular reform calls for the establishment of a central interdisciplinary curriculum office with authority over the educational program, and a budget specifically designated for the educational program. There are very few examples
in the literature where this has occurred. The University of Florida is one such example. They were successful in making structural changes and in accomplishing the renewal of its curriculum. In fact, Watson and Rooks (2000) refer to the “back door phenomenon” when relating their success in changing the curriculum: “Our faculty and administration were so focused on our institution’s changing financial picture (to MBM) that the education group was able to slip in reform without too much notice” (p. 128).

**Summary**

The review of the literature about the history and current state of medical education provides the background and context for this study. The review of the literature demonstrated that comprehensive, lasting change to the structure and process of medical education has been difficult to achieve despite seven decades of calling for reform by national and local leaders in medical education.

A description of the theoretical underpinnings of the study were provided to justify their selection for use in this study as well as to help guide the reader's understanding of the data analysis and findings.

The next chapter, Chapter 3, describes the methodology employed in conducting this study. The following three chapters present the findings of this study through the lenses of the theoretical constructs employed. Chapter 4 discusses curricular innovations that were approved and integrated into the medical education program. Chapter 5 describes reform initiatives that were not approved. Chapter 6 explores larger, more global issues influencing change in medical education.
CHAPTER 3

STUDY DESIGN

The purpose of this research was to explore factors that facilitate and inhibit curricular change in medical education. A case study design was selected to allow for an opportunity to do an in-depth examination of the issues at hand. It allows the researcher to intensively examine an issue, a group of people or a set of events in order to capture and vividly present the complexity of the subject (Koff, 1989). I am adding to the complexity of the study by including an examination of how external forces interplay with and impact the medical school curriculum, especially external financial forces.

According to Stake (1994), the purpose of a case study is not to advance grand generalizations, though the case study may provide steps in that direction. Case studies are of value in refining theory and suggesting complexities for further investigations (Stake, 1994). A case study is both the process of learning about the case and the product of our learning. I believe this is an ideal method for developing strategies about how the complex entities, tripartite missions, and external forces involved in an academic medical center combine to influence the process of change in its undergraduate medical education program. The findings of the present research may provide insight about the institution to the new leadership of the college and the Health Sciences Center as they move forward into the future. More importantly, the strategies that evolve from this case study may help inform other colleges of medicine as they embark on reform initiatives or attempt to identify why past initiatives were not successful.
Stake (1994) offered a heuristic delineation of three types of case studies: intrinsic, instrumental, and collective. I am proposing to conduct an instrumental case study. In an instrumental case study, a particular case is studied to facilitate the understanding of something else, such as insight into an issue or the refinement of theory. Qualitative case researchers delineate the themes or issues upon which the case study will focus. These issues are “matters for study regarding the specific case” (Stake, 1994, p. 239). In other words, the issues (what influences change in medical education) help determine the data (educational committees and departmental budgets) upon which the case study is focused. “The methods of instrumental case study draw the researcher toward illustrating how the concerns of the researchers and the theorists are manifest in the case” (Stake, 1994, pg. 241).

Different, though sometimes overlapping, from the instrumental case study are the intrinsic and the collective case studies. In an intrinsic case study, a study is undertaken in order to understand a particular case. The study is conducted because of intrinsic interest in the specific case; the goal of the researcher is to reveal its story. In the collective case study, a number of cases are studied jointly in order to inquire into the phenomenon, population, or general condition (Stake, 1994). In the present study, I have intrinsic interest in the institution of medical education and am choosing to do an instrumental case study that may prove insightful to this and other institutions about what facilitates and impedes change in medical education.

Through this case study, I will do an in-depth examination of educational endeavors at University College of Medicine (a pseudonym) in order to gain insight into
and develop propositions about what facilitates and inhibits change in medical education. As previously discussed, colleges of medicine are complex entities with tripartite missions and are influenced by the status of the state and national health care environment. Tomasa (1998) describes the national health care environment as a “market driven environment that is rapidly changing how physicians practice medicine; how academic leaders plan for the future; and how physicians and students are trained” (p. 27). Market driven health care is eroding the clinical revenues of academic medical centers, a major base of support for medical schools.

The internal personnel structure of the college also contributes to the complexity of AMCs. Many colleges of medicine have two distinct groups of stakeholders: the basic science educators and the clinical science educators. In most schools, there is little integration between the two and the educational program is often shaped by competition between the two different professions for jurisdiction over the curriculum and how to teach it. Power comes into play here – who has it and how it is enacted. An in depth case study offers an opportunity to examine how all of these complexities interact and their resulting influence on medical education.

I have distilled the issues described above into the specific research questions for the present case study:

- What supported and inhibited the implementation of curricular change in the undergraduate medical education program at the University College of Medicine?
  - What role did power play?
  - What was the effect of organizational power structures?
• What was the effect of individual power?
• What was the effect of leadership?
  o How did members define and protect their jurisdiction?
  o How did the external financial situation of health care effect reform efforts?
  o How did decisions regarding resource allocation influence the implementation and sustainability of curricular change?

**Sampling**

In instrumental case studies, the selection of the case is important. The issues to be studied must be present in the case – the case must provide the opportunity to study the phenomena (Stake, 1994). Though case studies provide weak bases for comparison and generalization, the selected case should provide the opportunity to learn about the phenomena. I am choosing the University College of Medicine because it is rich with data related to the process and outcomes of curricular change. During the 1990’s it undertook a thorough curricular review and renewal process that gained national attention. The Comprehensive Curriculum Analysis and Planning Project (CCAPP) was a multiyear, multifaceted project. Its timeline and tasks are listed below:

• 1992 – 1993 Identify educational philosophy; develop “Statement of Ideals for Medical Education”
• 1993 – 1994 Identify, collect, and analyze curricular data; generate “State of the Curriculum Report”
• 1993 – 1994 Design curriculum proposals
- 1994 – 1995 Identify criteria against which to appraise curriculum proposals; appraise proposals; develop final curriculum proposal
- 1995 – 1996 Design and develop curriculum implementation plan

CCAPP was distinctive in its comprehensive approach and its involvement of faculty and leadership from almost every department in the College. Furthermore, due to the governance structure of the educational program, each phase required the approval of the general faculty before the next phase could be initiated. Because of scope and the quality of CCAPP, the Associate Dean for Curricular Affairs was invited to give presentations on the process of CCAPP at numerous institutions across the country, including the National Science Foundation.

As described in the previous chapter, CCAPP was the topic of Jack Dexter’s 1994 dissertation. My study is different from Dexter’s in that it will examine the outcomes of CCAPP and starts at the time where Dexter ended.

In addition to the curricular reform attempted by CCAPP, the University College of Medicine was the recipient of two major educational grants in the years following CCAPP: the Cancer Prevention Education Grant, and the Geriatrics Education Grant. The goals for each of these grants included changing the content, and in some cases, the process of the undergraduate medical education program.

The Cancer Grant was funded by National Cancer Institute (NCI) in September 1997 and totaled $993,201. This grant was funded through August 2002. The goals of the NCI grant included developing a comprehensive curriculum to be integrated into the
four-year undergraduate medical education curriculum, and to employ a variety of teaching methodologies and the development of new teaching materials.

The Geriatrics Grant was funded by the John A. Hartford Foundation in conjunction with the Association of American Medical Colleges (AAMC). This two-year grant was awarded in July 2000 and totaled $100,000. The specific aims included the enhancement and integration of geriatrics and gerontology into existing curriculum, and the introduction of new and innovative teaching strategies into the required clerkships.

Thus, the University College of Medicine provided a rich setting for a case study in curriculum change due to the numerous attempts, both overarching (CCAPP) and content-specific (education grants), to reform the undergraduate medical education program. In spite of what Nonnemaker and Griner (2001) describe as the uniqueness of each medical school ("If you've seen one medical school, you've seen one medical school" [p. 11]), the University College of Medicine is structured similarly to most other colleges of medicine across the country. The educational program is divided into two two-year segments. The first two years are composed of classroom-based instruction in the basic sciences. The second two years are devoted to clinical education.

Like other accredited colleges of medicine, the University College of Medicine has a centralized coordinating unit (e.g., Curriculum Committee) to make decisions about the educational program. According to the standards put forth by the accrediting agency, Liaison Committee for Medical Education, "There must be integrated institutional responsibility for the overall design, management, and evaluation of a coherent and coordinated curriculum. All accredited colleges must meet a standard of centralized
coordination of the educational program” (2002, p. 7). In reality there is a varying degree of latitude given to authorize and implement curricular change – often depending on the complexity or the extent/degree of the proposed change and the nature of the school’s educational program. This standard has assumed a prominent position in terms of concern of the LCME resulting in more schools moving toward greater centralization for the management of the curriculum.

Beyond the issue of central authority is the issue of an integrated curriculum. A continuum of possibilities exists ranging from a completely integrated curriculum to one that is entirely disciplinary (departmentally based). The reality is generally some combination in between. Some schools may have some classes that are integrated and others that are departmentally based. Others may have integrated the first two years of the program, but resort back to the department structure for the clinical years. Others may actually have some integrated clinical experiences. The most common examples include a maternal/child clerkship integrating Obstetrics and Gynecology and Pediatrics, or a Psychiatry/Neurology clerkship combining psychiatry and neurology. In these different scenarios, the integrated courses tend to be managed by a central office, while the departmental courses are run by their home departments.

Given the multitude of possibilities that exist in terms of curriculum authority and curriculum integration, it is hard to quantify colleges of medicine into discreet categories. The University College of Medicine has a combination of disciplinary courses managed by their home departments, and interdisciplinary or integrated courses managed by the Curriculum Committee. The integrated courses include Social and Behavioral Sciences,
Clinical Medicine Skills including the Longitudinal Clinical Curriculum, Neurosciences, and Integrated Problem Based Learning. The Curriculum Committee plays an active role in the overseeing and evaluating all aspects (both disciplinary and interdisciplinary) of the educational program. Significant changes to the educational program (e.g., adding/deleting a course, adding/deleting a graduation requirement) require the authorization of the general faculty.

The ongoing nature of attempted curriculum change and the representation of both disciplinary and interdisciplinary courses provided the primary bases for my selection of the University College of Medicine as the case for the present research. My involvement and experience with the College of Medicine also influenced my selection. Tomasa (1998) effectively articulated three benefits of studying an environment that is familiar to the researcher:

First, prior information about the research site allows the researcher to know if the setting is appropriate for study. Second, access to sensitive information is facilitated because a relationship with the organization has already been established. Thirdly, interviewees may be more willing to share their emotions and thoughts with someone whom they can easily access, if the need for clarification or further discussion arises (Tomasa, 1998, p. 111-112).

Additionally, Lincoln and Guba (1985) argue that the “tacit knowledge” the researcher has of the case helps inform the understanding of the “nuances of the multiple realities” within the organization (p. 40).

Characteristics of the Case

University College of Medicine opened its doors in 1967, graduating its first class in 1971. It is part of a state public university in the southwest. There are two other state universities, but neither has a college of medicine. University College of Medicine has
two campuses, including an ancillary campus in the State Capital city 100 miles north of the main campus. The ancillary campus accommodates only third and fourth year medical students. Applicants who wish to be considered must by US citizens and residents of the state or two other states participating an the Western Interstate Commission for Higher Education (WICHE).

University College of Medicine enrolls approximately 100 new students per year, with the undergraduate medical student population totaling approximately 400. Its faculty includes 493 full time and 934 part time or volunteer clinical faculty, and 112 full time and 20 part time or volunteer basic science faculty. Its operating budget totaled approximately $208,000,000 in fiscal year 2001. Approximately 22% of the budget came from the state, 47% from grants and contracts, 18% from clinical revenue, 11% from designated and restricted funds, and 2% from auxiliaries. Though there are no universal rankings of medical schools, the University College of Medicine ranks 51 out of 123 medical school in terms of research dollars (NIH, 2000).

As previously stated, the educational program at the University College of Medicine consists of two years of basic science education, a year of clinical clerkships, and an elective fourth year. The centralized coordinating unit for the educational program is the Curriculum Committee. The Curriculum Committee’s authority is moderated by the level of decisions they make. Decisions having a major influence on the educational program, such as adding and/or deleting a course or changing the graduation requirements, would need to be sent to the General Faculty for approval. Whether or not a decision is major enough for general faculty approval is up the chair of
the Curriculum Committee, the Associate Dean for Curricular Affairs, and/or the Dean for Academic Affairs.

**Time Frame**

Dexter's study of the University College of Medicine focused on the first few phases of CCAPP and the effect of the reform process on the culture of the University College of Medicine. My study picks up where Dexter's study left off. The present research will include the last two phases of CCAPP: the Appraisal Phase and the Implementation Phase. The Appraisal Task Group, which began its efforts in 1994, was to appraise the extent to which the proposed curricular changes generated in the preceding phase of CCAPP were consistent with the educational philosophy created during the first phase, the available resources, and the needs of the faculty. The Appraisal Task Group also was to generate a final curriculum proposal to be given to the General Faculty for approval. The Implementation Task Group was to develop an implementation plan to be submitted to the General Faculty for approval. These last two phases of CCAPP will undoubtedly contain the data of most value for the present study.

I will use the beginning of the Appraisal Phase of CCAPP, 1994, as the marker for the beginning of my study. Since that time, two new educational grants were awarded to the University College of Medicine: the Cancer Prevention Grant and the Geriatrics Grant. Including in this study attempts at curricular change that had funding attached to them will provide an opportunity to explore the similarities and differences in processes and outcomes between those curricular change efforts that were specifically funded (educational grants) with those that were not (CCAPP). The study will run through June
30, 2002 - the end of the current academic year and the final days of the two education grants.

Methodology

Semi-structured interviews, surveys, and document analysis provide the methods of data collection essential to meeting the goals of this study. I chose these methods of data collection because any one of them, alone, would not have been sufficient. Interview respondents' recollection of events may be flawed (Light, 1979a) and their own perceptions of the experience may distort what they report (Becker and Greer, 1970). Documents provide an accounting of what happened, but alone, may not capture the more subtle aspects of a process. Surveys offer an efficient means for reaching many people. Interviews can supplement the information gained through document analysis or survey, and vice versa. Furthermore, by using all three methods, I improved the quality of my findings through a process called triangulation. Triangulation is a method of validating data obtained from two different sources against each other (Lincoln and Guba, 1985).

Interviews

According to Lincoln and Guba (1985), interviewing can serve many purposes, including gathering here-and-now constructions of events (including feelings and motivations), reconstruction of events, and projection of future events. All three purposes served the collection of data for the present study as I interviewed past and current faculty members and the new leadership. I used a purposive sampling technique to create an initial list of faculty with whom to conduct a semi-structured interview (see below for initial list of interviewees and questions). The list included faculty who were
actively involved in the CCAPP process, Principal Investigators of funded educational grants, and the Dean, Associate Deans and Assistant Deans of the College of Medicine. All of these people were involved with and had influence over the day-to-day implementation of the educational program by their participation on the various educational committees and/or the participation in CCAPP.

All of the subjects interviewed for this study were in a position to play a key role in the attempts to change the University College of Medicine educational program. One of the limitations of this study is that almost all of the interviewees were supportive of the attempts at curricular innovation. The purposive sampling of those actively involved in and supportive of curricular change was intended to provide insight into the lessons learned from those who have attempted change.

The initial number of subjects to be interviewed was 12, however, some subjects were interviewed on more than one topic, and in two to three separate interviews. The total number of initial interviews was 16. By a process known as snowball sampling (Crowson, 1993), each of the initial 12 subjects was asked to recommend others that I should interview to gain a deeper understanding of the factors that influenced curricular change at this institution. Based on these recommendations, four other subjects were added to the interview list. The list of subjects appears below. Those who were added are indicated with asterisks.

I conducted a semi-structured interview with each individual. At a minimum, the questions listed below were asked of each interviewee. Additional questions emerged, as I attempted to make the interviews more conversation-like. I treated each interviewee as
a "conversational-partner," acknowledging their role in shaping the discussion (Rubin and Rubin, 1995, p. 11). I started each interview with a general introductory statement such as: "I'd like to hear your thoughts and ideas about the process of change in the medical education program at this institution."

The questions listed below under each theoretical conceptualization drove the questions asked during each interview.

Lukes/Power:

- Was there open debate? How was the debate resolved?
- Who controlled the agenda? Did a key person/persons shut down the debate? Were some recommended changes left off the agenda?
- What effect did the actions and opinions of those in positional power have on the debate? On the agenda? On the overall process?

It was hard to ask questions that targeted Lukes’ third dimension of power since the respondents were members of the culture that was effected by this dimension. This dimension was used in interpreting the responses, in looking for topics that were missing from the conversation/debate.

Bland et al./Leadership:

- What was the overall effect of the Dean on the CCAPP process?
- What happened to the proposals that the Dean supported?
- What happened to the proposals that the Dean did not support?

Abbott/Professionalism/Jurisdiction:
• What were the arguments for/against proposed changes? Was there evidence of faculty members protecting their jurisdiction?

• How did faculty members and/or faculty groups protect their jurisdiction?

• Did they give up some/all of their allotted time in the curriculum?

• Did they collaborate with faculty members/groups from other departments/professions in an effort to integrate the curriculum?

• How did faculty members/groups respond to external pressures (if any) for change?

Pfeffer & Salancik; Slaughter & Leslie/Resource Dependency; Academic Capitalism:

• Was money allocated for changes to the curriculum?

• Was money allocated for curriculum/education used for curriculum/education?

• What influence did the external financial status of health care have on medical education at this institution?

• How did the internal resource allocation process effect attempts at curricular change?

• How did professionalism/jurisdiction play out in light of resource allocation decisions/diminishing resources?

• Where did faculty/departments look for funding?

• How did faculty/departments prioritize their tripartite mission?

The following interview schedule was conducted.

I. Principal Players In The Comprehensive Curriculum Analysis And Planning Project (CCAPP)
Interviewees:

M. Jones, MD  
Former VP for HSC and Dean for COM

*R. Connolly, PhD  
Staff/Resource Person, CCAPP

A. Murray, MD  
Former Associate Dean

L. Michaels, PhD  
Former Assistant Dean

J. Jefferson, MD, PhD  
Former Chairman, CCAPP  
Former Co-Chair, Years III/IV Continuum Subcommittee, CCAPP

B. Ross, MD  
Associate Dean, State Capital Campus  
Former Co-Chair, Interdisciplinary Seminars Subcommittee, CCAPP

M. Mann, MD  
Former Chair, Problem-Based Learning Subcommittee, CCAPP

J. Garcia, MD  
Former Chair, Longitudinal Clinical Curriculum Subcommittee, CCAPP

T. Van Horn, MD  
Former Co-Chair, Interdisciplinary Seminars Subcommittee, CCAPP

N. Case, PhD  
Former Chair, Basic Science Planning Group, CCAPP

Questions:

1. What was your experience with the Comprehensive Curricular Analysis and Planning Project (CCAPP)?

2. Following is a list of recommended curricular enhancements proposed through CCAPP. The enhancements with the asterisks indicate those enhancements that were implemented. Those enhancements without asterisks were not implemented.

   *Problem-Based Learning          *Longitudinal Clinical Curriculum
   Organ-based Basic Science Years    *Orientation to the 3rd Year
*Interdisciplinary Seminars Years 3 & 4 Continuum*

a. What were your thoughts and feelings at the time about each of these recommended enhancements?

b. How, if at all, have these thoughts about feelings changed over time?

3. Did you observe open debate during the CCAPP?

4. Generally speaking, how were these debates resolved?

5. Who do you feel controlled the CCAPP agenda?

6. How, if at all, did faculty members protect their turf/field/specialty/time in the curriculum?

7. How do you think faculty members were defining their “turf” (if clarification needed, offer as examples MD vs PhD or basic vs clinical science)?

8. Was greater emphasis put on the quality of the educational program or on protecting one’s turf.

9. Of which CCAPP recommendations were you most supportive? Why?

10. Of which CCAPP recommendations were you least supportive? Why?

11. What effect do you (in your position of institutional power) believe you had on the CCAPP?

12. How did the process of resource allocation and/or the availability of resources affect the CCAPP participants’ willingness to request resources?

13. What is your opinion about how the availability/lack of availability of resources effected the outcomes of the curricular enhancements listed above?

II. Organizational Leaders In Current Academic And Curricular Issues

Interviewee:

W. Quinn, MD Associate Dean
L. Michaels, PhD

Former Assistant Dean

Questions:

1. What, if any, are your ideas for changing the educational program leading to the MD degree?

2. What are your thoughts about how these changes might be implemented?

3. What effect do you believe you (in your position of institutional power) could have on implementing changes?

4. What are your feelings about how the process of resource allocation in this institution supports or hinders the educational program?

5. What are your feelings about how the process of resource allocation in this institution supports or inhibits curricular change?

6. Do you know of any curricular changes that have been implemented but not funded? What are your thoughts about how this might have happened?

7. Do you know of any curricular changes that have been funded but not implemented? What are your thoughts about how this might have happened?

III. Principal Investigators Of Funded Educational Grants

Interviewees:

L. Michaels, PhD Investigator, Geriatrics Grant

M. Brown, MD Investigator, Cancer Prevention Grant

*B. Thompson, MPH Coordinator, Cancer Prevention Grant

*M. Hartman, MA Coordinator, Clinical Medicine Skills Course

*N. Richards Coordinator, Family and Community Medicine Clerkship
Questions:

1. What changes to the educational program did you propose?

2. Were they implemented?

3. What are your views about why your changes were/were not implemented?

4. How, if at all, did faculty members protect their turf/field/specialty/time in the curriculum?

5. How do you think faculty members were defining their “turf” (if clarification needed, offer as examples MD vs PhD or basic vs clinical science)?

6. What will/did happen to the curricular changes when the funding from the grant expires?

IV. FINANCIAL PERSPECTIVE

Interviewee:

R. Tierney  Head, Finance Committee
L. Michaels, PhD  Former Assistant Dean
W. Quinn, MD  Associate Dean

Questions:

1. How do you feel the College of Medicine’s (COM) resource allocation process supports the educational mission of the College?

2. How do you feel the COM’s resource allocation process supports and/or inhibits curricular change in the COM?

3. What do you believe was the effect of the resource allocation process on CCAPP?

4. How do you believe money allocated for education is used by the departments?

5. What do you believe is the influence of the external financial status of health care on medical education at this institution?

6. How do you believe faculty/departments look for/obtain funding?
7. What is your view on how faculty/departments prioritize their tripartite mission?

8. Do you know of any curricular changes that have been implemented but not funded? What are your thoughts about how this might have happened?

9. Do you know of any curricular changes that have been funded but not implemented? What are your thoughts about how this might have happened?

Documents

Lincoln and Guba (1985) describe documents as a rich and stable source of information, contextually relevant and grounded in the contexts they represent. In this study, I analyzed the documents that officially represented the processes and decisions around curricular change. These documents included minutes from the various educational committees (Curriculum Committee, Basic Science Educators Directors, Clerkship Directors, CCAPP Steering Committee), minutes from General Faculty meetings where proposed curricular changes must ultimately be approved, proposals from funded educational grants, and departmental allocation sheets (education dollars are allocated departmentally).

The selection of these documents was driven by the theoretical underpinnings of this study.

Lukes/Power:

- In the official record (minutes) of meetings about the educational program, to whom were decisions about changes to the educational program attributed? What was this person’s role in the organization/institution?
- Was there evidence of debate on the issues?
• How did the minutes correspond with the information obtained through the interviews? If discrepancies existed, what might have been the basis of the discrepancies?

Bland et al./Leadership:
• What was the Dean’s position on CCAPP?
• How did the Dean’s support or lack of support affect the process and outcomes of CCAPP?
• Were the Dean’s preferences characterized in the documents?
• What was the effect of the statement of the Dean’s preferences?

Abbott/Professionalism/Jurisdiction:
• Was there evidence of debate/conflict between faculty groups? If so, how were the issues resolved?
• How did groups protect their jurisdiction?
• What rationales were employed by the different groups during the debate?
• Which group tended to “win” and which group tended to “lose”?
• How did the minutes correspond with the information obtained through the interviews? If discrepancies existed, what might have been the basis of the discrepancies?

Pfeffer & Salancik; Slaughter & Leslie/Resource Dependency; Academic Capitalism:
• Did departmental budgets reflect the educational mission?
• How were issues of finance addressed in the official record (minutes) of meetings about the educational program?
• Were financial issues discussed/presented in conjunction with educational change issues?

Following is a list of the records that were analyzed, again based in a purposive sampling technique, as these documents represented the institution’s committees whose primary focus was undergraduate medical education:

1. General Faculty meeting minutes – the general faculty has the final vote about curricular changes.

• Lukes’ power and Abbott’s professional jurisdiction perspectives: Did recommendations put forth by the Curriculum Committee appear on the General Faculty meeting agenda? How were the recommendations discussed in the General Faculty meetings and what was the final outcome? Who/what effected the discussion and the final outcome? What was the impact of people in positional power? Was there evidence of protecting one’s jurisdiction?

• Bland et al.’s leadership: What, if anything, did the Dean say about each recommendation? Did the General Faculty vote go in the direction of the Dean’s stated preference?

• Pfeffer and Salancik’s resource dependence and Slaughter and Leslie’s academic capitalism perspectives: Were issues of finance discussed in conjunction with the proposed changes? How did financial issues effect the setting of priorities? How did financial issues impact the outcome?

2. Curriculum Committee meeting minutes – the Curriculum Committee is the conduit between the various educational committees and the general faculty.
• Lukes' power and Abbott's professional jurisdiction perspectives: Did recommendations put forth by the Basic Science Education Directors meetings, Clerkship Directors meetings, and CCAPP Committee meetings appear on the Curriculum Committee agendas? How were the recommendations discussed in the Curriculum Committee meetings and what was the final outcome? Was there evidence that Curriculum Committee members put aside their jurisdictional issues for the good of the overall educational program or vice versa? What influence did committee members with positional power (Dean for Academic Affairs, Associate Dean for Curricular Affairs, Curriculum Committee chairperson) have on the agenda, the process of the meeting, and the outcome?

• Pfeffer and Salancik's resource dependence and Slaughter and Leslie's academic capitalism perspectives: Were issues of finance discussed in conjunction with the proposed changes? How did financial issues effect the setting of priorities? How did financial issues impact the outcome?

3. Basic Science Education Directors meeting minutes – educational issues related to the first two years of the educational program are discussed. Changes to the first two years would first be discussed by this group. If the changes were significant (e.g., adding or deleting a course, significantly changing the number of hours allotted to each course), approval would be required by the Curriculum Committee and the General Faculty.
• Lukes' power and Abbott's professional jurisdiction perspectives: Who tended to put forth proposals for change? What, if any, was the degree of conflict between faculty from individual departments about the proposed change and how was it resolved? What was the source of conflict (e.g., taking hours from one course to give to another)? What influence did committee members with positional power (Dean for Academic Affairs, Associate Dean for Curricular Affairs) have on the agenda, the process of the meeting, and the outcome? Did recommended changes requiring Curriculum Committee and/or General Faculty authorization get passed on to these higher-level committees? Did they appear on their agendas?

• Pfeffer and Salancik's resource dependence and Slaughter and Leslie's academic capitalism perspectives: Were issues of finance discussed in conjunction with the proposed changes? How did financial issues effect the setting of priorities? How did financial issues impact the outcome?

4. Clerkship Directors meeting minutes - educational issues related to the last two years of the educational program are discussed. Changes to the last two years would first be discussed by this group. If the changes were significant (e.g., reducing the number of hours third year students spend in clinical settings), approval would be required by the Curriculum Committee and the General Faculty.

• Lukes' power and Abbott's professional jurisdiction perspectives: Who tended to put forth proposals for change? What, if any, was the degree of
conflict between faculty from individual departments about the proposed change and how is it resolved? What was the source of conflict (e.g., taking hours from one course to give to another)? What influence did committee members with positional power (Dean for Academic Affairs, Associate Dean for Curricular Affairs, Curriculum Committee chairperson) have on the agenda, the process of the meeting, and the outcome? Did recommended changes requiring Curriculum Committee and/or General Faculty authorization get passed on to these higher-level committees? Did they appear on their agendas?

- Pfeffer and Salancik’s resource dependence and Slaughter and Leslie’s academic capitalism perspectives: Were issues of finance discussed in conjunction with the proposed changes? How did financial issues effect the setting of priorities? How did financial issues impact the outcome?

5. CCAPP Committee meeting minutes and reports – The CCAPP process resulted in recommended changes to the education program that were presented to the Curriculum Committee and then the General Faculty.

- Lukes’ power and Abbott’s professionalism: Did changes recommended by CCAPP appear on the Curriculum Committee and General Faculty agendas? If not, what stopped the progression? What were the extent, nature and source of conflict in discussing the recommendations? What was the outcome? Who/what influenced the outcome?
• Bland et al.’s leadership: Did the Dean attend CCAPP meetings? If so, what, if anything, did the Dean say about each recommendation? Did CCAPP committee and subcommittee chairs meet with the Dean? If so, what direction, if any, did the Dean provide? Was there evidence that the committees and subcommittees moved in the direction provided by the Dean?

• Pfeffer and Salancik’s resource dependence and Slaughter and Leslie’s academic capitalism perspectives: Were issues of finance discussed in conjunction with the proposed changes? How did financial issues effect the setting of priorities? How did financial issues impact the outcome?

6. Funded educational grant proposals – proposals to change the educational program that were funded by external agencies. I was interested in these documents to explore the extent of the proposed changes to the curriculum.

• Lukes’ power and Abbott’s professional: Did the recommendations proposed by the grant get implemented? Was faculty buy-in obtained before, during, and/or after the grant was funded?

• Pfeffer and Salancik’s resource dependence and Slaughter and Leslie’s academic capitalism perspectives: How, if at all, was funding attached to the proposed changes? How did the principal investigators propose to sustain the curricular changes after the funding has expired.

7. Departmental allocation sheets – funding was allocated departmentally. I wanted to examine departmental budgets for the entire period of the study (July 1, 1994 through June 30, 2002).
Pfeffer and Salancik's resource dependence and Slaughter and Leslie's academic capitalism perspectives: How did the educational mission appear on departmental budgets? Were there lines for CCAPP or other educational initiatives? Did money from the funded educational grants appear on departmental budgets?

Surveys

I wanted to determine the extent to which the curricular enhancements made possible by the two educational grants were implemented and sustained beyond the funding periods of the grants. I employed the use of a survey to query each course and clerkship director. The four questions included on the survey follow:

1. Have you ever used the materials provided and/or incorporated the enhancements recommended to your course/clerkship by the NCI Cancer Prevention Grant?
2. Do you still use the cancer prevention materials and/or incorporate the enhancements?
3. Have you ever used the materials provided and/or incorporated the enhancements recommended to your course/clerkship by the Hartford Foundation/AAMC Grant?
4. Do you still use the geriatrics materials and/or incorporate the enhancements?

The theoretical constructs of Abbott's jurisdiction (1988) and Pfeffer and Salancik's resource dependence (1978) drove these questions.

Gaining Entrée and Access/My Relationship to the Data

Taylor and Bogdan (1984) point to the importance of gaining access to the desired settings (and documentation), and establishing trust with the members of the settings. I
interacted regularly with several of the faculty whom I initially identified to be interviewed. I also played a role (described below) on several of the committees whose documents I analyzed. Consequently, my access was already negotiated. Furthermore, I believe my trustworthiness was established over the past two years on the basis of the work I produced for the college. My experience with the college and its faculty increased my tacit knowledge and informed my research questions, which were substantive in nature, relating to specific issues in a specific setting (Taylor and Bogdan, 1984).

Initially, I had considered incorporating the method of participant observation into my case study, because of my involvement with some of the educational committees. I decided against this methodology because of the responsibilities I have within these committees. While attending the meetings, my first priority ranged from conducting the meeting to accurately recording the proceedings, rather than taking field notes. Instead of formally conducting participant observations, then, I used my familiarity and involvement with these committees to enhance my tacit knowledge and inform the emergence of my propositions.

In the Curriculum Committee meetings, I was present as a “resource” person. My contributions to the discourse occurred primarily in response to questions directed to me. Occasionally, I was listed on the agenda to report on the activities and status of Third Year Orientation and/or Interdisciplinary Seminars (two educational activities for which I was responsible). I identified items that needed to be included on the agendas for the Basic Science Education Directors and the Clerkship Directors meetings.
I played a somewhat more active role in the Basic Science Education Directors and Clerkship Directors meetings in that I “staffed” these meetings. My duties included scheduling the meetings, soliciting agenda items from the directors, compiling the agenda, taking and distributing the minutes, and being the liaison between the two sets of directors, the Curriculum Committee, and the Office of Curricular Affairs. Given that many of my responsibilities in the Office of Curricular Affairs were related to the third year of the medical education program, I more actively participated in the Clerkship Directors meetings.

My role in the Hartford geriatrics grant meetings was similar to that of the Basic Science Education Directors and Clerkship Directors meetings; however, I was more actively involved in conducting these meetings. I also played a key role in the administration of the Hartford Grant as I worked with the Principal Investigators to implement the enhancements to the educational program proposed in the Grant. I did not have a role in the cancer prevention grant meetings, nor did I attend them.

Through my various roles on each of the educational committees, I formed relationships with many of the faculty whom I initially identified to interview. I believe they made themselves available for an interview based on their working relationship with me and their understanding of the goals of my study. The Associate Dean for Curricular Affairs also offered to helped me secure interviews with the past Dean for Academic Affairs.

Because of my position in the Office of Curricular Affairs, I had access to the meeting minutes that I listed for analysis. Gaining access to the departmental budgets
was facilitated by the endorsement of the Associate Dean for Curricular Affairs, and based on my relationship with the Vice President for Finance for the Health Sciences Center. I did not anticipate problems in being allowed access to this financial information. In fact, the financial data that I requested to see was public knowledge and posted it the library, though the Vice President for Finance shared her copies of the materials with me.

Data Management and Analysis

The analysis of the documents and interview transcripts that comprised the data set was akin to “bottom up” narrative analysis. In contrast to the more quantitative content analysis approach, narrative analysis allows for documents to be read as stories wherein “the researcher analyzes the narrative, temporal, and dramatic structures of the text” (Denzin and Lincoln, 1998, p. 43). Narrative analysis is “rather loosely formulated, almost intuitive, using terms defined by the analyst…themes, principal metaphors, definitions of narrative, defining structures of stories, and conclusions are often…contextually bound” (Manning and Cullum-Swan, 1994). In a bottom up version of narrative analysis, context-dependent units are used to produce an infrastructure that explains the effect. Bottom up narratives often rely on personal interview and documents, and an attempt to translate these materials into parts of a coherent argument (Manning and Cullum-Swan, 1994).

Bottom up narratives are contrasted to top down approaches. In a top down narrative, the investigator begins with a set of rules and principles and seeks to exhaust the meaning of a text using the rules and principles. According to Manning and Cullum-
Swan (1994), "what is tested is the preconceived closed and logically constrained binary model (events either happened or they did not) of the researcher" (p. 465).

Based on the concepts (described above) I had driving this research a priori, I developed a set propositions about what facilitates and inhibits curricular change:

- **Proposition 1** (based on Lukes' [1978] conceptualization of power): Consistent with Lukes’ second dimension of power, the Dean would control the agenda. Consistent with Lukes’ first dimension of power, there would be debate among the faculty and significant resistance to the proposed curricular reforms. In response to faculty opposition, the Dean would take some key proposals off the agenda.

- **Proposition 2** (based on Bland et al.'s [2000] characterization of leadership): The extent of change that occurred would be a function of the extent of the Dean’s commitment to the proposed changes.

- **Proposition 3** (based on Abbott’s [1988] concept of professionalization and jurisdiction): In order to maintain jurisdiction over “their” part of the curriculum, faculty members would resist efforts to integrate the curriculum and centralize the authority over the curriculum.

- **Proposition 4** (based on Pfeffer and Salancik’s [1978] concept of resource dependency and on Slaughter and Leslie’s [1997] concept of academic capitalism): Prioritizing the financial status of the institution over curricular change, the Dean would pressure faculty to increase their income-generating
activities, resulting in the faculty members’ increased concern about financial viability and decreased concern with educational innovation.

The data were reviewed and analyzed for evidence of activity supporting or refuting the above propositions. I used deductive analysis to confirm or falsify my theoretical constructs and working propositions (Goetz and Lecompte, 1981 in Lincoln and Guba, 1985). I used an iterative and cyclical process (Fetterman, 1989 in Koff, 1989) in my analysis, going back and forth between the data and the conceptual frames that were shaping that for which I was looking. In this way, I allowed for embedded information and themes to be uncovered and made explicit.

Specifically, documents and transcripts of interviews were read into a software program, Ethnograph, designed to facilitate the management and analysis of qualitative data. Next, I read the entire data set, consisting of over a thousand pages of documents and interview transcripts. On second reading, data were reviewed for occurrences of discussion for and/or against reorganization of existing curricular content, additions of curricular content, deletions of curricular content, introduction of innovative teaching methods (I am defining “innovative” as anything that is different from the current method), and restructuring of the four years of education. I used the theoretical constructs of this study to create codes and label the data in an effort to understand what facilitated and/or inhibited change in the educational program. On the third reading of the data, I used Ethnograph to label and sort the text with the data codes representing my theoretical constructs and propositions. Data were printed according to code. Reading of the newly formatted printed data revealed repeated occurrences of themes for which
codes were not originally created. These occurrences were labeled as emerging themes. They were highlighted in the results chapters (Chapters 4-6) and more fully discussed in discussion chapter (Chapter 7) of this study. Some of the emerging themes were not adequately addressed in the literature review chapter of this study, nor were expected based on the a priori propositions, and required further consultation of the educational literature.

For the financial data, I used a purposive sampling technique to examine the budgets of the departments involved in undergraduate medical education. I chose the departments in order to obtain a comprehensive view of the budgeting process as it relates to the educational program. These are the only units that could possibly receive funding for educating medical students in their first four years of medical school. They are listed below:

<table>
<thead>
<tr>
<th>Basic Science</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry</td>
<td>Family and Community Medicine</td>
</tr>
<tr>
<td>Gross Anatomy</td>
<td>Medicine</td>
</tr>
<tr>
<td>Histology &amp; Cell Biology</td>
<td>Obstetrics and Gynecology</td>
</tr>
<tr>
<td>Integrated Problem-Based Learning</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Longitudinal Clinical Curriculum</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>Medical Microbiology</td>
<td>Surgery</td>
</tr>
<tr>
<td>Medical &amp; Molecular Genetics</td>
<td>Administrative</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>Curricular Affairs</td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
</tr>
</tbody>
</table>
Basic Science – Continued

Pharmacology

Physiology

Preparation for Clinical Medicine

Social & Behavioral Science

I analyzed the departmental budgets to determine the format of allocations. I investigated the following questions: Were there lines reflecting all three elements of the tripartite mission of the COM - research, clinical, and education? What was the proportion of the allocation of these three elements to the overall departmental budget? How did the allocation for education compare to those for research and clinical services? Based on the data, I formulated assumptions about the importance/priority of education to the department based on the resource dependence and academic capitalism concepts included in my theoretical framework. When allocations were not specified for education on departmental budgets, or if the education allocations paled in comparison to those for research and clinical services, it would follow that time put toward educational reform will be minimal.

Other financially-related questions I investigated included: Where did the CCAPP recommendations that were implemented appear in the budgets? What was the nature of the budget for Curricular Affairs? Were there lines for each of the programs for which this office is responsible?

The survey data were used only to determine the extent to which course and clerkship directors used and continue to use the curricular enhancements recommended
or made available through the funded educational grants. Essentially, the data gleaned from the surveys were used to triangulate the Principal Investigators’ perceptions of the overall effect of their grants on the educational program in the College of Medicine.

The findings of the data analysis are presented in the next three chapters and further discussed in the following and final chapter.
CHAPTER 4
APPROVED CURRICULAR ENHANCEMENTS

Introduction

The discussion of findings will be divided into three chapters. The first data chapter will address proposed curricular enhancements that were approved and implemented, at least to some extent. It will include an examination of each of the proposals for curricular change through the lenses of power (Lukes, 1978), professionalism/jurisdiction (Abbott, 1988), and resource needs via resource dependence (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997). The second data chapter will address proposals that were not approved and will likewise consider them in terms of the theoretical frames used in this study. The third data chapter will include a presentation of the broader, more global issues affecting the College during the period of this study.

A note about resource dependence bears consideration. The Comprehensive Curriculum Analysis and Planning Project (CCAPP) Steering Committee made the decision at the beginning of the CCAPP process that they would not worry about resources until after faculty approval for curricular changes had been obtained. This was based on the Dean’s directive, “Don’t let issues of resources get in the way of the decision making. I’ll find the resources” (Jefferson, Q13). Of course, it is reasonable to assume that given the difficult financial situation of the college, faculty were either skeptical about this commitment of resources, or concerned that such monies would be drawn from other activities that they valued more than the proposed changes.
Consequently, there was evidence of issues that could be understood through the lens of resource dependence. Resource dependency was perhaps most useful in understanding the broader global issues affecting the College. Thus, it will be more fully described in Chapter 6.

As discussed in Chapter 3, several of the people I interviewed for this study held dean-level positions in the College of Medicine. To facilitate my presentation of the findings and to protect the anonymity of these individuals, I have classified them into three levels: the Dean, who has ultimate authority for the College of Medicine, Associate Deans, who are generally second in command to the Dean, and Assistant Deans. These titles may not match their exact classification in the University system, but they do reflect each dean’s position in the hierarchy of the organizational structure.

The Comprehensive Curriculum Analysis and Planning Project model spanned six years. In addition to the Steering Committee that oversaw the entire process, CCAPP involved five subcommittees, each responsible for the five phases of CCAPP. In sequential order, they were the Philosophy Group that issued the Statement of Ideals for Medical Education, the Analysis Group that compared the existing curriculum to the Statement of Ideals and issued a Report on the State of the Curriculum, the Proposal Group that sought and drafted curriculum proposals that would achieve the objectives outlined in the Statement of Ideals, the Appraisal Group that assessed and compiled the proposals and issued a final proposal, and the Implementation Group that designed and carried out plans for implementing the curricular changes. General Faculty approval was required at the completion of each phase of CCAPP. All members of the General Faculty
were invited and encouraged to participate in the Groups. Participation was voluntary and not financially compensated. Generally speaking, groups were chaired and composed of basic and clinical scientists with an interest in undergraduate medical education. The resulting proposals, then, were generated by the faculty and required the acceptance of their peers and the approval of the General Faculty.

During the Appraisal phase, several subcommittees were formed to focus on different aspects of the emerging educational program: the Problem Based Learning (PBL) Subcommittee, the Basic Sciences Planning Group, the Longitudinal Clinical Curriculum (LCC) Subcommittee, and the Years III/IV Continuum Subcommittee. Each of these subcommittees was to generate final reports to be presented to the Curriculum Committee and the General Faculty for approval.

The data indicated that none of the CCAPP proposals were implemented to the extent proposed. Several of the proposals were implemented to a lesser extent or in a different form than proposed. These included problem-based learning (PBL), longitudinal clinical curriculum (LCC), 3rd Year Orientation, and Interdisciplinary Seminars (the latter two were products of the Years III/IV Continuum Subcommittee). Following is a discussion of each of the proposals, including the purported rationale for the proposal and the process of its (limited) implementation. Discussion around each proposal will include a focus on the theoretical constructs underlying this study: power, professionalism/jurisdiction, leadership, and resource dependence/academic capitalism.
Problem-Based Learning

Problem-based learning was proposed as a means to develop students' critical thinking and life-long learning skills, skills advocated in the *Statement of Ideals for Medical Education*, which was approved by the General Faculty in the first stage of CCAPP. The Analysis Group of CCAPP conducted a comparison of the existing curriculum to the *Statement of Ideals* and identified that critical thinking and life-long learning skills were not being sufficiently met in the existing curriculum. In general terms, the goal of the proposed PBL was,

The ability to integrate information, actively seek new knowledge important to solving a problem and to use that knowledge to construct solutions. PBL is a small group activity, student-centered with interactive learning guided by a faculty facilitator. The faculty facilitator does not serve as the principal source for answers and information (General Faculty meeting minutes, March 18, 1997).

Small group sessions had already been built into the existing curriculum and could be used for PBL.

The CCAPP representatives at the March 18, 1997 General Faculty meeting in which PBL was proposed for a vote appeared to sense that there would be jurisdictional issues among the faculty members present. In his introduction of the PBL proposal to the General Faculty, the chairman of CCAPP put forth that the proposal might appear to be a directive. He then went on to say,

It's not. It is really just an advocacy for a model of teaching and learning. It is not meant to require departments to use this single approach. That, of course, is up to the departments, their course directors and [department] head (General Faculty meeting minutes, March 18, 1997).

The chairman of the PBL subcommittee offered further reassurance:
The [PBL] Planning Group strongly recommends that the role of PBL be expanded but this report does not mandate the adoption of PBL, it is a recommendation only... The Planning Group recognizes that individual courses have specific needs and therefore no specific form was mandated for each course. They also believe the course directors would better determine where in the curriculum time for PBL would be found (General Faculty meeting minutes, March 18, 1997).

There was, in fact, evidence of jurisdictional issues. According to an Assistant Dean, subcommittee meetings were filled with debate that was territorial in nature (Michaels, Q3). Faculty members at the March 18, 1997 General Faculty Meeting were resistant to the specific nature of the proposal. They commented that the tone of the document suggested that it was “carved in stone” and, although both presenters stated these were not mandated recommendations, very specific recommendations were included in the report. I performed a content analysis on the PBL proposal document in order to analyze its tone. Specifically, I looked at the verb tenses in the document to determine if the document was, indeed, directive in nature. The verb tenses fell into three general categories that fell loosely along a continuum – those that sounded directive, such as “will” and “must” (“Since PBL sessions will replace some existing small group sessions, it is anticipated that the number of additional faculty needed to introduce PBL will be small”); those that were suggestive by insinuating that there is a better way than what is currently being done, such as “should” (“PBL should be incorporated into existing basic science courses”); and those were consistent with proposing something or allowing for the prospect or possibility of something happening, such as “could” or “may” (“Small group sessions currently located in existing courses could be used to place PBL within the curriculum”). There were 27 occurrences of verb tenses sounding
directive in nature, 13 occurrences of verbs insinuating a better way, and 26 occurrences of verbs that would be consistent with proposing something new. Clearly, the tone of the document was weighted less in the language consistent with making a proposal.

Additionally, there were a number of examples of text that directly challenged the course directors’ jurisdiction. The following example offers the best illustration, “When course reviews are performed by the Curriculum Committee, the effectiveness of that course’s use of PBL will be evaluated.”

In addition to the problematic tone of the document, deeper issues also existed. One interviewee reported, “There was an unwillingness of disciplines to give up their identity” (Jefferson, Q2). Yet this was not the concern that was vocalized during the General Faculty meeting. Instead, faculty focused their objections on the tone of the PBL document rather than bringing to the fore the identity issue suggested by observers of the process.

Other evidence of jurisdiction included the response of a faculty member to the statement in the PBL proposal that the College curriculum was lacking in life-long learning and problem-solving skills. “This is categorically erroneous and it is unfortunate that in documents coming out that the phrase is still used” (General Faculty meeting minutes, March 18, 1997). This response illustrated a concern that what the faculty member taught was not adequate. The criticism of life-long learning and problem-solving skills may have affected the member’s openness to the proposal, and to the data relating to the effectiveness of PBL.
Faculty concerns about jurisdictional issues were articulated in a way that created obstacles to the implementation of the PBL proposal. The faculty simply voted it down.

As previously indicated, the stated concern with the PBL proposal was its tone. The PBL Subcommittee Chairman said that he had not anticipated that his report to the CCAPP Steering Committee regarding PBL would have gone as is to the General Faculty meeting. He thought the report was a working document that would have gone through a couple of iterations before its inclusion in the materials sent to the General Faculty by the Steering Committee. He said he learned an important lesson: know who your audience is or will be. Something as simple as the tone of the proposal, apart from substance, provoked a negative stance among the General Faculty, and may have contributed to the proposal's eventual defeat.

Additional data support this notion. The Dean of the College of Medicine said in the March 18, 1997 General Faculty meeting that he thought the problem was that the faculty did not want to vote for the entire [PBL] report. Consequently, he recommended a substitute motion for consideration:

We received the report and the faculty encourages all departments to explore the principles of problem-based learning to see how they might be applicable in their particular course. [I] believe that most faculty members agree with that, there is a problem in accepting every word of the report (General Faculty Meeting minutes, March 18, 1997).

This motion was approved.

In the March 18, 1997 General Faculty meeting minutes there was much reported debate about PBL (some reported above), which is evidence of the first dimension of power (Lukes, 1978). However, in his positional role of leadership, the Dean supported
the jurisdictional stance taken by the General Faculty. He chose not to challenge the faculty in their resistance by reporting that the literature on PBL looked promising or by indicating that he wanted the College to give it a try. Instead, he offered a compromise – one that supported the continued authority of the individual departments to make educational policy.

Although they were not specifically stated in the General Faculty meeting, the Dean held some strong views about PBL and other teaching methodologies. In discussing PBL with me, he labeled PBL as the most controversial of all the CCAPP recommendations. He went on to say that it is more efficient and effective to teach students via lecture – a method of education that he did not see as necessarily bad. His belief in the efficiency and effectiveness of lecture-based instruction may have been a result of the third dimension of power. Lecture/didactic instruction was the primary method of instruction since the formalization of medical schools in the late 1900s, and it continues today. His belief might also have stemmed from the cost efficiency of the lecture method.

In his interview, the Dean stated that if “there was nothing else to do,” then PBL could be done, but he did not believe that was likely to happen. He supported the notion of combining both lecture and PBL, and that is, in fact, what eventually happened. Consistent with Lukes (1978), the second dimension of power was at work. The Dean stated his preference, effectively shifting the agenda, and the final outcome paralleled this shift. A smaller version of the PBL proposal was implemented. The Integrated Problem-
Based Learning course (iPBL) was implemented in the second semester, instead of being integrated throughout in all four semesters of the first two years of the curriculum.

Interestingly, two General Faculty meetings later, in September 16, 1997, the Dean announced that,

Facilitators are needed for problem-based learning in the first year of medical school. Basic science faculty and clinical science faculty are encouraged to become facilitators; one does not need to be an expert in basic sciences to be a facilitator. The College is rapidly moving toward more problem-based learning.

In the eyes of the reformers, this phrase, alone, if said at the meeting where PBL was being voted on, might have had an influence on the ultimate outcome of the faculty vote.

There were multiple examples in the data of educational leaders saying that the Dean has a great deal of power in influencing faculty. One interviewee commented,

The Dean has considerable authority. If the faculty think the Dean thinks it (proposed change) is important, that will have an influence on faculty attitude... The Dean needs to be seen as interested in the change (Quinn, Q16).

Another stated,

[The Dean] really had an influence in the end. Faculty members are independent thinkers, but when the Dean gives an opinion, people fall into place. For PBL, the Dean could have said, 'I know there is disagreement, and this is how we are going to do it.' People would have fallen into place (Mann, Q13).

The third dimension of power may have been in effect as well, and interacting with the theoretical construct of jurisdiction. The departmentalization of the curriculum is so much a part of the fabric of this particular medical school that the majority of the General Faculty could not see how their identities could be maintained in an integrated, problem-based, student directed education. They did not identify or discuss this issue at the General Faculty meeting.
Issues of resources needed for PBL were evidenced in the data. The General Faculty vocalized a concern about the resources necessary to implement the proposed PBL. The CCAPP chairman reassured the faculty that they did not need to address resource issues at this time. If the faculty approved curricular changes, the Dean had indicated he would make funding available. However, this appears contrary to the Dean’s statement to me that “if there was nothing else to do” PBL could be done. This may have been an indication of his concern around the time and resources that would have been required to implement PBL, especially in tight budgetary times.

In fact, resources did play out as an issue as the PBL proposal became iPBL (Integrated Problem Based Learning) – a scaled down version of the original proposal. One of the challenges faced by those who implemented the iPBL was a lack of adequate resources. The data indicated that the problem for this initiative was resources for coordination. According to one interviewee, ”For initiatives to really take off, you’d have to compensate people for their additional efforts” (Case, Q12). Another interviewee even believed that the PBL proposal would have been more palatable because it would have given departments an excuse to ask for more money (Mann, Q13). But the data do not indicate this was the case. In spite of the lack of resources, a faculty member from the Biochemistry department took on the challenge of iPBL and made it happen (Case, Q12). As a result of his initial efforts, iPBL became institutionalized into the curriculum and continues today. One interviewee pointed out “[Some] People devote time and effort even without money – these are dedicated people” (Case, Q13). The faculty member from Biochemistry resolved the biggest challenge facing iPBL at the time – money to pay
for a coordinator – by doing the coordination himself for free. These data revealed the emergence of a new theme, one that is separate from the theoretical constructs underlying this study: the effect of a single individual’s efforts and dedication in the implementation of change. This theme will be highlighted as it reappears throughout the discussion of the data.

Longitudinal Clinical Curriculum

Another major curriculum change proposed by CCAPP was the Longitudinal Clinical Curriculum (LCC). The Longitudinal Clinical Curriculum was designed to expose students to clinical medicine during their first two years of medical education (the basic science years). LCC was intended to give students concrete grounding in practice and to provide clinical models in which basic science education could be rationalized. The goals of the LCC were:

To provide students in years I and II with regular opportunities to apply their learning within the context of clinical medicine, to provide opportunities to learn and reinforce the basic science principles within a clinical setting within the medical center or with community based physicians, and to provide the students early on with the concept of continuity of care (General Faculty Meeting minutes, March 18, 1997).

Jurisdictional issues about LCC were evidenced in the data though not between the basic science educators and the clinical science educators as might have been expected from the perspective of Abbott’s jurisdiction theory. There was no evidence in the data of a clinical science faculty group lobbying in support of the LCC. Perhaps this was because the clinical faculty felt the chairman of the LCC subcommittee, himself a clinician, would adequately represent their viewpoint. Or, perhaps it was because the majority of clinical sciences faculty were too busy trying to increase their patient load
(clinical revenues) to be involved in curricular issues. Nonetheless, the jurisdictional debates evidenced in the data in the initial stages of LCC occurred between the basic science faculty who initially opposed the LCC proposal, and the CCAPP subcommittee who supported it. Basic scientists considered LCC to be “fluff,” believing that what the students really needed at that point in their education (first two years) was to build a basic science knowledge base (Michaels, Q4). Strategies were negotiated to ease the jurisdictional concerns expressed by the basic science faculty. Specifically, students were required to take a case from their LCC experience and write a paper to account for the basic science principles they were learning. Basic scientists were to grade the papers.

The chairman of the LCC subcommittee was active in addressing the basic scientists’ concerns, primarily jurisdictional issues, about the LCC proposal. He reported,

I learned a lot about how change takes place – logistics, the politics... I learned change needs to be negotiated. I learned how to negotiate. Basic science faculty and clinical science faculty – they have their turf to worry about. People didn’t want to give away time. It was difficult to carve out time because the curriculum is so full. I’d have to smooth feathers if I said the wrong thing. I really tried emphasizing the point of what we were recommending to get people to go along with the proposed change. It is exciting and fun to reconstruct a curriculum (Garcia, Q1).

The subcommittee chairman’s strategy of one-on-one meetings with the basic science educators to understand their “turf” issues and negotiate around their concerns appeared to be effective. His willingness to recognize jurisdictional boundaries (time in the curriculum), negotiate new boundaries, and acknowledge when he may have overstepped the new boundaries proved effective in winning support for the proposal. More importantly, however, may have been his strategy to describe what was good about
LCC, instead of what was ineffective about two years of solid classroom-based basic science instruction. Furthermore, he was able to speak about the benefits of LCC from a personal experience as he was among the medical students who pioneered it 20 years ago at George Washington University. Pointing to the possibilities, instead of the deficits, helped appease the basic science educators and increase their willingness to give up some of their time in the curriculum. Additionally, faculty may have afforded legitimacy to the proposal after hearing that a respected peer institution had been doing it for 20 years. However, the chairman's strategies were not a complete success. The LCC subcommittee had proposed a half-day per week, but was given a half-day every other week.

Consistent with Lukes' (1978) first dimension of power, there was evidence of debate about this proposal among the faculty members present at the General Faculty Meeting on March 18, 1997. The minutes included a long paragraph in opposition to the proposal. Specifically, the data indicated a concern on the part of at least one clinical faculty member about the LCC proposal. This is interesting from Abbott's (1988) perspective of jurisdiction, as one would expect the clinical faculty to be quite supportive of adding clinical education to the curriculum. But, this faculty member's issue was one of resources and could be understood from the perspectives of resource dependency (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997). Specifically, the faculty member opposing the LCC proposal did not want to prioritize clinical education for first and second year students when resources to ensure exposure to continuity of care for the third and fourth year students were still somewhat lacking.
Physicians “are incredibly pressed within their time schedules already” with the demand to see more patients in order to keep the practice plan afloat. Additionally, it was stated that there wasn’t enough clinic space to accommodate first and second year students. Faculty members were urged to vote against this proposal, even in concept, until more details were worked out. Consistent with the frames of resource dependence theory and academic capitalism, which state that resources are given to those activities that generate revenue, some faculty members were extremely resistant to adding more tasks and responsibilities to those whose work generated income for the college. There was only one sentence in the minutes recording one person’s support of the proposal. Yet, in spite of the lop-sided debate recorded in the data, the motion to incorporate LCC into the curriculum was approved by the General Faculty.

The data indicated subtle uses of power. In his interview with me, the Dean reported being supportive of LCC, labeling it as “extremely important. Students need this in the first year. It makes everything relevant” (Jones, Q1). However, none of the documents analyzed for this study indicated that the Dean commented publicly on this proposal one way or the other. An Associate Dean, on the other hand, was viewed as influencing the process. The subcommittee chair relayed the following:

Leadership played a major role. [An Associate Dean] had a calming way to negotiate differences. You need a strong leader, but not someone who is overpowering. You need someone to smooth out the two camps. [An Associate Dean] facilitated and directed. He did a little bit of both – this is where leadership comes in handy. The critical thing was his mannerisms – the way he conducted himself. He was cohesive – not at the expense of one over the other. With disparate parties, you need a strong leader – someone who knows what he is doing. Not just an enforcer (Garcia, Q4).
This quote highlights the interaction between leadership, power, and jurisdiction. An Associate Dean demonstrated qualities consistent with effective leadership during change (Bland et al., 2000) and used his positional power to keep the debate alive and the dialogue going about LCC (Lukes' [1978] first dimension of power) long enough for the LCC subcommittee chairman to meet individually with each basic science educator to negotiate around jurisdictional issues.

LCC seemed to have so many things going against it – jurisdictional wars, resource issues, logistical issues, and it was the least defined of all the proposals - yet it passed anyway. How is this accounted for? In addition to the factors listed above (Associate Dean’s leadership and use of power, and one-on-one negotiations around jurisdictional issues) another notion that appeared throughout the data was the time and effort put in by one basic science faculty member in working out the details and scheduling of LCC. Putting jurisdictional issues aside, he took it upon himself to find a way to make LCC work with the least amount of intrusion. According to one interviewee, “He did the leg work and the scut work to make it fit, and it didn’t hurt that he was a basic scientist himself” (Michaels, Q14). The data indicated that seeing one of their own well-respected colleagues taking on the challenge of making LCC work, along with the inclusion of a paper outlining the basic science principles of the clinical care provided to one of the patients seen during the student’s LCC experience to address the basic scientists’ educational concerns and jurisdictional issues, appeared to make the difference in the faculty’s adoption of the LCC proposal. Once again, the efforts of a single individual emerged in the data as instrumental in facilitating curricular change.
This developing theme seems to be a combination of leadership, jurisdiction and resources. Individuals stepped up and modeled their willingness to put aside their own jurisdictional issues, giving credibility to the proposed changes. In this case, the individual was a peer, which was particularly important. They contributed time to implement the changes without compensation alleviating many of the resource issues. This theme will be discussed in greater detail in Chapter 7.

The data revealed that the Longitudinal Clinical Curriculum continues today. It was included in discussions in Basic Science Education Directors meetings and Curriculum Committee meetings. Interestingly, one of the concessions that made LCC palatable to the basic science educators, the requirement that students write a paper on a patient that includes the application of basic science knowledge, is no longer required. Basic science educators found they did not have the time (a critical resource) to grade these papers and provide feedback to the students. In spite of the basic scientists current lack of participation in the experience, LCC has been institutionalized into the curriculum.

**Basic Science Curriculum**

CCAPP's Basic Science Subcommittee generated a proposal to teach the basic sciences in an organ-based system. This proposal was soundly defeated by the Basic Science Education Directors and will be discussed at length in the next data chapter. Following that defeat, the Basic Science Subcommittee and the Basic Science Education Directors convened a faculty retreat to review and discuss potential changes to the basic science curriculum. Several recommendations emanated from that retreat and were
developed into a proposal that was put forth to the General Faculty on January 21, 1997.

The recommendations included:

1. Establishing mini-interest groups to integrate information across the courses, both basic science and clinical,
2. Establishing the use of clinical cases at the outset of basic science lectures to demonstrate clinical relevance to students while they are learning the basic sciences,
3. Establishing "Clinical Problem Days" which integrate clinical sciences with the basic sciences to relate the importance of understanding the basic sciences and applying that knowledge to a clinical problem,
4. Combining basic science and clinical clerkship directors' meetings to improve communication between the basic science and clinical courses,
5. Increasing electives,
6. Utilizing new technology, linking information between disciplines,
7. Rearranging the second year to obtain better integration, and
8. Obtaining administrative support to demonstrate to faculty that administration actively supports faculty in its efforts to develop new directions in the curriculum (General Faculty Meeting Minutes, January 21, 1997).

After listing these proposals to the General Faculty present at the January 21, 1997 meeting, a vote was taken and the recommendations were unanimously approved. The data did not indicate any discussion or debate among those present at the meeting.

Interestingly, the data indicated that only one of the proposals listed above was fully implemented – the rearranging of the second year to achieve better integration. Pathology, Microbiology and Pharmacology were all made into yearlong courses.

Putting jurisdictional issues aside, the directors of these three courses met to discuss their courses with each other and were successful in identifying redundancies and omissions. The data did not offer an explanation or any insight into why this element of the basic science curriculum proposal was implemented.

There was evidence of an attempt to integrate information across the existing courses (element number 1 of the proposal) by creating an organ-based approach to two
systems, pulmonary and cardiovascular. According to the data, a subcommittee consisting of basic and clinical sciences educators was formed and met one time. There was no follow through. One interviewee reported that the chairs of this subcommittee had clinical duties that were too demanding (Case, Q2), a notion that can be understood within the resource dependence theoretical construct. Data indicated that faculty members felt pressured to engage in activities that generated income as University Practice Group (UPG), a pseudonym for the practice plan for the clinical faculty in the College of Medicine, was doing poorly. Expenses were going up while HMO reimbursements were going down, HSC had to compete in the mainstream of the marketplace with everyone else, and more and more regulations from Medicare and other groups were being put into place having an overall effect of increasing expenses. The need to prioritize income-generating activities is consistent with the frame of academic capitalism (Slaughter and Leslie, 1997) and appeared over and over in the data as critical to the outcomes of curricular change efforts that were happening at the same time.

From the perspective of the other theoretical constructs underlying the study, the proposal did not appear to represent any jurisdictional challenges to either the basic science or clinical science faculty, which may have facilitated its approval by the General Faculty. That being said, the third dimension of power also may have been at work. At this particular institution at that time, it was uncommon for basic and clinical scientists to collaborate on the education of medical students. As indicated above, time was a resource issue. Many changes were being proposed, all of which required faculty
members' time to implement, resulting in time away from their income-generating
activities (clinical care and/or writing research grants).

Only a couple of course directors tapped into the administrative support offered in
element number eight of the proposal. For example, the director of the Biochemistry
course got money from central administration to work on the case studies embedded in
the course. I see it as interesting that even the offer of financial support did not instigate
more effort in the development of “new directions in the curriculum.” Perhaps the
faculty were truly overwhelmed with the tenuous financial status of their institution and
demands on their time.

In summary, the General Faculty’s unanimous support of these proposals did not
influence or guarantee their implementation indicating that resource issues are equally or
more important than jurisdictional issues. On the other hand, findings to be reported in
the second data chapter demonstrated that if just one more than half of the faculty
opposed a proposal, its demise was certain.

Orientation to the 3rd Year

In the fourth year of CCAPP, a series of proposals to change the third year of
medical education were presented to the General Faculty. Included was a proposal to
implement an orientation to the clerkships (required clinical placements in several of the
medical disciplines) that occur in Year 3. The orientation was proposed so that students
could feel prepared, empowered, and confident in starting their clinical education years.
The whole structure of clinical education is different, requiring a much more active role
on the part of the students in advocating for their own learning (Koff, 1989). The clinical
environment is much different from the classroom. Students need to know how to gather patient data, make determinations, interact with their medical team and other health care providers, and critique themselves and others (Koff, 1989). The orientation was designed to address these issues.

The proposal for a three-day orientation to the third year was introduced in the General Faculty meeting by the Dean. In so doing, “[The Dean] stated that he would like to add a word of support. [The Dean] believes it is something the College should have done a long time ago” (General Faculty Meeting minutes, May 19, 1998). The Dean went on to say that most schools of medicine do offer such an orientation, which likely added an air of legitimacy to the proposal. There was no discussion or debate, a vote was taken, and the proposal passed. The Dean’s expression of his desire to approve this proposal was consistent with the leadership characteristics of clearly stating the vision and using organizational authority (Bland et al., 2000). Additionally, it could be speculated that the Dean’s outspoken support of the orientation was indicative of Lukes’ (1978) third dimension of power. In this case, the culturally embedded power could be the conformity to the preferences of the person in the position of ultimate power or authority. There was other evidence of this notion in the data. One interviewee stated, “We knew what the Dean wanted. It’s not really called control. It is deference to the Dean’s desire. It was respect for him. He is the ultimate responsible person. We know what the Dean wanted” (Garcia, Q5). This quote nicely represents the interaction between the constructs of leadership and power.
As with the other proposals that were implemented, the orientation was not implemented to the fullest extent proposed. Debate consistent with Lukes' (1978) first dimension of power was evidenced over the course of the data. Much of the debate had to do with jurisdictional issues, such as time in the curriculum. No one wanted to give up time to accommodate a three-day orientation. The ongoing effect of those jurisdictional issues was evidenced in the implementation of the orientation. Though the orientation was proposed to be three days, in its first implementation, it consisted of one optional day and one required day. In the second year of implementation, the orientation was one required day. The third, and most recent, orientation was one-half day in length.

Data indicated that clerkship directors did not want to give up time on the clerkship rotations for the orientation thus making the orientation shorter and shorter, and requiring that it occur on the students’ last day of vacation instead of first day of clerkship rotation (Clerkship Directors Meeting Minutes, September 18, 2000). These data are interesting considered in light of Koff’s 1989 study. Koff found that students miss a lot in their first rotation as they spend so much time just figuring out how to be a clerk. It might then follow that a comparatively small investment of time for the orientation would result in more learning on the part of the students. Clerkship directors did not want to negotiate around this issue and maintained that the most effective education for third year students was with them in the clinic or on the ward. They created and maintained the jurisdiction on students’ third year of education.

The data did not indicate any discussion of resources in relation to implementing a general clerkship orientation. As previously mentioned, there was no discussion at all
about this proposal except for the Dean’s endorsement of the idea. Once approved, the Office of Curricular Affairs became responsible for its implementation, so the issue of time to develop and implement the orientation was not a concern for the Clerkship Directors. The Dean’s Office made funds available to pay for breakfast and lunch for the students attending orientation. So, it did not cost the faculty or the Clerkship Directors anything to approve this proposal, which likely contributed to the ease with which this proposal passed. This outcome is consistent with the academic capitalism (Slaughter and Leslie, 1997) and resource dependency (Pfeffer and Salancik, 1978). Although they did stand to lose educational time, clinical faculty and departments did not stand to lose their own time or money, thereby allowing them to continue to focus on income generating activities.

Interdisciplinary Seminars

Interdisciplinary seminars were designed to bridge the basic science years and the clinical science years, and to provide an opportunity for longitudinal integration among the courses and contextually based education. Students learn basic information about patient care in the first two years, but in the clinical rotations, they are seeing patients everyday and are experiencing frustrations around a knowledge base that is not yet fully developed. Their experiences on clerkship rotations were to serve as the basis for interdisciplinary seminars. The seminars were to provide an opportunity for students to reflect on or refer back to the patients they had seen.

Similar to the orientation to the third year, getting the proposal for interdisciplinary seminars approved by the General Faculty was straightforward and
without debate. There were only two-and-one-half lines of text in the meeting minutes (May 19, 1998) devoted to the presentation of the proposal, the vote, and its passage. However, the data indicated that the implementation of this enhancement proved more difficult. The issues in implementing interdisciplinary seminars were similar to the jurisdictional issues described in the orientation section above. Though the clerkship directors were supportive of the proposal in principle, they did not want to take time away from the students’ experiences on the wards or in clinics. They, in fact, voted down the interdisciplinary seminar proposal in their November 20, 1997 Clerkship Directors meeting.

The proposal for interdisciplinary seminars was resurrected again after a recommendation from the Liaison Committee for Medical Education (LCME) accreditation team (Clerkship Directors Meeting, March 12, 1998). Based on the LCME recommendation, the Curriculum Committee called for the seminars to be implemented with the help and support of Clerkship Directors. According to the data, the Clerkship Directors put up no resistance to this externally generated mandate, suggesting that the jurisdictional boundaries were more permeable when targeted by a higher, more legitimate authority – that which has the power to accredit (or not) medical schools.

In addition to the LCME’s recommendation, the proposal for interdisciplinary seminars also had the Dean’s support. He voiced his support at the General Faculty meeting at which the seminars were voted on and approved. After the Dean vocalized his support, a motion was made to approve the seminars, no discussion occurred, and the motion was passed. The ease of acceptance of the motion may be understood from the
perspective of leadership (Bland et al., 2000), which indicates the influence of the Dean’s organizational power.

The Clerkship Directors did, however, remain protective of the students’ time in clinical settings based on their strong professional conviction that this was the most powerful educational venue for clinical education. Initially, the Clerkship Directors mandated that the seminars be offered outside of regular clerkship hours - on Wednesday evenings and Saturday mornings. Ultimately, Clerkship Directors were willing to include the seminars within working hours. They now occur on the third Friday afternoon of each rotation – an afternoon typically light in clinical responsibilities for the students. The data indicated the basis of this negotiation was the favorable evaluations of the seminars by the students, the difficulty in getting faculty to teach after hours, and the minimal disruption to students’ time in the clinical setting – the latter being the most powerful reason.

The implementation of interdisciplinary seminars was further complicated by the students’ lack of desire to attend the seminars. There were indications of uncertainty among the educational leaders and those faculty involved in the CCAPP process about whether third year students would actually attend them. The Dean commented in his interview,

They [interdisciplinary seminars] are good, if students show up. Students are excited about seeing patients. They don’t want to go to lectures. They would have to be spectacular seminars. Students are in the classroom for 18 years straight. They don’t realize they will have to go back to lectures once they go into practice (for CMEs) and they’ll have to PAY for it (Jones, Q2).
Another interviewee echoed the same thought: “Interdisciplinary seminars are worthwhile if students take advantage of them” (Case, Q2).

The data suggested subjugation of students to the third dimension of power (Lukes, 1978). The students were less willing to go to classroom-based educational activities in the clerkship year, especially if their clerkship faculty were not conducting them. The culture of the institution was such that third year students placed value on only that education that occurred within a clinical setting or one in which there were clear negative sanctions for not attending.

Though this proposal for interdisciplinary seminars was supported by the Dean and approved by the General Faculty, no financial resources were allocated to this activity. The lack of resources allocated to interdisciplinary seminars can be understood from the perspectives of resource dependence theory (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997). Interdisciplinary seminars were not income producing activities, and therefore did not receive financial allocations. Furthermore, they were introduced at a time when resources in the College were dwindling. Interestingly, however, they were implemented and institutionalized into the third year curriculum. This may have been another example of individual initiative – this time on the part of the Office of Curricular Affairs to simply make the seminars happen.

**Cancer Prevention Education**

The cancer prevention grant was one of two educational grants funded during the period of this study (the other being the geriatrics education grant discussed below). Analysis of the data related to the proposed enhancements was facilitated by the written
proposals submitted to the funding agencies. Data were analyzed to determine if the specific aims of the grant were achieved while simultaneously looking for evidence of processes or activities consistent with the theoretical constructs underlying this study.

The intention of the National Cancer Institute (NCI) Cancer Prevention Grant was to integrate more primary and secondary cancer prevention into the existing undergraduate curriculum. According to grant documentation, the specific aims were to:

Develop and evaluate a cancer prevention/health promotion curriculum which will be integrated into the four-year predoctoral medical curriculum... in order to graduate medical students who have the attitudes, cognitive knowledge and skills required to effectively assess health risks of individuals and communities and who are able to provide clear, concise and measurable health promotion and disease prevention prescriptions which foster health-related quality of life. By careful evaluation of both the process and outcomes of this curriculum, we hope to advance current models of medical education by demonstrating its efficacy and transferability. The specific aims of this grant are to:

1. Complete the development of specific educational objectives for all required courses in the predoctoral medical curriculum, in order to provide comprehensive education in basic cancer prevention and health promotion for individuals and communities.

2. Complete an evaluation of the medical school curriculum with regard to current content and opportunities for increased content in cancer prevention and health promotion.

3. Develop a comprehensive, culturally competent cancer prevention/health promotion curriculum to be integrated into the four-year curriculum, which will employ a variety of teaching methodologies including theoretical and applied experiences at both the individual patient and community level, with the development of new teaching materials and revision of current teaching materials as need.

4. Promote positive attitudes, behaviors and personal health habits related to health promotion and disease prevention among medical students.

5. Facilitate student access to research experiences in cancer prevention/health promotion.

6. Establish a comprehensive evaluation component to measure the efficacy of the cancer prevention/health promotion curriculum.
7. Establish mechanisms to assure continuation of the prevention curriculum as a required component of future medical school curriculum (Brown, NCI Grant Proposal).

The Curriculum Committee members "enthusiastically supported and provided a letter of endorsement for the grant proposal (Curriculum Committee meeting minutes, September 18, 1996). The General Faculty was informed of the Curriculum Committee’s endorsement (Annual Report of the Curriculum Committee – Activities for Academic Year 1996-197). Approval by the General Faculty was not needed. The five-year, $993,201 grant was awarded to the University of Arizona College of Medicine in 1997.

According to interview data, the first step taken after being awarded the grant was to assemble several content experts to identify what should be taught by drawing on a national curriculum. This initial assessment indicated that students received adequate education in tertiary care, and identified deficits in education in primary and secondary care. After the needs assessment, grant investigators met with course and clerkship directors. The grant targeted six of the 12 courses in the first two years (Social and Behavioral Sciences [SBS], Clinical Medicine Skills [CMS], Pathology, and the problem-based learning cases in Medical and Molecular Genetics [MMG], Histology and Cell Biology [HCB], and Anatomy), and three of the seven clerkships in the third year (Family and Community Medicine [FCM], Medicine, and Surgery). This data indicated that the first two specific aims proposed were achieved. There was little in the data at this point that could be tied to the theoretical constructs of study, except for perhaps resource dependence. Funding provided by the National Cancer Institute facilitated the creation and implementation of the curricular enhancements. The allocation of resources
by NCI allowed for additional personnel to be hired to conduct the work of the grant. Faculty members already struggling to meet the demands of teaching, clinical service, and research did not have to also carve out time to develop the materials proposed by the grant. In keeping with the resource dependence and academic capitalism constructs, faculty were focusing their time on revenue generating activities.

According to the grant personnel, curricular enhancements were implemented based on the audit of the curriculum. Developing the enhancements was in keeping with the third specific aim. Slide sets containing applicable cancer prevention information were developed through the grant for the courses in the first two years to be integrated at the faculty’s discretion. An improved breast exam was added to CMS. Several components were added to the SBS course including a transtheoretical model of stages of behavior change, a practical skills set for smoking cessation, and a nutrition fair providing students the opportunity to experience the nutrition screening techniques they may one day recommend to their patients. In conjunction with a subgroup of the Curriculum Committee, biostatistics and epidemiology were added to SBS. The FCM clerkship added content to its didactic prevention series. A prevention station was added to the Objective Structured Clinical Exam (OSCE). Building on the progress made by an earlier education grant to enhance nutrition related education, grant personnel worked with the nutrition part of the biochemistry course, and added a cancer nutrition elective in the fourth year. According to grant documentation and data gathered through interviews, sustainability was the goal of the curricular enhancements developed through the grant.
The success of the cancer prevention grant in developing and implementing the above enhancements may be viewed through the lenses underlying this study. The grant personnel described their recommendations as emanating from an iterative process conducted by the grant personnel. They would meet with course and clerkship directors to identify enhancements that could be implemented, create and deliver the enhancements to the course and clerkships directors, then “wait to see what happened” (Brown, Q22). From the perspective of jurisdiction (Abbott, 1988), this was an effective strategy in facilitating the course and clerkship directors’ openness to the materials. At this stage in the process, faculty members did not feel their professional jurisdiction over their courses/clerkships was being challenged. In fact, grant personnel reported that “no one was obstructionist” (Brown, Q1; Thompson, Q24) in the process. The process of making enhanced materials available did not, however, guarantee that the materials would be used by faculty or become an institutionalized part of the curriculum. Educational resources simply were made available to the course and clerkship directors who could use them at their discretion.

I conducted a survey of course and clerkship directors to determine the extent of use of the NCI grant materials in their courses and clerkships. Of the 13 Basic Science Education Directors, six responded. Of the seven Clerkship Directors, none responded. The total response rate was 30%. The low response rate is indicative of one of the drawbacks of the survey method when there is no recourse for not responding.

Two of the six responding basic science course directors reported receiving materials from the NCI grant. In both cases, half of the materials provided are still being
used today. Those materials that are not being used were eliminated in the restructuring of the two courses. The other four responding course directors said they did not receive recommended materials from the NCI grant.

The dual role of the one of the investigators may offer insight into the elements of the grant that were successfully integrated into the educational program. The investigator was also a co-director of the course in which most of the recommended enhancements were implemented. From Abbott’s (1988) perspective, there were fewer (or no) jurisdictional issues to negotiate. The Principal Investigator recognized this as an effective strategy: “The courses that we were able to get the most in were the courses where the Principal Investigator and the grant folks have an influence. In future grants, I’ll get more representation from the different courses as investigators on the grant” (Brown, Q3).

Lukes’ (1978) second dimension of power offered additional insight when examining the implementation of proposed enhancements. One of the investigators of the grant was also one of the people responsible for setting the agenda of the Social and Behavioral Sciences course, and could easily choose to incorporate enhancements from her grant.

The data illustrated that there was even more success than anticipated for one of the proposed enhancements. The integration of epidemiology and biostatistics into the educational program “happened in an even bigger way then we proposed” (Brown, Q6). The success of this element was attributed by the grant personnel to the extraordinary efforts of a particular faculty member. An investigator reported, “It takes someone
placed in key areas of the educational mission and program to make things happen, to get a focused look at some aspect of the curriculum. It was hugely helpful to be on the inside, an MD, and a course director” (Brown, Q6). Once again, this success can be understood using the jurisdiction and power constructs described above. The jurisdictional issues were all but eliminated because the grant investigator was also the course director, and she controlled the content (agenda) of the class. Here, again, is an example of a construct developing throughout the data – that of the energy, work, and dedication of an individual. In this case, it was an individual who had organizational power (as a course director). This construct will be more fully explored in Chapter 7.

In spite of the successes reported above, the data indicated that some of the educational enhancements were not implemented. Grant personnel reported having less success with enhancements targeting the cellular biology level. It was hard finding people who could teach this subject matter. Having rotating course directors also made it difficult. Grant personnel would continually have to negotiate with each new course director to address jurisdictional issues.

According to the data, there were also structural barriers to some of the proposed enhancements. A set of grant recommendations was based on changes proposed by CCAPP that were never implemented, consequently, the cancer prevention recommendations could not be put into place.

Interviewees reported that course directors were receptive to the idea of including a focus on cancer prevention in their courses. Grant personnel did not perceive that they had any experiences of resistance that would have been consistent with Abbott’s
jurisdiction construct. In spite of the grant personnels' perceptions, the data contain examples of resistance on the part of course and clerkship directors.

Regardless of the education directors' openness reported by the grant personnel, not all of the directors were willing to allow for time in their course to add the cancer prevention topic. Directors told the grant personnel that the curriculum was too full and they were not able to identify topics from their courses that could be eliminated in order to allow time for the cancer prevention topic. The issue was one of time and can be understood through Abbott's (1988) jurisdiction construct. Course and clerkship directors valued the material from their disciplines more than what was being recommended by someone(s) outside of their discipline. The grant personnel viewed this as a valid reason for not using their materials and thus reported that they did not observe faculty members attempting to protect their turf. One interviewee reported,

> When course and clerkship directors had concerns about fitting new stuff in, there were appropriate concerns. Maybe there really isn't room. As a fellow faculty member, I can see their point. I can see the larger context myself as a PI and faculty member. We'd both agree that nothing could be cut (Brown, Q4).

Once again, this investigator's openness to the argument that there is no time in the curriculum may have been due to the dual role played (and described) by this individual and her experience with jurisdictional issues from both sides of the curricular enhancement process.

Interviewees reported that resource issues had a negative impact on the sustainability of some of the implemented enhancements. For example, the nutrition fair was too costly to maintain beyond the funded period. Simultaneously, there were cut backs in state allocations resulting in the loss of personnel, some of whom were
responsible for integrating the enhancements into their educational programs. Not having the money to pay for the manpower to nurture and support these innovations became an issue. From the standpoint of resource dependency (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997), these elements were not seen as income-generating activities, and therefore did not receive continued attention after the funding for the personnel provided for by the grant expired.

Lack of funding may have effected the sustainability of some of the curricular enhancements beyond the funding period – the seventh and last of the specific aims outlined in the grant proposal (the fourth, fifth and sixth specific aims were not addressed in the data). In response to a question about what happened to the curricular enhancements when the funding for the grant expired, one interviewee responded, “I’m taking the optimistic view. At least the [educational] products [developed through the grant] will remain in the possession of the course directors, and we encouraged faculty to use the materials” (Thompson, Q6).

Aside from the quality of the enduring materials developed and/or purchased through the grant, the data indicated the grant personnel’s hope that course and clerkship directors would continue to use the materials was based in the quality of professional relationships developed between the grant personnel and the directors. This idea was highlighted by the remarks of another interviewee in response to the same question, “In a time of dwindling resources, things get done because of good collaboration, out of simple affinity. If there is a lack of personal affinity, it can slow things down even when you
share interests” (Brown, Q6). The quality of professional relationships is a theme that emerged throughout the data and will be more fully discussed later.

The grant personnel reported that “absolutely not every recommendation was implemented, but those that were were sustainable” (Brown, Q6). According to the data discussed above, the enhancements that became an institutionalized part of the curriculum occurred in the courses in which the grant investigators played leadership roles, most notably in the Social and Behavioral Sciences course, the course in which the Principal Investigator on the grant was a co-director of the course.

Geriatric/Gerontology Education

The second of the two educational grants funded during the period of this study was the geriatrics/gerontology grant funding by the John A. Hartford Foundation and the Association of American Medical Colleges (AAMC). The intention of the grant was to increase geriatric and gerontology education in the undergraduate medical education curriculum. The proposal was endorsed by the Curriculum Committee (Curriculums Committee Meeting Minutes, March 3, 2000). The General Faculty was informed of the proposal in their February 20, 2001 meeting. As with the cancer prevention grant, General Faculty approval was not necessary. In an unprecedented move, every course and clerkship director wrote a letter of support for the grant. This $100,000 two-year grant was awarded to the College of Medicine in 2000. The specific aims of the grant stated that medical students would be able to do the following:

1. Develop an understanding of the special needs and problems of the elderly and emphasize the interaction of medical, psychosocial and environmental factors.
2. Perform interviews using communication techniques responsive to social, cultural, and psychological needs of the elderly, and conduct physical examinations that include functional, cognitive, and psychological assessment.

3. Identify the appropriate level of care for their frail patients and formulate appropriate expectations for that care. The educational program will provide exposure to available community services that promote independence and quality of life.

4. Gain an appreciation for the usefulness of home visits in gathering information critical to promoting the health of older people.

5. Learn to work effectively and respectfully with other health and social service professionals in crafting an appropriate care plan in order to provide optimal and caring services (Michaels, Hartford Foundation/AAMC Grant Proposal).

Additionally, the investigators proposed enhancements to the undergraduate medical curriculum that would address not only the diagnosis and management of medical conditions, but also the social and ethical dimensions of care that makes caring for elderly patient particularly complex; encourage reflections about the students' own aging and an awareness of their assumptions and beliefs about the role of older people in society; incorporate the concepts of wellness, prevention, and healthy aging; and provide an understanding of and exposure to the organizations providing a continuum of care of the elderly (Michaels, Hartford Foundation/AAMC Grant Proposal). The proposed enhancements in this proposal were quite specific. They started with a review of the entire undergraduate curriculum to target omissions and identify redundancies of geriatric-related content. They went on to spell out specific curricular enhancements for particular courses and clerkships: creating a well-aging experience for the students, adding aging issues to the Cultural Conference and the Bioethics Conference, adding a session to the interview course dedicated to older adults and using patient instructors, adding content on home care services to the primary care section of Social and Behavioral Sciences course, adding age-appropriate questions to all performance
checklists used in the physical exam course and interview sessions with patient instructors, dedicating a third-year interdisciplinary seminar to a multidisciplinary case conference focusing on a geriatric assessment clinic visit, adding a nursing home visit and a geriatric clinic experience to the Medicine clerkship, adding a home visit to the Family Medicine clerkship, adding a session on the surgical and trauma risks in the elderly in the Surgery clerkship, enhancing the teaching of gait assessment in the Neurology clerkship, adding a memory disorder station to the OSCE, and ensuring that all OSCE station checklists included age-specific items. Elective and enrichment activities were also proposed.

Many of the changes emanating from the geriatrics grant have been integrated into the required undergraduate curriculum. A session on the specific considerations for interviewing older adults was added to the Clinical Medicine Skills (CMS) Interview course during the first year. The session included practicing different scenarios with an older adult patient instructor. Evaluation data from this session consistently revealed students’ increased confidence in working with older adults as a result of having attended this session. The data revealed that the relationship between the CMS course director and the Principal Investigator of the geriatrics grant was instrumental in CMS’s implementation of this proposed enhancement into the course. In my interview with the Principal Investigator, I explored the notion of power, seeking to establish whether the Principal Investigator (in her full-time position as an Associate Dean) perceived that she could set the agenda for the course. The Principal Investigator dismissed this notion: “There isn’t really a hierarchical relationship [between the course director and me]. I do
believe it is influential that [the CMS course director] and I have a good, trusting, collegial relationship. We talk about issues honestly and openly—that had an influence” (Michaels, Q22). Additionally, the Principal Investigator was an instructor in the CMS Interview course. She believed she had credibility in the course because of her experience and real knowledge of the course. The quality of the relationship and the PI’s experience in teaching the class may have broken down some of the jurisdictional issues inherent to implementing changes in departmentally based courses. Once again, the concept of quality working relationships emerged in the data and will be discussed more fully in Chapter 7.

The strength of the relationship between the Principal Investigator and the CMS Course Director was further highlighted in the implementation of other enhancements in CMS: adding age-appropriate questions to all performance checklists used in the physical exam classes and interview classes with patient instructors, adding a memory disorder state to OSCE, and ensuring all OSCE checklists include age-specific questions.

Another significant change to the curriculum was the requirement that students do a home visit with an older adult during the Family and Community Medicine Clerkship rotation in the third year. This enhancement was particularly challenging to implement because FCM clerkship sites are scattered around Arizona. Similar to the findings reported related to the cancer prevention grant, the affiliation of one of the investigators with the FCM department appeared in the data to be instrumental in accomplishing this change. The data indicated that there were fewer jurisdictional issues in implementing the home visits because the proposed enhancement was coming from one of their own
faculty members. In addition, this faculty member had a quality, productive relationship with the clerkship director and coordinator, who were willing to accommodate her request to try the incorporation of a home visit, then assess its effectiveness at a future time. The tireless efforts of a specific individual and the quality of relationships are two themes that have repeatedly emerged from the data.

The well aging experience was implemented to a much greater extent than that proposed by the grant. Instead of having students visit one of a variety of sites or communities representing senior independent, productive, and active living, an Optimal Aging Program (OAP) was developed and approved by the Curriculum Committee. The OAP became a longitudinal elective in which students earn two elective credits in their fourth year (the fourth year is entirely elective at this medical school). Through the OAP, first year students were paired with healthy, active older adult mentors with whom they regularly interacted over the course of the four years of medical school. In addition to interacting with their mentors, students were required to attend four educational seminars per year that focused on aging or the care of older adults. In their senior year, students are required to write a research paper based on an issue they encounter during the OAP. Approximately 10% of each of the first year classes commenced during the grant period enrolled in the OAP. The OAP was integrated into the curriculum and continued to be offered beyond the funding period of the grant.

The success of the OAP may be partially understood through the lenses of the theoretical constructs underlying the study. From the point of view of professionalism/jurisdiction (Abbott, 1988), no one’s jurisdiction was threatened. The
OAP was offered outside of and separate from the courses and clerkships comprising the educational program. Course and clerkship directors were not directly affected by the OAP nor were they asked to give up any time in their educational programs. From the perspectives of resource dependency and academic capitalism, the OAP did not require any monetary support, so there were no financial issues to address. It did, however, require periodic staff support. This was made available through the Office of Curricular Affairs. Though the Associate Dean for Curricular Affairs was also the Principal Investigator on the grant, providing the administrative support for educational electives was one of the responsibilities of the Office of Curricular Affairs, so the OAP legitimately fell within this office's purview. Consequently, it would be difficult to make an assumption based on Lukes' (1978) construct of power.

The multidisciplinary case conference that was proposed in the grant was implemented through one of the interdisciplinary seminars integrated into the students' clerkship year. The process of integrating interdisciplinary seminars was described above as one of the recommendations put forth by the CCAPP and will not be readdressed here. However, the data indicated that using the interdisciplinary seminar venue for the multidisciplinary geriatric case conference was facilitated by the fact that the Office of Curricular Affairs had jurisdiction (Abbott, 1988) over both of these activities.

Grant personnel reported experiences of some faculty “protecting their turf” in response to enhancements proposed for their courses/clerkships – an activity that is to be expected from the perspective of Abbott's (1988) construct relating to professionalization and jurisdiction. According to the Principal Investigator, some faculty “just said no. We
have absolutely no authority over these people. We can’t do it by command. We probably could get them on board by going to them, meeting and discussing the roadblocks” (Michaels, Q24). One of the interviewees had an interesting observation about another strategy for “protecting turf.” She reported,

Some faculty members protected their turf in a positive fashion by doing the work. We highlighted the need for geriatric instruction in their course, but they took it over by taking the responsibility and doing it in a fashion that worked for them. In surgery and neurology, for example, they protected their turf by writing their geriatric enhancements in a way that was constant with their goals (Michaels, Q24).

In other words, they did not have to give this power over to someone outside their own profession, and both sides “won” – those calling for the enhancements and those implementing the enhancements.

The data indicated that six of the proposed geriatric-related curricular enhancements were not implemented. Some were due to structural changes in the undergraduate curriculum; for example, Selectives were eliminated from the SBS curriculum, so a Selective related to caring for older adults could not be offered. Some enhancements were not implemented because of resource issues, for example, there were not enough staff to devote to entering the geriatrics curriculum on the AAMC’s curriculum database; no one had time to develop and implement the “Expressions of Aging” art contest. Consistent with Pfeffer and Salancik’s resource dependency theory (1978) and Slaughter and Leslie’s concept of academic capitalism (1997), these activities were not income producing activities, nor were they core to the educational outcomes of the grant, and therefore did not receive resources in support of them. Lastly, one enhancement was not implemented because a course director decided not to incorporate
enhancements to which prior agreement had already been made. The director reported needing the time to cover more pressing topics – an illustrative example of the construct of jurisdiction (Abbott, 1988). As one interviewee put it, “In part, it’s an academic freedom issue. ‘I determine what and how gets taught. If you ask me to change it, it has to be approved by me. I’m the expert. I’m the one controlling my time and effort’” (Michaels, Q25).

In spite of the resource issues described above, the data indicated that many of the proposed enhancements were achieved. Furthermore, work is still being done to incorporate elements of the grant into the education program even though funding for the grant expired. These activities do not appear consistent with the constructs of resource dependency and academic capitalism. They do appear to be consistent with Luke’s second dimension of power. The Principal Investigator of the grant, who was also a dean in the curriculum office, has allowed priority to be given to these tasks by her staff – essentially keeping the proposed enhancements on the agenda of work to be completed. Additionally, they appear related to the repeatedly emerging theme of individual effort – the Principal Investigator is passionate in her belief that health care professionals need to be trained in the care of older adults as the demographics of our society point to increasingly growing population of people 65 years of age and older. The Principal Investigator reported, “I’m enormously pleased with the geriatrics grant. We got some significant changes and I think they’ll last. We proposed to do a great deal more than was funded. Even though we didn’t get everything we proposed, the [Hartford] Foundation got way more than their money’s worth” (Michaels, Q22).
CHAPTER 5

CURRICULAR ENHANCEMENTS NOT APPROVED

Introduction

The previous section of this chapter explored through various theoretical lenses the data surrounding curricular enhancements that were approved and implemented during the course of this study. This section examines the issues around proposed enhancements that were not approved and offers explanations from the perspectives of the theoretical constructs underlying the study.

Organ-Based Basic Sciences

In an effort to create horizontal integration in the basic science years (first two years of the curriculum), highlight connections among courses and reduce redundancy, the CCAPP Basic Science Subcommittee proposed an organ-based basic science curriculum. The existing curriculum was discipline-based and fit nicely into the departmentalized structure of the curriculum. In the existing curriculum, each basic science department taught their own discipline with little or not consultation with other departments. There was no process or structure for identifying redundancy and/or omissions across courses. The CCAPP Basic Science Subcommittee looked to the experiences of other schools and found that they were successfully integrating the basic science years through an organ-based system. The implementation of an organ-based system by peer institutions lended credibility to the Subcommittee’s proposal that it be implemented here.
The organ-based system proposed by the Basic Science Subcommittee never got to the faculty for a vote. Opposition was demonstrated at meetings of the Basic Science Subcommittee and was based on the concern that moving to interdisciplinary courses may result in departments' loss of educational autonomy and time in the curriculum, along with the money allocated to each department based on teaching time. According to two interviewees, basic scientists resistant to the organ-based system approach would organize their colleagues to come to subcommittee meetings and be quite vocal in their opposition. Their behavior nicely illustrated the conviction and power of professional jurisdiction (Abbott, 1988), as well as concerns over the loss of resources in a tight budgetary time (Pfeffer and Salancik, 1978; Slaughter and Leslie, 1997).

The Dean reported being supportive of the proposed organ-based curriculum. In fact he reported to me that in medical school he had organized his course notes by organ system. Upon hearing of the course directors' resistance to the proposal, he requested that the Basic Science Subcommittee meet with each individual department head to discuss the proposal. Many of the Basic Science Subcommittee members who generated the proposal were not available to attend these meetings, perhaps because of the increased pressure to write even more grants in the face of declining resources (consistent with resource dependency theory and academic capitalism), and perhaps because of lack of commitment to the changes. Consequently, the Associate Dean for Curricular Affairs and her staff made the presentations to each department head. She recalled telling the Dean she “was getting major objections to this proposal” and in some cases was being accused of trying to foist these ideas on the department heads. (Michaels, Q1).
response, the Dean called a meeting of all of the basic science department heads to
discuss the organ-based curriculum and to reaffirm that this was a faculty proposal, not
an administrative proposal. In the meeting, one by one, each department head said that
he could not teach his discipline through organ systems, in spite of the fact that at least
one of them already was (Physiology). One interviewee reflected,

At this point, the Dean could have said any number of things. He could have said,
‘OK, but you, as a faculty, have already accepted and approved the goal of better
integration in the basic science years, so adjourn and find a better way to
integrate,’ or he could have said, ‘OK, but do it [organ-based curriculum]
anyway,’ or he could have said, ‘OK, we won’t do it.’ He said the latter – ‘OK
we won’t do it’ (Michaels, Q1).

The former Academic Dean had a similar recollection, “The Dean said to the Curriculum
Committee that he is for more integration, but he didn’t have his heart and soul behind
the organ-based system. He didn’t speak out for this change” (Murray, Q2). This
situation was a demonstration of the first and second dimensions of power (Lukes, 1978).
There was observable conflict and debate in the formal institutional setting (first
dimension of power), then the Dean’s removal of the issue from discussion (second
dimension of power).

The Dean’s dismissal of this proposal was seen as a “signal event” (Michaels, Q1)
by the CCAPP leadership in the CCAPP process. Their observation was, “All the faculty
had to do was say ‘no’ and the Dean would say ‘never mind.’” The stifling effect of the
second level of power (the ability to control the agenda) is evidenced by the following
comments made by the highest level dean involved in the CCAPP process:

I look at myself as a failure regarding CCAPP because it didn’t result in a major
curricular change. In retrospect, maybe we – administration – should have been
more forceful. Maybe we should have tried harder. But the Dean wouldn’t have
done this. That became obvious when the basic science faculty voted down the organ-based curriculum (Jefferson, Q10).

The Dean’s decision did not appear to be driven as much by his own personal bias, given that he “actually prefers this [organ-based education]. It makes more sense” (Jones, Q2). Instead, the data indicated that it was based on his acknowledgement and acceptance of jurisdictional issues (Abbott, 1988): “There are turf issues. Basic science departments felt they would lose autonomy” (Jones, Q2).

The data also revealed ambivalence for the organ-based system among CCAPP leaders: it would have been difficult to implement (Michaels, Q2; Case, Q2; Garcia, Q2; Dalan, Q2), it would have created as many problems as it solved (Mann, Q2), and it would have been difficult to assess the outcomes (Garcia, Q2). This ambivalence was revealed in the following quotes taken from interviews with the participants of CCAPP:

The Dean reported in retrospect, “Disciplinary courses are hard to put together. We need someone like [the Associate Dean for Curricular Affairs] to coordinate the logistics of the course” (Jones, Q2). In pondering the outcome of the Basic Science proposal, the chairman of the PBL Subcommittee reflected, “I thought it was an interesting idea for integrating material. I didn’t feel strongly about it. It created as many problems as it solved. It was requiring spreading the education of basic science material out over the two years, instead of spreading the organ systems out over the two years” (Mann, Q2). The chairman of the LCC subcommittee recalled thinking, “I remember a lot of discussion [about the organ-based proposal for Basic Science education] – pros and cons. There were many, many meetings. It was difficult to ascertain which was the best approach. There was no good yard stick to measure one over the other” (Garcia, Q2).
Yet the Basic Science Subcommittee felt it was the best program at the time for addressing the lack of integration among the Basic Sciences.

In short, without consistent champions for such an overarching change, it may have been hard to keep this proposal on the agenda. These factors may have precluded the Dean from actively and vocally supporting the proposal. According to the literature on change (Bland et al., 2000), and supported by the data here, the Dean’s lack of support proved fatal for this proposal.

The data offered another significant example of jurisdiction (Abbott, 1988) in addition to those described above. The chairman of the Basic Science Subcommittee reported in his interview that he was not entirely supportive of the organ-based system. He acknowledged that it worked at other schools, but it wouldn’t work here (because of the departmentalized structure of our school). He went on to say that it is not practical to do an organ-based dissection in gross anatomy (he was an anatomist). These comments illustrated the strength of jurisdictional attachments. The chairman was more closely aligned with the beliefs and practices of his profession than with the curricular innovation emerging from the subcommittee of which he was the chair. Without his full support, it is not surprising that other basic scientists opposed the organ-based system.

Resource issues also contributed to the demise of the organ-based basic sciences proposal. As previously mentioned, the basic scientists were under increasing pressure to write more grants because of the negative financial effects of managed care on the College. Moving to an organ-based system would have required faculty to take time away from possible income generating activities (grant writing) in order to rewrite the
basic science curriculum. Their refusal is a clear demonstration of Pfeffer and Salancik’s (1978) resource dependence theory and Slaughter and Leslie’s (1997) construct of academic capitalism.

Years III/IV Continuum

At the University College of Medicine, third year students rotate through a series of clinical clerkships, including medicine, surgery, pediatrics, obstetrics and gynecology, family medicine, neurology, and psychiatry. During the fourth year, students take a series of self-selected electives and interview for residency positions. It is worth noting here that the College of Medicine has an ancillary campus in the State Capital city located a hundred miles to the north. The ancillary campus handles only third and fourth year students; all of the basic science education in the first two years is conducted at the main campus of the College of Medicine. The ancillary campus has an Associate Vice President and a small administrative staff. The faculty are clinical faculty with volunteer appointments with the College of Medicine as they are employees of the hospitals in which they practice. The Associate Vice President for the ancillary campus reported that working on CCAPP was a positive experience for her campus as “it brought us together as a faculty interested in education. It gave us a chance to bond and to get to know the curriculum” (Ross, Q1). The ancillary campus faculty were particularly involved with CCAPP proposals having to do with the clinical years given that their campus dealt exclusively with third and fourth year medical students.

The proposal to create a continuum of educational experiences in years three and four was intended to decompress the educational experience in the third year and provide
greater flexibility in the third and fourth years. Students could schedule required or elective activities throughout the two years. Three separate subcommittees worked independently to develop a three-four year continuum: a main campus group, a State Capital Campus group, and a group of students.

Similar to the organ-based basic sciences proposal, the proposal for a years III/IV continuum never made it to the General Faculty. After a brief discussion in the November 20, 1997 Clerkship Directors meeting, the Directors voted it down. The opposition to this proposal appeared in the data to be less grounded in jurisdictional and/or resource issues. Clerkship Directors focused their concern on students who do not take their clerkships in the third year will not be well equipped to make career choices. Additionally, the perception among faculty and administrators was that students were passionate in their opposition to having requirements in the fourth year. This perception appeared to be woven into the fabric of the institution – a demonstration of Lukes’ (1978) third dimension of power. The fourth year had always been an elective year at this school, and the effort to change that was not successful. The following quote from the Dean illustrated this point. In his interview with me, the Dean said that he was moderately supportive of this proposal. He called the fourth (elective) year a “joke,” but went on to say, “The catch is the phenomenal resistance from the students to losing elective time. If this [years III/IV continuum] was implemented, the students would have burned down the Dean’s office” (Jones, Q9). The Dean stated that if he was starting a new school, he would “definitely implement this” (Jones, Q9). The Dean even reported working to extend to January the date by which students need to decide on their
internship in order that a years III/IV continuum would work; yet he let the proposal fall off the agenda, demonstrating Lukes' (1978) second dimension of power.

One subcommittee chair from CCAPP reported to me that he thought the Years III/IV Continuum Subcommittee was being manipulated by people to benefit their own department or clerkship – actions that could be predicted from the professionalization/jurisdiction conceptual framework (Abbott, 1988). He went on to say, “They poisoned the process. I remember thinking people were pushing their own agendas. They were hurting the recommendations coming out of the committee” (Mann, Q2).

There was disappointment on the part of the educational leaders that this proposal was not implemented. The champions of this proposal were the ancillary campus faculty since their participation in CCAPP focused on the third and fourth years of undergraduate medical education. One interviewee reported that the ancillary campus faculty felt like “second class citizens, like ‘what do we know anyway?’” when the proposal did not get approved (Ross, Q2). The depth of the State Capital Campus faculty’s disappointment is evidence of the jurisdictional ownership they felt of their students’ education.

In not approving a Years III/IV continuum, the chairman of CCAPP believed “students were robbed of the adult experience of planning their life” (Jefferson, Q2). This statement can be seen as ironic since students were choosing, as adults, to oppose this reform. In the end, none of the faculty were willing to take on the students. It appeared that the students had a tremendous level of influence at this school, a notion that will be explored in the third data chapter.
In their working group, the Years III/IV Subcommittee acknowledged that some additional resources would be necessary to implement their proposal. Specifically, academic counseling services would have to be changed and refined to successfully facilitate students through the years III/IV continuum. These resource needs were written into the proposal. The data did not indicate that the additional resources needed were a barrier to the proposal’s acceptance. The barriers were more structural in nature. However, it is reasonable expect that there may have been some underlying resource concerns (e.g., costs to cover increased academic counseling services) given the tight financial situation of the institution at the time. Concerns such as this would have been consistent with Pfeffer and Salancik’s resource dependence theory or Slaughter and Leslie’s construct of academic capitalism.

**Sub-Internship**

A sub-internship is generally a month long experience in which the fourth year medical student is given an increase in responsibility for patient care in an in-patient setting. It is intended to prepare students for the level of responsibility they will be afforded in their first year of graduate medical education, called the internship year. At this College of Medicine, a sub-internship is offered as fourth-year elective that students may choose to take if they wish. As noted before, the fourth year is an entirely elective year in which students may select from a variety of offerings within certain constraints. Students also interview for residency positions during the fourth year.

The sub-internship proposal was one that emanated from three independent subcommittees examining the third and fourth years (clinical years). All three proposals
suggested the incorporation of a required sub-internship. The proposal was endorsed by
the Dean and Clerkship Directors at the November 20, 1997 Clerkship Directors meeting.

When the subinternship proposal was presented at the General Faculty meeting,
two faculty members spoke out against it. One’s opposition can be understood through
the lens of jurisdiction, and the other’s through resource dependence. The first faculty
member was adamantly against having any required activities in the fourth year. Leaving
the fourth year as elective would allow students to take the research elective she offered.
The second faculty member expressed concern that necessary resources (physicians in in-
patient settings with time available to supervise the subinternship) were lacking in the
proposal and saw this as problematic at a time when physicians were under increased
pressure to see more patients to generate more income. His concern aligned with
Slaughter and Leslie’s (1997) construct of academic capitalism that recognized the
faculty’s need to align themselves with income generating activities. This faculty
member also expressed concern that students may have to do a subinternship in an
outpatient setting, which he perceived as less educationally valuable. He went on to say
that allowing a “watered down proposal” would “open the door for other rather ill-
conceived and half-baked proposals for fourth year” (General Faculty Meeting minutes
May 19, 1998). None of the faculty members present at the meeting spoke out in favor of
the proposal. A vote was taken and the proposal failed.

In spite of fairly wide spread support for the sub-internship, including the Dean,
CCAPP subcommittees, Clerkship Directors, and the Curriculum Committee, the
proposal was not approved. The data indicated that one reason may have been the
student resistance to requiring anything in the fourth year. In his interview with me, the Dean stated that he was the most supportive of the required sub-internship proposal, and had in fact, started sub-internships at another medical school in which he had worked (Jones, Q9). He went on to say, “The students are the limiting factor [at the UA]. They are spoiled. The fourth year is a joke. It is so easy it’s unbelievable. Students resist anything happening in the fourth year. There should be something required in the fourth year” (Jones, Q2). Similar to the proposal for a years III/IV continuum, it appeared that the students had quite an influence on the outcome. This is interesting to consider given that the students have not yet achieved the status of “professional” nor the jurisdiction that accompanies it. As previously stated, the fact that the faculty allowed the students to have this kind of power in protecting the fourth year may have been part of the fabric of the institution – a notion consistent with Lukes’ (1978) third dimension of power.

Anesthesiology/Ophthalmology Clerkship Rotations

Part of the CCAPP Years III/IV proposal included a recommendation that a clerkship rotation in both anesthesiology and ophthalmology become a required component of the curriculum. The proposal first appeared in the April 15, 1998 Curriculum Committee Meeting Minutes. The rationale for implementing an anesthesiology rotation included the assertion that every doctor should know at least the basics of pharmacological interactions, resuscitation skills, and fluid and airway management. The head of the Department of Anesthesiology indicated that his department had the resources for conducting this proposed requirement, such as the acute and chronic pain management services, and possession of the only human patient
simulator in the southwest. If made a requirement, the rotation would include a sampling of pain management, resuscitation, airway management skills, and hands-on time with the patient simulator.

The rationale for a required rotation in Ophthalmology was based on data that revealed that students were not at all comfortable with their use of the mechanics and dealing with eye complaints, nor their ability to accurately diagnose simple eye diseases. The proposal included a curriculum outline and learning objectives that included the expectation that students gain proficiency to recognize and refer eye problems, and be able to distinguish between vision threatening and non-vision threatening pathologies, especially in pediatric cases where some diseases need to be treated before certain ages or irreparable damage will occur. The proposal outlined the availability of resources to implement an Ophthalmology rotation.

Four months after the April, 1998 meeting in which the rationale for the two additional rotations was stated, the department head of Anesthesiology attended the Curriculum Committee meeting to answer the Committee’s questions about the proposed Anesthesiology rotation. Details of the proposed rotation were discussed at great length. Data indicated that Curriculum Committee members supported the idea of having a required Anesthesiology rotation, and questioned whether the proposed one-week time frame would be long enough. They requested that the department head submit a formal curricular proposal including educational objectives and a tentative curricular outline for a rotation up to two weeks in length. The logistics of time and location in the curriculum was deferred until a later meeting.
Eight months later, at the April 21, 1999 meeting, the Curriculum Committee approved the Anesthesiology proposal. They implemented a subcommittee to develop a proposal for the logistics of integrating Ophthalmology and Anesthesiology rotations into the curriculum structure. Tracking the progress of these proposals through the data was an interesting journey, an overview of which is offered here as a basis for discussion within the constructs underlying the study. On May 19, 1999, a Committee member reported that the Ophthalmology/Anesthesiology Subcommittee was working on setting up its own meeting. On July 21, 1999, the Associate Dean for Curricular Affairs confirmed with the Curriculum Committee that the required number of fourth year electives would be reduced from 33 to 30 if the Anesthesiology/Ophthalmology rotation was approved.

The Anesthesiology/Ophthalmology Subcommittee presented their proposal at the August 18, 1999 meeting of the Curriculum Committee – a full year and a half after the proposal for these rotations was made by CCAPP. The proposal called for the implementation of a new three-week required rotation into the curriculum, and allowed for flexibility in the curriculum so that the rotation could be completed in year IV. The Curriculum Committee approved the proposal and outlined a plan to bring it to the next meetings of the Department Heads, Clerkship Directors, State Capital Campus faculty, and finally to the General Faculty.

The data indicated that State Capital faculty voted down the Anesthesiology/Ophthalmology proposal. This faculty body wanted the concepts of the Ophthalmology proposal to be integrated into the first two years of medical school so
students would be prepared with this knowledge before entering the wards. There may have been an additional agenda. Many of the State Capital faculty also offered fourth year electives and may have been acting to protect the time that students used to participate in their electives. The council of Department Heads also was not supportive of the proposal. Their suggestions focused around including the concepts in the Anesthesiology proposal into the Surgery Clerkship rotation and lengthening the rotation to 12 weeks. At this point (October 20, 1999), the Curriculum Committee discussed the advisability of withdrawing the proposal as a required course, and offering it as an elective instead, and delayed to January the presentation of the proposal to the General Faculty. It was reported in a November, 1999 Curriculum Committee meeting that the department heads from Anesthesiology and Ophthalmology would meet with their respective faculties to discuss the variety of options presented (original proposal for a three-week required clerkship; expanding the second year Preparation for Clinical Medicine course; a three-week elective; and/or extending the Surgery clerkship) and report back to the Curriculum Committee.

The influence of the students was evidenced in the data surrounding the December 1, 1999 Curriculum Committee meeting. Students recommended that the Anesthesiology/Ophthalmology proposals be “strongly recommended” instead of required. At issue was the students’ desire to maintain an entirely elective fourth year. Faculty from both the Anesthesiology and Ophthalmology departments would not commit the level of effort necessary to conduct such offerings as electives, and still maintained their desire that the rotations be required. Students decided to hold a Town
Hall meeting early the following semester to discuss the proposals and make a final recommendation to the Curriculum Committee.

The Student Town Hall occurred on January 23, 2000. The result of the Town Hall was the construction and administration of a survey to poll students on four recommendations (incorporate a required Anesthesiology/Ophthalmology rotation in the fourth year, incorporate the required rotation in the third year and reduce the Family and Community Medicine rotation by three weeks, incorporate the required rotation in the third year and reduce the Psychiatry rotation by three weeks, and create a two-track system into which students may choose – one requiring six weeks of Psychiatry and no Anesthesiology/Ophthalmology rotation, and the other requiring three weeks of Psychiatry and three weeks of Anesthesiology/Ophthalmology).

The results of the student survey were presented during the February 16, 2000 Curriculum Committee meeting. Data indicated that a majority of the students supported the two track system expressing that it would give them the most flexibility in their education. In response, the Curriculum Committee motioned to table the proposals for the Anesthesiology/Ophthalmology clerkship rotations until further review of the curriculum could be conducted. The proposals did not appear again in the data through the rest of the course of the study. However, there was discussion spanning the next fourteen months that culminated in a decision requiring students to purchase ophthalmoscopes and clerkships to add eye exams to their skills checklists.

The process of the Anesthesiology/Ophthalmology proposal was longer than any of the other proposals for curricular change in the data. It appeared in the data over a
course of twenty-three months from its initial inception to the final outcome. The data indicated that it was strongly supported by the faculty, but it represented a unique challenge – that of changing the disciplines historically covered by clerkships. It was initially proposed that the anesthesiology content be incorporated into the Surgery clerkship. This idea was opposed by the head of the Department of Anesthesiology and by the director of the Surgery clerkship for reasons that fit within the jurisdiction construct (Abbott, 1988) underlying this study. The department head of Anesthesiology, Recognized that experience in Surgery and Anesthesiology are closely related, [but] made the point that a rotation geared toward the proposed Anesthesiology content could not be integrated into the students’ activities while participating in the Surgery clerkship... The higher specialization in Anesthesiology will provide the standardization and focus necessary to teach emergency management skills (Curriculum Committee Meeting Minutes, August 18, 1998).

In other words, students would need to be free of other content requirements in order to fully gain the specialized knowledge outlined in the Anesthesiology rotation proposal. The director of the Surgery clerkship used the same line of jurisdictional reasoning in arguing to keep the proposed goals out of the Surgery clerkship: “[The surgery clerkship director] is of the opinion that students should have a separate rotation... as these subjects are best taught by experts” (Clerkship Directors Meeting Minutes, May 25, 2000).

Jurisdictional issues were less evident in relation to the Ophthalmology proposal. The department head for Ophthalmology worked tirelessly to ensure students had the basic skills necessary – regardless of where they were taught. The data indicated that he would have preferred a separate clerkship rotation, but was willing and quick to provide the necessary instruction in the Clinical Medicine Skills (CMS) course. The CMS course director reported to the Clerkship Directors that the Ophthalmology department head “has
almost single handedly taken on the ophthalmologic skills teaching in CMS" (Clerkship Directors Meeting Minutes, December 7, 2001). Here again is an example of the theme of individual effort in effecting curriculum change that has repeatedly emerged in the data. This topic will be more fully discussed in the next chapter.

Interestingly, there was very little evidence of discussion at Clerkship Directors meetings about the Anesthesiology/Ophthalmology proposals. Even when students proposed making the Family and Community Medicine rotation or the Psychiatry rotation shorter, the data did not indicate that the directors from either of these rotations attempted to "protect their turf" by making a case against shortening their rotations. Active opposition to shortening the rotations would have been expected from the perspective of the jurisdictional construct. The lack of evidence of the Clerkship Directors' response to the Anesthesiology/Ophthalmology proposal is remarkable given that their territory would have been threatened. It may be possible that the Clerkship Directors did not know about the proposal.

There was little evidence in the data of the resource dependency (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997) constructs in relation to the Anesthesiology/Ophthalmology proposals. All discussion of resources around these proposals indicated that sufficient resources already existed – faculty members were willing to take on the teaching responsibilities by having students rotate with them in their clinical settings, there were plenty of appropriate patient cases from which the students could learn, there was sufficient equipment and physical space. Lack of resources was not an issue. Having said this, the resources necessary to devote to the
proposed clerkships was the basis of the two department heads opposing the students' recommendation to make the rotations elective: "... faculty from both departments indicated that they did not consider it feasible to commit the level of effort necessary to conduct such offerings as electives with an unpredictable and variable number of students" (Clerkship Director Meeting Minutes, January 6, 2000). Unless the rotations were validated as a required component of the curriculum, the faculty from the two departments were not willing to participate.

Lukes' construct of power seems most relevant in examining the data related to the Anesthesiology/Ophthalmology proposals. There was evidence of debate about the proposals, but not among the faculty. The groups of faculty involved in the process supported the proposals. There were numerous occurrences in the data of faculty validating the importance and necessity of the proposed content. The only group of faculty to oppose the proposals was the State Capital Campus faculty. They agreed with the others about the importance of the content, but differed in where they thought it should be taught. The central debate surrounding this proposal occurred between the faculty (who generally supported the proposals) and the students (who did not). The debate was evidence of Lukes' (1978) first level of power – there was observable conflict of subjective interests. The faculty wanted to implement a new required clerkship rotation, and the students did not want any requirements to spill over into the fourth year. It was interesting that the debate occurred between two parties of unequal status in the institutional hierarchy. Instead of mandating the change, the faculty included students in the process of decision-making. Indeed, the faculty gave the students quite a bit of power
in the decision making process. The faculty allowed for time for the students to hold a Town Hall Meeting about the proposals. They allowed for more time for the students to create and conduct a survey. But the faculty did not implement the students’ ultimate decision – to create a two-track system. Ultimately, the faculty maintained control of the agenda (evidence of Lukes’ second level of power) by tabling the proposal. In the end, however, it was the students who “won.” There were no required clerkship rotations implemented in the fourth year. And the faculty “lost.” Students did not receive instruction aligned with the objectives put forth in one of the proposals, the Anesthesiology proposal – instruction that was consistently and unanimously labeled as important and necessary by the faculty. Students did, however, receive instruction related to the Ophthalmology objectives because of the tireless efforts of one faculty member.

The third dimension of power (Lukes, 1978) was evidenced in two ways. As previously highlighted, the tolerance of students’ resistance to change the fourth year appeared to be an acknowledged and accepted aspect of the culture of this medical school. The other evidence of the third dimension of power was revealed in how specific disciplines are awarded clerkship rotations. The disciplines covered by clerkships are historically based. These are the clerkships that were implemented when the medical school started. According to the Dean, “Ophthalmology and Anesthesiology weren’t there because they weren’t there to begin with. All the time is taken up. We can’t expand the time. We would have to give something up” (Jones, Q8). It appears from this
quote that issues related to the third dimension of power and to jurisdiction interacted to keep new rotations out of the clerkships.
CHAPTER 6

BROADER ISSUES AFFECTING CURRICULAR CHANGE

Introduction

The proposals for curricular change described above were happening within the larger context of the University College of Medicine, the Health Sciences Center, the State University, and the surrounding local and national health care environment. Examining the process and outcomes of curricular change efforts would be incomplete without including an analysis of the internal and external mechanisms that were happening simultaneously. This chapter will include an examination of these broader issues and an analysis of how they impacted the attempts at curricular innovation. The issues to be addressed include the effects of internal and external financial issues, the research agenda, the organizational structure of the institution, and the role and influence of the various players including the Dean, the Department Heads, the faculty, and the students.

Financial Issues

In order to explore the possible relationship between financial issues and the proposed curricular enhancements, a brief summary of the institution's budgeting and resource allocation process follows. Each year, the University assembles a decision package, or request for budget, to the State Board of Regents (SBOR). The SBOR approves or disapproves the budget. It is then up to the State whether they will fund the budget in its entirety. Annual expenditures for the University in fiscal year 2002 totaled approximately $1.2 billion. The State appropriation was approximately $409 million, or
33% of the University’s expenditures. Annual expenditures for the Health Sciences Center (HSC, including Colleges of Medicine, Nursing, Pharmacy, and Public Health) total approximately $265 million, or 21%, of the total University expenditures. Approximately 78%, or $208 million, of the HSC expenses were incurred by the University College of Medicine. Annual expenditures by major funding groups for the University College of Medicine are detailed below:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>$45,283,196</td>
<td>22%</td>
</tr>
<tr>
<td>Auxiliaries</td>
<td>$3,241,584</td>
<td>2%</td>
</tr>
<tr>
<td>Designated</td>
<td>$12,751,103</td>
<td>6%</td>
</tr>
<tr>
<td>Sponsored Projects</td>
<td>$98,787,807</td>
<td>47%</td>
</tr>
<tr>
<td>Restricted</td>
<td>$10,318,596</td>
<td>5%</td>
</tr>
<tr>
<td>UPG*</td>
<td>$37,472,077</td>
<td>18%</td>
</tr>
</tbody>
</table>

*UPG stands for University Physicians Group (a pseudonym). It is the practice plan in which University College of Medicine clinicians participate. This number represents the flow of UPG expenditures on the University “books” which is primarily physician member salaries and fringe benefits. An additional $5.6 million of expenditures was recorded on UPG books and included salaries and benefits for other professionals (nurses, technicians, aides, etc.), overhead, and equipment.

State money is allocated to the Health Sciences Center through processes referred to as lump sum and continuation budgeting. Instead of going back to zero base each year, allocations are based on what was given the year before (continuation budgeting), and the allocations are given all at one time (lump sum). The same process is used to allocate
money from the Health Sciences Center to its colleges – Medicine, Nursing, Pharmacy, Public Health, and the School of Health Related Professions.

Allocations from the University College of Medicine to its departments also are historically based and are allocated on eight lines (FTE funding, benefits, operations, travel/in state, travel/out of state, capital investment, student support, and other expenses). The way the budget is allocated to departments is not necessarily the way it is spent. There are no restrictions on these line items. Through the entire process – from the State to the University administration to the departments – there are no specifications for education, although historically the understanding was that state money was used to fund education.

When examining revenue streams, some patterns emerged in the study of financial resources allocated to the University of xxx, in general, and to the University College of Medicine, in particular. The state of xxx has reduced its funding of higher education by more than half since 1974 (Postsecondary Education Opportunity, December 2002). This reduction in funding was reflected in the state allocations ultimately received by the University College of Medicine. Though expenses have steadily increased, the percent of the budget covered by state dollars during the period of this study has fluctuated around the 25% mark, dropping to almost 20% in fiscal year 2001. Further complicating the financial status of the institution was the steady decline in the percent of the budget achieved by the physicians’ practice plan, dropping from a high of 39.2% in 1994 to 36.6% in the beginning of 2002. As a percentage of total revenue, grants and contracts declined steadily from approximately 34% in 1994 to
31.9% in 1998, then started an upward trend to achieve a level of 40% of total revenue in fiscal year 2001.

In medical schools around the country, and certainly at this University College of Medicine, clinical revenue was the largest single source of funding (Tomasa, 1998). Over the course of the present study, the physicians’ practice plan, UPG, was the greatest source of revenue for all years, except the last year of the study when grants and contracts was the greatest. Simultaneously, however, the data illustrated that the practice plan/clinical revenue was being significantly impacted by managed care. From the earliest days of the period of this study, the data indicated that competing in a managed care environment was having a negative impact on the financial status of UPG:

Managed competition is having a very negative impact. We’re not only getting reimbursed less, we’re also seeing fewer patients and the reason we’re seeing fewer patients is that patients in many HMOs are not authorized to get their care here. This is something we have to deal with. All medical schools are going to face the same problem. It’s more acute here because we have a higher HMO ratio, 90-85%, more than almost any city in the United States. So, that’s why we were feeling the impact (General Faculty Meeting Minutes, January 18, 1994).

This piece of data revealed the extent of the challenges to be faced by UPG in the coming years.

Academic medical centers were hit especially hard by managed care because of the higher costs associated with providing patient care in an academic medical center setting. The cost per patient is higher at an academic medical center because it includes education costs, making it difficult for academic medical centers to compete in the managed care marketplace. According to one interview,

A good chunk of the [education] budget relies on patient care income. The medical school has to bid along with everyone else, for example Cigna, to provide
patient care. UPG was bidding along with everyone else. UPG has to include education costs, but none of the other bidders do, so ours is more expensive. We need more people to keep the money flow at a good level (Michaels, Q1).

In 1994, UPG lost its contracts with the state Medicaid program to fund indigent care to a lower bidder. The effect on UPG was enormous. Some departments within the University Medical Center relied almost solely on the state Medicaid program for money, and now that whole category of patients, and patient revenue, had been lost. The Chief Medical Officer for UPG began calling on the University Physicians to see more patients, “We need to strive to increase patient activity, which, in turn, will increase revenue” (General Faculty Meeting Minutes, September 20, 1994). In the second quarter of 1995, the Chief Medical Officer (CMO) continued to press physicians to see more patients, “...we have been working very hard to increase our patient volume in order to increase our managed care contracts” (General Faculty Meeting Minutes, May 16, 1995). Six months later, the CMO reported, “Overall, business has increased dramatically which demonstrates how hard our physicians are working. The financial status of UPG has greatly improved from three years ago. Again, this is due to the hard work of the faculty members who are willing to see more patients and do more work.” The Dean then commented, “...the increase in clinical volume really is striking given all the things that are happening in the marketplace. There is no doubt that it is largely due to faculty members who are making the extra effort and this is very, very important” (General Faculty Meeting Minutes, November 21, 1995). These examples are provided to highlight the pressure put on faculty from organizational leaders at or near the top of the
hierarchy to increase their clinical workload. These pressures were occurring at the same
time as the preliminary work on CCAPP was being done.

In early 1994, the CCAPP was wrapping up the second phase of the process, the
analysis of the curriculum. In March, it presented a written report, “The Statement of
Ideals” to the General Faculty. Three areas in the curriculum were identified as needing
attention: there needed to be greater integration among and between the courses and
clerkships, there needed to be greater emphasis on independent learning and critical
thinking skills, and there needed to be more professional rewards and support for
teaching. Interestingly, during the discussion following the motion to accept this
document and move to the third phase of CCAPP, a faculty member questioned the
viability of continuing further due to the financial situation of the State. The Dean
responded by saying, “Even in spite of these [financial] difficulties, we must always
remember that our main purpose is teaching. Therefore there is nothing incompatible
about the fact that we have to work very hard clinically, in research, and in the
curriculum” (General Faculty Meeting Minutes, March 15, 1994). The motion to move
to the third phase of CCAPP (the proposal and appraisal stage) was passed. The Dean’s
verbal support of the process and dismissal of financial issues may have been
instrumental in moving the faculty beyond the debate and into support of the CCAPP
process, as is consistent with the leadership/organizational power construct described by
Bland et al. (2000) and with Lukes’ (1978) second dimension of power (setting the
agenda).
Work on CCAPP continued unobstructed through 1994. The budget situation looked good with the Dean expecting the State to allocate what the Health Sciences Center had requested. UPG was developing a “three-pronged approach” regarding primary care that would increase revenue. In late 1994, the CCAPP Steering Committee, working with the Dean, reported to the General Faculty that a letter was sent to all faculty members and to organizations around the state requesting ideas and themes regarding how to plan a curriculum that is consistent with the Statement of Ideals. The data do not indicate that there were any more voting items for the General Faculty related to CCAPP in 1994.

Work on CCAPP’s Proposal and Appraisal Group continued through 1995, with the development of subcommittees to address the six major proposals received in response to CCAPP’s statewide request for curricular input. Financial pressures were evident in the data, but not central. The State was doing well financially, but did not choose to fund the HSC proposals (Area Health Education Center, State Disease Control Commission, and expansion of eligibility for the state Medicaid program), resulting in a flat budget for the year. UPG developed strategies for quicker, more effective communication with community physicians who referred patients to the University Medical Center (UHC). In March, the Dean, the chairman of UPG and the Chief Medical Officer of UPG made a report to the State Board of Regents outlining the effects of managed care. Their report summarized what had appeared in the data to that point. At the September 19, 1995 General Faculty Meeting, the Chief Medical Officer for UPG announced, “UPG has had a good year and is surviving managed care.” In spite of the
relatively good financial reports at the time, at the November 21, 1995 General Faculty meeting, the Dean commented, “CCAPP is one of the most important processes going on at present but [I] feel that, although we have done a very good job to this point, it (CCAPP) must be brought to closure” (italics added).

The documents analyzed for this study did not include evidence of the effect of managed care on individual departments. In spite of the “good year” and the “survival of managed care” that was reported in the General Faculty Meeting minutes over the course of 1995, at least one department was in dire financial condition. The Department of Family and Community Medicine (FCM) had a deficit of $700,000 and was placed in financial receivership. Many of the reasons for their situation could be traced to managed care. New capitated reimbursement rates resulted in less money going into UPG. Under the UPG contract, specialty departments received a greater reimbursement rate, leaving less money for primary care departments like FCM. Tomasa (1998) reported data from this period of time consistent with the constructs of resource dependency and jurisdiction: “When resources are tight, departments protected their own resources. Departments were not accustomed to thinking about what was best for the entire group, but thought in terms of what was best for them” (p. 189). Clearly, the news in 1995 was not all good.

In 1996, the legislature awarded the State University and the Health Sciences Center a level budget – the same as the year before. The financial focus at General Faculty meetings was on increasing funding and endowments for research (January 9, 1996), maintaining appropriate documentation to avoid charges of Medicare fraud (March 19, 1996), and creating strategies for dealing with the increase in number of
patients that typically happened during the winter season (September 17, 1996). Based on the documentation, concerns about the financial status of UPG were not apparent during 1996. However, level funding is seen, and often experienced, as a loss in funding as expenses continue to rise each year.

There was, however, evidence in the data of one activity that may have affected departments’ willingness to participate in and/or accept change in the curriculum – a process referred to as the “teaching study.” The teaching study looked at how state dollars were being used in relation to teaching and it required participation from all of the basic and clinical science department heads. For the first time, “departments became aware they would have to align teaching resources with teaching to the best of their abilities” (Tierney, Q31). The results of the teaching study indicated that the basic sciences were doing approximately 22% of the teaching and receiving 25% of the State dollars, and clinical sciences were doing approximately 80% of the teaching and receiving 75% of the teaching funds. The Dean reported that the decision was made not to shift funds from the basic sciences to the clinical sciences or vice versa. Two clinical departments were found to be “grossly underfunded” in relation to the amount of teaching they were doing. The Dean made cuts in administration to increase State funding for these two departments. In describing the outcomes of the teaching study, the Dean concluded by saying,

What is happening in our medical school is also happening at every other medical school. In the past, clinical departments made enough money to supplement teaching and to supplement research, but that is no longer possible. Working at full speed, our clinicians will just make their clinical salaries (General Faculty Meeting Minutes, May 21, 1996).
The data indicated that the overall effect of the teaching study was to make department heads more protective of their teaching time and the associated financial allocations, and less likely to enter into conversations about curricular innovations that might require them to negotiate away some of their teaching time. According to the Dean for Academic Affairs, faculty members were more active in protecting their turf after the teaching effort study was undertaken. “Everyone wanted to protect their money [teaching time]. It’s one of the major reasons why no tremendous changes occurred in the curriculum” (Murray, Q6).

Since the teaching study was being conducted by one of the same people who was staffing the CCAPP process, some faculty members experienced the two processes as related. The data indicated that having the two processes occurring simultaneously and by some of the same people created confusion and contributed to faculty members having negative thoughts about the administrators involved. (This negativity emerged as a theme in the data and will be discussed in more detail later in this chapter.) The negativity can be understood from the perspectives of resource dependence – faculty members were afraid of losing their financial support, and professionalism/jurisdiction – faculty members were afraid that the scope of their importance in the curriculum would be diminished. This point was succinctly demonstrated by one interviewee, “People like their curriculum time because it gives you power in medical schools. The more time you have in the curriculum, the more important you are” (Mann, Q6).

The major CCAPP initiative happening in 1996 was the proposal for an organ-based basic science education. As previously described, the proposal did not even make
it to the General Faculty. It was voted down in a meeting of the Basic Science Department Heads. The Dean reported in the March 19, 1996 General Faculty meeting “There was virtually no enthusiasm for an organ-based system curriculum. CCAPP will not, therefore, head in that direction.” As previously indicated, the data revealed a possible financial explanation for the Department Heads’ defeat of this proposal that can be understood from the perspectives of academic capitalism (Slaughter and Leslie, 1997) and resource dependence (Pfeffer and Salancik, 1978). Faculty members were working at full speed just to maintain their salaries and departments. Rewriting the curriculum would have taken time away from these tasks and placed faculty/departments in financial jeopardy.

In 1997, the reports to the General Faculty about the financial status of the institution reappeared with a clear message that the practice plan was suffering. Excerpts from the data illustrate this point: “Basically, times are pretty tough right now clinically for most departments. Reimbursement is about the same as last year while expenses are up,” (General Faculty Meeting Minutes, March 18, 1997); “UPG is having considerable difficulties. The reason is that [the Health Sciences Center] is in the mainstream of the marketplace competing with everyone else...At the same time, revenues are decreasing because HMOs and other managed care organizations reimburse for less,” (General Faculty Meeting Minutes, May 20, 1997); “1995-1996, UPG was in the black. 1996-1997, UPG lost considerable funds. There are many reasons for this. At the top of the list is decreased reimbursement. The market place is comprised of HMOs, contracts, and negotiated fees resulting in physicians seeing more patients while revenues are
decreasing. There is also significant increase in expense. Expense goes up when there is an attempt to cut health care costs by additional regulation” (General Faculty Meeting Minutes, September 16, 1997). By the end of 1997, the news got a little better: “UPG, similarly to UHC, struggled through the first two months of the [fiscal] year. It appears that some of the loss rate has turned around. UPG is looking for that to continue” (General Faculty Meeting Minutes, November 19, 1997). The Dean got actively involved in ensuring this turn around. He and two members of his financial team met with each department head to review their financial status and ensure that UPG would be in good shape at the end of the fiscal year.

During the financially troubled times in 1997, CCAPP was proposing curricular changes to the General Faculty for their approval. The proposals included recommendations from the basic science group, problem-based learning, and the longitudinal clinical curriculum. Each of these proposals was discussed in detail above. They are readdressed here in relation to the broader issue of financial status of the institution in an attempt to identify evidence consistent with resource dependence theory. Two of these three proposals were approved by the General Faculty; PBL was not.

During the meeting in which the basic science proposal was approved, the Chief Medical Officer for UPG was not present, and therefore, no financial report was given. The Dean did announce that the greatest need facing the College at the time was to increase endowments to fund research. In spite of the lack of documentation, one could safely assume that financial concerns were among the thoughts of those at the meeting.
As previously indicated, financial concerns were due, in part, to why the approved basic science proposal was never fully implemented.

The PBL and LCC proposals were presented during the next General Faculty meeting on March 18, 1997. In spite of the difficulties being experienced by the physicians' practice group, the State budget appeared in better shape. At the beginning of the March 18 meeting, the Dean reported "This will be a banner year for the College in terms of the budget." Later on in the meeting, the Dean stated his belief that the College receives adequate State funding for teaching. Later in the meeting when it was time to vote on the proposed changes to the curriculum, the PBL proposal was voted down, and the LCC proposal was accepted. During the debate that followed the introduction of the PBL proposal, concern was expressed about the resources required to implement PBL. The CCAPP chairman reminded the General Faculty that, for all CCAPP proposals, the issue of resources would be addressed after proposals were approved by the General Faculty. Nonetheless, the historical pattern in resources, and concerns about the future likely contributed to the defeat of this proposal.

The issue of resources was again raised during the debate that followed the introduction of the LCC proposal. The concerns were specific to the resource intensive nature of the proposal when physicians were already incredibly pressed within their time schedules to see more patients, as well as lacking in clinic space. This argument was consistent with the constructs of academic capitalism and resource dependence (Pfeffer and Salancik, 1978) and was clearly articulated during the meeting. Interestingly, the LCC proposal was approved by the faculty.
In summary, the data from 1997 did not indicate a consistent effect of the larger financial status of the institution on the outcomes of the proposed curricular enhancements. Within the larger negative financial status at the time, the PBL proposal required fewer resources and was rejected, and the LCC proposal required many more resources and was approved.

In 1998, the data indicated the financial status of UPG had improved. During the same year, there were a number of CCAPP proposals put before the General Faculty: required subinternships, a general orientation to the 3rd year, and the implementation of an interdisciplinary seminar series. As in 1997, two of the three proposals were approved. The required subinternship was rejected. And as in 1997, the financial status of the institution documented in the General Faculty Meeting minutes did not appear to be useful in predicting which of the proposals would be accepted. The somewhat unpredictable nature of the institution’s financial status may have contributed to faculty members’ wariness about curricular change.

The effort to add a clerkship rotation in Anesthesiology was the only significant curricular change proposed in 1999. Financially, the data indicated that the institution was “in the black.” The Department Head for Anesthesiology reported having enough resources already in place to accommodate a clerkship rotation. The data did not reveal a correlation between financial issues and the defeat of the Anesthesiology proposal.

The financial status of the institution became a bit more tenuous in 2000 due to a reduction in patient volume, up to 30% in some departments, at the beginning of the year,
some of which was recovered by the end of the year. There were no initiatives to change the curriculum in 2000.

In 2001, the data indicated the College was surviving financially. State allocations to the Health Sciences Center increased by $1 million, primarily for the State Capitol Campus and UPG finished the year in the strongest position in its history and with a substantial profit. As in 2000, there were no significant curricular proposals.

There was only one meeting of the General Faculty in 2002 before the end of the period of this study. No one was present to give a financial report, and no curricular changes were proposed.

In summary, the financial data indicated that the College was hit hard by managed care, yet it developed strategies to survive. Some curricular innovations were introduced and approved during this time – but none to the extent that they were originally designed. The constantly fluctuating financial picture and the severe impact of managed care likely made large-scale reform seem difficult, if not impractical, to the institution’s faculty and its Dean. Though it was not reflected in the documents analyzed in this study, a number of interviewees stated the belief that the scope of success of CCAPP would have been much greater had it not been for the financial challenges brought on by the changes in managed care. Much of the lost potential was attributed to attention the Dean had to give to keeping the practice plan viable. One interviewee reported,

When all this was happening [moving into the Proposal and Appraisal phase of CCAPP], all hell broke loose with the healthcare environment in Tucson. We had terrible problems with the practice plan because of managed care. We lost the [state Medicaid] contracts. It became hard for people to stay involved in the curriculum efforts...[the Dean] was struggling to keep the school and the practice plan afloat (Michaels, Q1).
Another interviewee expressed almost the exact same sentiment, "The Dean didn’t want the medical school to go under on his reign. His main goal was keeping us afloat financially" (Murray, Q10).

During the financially tight times of the mid 1990s through the early 2000s, it might have been effective to propose curricular reforms that could save or even generate money. None of the proposals made during the period of this study made that assertion. Part of the reason might be the Dean’s stated belief that there was enough money for education and his assurance that he would fund the reforms approved by the General Faculty. Yet given the overall financial context in which the changes were being attempted, designing reforms that would save or leverage new money may have been an effective strategy. Admittedly, it would be challenging to create proposals that were both pedagogically sound and saved money given the fact that that any change would, at a minimum, “cost” faculty planning time.

The Research Agenda

The Dean was a self-proclaimed “pro-education Dean.” Many of the people interviewed for this study acknowledged that education was high on the Dean’s priority list. But as the data above revealed, the Dean’s top priority was the financial viability of the faculty’s practice plan. Further examination of the data indicated that the research agenda also was high on the Dean’s priority list. Documents from General Faculty meetings highlighted the importance of the research agenda to the faculty at large. At the May 20, 1997 meeting of the General Faculty, the chairman of the Long Range Planning Committee (LRPC) reported that the committee had been studying the impact of the
current economic environment on teaching and research in the clinical departments of the College. Based on their study, the LRPC proposed to do a study to define the roles of the faculty, specifically to identify who should be doing the teaching, who should be doing the research, and how should time be divided. The Dean supported the proposal stating that the biggest threat facing the institution was not the impact of managed care, “That we can deal with” (General Faculty Meeting Minutes, May 20, 1997). The Dean saw the biggest threat to be to clinical research. Without the funded time necessary to conduct research, the Dean feared that a whole generation of clinical investigators could be lost. During the next General Faculty meeting on September 16, 1997, the LRPC chairman reported that his committee would spend the next year developing a strategic plan focusing on how the College could preserve its research funding and its research mission. Next, he reported, the committee would develop plans for looking at how the teaching mission could be enhanced. This was the very last time the LRPC mentioned teaching or education. For the next five years (to the end of the period of time under study), documents revealed that the LRPC focused exclusively on research. Education fell off their agenda. The absence of education can be understood from the perspectives of academic capitalism and resource dependence because education is not an income-generating activity. Research is. Faculty were needing to focus their time and energy on activities that would produce income for the institution. From the perspective of power, those who controlled the agenda did not put education back on LRPC’s agenda. Controlling the agenda is an activity consistent with Lukes’ (1978) second level of
power. Over the course of the following year, the focus of the LRPC remained on developing a strategic plan for research.

The de-prioritization of education was subtly represented in other documents analyzed for this study. In his address to the General Faculty at the HSC on June 1, 1999, the president of the University acknowledged, “those engaged in clinical practice, as well as the research and teaching enterprise, are getting squeezed six different ways. It has put enormous pressure on faculty life in the medical schools across America.” He went on to say, “We must prevail. The research universities must continue to prosper as they have for many years.” The remainder of his speech addressed clinical and research issues. Nothing more was stated about education. Eight months later, the University of Arizona Provost addressed the HSC faculty. He outlined his vision that “HSC will continue to make progress enhancing the degree to which it serves the State; that it will continue to deepen the basic research carried out and its connectedness with clinical research and with the centers” (General Faculty Meeting Minutes, February 20, 2001). The Provost did recognize that the College of Medicine was “heavily engaged in teaching and training, basic and applied research and it is dedicated to outreach and the clinical component, resulting in a broad, deep agenda.” The remainder of his speech was about Proposition 301 and the biotechnology research that would be made possible through proposition’s funds. As with the President, the Provost made only a passing comment about education, and focused the rest of his speech on the money making activities of the institution, an angle consistent with academic capitalism (Slaughter and Leslie, 1997). The focus on research also may be understood through the lens of Lukes’ third dimension...
of power. In a research I university, research is key. The culture of such an institution does not allow for education to be the primary focus of the institutional leaders. Additionally, revenue-generating activities have moved to center stage as institutions of higher education struggle to survive financially and faculty members and administrators seek to establish profitable partnerships with businesses and industry. (Pfeffer and Salancik, 1978; Slaughter and Leslie, 1990). So, the President and the Provost may simply have been representing the reality at the time of this particular Research I institution.

In summary, the data repeatedly indicated that research was a higher priority for the College and its leadership than was education. The Dean did verbally support the CCAPP, but it was not at the top of his priority list (Michaels, Q1, Mann, Q13, Murray, Q10). (The influence of the Dean on CCAPP will be explored in greater detail below.) Though education is included in the mission, it does not naturally emerge at the top of the agenda. If asked about the cultural expectation that research be placed at the top of the priority list, even the educators would probably defend or justify it – some from the perspective of needing the resources generated through research, and others by stating that research is necessary for the discovery and advancement of knowledge. In response to a question about how faculty members prioritize the tripartite mission of the institution, a Vice President for HSC Finance stated, “They don’t think they have time to do all three. The value is not there for the teaching mission. It is not rewarded or valued” (Tierney, Q34). Accepting this cultural expectation of research “out-ranking” education, even if they did not like it, would be evidence of Lukes’ (1978) third dimension of power.
Organizational Issues/Structure of the Institution

When asked about the outcomes of CCAPP, many involved said they “failed” miserably. Some changes were made, but none to the level initially proposed. Other initiatives were rejected, while still others never even made it to the General Faculty for a vote. Some of the possible explanations for the “failure” of CCAPP that emerged from the data were described above, for example, financial issues, and the priority of research over education. Another theme that emerged was the organizational structure of the medical school.

In the Analysis stage of CCAPP, three broad areas were identified as needing attention. The first area had to do with integration. “Here, knowledge, skills, and attitudes need to be more systematically developed among the students. The current curriculum is more or less made up of relatively free standing courses and clerkships with less than the optimal amount of integration and coordination between them” (General Faculty Meeting Minutes, March 15, 1994). Increasing horizontal integration became one of the overarching goals of CCAPP. Many of the recommended curricular enhancements specifically targeted this goal, for example, PBL, organ-based basic sciences, Years III/IV Continuum, the Basic Sciences proposal, and interdisciplinary seminars. As previously described, none of these proposals were implemented to the extent originally proposed, and some of these proposals were simply not approved by the faculty. One of the themes that emerged in the data as a possible explanation for the lack of success in integrating the curriculum was organizational structure of the institution.
The organizational structure of the College was highly decentralized. In terms of education, that meant that each department developed their own piece of the curriculum. There was no expectation that departments consult with each other or review other pieces of the curriculum. Additionally, there was no central office coordinating the curriculum. Though the Office of Curricular Affairs existed, it had no authority or jurisdiction over the curriculum. In his interview with me, the Dean expressed his preference for an organ-based system for the basic sciences, but went on to say, aside for the turf issues, an interdisciplinary course would be hard to put together without a central curriculum office (Jones, Q2).

An Associate Dean also acknowledged the importance of a central curriculum office and just what it would take to get one,

The recommendation for a centralized curriculum office was not implemented because of money. I firmly believe the only way to change curriculum and have curriculum run by faculty who are interested in medical education is to have a centralized office. A central office would need money to pay for teaching. The Dean would have to take a lot of money away from departments. He wasn’t willing to do that. It would have been a bloody revolution. It is a grand idea (Murray, Q2).

This quote nicely illustrates the resource dependence and jurisdiction constructs underlying this study. Departments were not willing to give up a source of income (State money for education), nor were they willing to have someone other than themselves (faculty who are interested in medical education) determine what is to be taught.

A decentralized governance structure also meant that money for education was allocated to each individual department. Resources were allocated based on historical patterns. According to a Vice President for HSC Finance, “Resource allocation is based
on historical allocations. As times change, the process for allocating resources has not changed enough to address new needs. If curricular needs change, we haven’t addressed this through resource allocation” (Tierney, Q14). With the decentralized governance structure, there was no accountability for how the educational money was being spent. According to the current Dean of the medical school, “A major part of the resources are given to the departments with no strings attached. That’s a big negative on resource allocation” (Quinn, Q17). Many of the Associate and Assistant Deans interviewed for this study reported the Dean of the medical school did not have any way to gain the support of the department heads for the proposed educational enhancements (Tierney, Q9, Quinn, Q17; Michaels, Q1). “We can’t be innovative since resource allocations are based on historical patterns” (Tierney, Q5). The chairman of the CCAPP Steering Committee, who was also a department head at the time stated, “You have to show your contribution to teaching. You contribution to teaching could get lost in interdisciplinary courses and you could get hurt” (Jefferson, Q1).

The departmentalized structure of the institution also served the jurisdictional concerns of the departments. As mentioned above, many of the proposals put forth by CCAPP were interdisciplinary in nature. The prospect of interdisciplinary education was a huge threat to the jurisdiction of each department and its faculty in determining what is important for the medical students to learn. According to one of the Associate Deans,

The biggest problem confronted was the ego-based nature of the proposed changes. In the case of clinicians, they thought, ‘Look, I was educated this way and I’m a good doctor. If we say this isn’t a good educational way, then it assails that I’m a good doctor, and I’m not willing to go there.’ With the basic scientists, they think, ‘I have this piece of the curriculum. I’m an expert in this discipline. If we are going to do PBL [interdisciplinary education], I can’t assure the students
will get enough of my discipline and students might kill people and I’m
responsible for ensuring they don’t kill people. If the education is student-led,
then I can’t ensure they’ll get every factoid I’ve identified as important.’ To be
completely successful, you’d have to find some way for change to not assail one’s
sense of self (Michaels, Q7).

This data element eloquently speaks to the jurisdictional constructs espoused by Abbott
(1988).

On the other hand, had a centralized curriculum office been implemented, the
departments’ losses would have been the new office’s gains. It would have gained the
prestige that goes along with jurisdiction over the curriculum, along with potentially
substantial resources to implement the educational program.

From the point of view of Abbott’s jurisdiction, I pursued whether there was a
greater perceived emphasis on the quality of the educational program or on protecting
one’s turf. Of the nine people who were interviewed from CCAPP, four of them believed
the emphasis during the process was on quality. Two people believed the emphasis was
on turf, and two people said the emphasis was equally on both. One person did not
answer the question. The two people who believed the emphasis was on turf were two of
the people most involved with every aspect of CCAPP. One was the chairman of the
Steering Committee, the other an Assistant Dean responsible for supporting CCAPP. The
other two who acknowledged that turf was an issue were an Associate Dean and the
chairman of the PBL subcommittee – the most contentious of all the committees. These
were the front line people that had to address and negotiate the jurisdictional issues
brought forth by the players throughout the process.
Of the four people who perceived the emphasis to be on quality, one was the Dean and the other was responsible for the ancillary campus. Believing the emphasis to be on quality fit with the Dean’s perception of himself as a pro-education Dean. The ancillary campus member described CCAPP as a positive experience that brought the members of the then young ancillary campus together. She noted that since the ancillary faculty were all clinical faculty from various teaching hospitals, they did not have a personal agenda, nor the barriers [jurisdictional boundaries] of departments. There were fewer jurisdictional groups in ancillary campus, and therefore, less emphasis on the protection of turf at the expense of quality in the educational program.

Effects of the Dean

The literature on curricular innovation is clear that the Dean, or the person in the ultimate position of institutional leadership, must fully and enthusiastically support the efforts for there to be any chance of successful change (Bland et al., 2000). Based on this literature, the role and effect of the Dean during the CCAPP process was analyzed. Not surprisingly, the data were rich with examples of the Dean’s effect on the process of CCAPP. At numerous General Faculty meetings, the Dean commented on the importance of the work being done through CCAPP: “It [CCAPP] is an extraordinarily important and ambitious project...It’s going to have a big impact on the future of this medical school” (January 18, 1994); “[The Dean] commented on the importance of the [CCAPP] process and that he was pleased that so many faculty members, both here and in [the ancillary campus] were involved” (March 15, 1994); “An article written by [the Dean] will be published in the next edition of the Pima County Medical Society’s
Sombrero addressing the role of CCAPP” (March 21, 1995); “[The Dean] reiterated the importance of this process [CCAPP], stating that since it is done only about every 20 years, we must be absolutely certain that it is done properly” (September 19, 1995); and “[The Dean] stressed the importance of faculty input when the CCAPP Committee meets with the departments, reiterating the impact this will have on the curriculum and the students” (January 9, 1996). These numerous examples are offered to highlight the consistency with which the Dean publicly verbalized support for the CCAPP process.

Numerous interviewees reported their perception that the Dean supported CCAPP, but his heart was not in it. “The commitment [to CCAPP] fell short at the Dean’s level” (Ross, Q13); “He [the Dean] was a pro-medical education Dean, but he had so many things on his plate. Curriculum change was way down on his list – he didn’t have the energy or the time to tackle it. He didn’t really see the curriculum as broken” (Murray, Q10); “There were multiple opportunities where he [the Dean] could have said, ‘No, we don’t want to go on [with CCAPP]. There’s not enough broken to fix.’ We talked to him at each step of the process and he said to go on. But I don’t think he felt a need for this in his heart of hearts. It might have resulted in a different outcome if the Dean had supported it” (Michaels, Q5). Even a Vice President for HSC Finance, who was not involved with curricular issues, concurred with the perception that the Dean was not fully committed,

The leadership at the time wasn’t directive to make this massive change. The curriculum wasn’t completely broken. But we were in a resource crunch on the clinical side. The leadership focused on making sure the practice plan didn’t fold. Strong leadership would have been needed to get departments to give up time (Tierney, Q30).
In his interview, the Dean stated he played a quiet role during CCAPP. "I believe I had a high profile as a Dean. But I maintained a low profile on this [CCAPP]. Even though teaching is the most important thing we do, the change had to be faculty led. I welcomed debates and I tried to stay out of them" (Jones, Q3). A number of other interviewees said they looked to the Dean to take a stance on issues encountered along the way, and experienced his low profile to be a barrier to success. Some examples follow. Regarding the Basic Science Department Head retreat, where the proposal for an organ-based education system was being rejected by the department heads, an interviewee said,

At this point, [the Dean] could have said a number of things, like, 'OK, but you've already passed the goal of better integration, so adjourn and find a better way to integrate,' or 'OK, but do it anyway,' or 'OK, we won't do it.' The latter is what he said. At this point, [the chairman of the Steering Committee] and I looked at each other and said, 'There goes the ball game. All the faculty had to do was say no and [the Dean] would say, 'Never mind.' We realized anything else we gained after this point would just be by luck (Michaels, Q1).

The chairman of the PBL subcommittee offered another example of how the Dean could have influenced the outcome:

[The Dean] really had an influence in the end. Faculty members are independent thinkers, but when the Dean gives an opinion, people fall into place. For PBL, the Dean could have said, 'I know there is disagreement, and this is how we are going to do it.' People would have fallen into place (Mann, Q13).

An Associate Dean provided another example,

I look at myself as a failure regarding CCAPP because it didn’t result in major curricular change. In retrospect, maybe we – administration – should have been more forceful. Maybe we should have tried harder. But the Dean wouldn't have done this. That became obvious when the basic science faculty voted down the organ-based curriculum (Murray, Q10).
Though the Dean voiced support for CCAPP in public arenas, the perception was that his inaction at critical junctures along the way resulted in fewer curricular enhancements. Two leadership characteristics described by Bland and her colleagues (2000) as necessary for successful change were lacking: assertive participative leadership balanced with the use of organizational authority was lacking. On the other hand, the Dean may have been wisely playing his political chits. He knew the College in was financial difficulty. He knew that large-scale change would require additional resources at a time when resources were dwindling. He knew that faculty were already working at near- or maximum-capacity to generate money for the institution. He knew that faculty tended to dismiss educational research as non-scientific. For all of these reasons, it might be considered wise that he did not push for curricular reform at the time.

As alluded to above, an additional theme emerged from these data: Though the Dean did give approval for CCAPP, the data repeatedly indicated that he did not perceive the curriculum to be “broken.” The Dean acknowledged this in his interview with me, “I’ll tell you what I think about the curriculum. Medical students are bright and motivated. Changing the curriculum won’t have an effect on them as physicians” (Jones, pre Q1). Being firmly grounded in this belief may have precluded the Dean from taking a stance at critical (steeped in conflict) junctures along the way (e.g., going to an organ-based system for basic sciences, making the first two years problem-based). Consistent with the literature on leadership, without a fully committed charismatic leader willing or able to fight the hard fights, change is not likely to happen (Bland et al., 2000).
Not all interviewees viewed the Dean as inactive. At least one CCAPP subcommittee chairman believed the Dean played a more active role in support of curricular change:

We knew what [the Dean] wanted. It's not really called control. It is deference to the Dean’s desire. It was respect for him. He is the ultimate responsible person. We knew what the Dean wanted. There wasn’t any negative control. The Dean listened, we made recommendations, the Dean would give wisdom from his experience and then approve or not approve the recommendation (Garcia, Q5).

This view was expressed by the chair of the LCC subcommittee, whose recommendation was ultimately implemented and institutionalized. Would he have felt this way if his subcommittee’s recommendation had not been approved?

The documents analyzed for this study also provided examples of the Dean voicing his preference during the General Faculty meetings in which the CCAPP proposals were voted on. In all cases, the votes went in the direction of the Dean’s stated preference. When PBL was presented to the General Faculty, it was the Dean who summarized and supported the sentiment expressed by the attendees (as indicated above, the attendees felt the wording of the PBL proposal document was too directive):

[The Dean] stated that he thinks the problem today is that faculty members do no want to vote for the entire report. What we should decide today is whether we want to encourage all departments to continue to determine if PBL is applicable to their department and if it is, to proceed (General Faculty Meeting Minutes, March 18, 1997).

In fact, the Dean’s words became the substitute motion that was approved, effectively shifting the PBL proposal.

When the proposal to add a general clerkship orientation was presented, the Dean “stated that he would like to add a word of support” (General Faculty Meeting Minutes,
May 19, 1998). He went on to say that he thought the College should have done this a long time ago. There was no discussion and the motion passed. The same pattern occurred around the proposal for required interdisciplinary seminars. The Dean "stated that the seminars would provide an organized method of presenting necessary material in the curriculum" (General Faculty Meeting Minutes, May 19, 1998). There was no discussion and the motion passed. These examples provided consistent evidence of the influence of the Dean when he stated his opinion.

**Effects of the Department Heads**

Given the decentralized governance structure at the University College of Medicine, the heads of departments carried considerable weight. Recognizing their power, Department Heads were recruited and "a good chunk of them" (Michaels, Q1) agreed to be on the CCAPP Advisory Committee. Initially, the Department Heads were excited and enthusiastic about the unique opportunity to participate in changing the curriculum. Over time, the tenor of the CCAPP process changed. The data indicated two reasons for this change. The primary reason appeared to be that managed care began wreaking havoc on the financial status of the institution. It became hard for people, especially Department Heads, to stay involved in the curriculum efforts. The second reason was the edict from the Dean to "go fast, speed up, make decisions and get on with it" (Michaels, Q1).

Understandable through the constructs of resource dependence (Pfeffer and Salancik, 1978) and academic capitalism (Slaughter and Leslie, 1997), Department Heads shifted their focus away from curriculum toward ensuring the financial viability of their
departments, particularly toward income-generating activities. This also explained their reluctance to give up time in the curriculum since resources were attached to teaching time.

The first evidence of the power of the Department Heads was in their rejection of the organ-based approached to basic science education. The Dean explained their resistance, “The basic science department heads felt they would lose autonomy” (Jones, Q2). An Assistant Dean explained how this proposal challenged the fundamental structure of the medical school:

Organ-based basic science education takes the initiative away from the individual departments, and we have such a strong departmental structure. Departments would no longer have their own courses. It’s not just a pedagogical issue. That’s the least of it. Organizational and funding issues are the hardest. You’d need to transfer all of the educational budget to some central authority, and they’d have to broker it out. It requires enormous structural, philosophical, leadership, and financial change (Michaels, Q2).

Department Heads did not want to see their financial stability and curricular jurisdiction threatened and were effective in bringing the proposal to a halt.

Several of those interviewed for this study believed it was the Department Heads who controlled the CCAPP agenda and process.

The reality was that the strongest constituency was the Department Heads. It was the Department Heads who said no to the Dean about teaching basic sciences in an organ-based system. They said no and it was gone... It was the Department Heads who controlled the agenda. This is entirely in keeping with our history, tradition, and political environment of the time (Michaels, Q5).

According to the chair of CCAPP,

The Department Heads were leaders in preventing any change. The meetings with the Department Heads were unpleasant meetings... I was also a Department Head during CCAPP. I know that when department heads are against something,
it usually won’t happen. This is especially true for interdisciplinary course offerings (Jefferson, Q1).

According to this data, the Department Heads took an active in protecting what was theirs.

Department Heads not only influenced the process of curricular change, but the data indicated they influenced most aspects of their faculty members’ behavior. The current Dean described how the preferences of the department heads molded the faculty’s priorities:

How faculty members prioritize the tripartite mission (education, research, service) very much depends on the department head. The Department Head is charged with providing leadership so all aspects of the mission receive attention. Some Department Heads have a great interest in research. Others in education. It is reflected in where they place the emphasis and rewards (Quinn, Q34).

The past Dean recognized the influence of Department Heads: “I recruited all but one Department Head, and I ensured their commitment to teaching” (Jones, Q10).

In summary, the data indicated that Department Heads exerted considerable influence on outcomes of CCAPP and the behavior of the people in the institution. None of the changes ultimately implemented required Department Heads to give over control of their course or to relinquish their educational funding.

Effects of the Faculty

The decentralized governance structure of the College of Medicine dictated that an analysis of the factors influencing curricular change would be incomplete without an examination of the effects of the faculty. CCAPP was designed to be faculty driven. Everyone was given the opportunity to participate. Many did involve themselves. The
Dean even commented positively on the large number of faculty – over 300 – participating in CCAPP (General Faculty Meeting Minutes, March 15, 1994).

In spite of the proactive efforts on the part of the CCAPP Steering Committee, the data indicated that some faculty were resistant to curricular change. Similar to the Dean, they did not think the curriculum was bad to begin with. The chair of the organ-based basic sciences subcommittee reported, “The faculty felt the goals [of the basic sciences curriculum] could be met without doing the organ-based system. They and I felt that to go to an organ based system would require lots of time and energy without lots of return – improved performance of the students” (Case, Q2). I believe it was significant that the chair of this subcommittee did not support the major recommendation emanating from the committee. The inference was that the chair identified himself more with the General Faculty than with educational leaders involved in CCAPP. This is in contrast to another subcommittee chair who stated that his role “was to push things a bit” with the faculty (Mann, Q4). Generally speaking, the onus of responsibility for defending the need for CCAPP fell to the CCAPP leadership, and it was an uphill battle. The chair of CCAPP characterized the theme of the faculty’s response to CCAPP: “If it’s not broken, don’t fix it. Our curriculum is analogous to curriculum for the last 30-40 years. Our students do well. Why change it?” (Jefferson, Q3). Additionally, faculty wanted proof that changing the curriculum would make it better, and that board scores would be higher (Michaels, Q1).

Not only did the faculty believe the curriculum was not broken, there was evidence in the data that some took offense at and/or felt threatened by suggestions to
change it. This was most evident in the subcommittee meetings and the work that
occurred prior to bringing proposals to the General Faculty. “The undercurrent among
the faculty was that educationalists were trying to tell them how to run the curriculum,
yet they had never been to medical school… The educationalists took hits because they
weren’t MDs” (Murray, post Q12). The theme of “educationalist” appeared many times
throughout the data, as did numerous examples of faculty members directing hostility to
CCAPP committee members and staff. The CCAPP committee chairman reported that
one of the CCAPP staff persons, in particular, was the target of hostility (Jefferson, Q3).
The CCAPP staff person recalled these experiences. Following are excerpts from my
interview with her.

We had some really hard, hard meetings. I think it wasn’t just this [CCAPP]
activity. People were feeling really overwhelmed [by the financial situation of the
institution]. People were mad, angry with us. I’d remind them that the ideas were
developed by their faculty committee members, yet the feeling was that
administration was trying to foist these ideas on them. They were pretty
harrowing meetings…I had become the scapegoat. I had gotten the brunt of the
anger and distress. It was all aimed at me. I was the bad guy… Someone sent a
letter to the General Faculty saying that I was the ‘thought police.’ I didn’t have
that kind of power!… Only a few of the people closest to me knew what I wanted
to see [in the curriculum], but I didn’t tell anyone else. I was not outspoken in the
meetings…[An Associate Dean] was outspoken about what he wanted. He had
power over – he could effect the faculty’s lives. They couldn’t act out against
[him]. They acted out against me because I couldn’t retaliate. I was like the weak
sister… It was an enormous assault to my ego. ‘Educationalist’ became a dirty
word. It was a very sad time (Michaels, Q1).

Subcommittee meetings were described as “mean spirited,” “malignant,” and full
of “duplicity.” There were active efforts to invalidate the educationalists, including
accusing one of them of intentionally misrepresenting what occurred in a previous
meeting, and telling his supervisor to watch her staff.
This dichotomy of us (the faculty) versus them (the “educationalists”) can be understood from the perspective of jurisdiction (Abbott, 1988). The faculty did not believe the educationalists had the qualifications to recommend changes to the curriculum. The faculty saw themselves as scientists. They wanted to see outcomes data regarding the recommended changes. The Dean described how the need for data is part of the culture of the medical school,

We’re scientific. If there’s a new treatment, it’s tested. It’s almost impossible to get outcomes in medical school. The outcome is, ‘How good are you as a doctor?’ Then you need to ask, to what extent is it due to undergraduate medical education? To what degree is it due to graduate medical education? (Jones, pre Q1).

The Dean’s quote also points to the challenges of assessing medical education.

The CCAPP Steering Committee did report providing educational outcomes literature to the faculty. For example, findings from a meta-analysis on outcomes data related to PBL were distributed, yet the faculty dismissed the data. Again, this might be understood from the perspective of jurisdiction. The data indicated a general lack of enthusiasm among the basic and clinical faculty for the science of educational research. One interviewee reported,

I also need to account for the degree of respect, or lack of respect, people have for educational research. Someone sent a memo about the ‘psuedo-science’ of education and said, ‘How could we make decisions based on no science?’ They denigrated educational theory by saying, ‘How can we make changes if we don’t consider this to be scientific or valid?’ (Michaels, Q8).

In addition to discounting educational literature and attempting to invalidate the educationalists, the faculty was organized in their opposition. One interviewee reported,

Those who didn’t like it [proposed change] felt threatened. They felt strongly about not supporting it. They had more to lose. They were more scheming. And
they were more vocal in the General Faculty meetings. They made efforts to ensure opponents were strongly represented during the General Faculty meetings. Those who supported it didn’t feel as strongly about it and didn’t speak up during the General Faculty Meetings (Mann, Q5).

This can be understood from the jurisdiction perspective (Abbott, 1988). Faculty opposing the changes were protecting their time in the curriculum, along with the resources and the sense of importance that accompanies the time.

In reflecting back on CCAPP, many interviewees speculated about who would best lead efforts for curricular change. There were inconsistencies in the speculation. Some involved in CCAPP believed it should be the faculty educators. According to the chair of one of the CCAPP subcommittees, “The best way [to effect change in medical education] is let the people in the trenches decide the ways to solve the problem since they are the best informed” (Case, post Q12). The chair of CCAPP commented, “Some faculty were resentful that it wasn’t the front line educators setting the agenda. But they could have! Everything was done out in the open” (Jefferson, Q5). A CCAPP staff person speculated,

To be completely successful, you’d have to find some way for change to not assail one’s sense of self. It is almost an intractable problem. It takes a great deal more leadership than we were able to muster. It would need to be another basic scientist or physician from among them. Someone who could, by example, show that I can maintain my sense of self and ego and I also see a sense of the value in making this change. We didn’t have enough of these people (Michaels, Q7).

The Dean expressed an opposing view. He reported, “We were very fortunate to have [the particular CCAPP staff person] – an expert. If an MD had been facilitating the process, it never would have happened. An MD wouldn’t have had the time, background, or patience” (Jones, Q1).
In summary, the faculty had a significant influence on the process and outcome of the proposals generated by CCAPP. Most of the data highlighted the power of the faculty as a group to slow the process and oppose the recommended changes. However, the data consistently demonstrated the effect of individual faculty members in bringing about change.

Effects of Students

The last of the constituencies to be considered in the examination of the global issues affecting the outcomes of CCAPP is the students. The data indicated that the students were powerful in their own right. The most sweeping changes proposed by CCAPP were the organ-based basic sciences proposal and the years III/IV proposal. As reported, the department heads were effective in defeating the organ-based system proposal. The students were powerful in defeating the years III/IV proposal. Their influence might best be understood through the lens of Lukes’s (1978) third dimension of power. The cultural fabric of the College included the expectation that the fourth year of medical school be entirely elective. Many of those interviewed for this study reported that students were resistant to any proposal that changed or challenged the elective status of the fourth year. A faculty member from the ancillary campus reported, “Students played an active role. They adamantly wanted the unstructured fourth year” (Ross, post Q13). The Dean reiterated this by saying,

I moderately supported the years III/IV proposal. The catch is the phenomenal resistance from the students to losing elective time. If this was implemented, the students would have burned down the Dean’s office... The students are the limiting factor. They are spoiled. The fourth year is a joke. It is so easy it’s unbelievable. Students resist anything happening in the fourth year (Jones, Q2, Q9).
The chair of CCAPP concurred, “Students have the attitude that the fourth year is to rest up for what comes next. I don’t buy this. Students were opposed because it took time away in the fourth year” (Jefferson, Q2). Interestingly, the CCAPP records analyzed for this study do not support the contentions made by those who were interviewed. In fact, the years III/IV proposal put forth by the students called for a continuum over the course of the two years. Did the students actively oppose changes to the fourth year, or was it just inferred that they would? The faculty’s expectation of the students’ resistance may have led them to defeat the years III/IV proposal. If that was the case, this example illustrated the third, cultural dimension of power (Lukes, 1978). It is also possible that the students working on the proposal were self-selected, education-interested students who did not represent the student body as a whole.

It should be noted (as was described above) that, in addition to student opposition, one faculty member was quite vocal in her opposition to adding any requirements to the fourth year. This was a faculty member who taught an elective during that year and did not want anything to interfere with students’ ability to take her elective. Her actions were consistent with Abbott’s (1988) jurisdiction construct.

In spite of the years III/IV continuum put forth by the student group working on this subcommittee, the data did include evidence of students being actively resistant to a proposed change that would have encroached on the elective status of the fourth year. Specifically, they opposed the proposal to implement an Anesthesiology and an Ophthalmology clerkship rotation in the fourth year. After months of discussion and a Student Town Hall, the students proposed that these rotations be offered as electives.
They were successful in defeating the proposal that the rotations be required in spite of the near unanimous agreement among the faculty that they should be. One might speculate that students were protecting their “turf.” They frequently use the fourth year to explore career options (specialties) and residency programs.

Whether the unwillingness to change the requirements of the fourth year is a function of the expected opposition by students, or the students’ actual opposition, the fourth year remains untouched today, even though the new Vice President for Health Sciences desires to add a required capstone course.

The next chapter will summarize and discuss the findings of this research. It will include implications for research related to the theoretical constructs underlying the study. It will conclude with a discussion of the application of these findings to the practice of medical education and the processes for change.
CHAPTER 7
CONCLUSIONS

Summary of Findings

This in-depth case study sought to identify factors that facilitated and inhibited several attempts to change the curriculum at University Medical College. Some of the attempted changes were comprehensive in nature, while others were smaller scale. Some of the changes were created by faculty within the institution, while others were generated through funded educational grants or from recommendations of the external accrediting agency. All of the changes were attempted in the larger context of the changing health care environment.

The study examined the processes and outcomes of change through specific theoretical lenses, specifically, power, leadership, jurisdiction, resource dependence and academic capitalism. These constructs were chosen because of their applicability to both organizational change and institutions of higher education. Several propositions stemming from the theoretical constructs were outlined a priori. There were:

- Proposition 1 (based on Lukes’ [1978] conceptualization of power): Consistent with Lukes’ second dimension of power, the Dean would control the agenda. Consistent with Lukes’ first dimension of power, there would be debate among the faculty and significant resistance to the proposed curricular reforms. In response to faculty opposition, the Dean would take some key proposals off the agenda.
• Proposition 2 (based on Bland et al.'s [2000] characterization of leadership): The extent of change that occurred would be a function of the extent of the Dean's commitment to the proposed changes.

• Proposition 3 (based on Abbott's [1988] concept of professionalization and jurisdiction): In order to maintain jurisdiction over "their" part of the curriculum, faculty members would resist efforts to integrate the curriculum and centralize authority over the curriculum.

• Proposition 4 (based on Pfeffer and Salancik's [1978] concept of resource dependency and on Slaughter and Leslie's [1997] concept of academic capitalism): Prioritizing the financial status of the institution over curricular change, the Dean would pressure faculty to increase their income-generating activities, resulting in the faculty members' increased concern about financial viability and decreased concern with educational innovation.

A summary of the findings will be organized according to the propositions and framed within the theoretical constructs.

Proposition 1. The data was rich with evidence of debate. Some proposals contained evidence of debate in the discussion phase, and others in the implementation phase. In most cases, the decision went in the direction of the person in the highest position of power who controlled the agenda. However, that person's decision was sometimes shaped in substantial part by the depth of the debate and balance of faculty opinion evident in that debate.
There were several examples of the faculty vote paralleling the preference stated by the Dean in meetings in which the proposals were presented for a vote of approval. For example, there was much debate and opposition around the Problem-Based Learning (PBL) proposal resulting in the Dean putting forth a motion that the proposal not be accepted but that PBL as a teaching method be considered. This is evidence of the sort of debate and compromise one would expect given the way Lukes’ (1978) first dimension of Lukes works. The faculty approved the Dean’s motion. There was debate about the Longitudinal Clinical Curriculum (LCC) proposal in the General Faculty meeting in which it was presented. The Dean stated his support for the proposal, and it passed. Likewise, the Dean voiced his support for the 3rd year orientation and interdisciplinary seminars proposals and the faculty approved both of these reforms in spite of the debate. The same pattern was evident in at least one of the educational grants funded during the period of the study. The General Faculty were informed of the grant; a vote was not required so there was no evidence of debate at that level. However, there was debate among the grant personnel and the course and clerkship directors about where to fit the cancer prevention material in the curriculum. Consistent with Lukes’ second dimension of power, the course and clerkship directors – those with control over their segment of the curriculum – decided whether they would use the materials provided through the grant.

There was an example in the data that did not support this pattern. The proposal to enhance the basic science curriculum was presented at a General Faculty meeting for a vote. There was no debate or discussion about the proposal, nor did the Dean express his opinion, yet the proposal passed unanimously. Based on the documented data, it was
hard to make an inference grounded in the theoretical concepts underlying the study about why this proposal was unanimously approved.

There also was an example in the data that contradicted the general correspondence of the views expressed by faculty and the action promoted by the Dean. The subinternship proposal supported by the Dean was not implemented. During a Clerkship Directors meeting, the Dean endorsed the CCAPP proposal to implement a subinternship into the fourth year. However, he did not state his opinion during the General Faculty meeting in which the proposal was being considered. There were two vocal opponents at the General Faculty meeting, one of them a Clerkship Director responsible for one aspect of the students’ clinical education. Perhaps in the absence of the Dean’s verbal support, the General Faculty was impressed by and gave credibility to the opinion expressed by the clinical educator about the proposed new clinical education requirement. Further complicating the process was the strong opposition by the students to any requirement being placed in the elective fourth year. Once again, this debate and compromise is consistent with Lukes’ first dimension of power.

Proposition 2. According to Bland et al.’s (2000) conceptualization of leadership, when there was debate about an issue and the Dean did not voice his support for the proposal, the proposal was not likely to be approved. This was the case for almost all of the proposals that were not implemented – the organ-based basic sciences proposal, the Years III/IV Continuum proposal, and the Anesthesiology/Ophthalmology clerkships proposal. Although the Dean reported to me his preference for organizing his own education according to organ-based systems, he did not vocally support changing the first
two years to such a system at the time. Similarly, the Dean did not verbalize his support for a years III/IV continuum in spite of his feeling that the fourth year was “a joke.” The Dean’s voice was absent in the documented data about the Anesthesiology/Ophthalmology proposal. And, as indicated above, the Dean did not verbalize his support for the subinternship in the General Faculty meeting in which it was considered. In summary, the Dean allowed debate – sometimes an extensive process as was the case with the Anesthesiology/Ophthalmology proposal – about each of the proposals, but did not vocalize his support for the proposals in the forums in which it became clear they were controversial and in which their fates were decided.

Propositions 1 and 2 can be seen as closely related in relation to the effect of the Dean on the process of change. When the Dean verbally expressed his support or opposition in the forums in which the ultimate determination about the proposals were made, the outcomes tended to be consistent with his preference. If he expressed his support in meetings leading up to the General Faculty meeting, but not in the General Faculty meeting itself – as was the case with the subinternship proposal – the proposals did not tend to be approved. This point is salient because General Faculty meetings tend to be attended by faculty who are not necessarily involved with or knowledgeable about the educational program or the curriculum.

Proposition 3. There is ample evidence of the effectiveness of faculty members’ efforts to protect their jurisdiction – behavior consistent with Abbott’s (1988) construct of professionalism and jurisdiction. Both for proposals that were approved and those that were not, faculty worked to maintain authority over their part of the curriculum, putting
forth the most resistance against proposals that would have required central curricular control. Specifically, the PBL and organ-based systems proposals, if approved as proposed, would have required in an interdisciplinary, integrated curriculum necessitating central oversight and authority.

In addition to the organ-based system, three other proposals were not approved. All three related to the clinical education years, years III and IV. Clerkship Directors rejected the years III/IV proposal on the grounds that it may interfere with students' ability to make career choices. Underlying this was the acknowledgement of the intense student opposition to the proposal. From the perspective of Abbott's jurisdictional construct, students are the clients, not professionals with jurisdiction. So it appeared that the faculty deferred to the wishes of their clients, the students. It almost seemed as if the Clerkship Directors were voting on behalf of the students, reinforcing the students' desire to maintain an elective fourth year. The same inference could be made about the subinternship proposal. Although one faculty member did express her jurisdictional desire to keep the fourth year elective so that students could take her research elective, the faculty as a whole accepted the students' opposition to adding a requirement to the fourth year. Regarding the Anesthesiology/Ophthalmology proposal, the faculty shared power with the students and allowed them a strong voice in the final outcome of the proposal. Apparently, the students' preferences were afforded great weight in determining their educational program, a process that is not clearly understood through Abbott's conceptualization of professional jurisdiction.
Jurisdictional issues appeared not just in the process of approving or rejecting proposals; they also appeared in the implementation phase of approved proposals. There were few, if any, jurisdictional concerns evident in the data as the proposals for interdisciplinary seminars and a third-year orientation were presented and approved. However, jurisdictional issues came into play as these two components were implemented into the education program. Clerkship Directors did not want to give up time in their curriculum for either of these programs, so they were conducted either before the clerkship rotations began, or after regular working hours (nights and weekends).

There was one proposal that did not fit the patterns described above. The data indicated opposition by the basic science faculty to the LCC proposal. The basic science faculty considered as "fluff" the LCC proposal to have first and second year students assigned to a clinical preceptor to observe and learn the clinical applications of their basic science education. The LCC proposal clearly overstepped the jurisdictional boundaries of the basic scientists and the basic scientists were articulate in their opposition. In keeping with the patterns described above, one would have expected the LCC proposal to have been defeated. Yet it was not; it was approved by the General Faculty. The chairman of the LCC subcommittee acknowledged the jurisdictional boundaries of the basic science educators and successfully negotiated around them. These findings are somewhat surprising from the point of view of Abbott's jurisdiction given that the LCC chairman was a clinician, not a basic scientist.
There were also jurisdictional issues in relation to the educational grants. The course and clerkship directors were open to receiving the cancer prevention materials from the Cancer Grant. They maintained authority in deciding whether and how to use them. The investigators on the Geriatrics Grant sought the course and clerkship directors’ cooperation before submitting the proposal. Each director signed a letter in support of the curricular enhancements put forth in the grant proposal. The data indicated that course and clerkship directors have incorporated many of the developed enhancements into their educational program, some in spite of great logistical challenges. Yet the course and clerkship directors maintain jurisdiction over their curriculum and could choose to discontinue the geriatric related components at any time.

Most of the data do seem to support the part of this proposition that predicted those with the loudest voices in protecting their jurisdiction would effect the eventual outcome of the proposed changes. I originally expected to find evidence of faculty protection of their jurisdiction at the expense of the quality of the educational program. The data did not consistently support this expectation. Those opposing change maintained that University Medical School students achieved the academic standards of the school and perform at or above average on national board exams. They questioned the efforts to change a curriculum that appeared effective. Additionally, they sought evidence that changing the curriculum would result in better performance as a physician. These data were scarce in the educational literature. By opposing the reform initiatives and striving to maintain their jurisdiction, they may have been acting to protect an educational program that was established and had proven successful.
Proposition 4. As predicted by this proposition, the budgets sent to each department did not include a line specifically for education. However, it was generally understood that state allocations were to be used to support the teaching effort. Allocations were based on historical patterns of funding. Once departments received their allocations, it was up to the department head how they were spent.

During the Appraisal and Implementation phases of CCAPP, the institution’s physician practice plan was experiencing great difficulties. State allocations to the school were essentially flat. Through it all, expenses continued to increase. The Dean’s primary focus at the time was keeping the practice plan afloat and ensuring the financial stability of school. Consistent with Slaughter and Leslie’s concept of academic capitalism and Pfeffer and Salancik’s theory of resource dependency, faculty members were encouraged by the Dean to increase their revenue-generating alliances and activities. For the basic scientists, that meant stepping up the pace of their grant writing activities. For the clinical scientists, it meant seeing more patients. The Dean appeared reluctant to pressure faculty members to agree to comprehensive curricular reform at the same time that he was pressuring them to increase their revenue-generating activities. One of the participants in CCAPP stated that the perceived unavailability of resources and the increased demand on faculty time to earn money had on enormous impact on the outcomes of CCAPP. She said the scarce resource issues were the ultimate demise of CCAPP.

When the financial problems of time are considered in light of the other theoretical constructs underlying this study, it is evident why attempts at reforming the
curriculum were minimally successful. The Dean chose not to push for educational reforms that would have taken faculty away from time spent generating income, especially in light of the faculty members’ reluctance to give up their authority over the curriculum and the associated financial resources, especially without sufficient data proving that changes would result in better doctors.

Another demonstration of the interaction between the financial related constructs and the construct of jurisdiction can be seen in the following quote taken from the interview data in this study,

When everything else around you is going to hell in a hand basket [the institution was struggling financially], you really swing into operation to protect your turf… The [the faculty] didn’t have the time or emotion to respond to anything else. They couldn’t change what was happening in the health care environment. They couldn’t change what was happening in the research environment. But they could effect the CCAPP process (Michaels, Q8).

The implication is that in financially unpredictable times, professionals are not likely to let down their jurisdictional boundaries. They will seek to protect what is theirs.

Implications for Research

Generally speaking, the data supported the theoretical constructs underlying the study. However, through the course of the study, a couple of themes emerged that were not entirely expected from the perspective of these constructs. I labeled these themes as “the quality of the working relationship” and “the efforts of a single individual.” A discussion of each of them follows.

In the disciplinary structure of University College of Medicine, course directors have autonomy in designing their courses. This design is done individually, in collaboration with other department faculty, and/or under the direction of the department
chair. People outside of the department have little or no influence over what each department teaches. This notion is consistent with the jurisdictional construct described above. There was evidence in the data of the quality of the working relationship transcending jurisdictional boundaries. An example from the data was the Clinical Medicine Skills (CMS) course director’s willingness to delete part of his course and replace it with materials provided by the geriatrics grant. Both the course director and the principal investigator pointed to the quality of their working relationship as the basis for his willingness to change his course. According to the principal investigator, it was an issue of trust. Additionally, it was based in her credibility as a former instructor in the CMS course, which likely contributed to the course director’s trust in her.

One of the investigators of the Cancer Grant made a similar observation when she remarked that things get done because of good collaboration, out of simple affinity. One of the investigators of the Geriatrics Grant made a similar observation when she stated that the most critical and most difficult thing about proposing change is establishing a sense of trust that the recommendations are not being made in a malicious fashion. It was important that faculty members understood that the changes were not being proposed to make the faculty members’ lives more difficult, but instead to strive for the best possible educational program. She went on to say that it also was important for those proposing the change to be sensitive and thoughtful of the issues of the individual faculty and departments. Clearly, establishing trust required an iterative, reciprocal, and respectful process.
Trust was an issue in the CCAPP process. Trust, or the lack of trust, emerged in the data as one of the bases of the basic and clinical sciences educators’ resistance to change. Some members of the faculty labeled the administrators supporting CCAPP as “educationalists,” and felt the educationalists were trying to force unwarranted change upon them. The educational leadership felt the faculty was trying to invalidate them. If there had been a stronger sense of trust between the education administration and the general faculty, perhaps the CCAPP process would have resulted in more change.

The concept of trust in relation to curricular change also appears in the published literature. Following is an example taken from the University of Florida College of Medicine’s story of change:

A final dynamic was trust. The education leadership slowly convinced the faulty that the goal was to improve the quality of our education program. Leadership acted in ways that acknowledged departmental integrity and value while at the same time moving toward institutional consistency in the education program. Many chairs played vital roles in supporting the plans of the CC [committee for change], and departmental opposition to the proposals for change waned. Based in part on the leadership roles of chairs, the faculty started to trust the CC and its intentions (Watson and Rooks, 2000, p. 128).

This example points to the importance of trust and demonstrates how trust, jurisdiction, and leadership can interact to facilitate change.

The other emergent theme that transcended one of the theoretical constructs underlying this study was the effect of a single individual. There were numerous examples in the data of an individual taking on the challenge of implementing a change without the financial resources or rewards for doing so. This action would not be expected from the points of view of academic capitalism and resource dependency. Both of these constructs emphasize the importance of revenue-generating activity.
Specifically, departments that bring in money will receive a greater financial support from the administration. Furthermore, administration is placing greater value on entrepreneurial relationships with external funding sources.

The data clearly indicated that basic and clinical sciences faculty were under great pressure from the Dean to increase their income-generating activities. In spite of this pressure, there was evidence of extraordinary effort on the part of some individuals. For example, in addition to his clinical responsibilities and without financial compensation, Dr. Garcia, the chairman of the Longitudinal Clinical Curriculum (LCC) subcommittee, spent many hours negotiating with basic scientists to support LCC. After LCC was approved, effort was needed to coordinate its implementation. Once again, a single individual stepped up and took on the challenge in addition to his other teaching, research and grant writing activities. He did not expect, nor did he receive, compensation for his work on LCC. Yet without him, and Dr. Garcia before him, the LCC proposal may not have been successfully integrated into the curriculum.

Another example of individual effort transcending what would have been expected from the perspectives of resource dependency and academic capitalism appeared in the process of the PBL proposal. In reflecting back on the PBL proposal, the chairman of the organ-based system subcommittee remarked that one of the problems facing PBL was resources for coordination. “For initiatives to really take off, you need to compensate people for the additional efforts” (Case, Q12). He went on to say that even without these resources, a faculty member from the Biochemistry department took on the
task of coordinating PBL. “People devote time and effort even without money. These are dedicated people” (Case, Q13).

One of the Associate Deans interviewed summarized the potential for a single individual to make an impact, even without financial resources. She said,

This individual level is a level you can’t ignore. You can make general statements that will hold true to a certain extent – until you come to the individual level. You could have no leadership, no departmental support, no money, and yet, some change will happen because of the individual (Michaels, Q 34).

The importance of individual effort is beginning to emerge in the published literature as well. The following excerpt taken from University of California at San Francisco College of Medicine’s (UCSF) story of change illustrates this point:

Dr. Donald Ganem [chair of the Essential Core task force] is a highly respected physician-scientist and teacher. His vision, energy, and commitment to create a new curriculum worthy of UCSF were critical to getting Essentials approved. Without his stature and enthusiasm, the Essential Core planning process might have failed (Irby, 2000, p. 61).

These examples also point to the relationship between individual effort, jurisdiction, and leadership. In the University Medical College examples, it was critical that the biochemist who worked on implementing PBL was a basic scientist trying to effect change within the basic sciences curriculum. The same was true of the basic scientist who coordinated the implementation of LCC, another enhancement to the basic science years. Having someone from within their own ranks may have created openness on the part of the basic science faculty to the changes being attempted. At UCSF, the stature and respect of the physician working on the Essential Core likely contributed to the energy he put forth to making it work. All of these examples point to the interaction between several of the constructs underlying this study. It appeared that the success of
these initiatives was due to a combination of individual effort and leadership at a level
different than the Dean. Key to the success of these individuals was that others saw their
leadership as legitimate in terms of their jurisdictional claims. These individual cases led
me to rethink what leadership is. Leadership is not based just in formal position, but it is
elsewhere, and it is sometimes informed by and supported by one’s jurisdictional
position.

Application to Practice

This study reinforced many of the constructs that appear in the literature about
what facilitates successful curricular reform. The constructs most commonly cited
include the importance of the unwavering support of the Dean, a centralized curriculum
office with authority over the education program and a specified budget for education,
and faculty incentives and rewards for effective participation in the educational mission
of the institution. The University College of Medicine lacked all three of these constructs
and it had varying levels of success in modifying its educational program.

Through the process of conducting this study and analyzing the data, a number of
strategies emerged that may prove useful in attempting curricular reform. Some of these
strategies suggest ways of moving forward with curricular change in the absence of the
constructs listed above. Considering these strategies before beginning the change process
may facilitate both the process and outcomes of change. Though not every strategy will
be applicable to every situation, many of them may transcend the varying structures of
medical schools. The strategies are discussed below.
Strategy 1. Articulate how the institution's financial status will influence the change process. Acknowledge and address the influences of the external environment on the financial status of the institution. Perhaps changes could be tied to benchmarks in funding. For example, propose that an approved change be implemented once the physician practice plan achieves a specified level of income for the college. Conversely, if change is being attempted at a time when resources are unpredictable or expected to dwindle, specify a financial level at which the reform process will be suspended until the financial situation stabilizes. Clearly specify what the stabilized point would be.

Describe in the beginning how the change process will impact current resource allocation patterns. Be specific. During the CCAPP process, the Dean told the faculty that if they approved the changes, he would fund them. This did little to alleviate the perception that resources would not be available. The data from this study indicated that one of the largest concerns about CCAPP related to resources, both time and money. Time ultimately came down to money as faculty were being pressured to spend their time on income-generating activities, leaving little time for curricular reform. If the curricular reform will not change the level of funding that departments will receive, inform the department heads of such.

Tying resource allocations to the educational mission has proved effective in facilitating curricular change. The University of Florida undertook curricular innovation simultaneous with a transition to mission based management. Mission based management calls for the aligning of resources to each of the institution’s missions, including education. The change leaders there perceived the success of the curricular
reform in part to allocation of education funds on the basis of faculty teaching effort and its quality. It is important to recognize that this strategy may have some unintended outcomes. For example, faculty may perceive that the curricular change is being attempted in order to effect budgetary changes instead of to improve the educational program and outcomes.

Strategy 2. Create curricular reform that will save money or free faculty time to spend on income-generating activities. This is particularly important in times of tight financial resources. In difficult financial times, it does not make sense to propose more costly programs or to embark on comprehensive reform efforts. This strategy is admittedly difficult in that change requires resources – even just the resource of time in considering the change. This strategy obviously relates to Strategy 1 above in that it may be more efficient in the long run to tie reform initiatives to benchmarks in income. However, articulating how a proposed change will save faculty time, or provide an opportunity to leverage for new money, will make proposals more palatable, and certainly more possible.

This strategy evolved out of what did not happen at University College of Medicine. None of the initiatives proposed by CCAPP directly supported this strategy. Many of the proposals generated by CCAPP would have been costly, both in terms of time and resources, to implement. Even those CCAPP initiatives that were approved were implemented on a smaller scale than proposed, primarily because of scarce resource issues. There was a bit more success with curricular innovation by the educational grants. Though the education grants did not directly support this strategy, they did not
cost the College or the faculty any money in that they were funded by the granting agencies.

There is currently an idea in the College that would support this strategy. The idea is to train fourth year medical students in teaching/facilitation skills so that they may facilitate small group learning experiences for first and second year medical students. Participating fourth year students would earn fourth-year elective credit as well as an entry in their Dean’s Letter documenting their completion of a teacher training (Dean’s Letters accompany medical students’ applications to residency programs. Teaching is an expectation of residents). This kind of proposal would save basic and clinical science faculty time by freeing them from group facilitation time, allowing them to focus on teaching the core requirements, and continuing in their efforts to generate income through research and clinical care.

Strategy 3. Recommend trying the reform on a trial basis, then reassessing it.

This strategy was used for the implementation of iPBL, the lesser version of the original PBL proposal. The Curriculum Committee agreed to designate iPBL as a trial course for one semester. At the completion of the semester, the course coordinator presented to the Curriculum Committee the evaluations from iPBL faculty, facilitators, and students. Based on the evaluation results, the Curriculum Committee reassigned the course as permanent. Faculty jurisdictional concerns were eased by giving the course a “trial” designation in that the ultimate decision about the course’s future was delayed, giving them a chance to see how this new course would effect them and their courses. Aiding in the process was the data showing that faculty and students enjoyed the experience and
felt that it contributed to the development of students' critical thinking skills. This strategy also allows for the rallying of faculty support (based on their experience and the data) before presenting the proposal to reassign a trial course as a permanent course to the General Faculty.

Strategy 4. Build specific evaluation strategies and benchmarks into each proposal for change. The data and the literature revealed that physicians, as scientists, are eager to see data supporting that change will make a positive impact on the educational program. As has been indicated, it is often difficult to evaluate the ultimate impact of an educational program – does it produce a better physician? Even though summative evaluation of the educational program is difficult, formative evaluation may be of particular use in curricular reform. Break the evaluation into small steps. Including the evaluation schedule and copies of the evaluation forms in the proposal packet may increase faculty members’ openness to the proposed change as they see what kind of data they can expect during the reform process.

Strategy 5. When communicating about proposed changes, be careful not to overstate criticism of the current program. Understandably from the point of view of jurisdiction, faculty members may become defensive and less open to the ideas for change. This was evident in the data around the PBL proposal. The minutes from the General Faculty meeting in which PBL was presented for approval and ultimately rejected include the following excerpt: “Issue was taken with the contention in the introductory remarks of the PBL proposal that the College did not have life-long learning and problem solving skills incorporated into the curriculum. That is categorically
erroneous and it is unfortunate that in documents coming out that the phrase is still used” (General Faculty Meeting minutes, March 18, 1997). This faculty member’s anger likely affected the atmosphere within which the proposal was being presented. This notion was further reinforced by an associate dean’s observation, “To be completely successful, you’d have to find some way for change to not assail one’s sense of self” (Michaels, Q7).

Instead of criticizing the current method – even if criticism is warranted – change leaders should point to the possibilities that exist with their proposed changes. This method proved effective with the LCC proposal. The chairman of the LCC subcommittee continually emphasized the point of what the committee was recommending to get people to go along with the change, instead of emphasizing what was wrong with the current method.

If criticism is warranted, it should probably come from the Dean. If it comes from the reformers, it is likely to create an “us versus them” dichotomy between the reformers and the faculty. If it comes from the Dean, it carries the possibility of motivating faculty to consider change.

Strategy 6. Whenever possible, involve people who had experiences in the proposed changes at other institutions. Find people who are products of the proposed innovation to lead the change effort. This becomes even more powerful when these people also have jurisdictional legitimacy. Finding people with jurisdictional legitimacy who have first hand experience with the proposed change accomplishes two things. It gives credibility to the proposal in that faculty members learn that other peer institutions have made similar changes. It also allows the reformer to speak to the change from
his/her own personal experience. Personal experience can be compelling if faculty are dismissive of educational research or do not perceive parallels between the institution studied and their own. The data from the study at hand highlighted the effectiveness of this strategy in relation to the LCC proposal. The LCC subcommittee chairman had participated a longitudinal clinical curriculum as a medical student and was able to relate the benefits of the experience.

Interestingly, the data indicated that this strategy did not always work. The Dean had created a subinternship program at his previous institution and was supportive of the proposal to implement a subinternship at University College of Medicine. Yet the proposal was not approved by the General Faculty. As indicated above, this may have been because the Dean did not vocalize his support at the General Faculty meeting in which it was presented. Additionally, he was aware of the students' strong opposition to this proposal. Though involving people with personal experience in the proposed innovation appeared to be a useful strategy, other factors can certainly challenge its effectiveness.

Strategy 7. Involve course and clerkship directors and department heads in leadership roles in the change process to the greatest extent possible. By their participation in the change process, they are modeling openness to the possibilities and mitigating some of the jurisdictional issues. Evidence of the effectiveness of this strategy appeared in the data in relation to the Cancer Grant. One of the investigators also was a course director. Her course integrated most of the recommendations made by the Cancer Grant. The investigator observed,
The courses that we were able to get the most in were the courses where the PI and the grant folks have an influence. In future grants, I’ll get more representation from the different courses as investigators on the grant…It takes someone placed in key areas of the educational mission/program to get some extra money to make things happen. To get a focused look at some aspect of the curriculum. It was hugely helpful to be on the inside, an MD, and a course director (Brown, Q3, Q6).

According to one interviewee, the change leaders were showing by example that they can maintain their sense of self and ego and also demonstrate a sense of value in making the change. It is a powerful combination when the change leaders are also the course and clerkship directors or department heads.

Strategy 8. Keep the pace of the reform effort moving along. Do not let too much time elapse between steering committee and subcommittee meetings. This strategy will be difficult to achieve given the pressures on faculty members’ time, yet there was evidence in the data that length of the CCAPP process may have been detrimental to the outcomes. The Dean said the process was taking too long. One of the Assistant Deans reported that the tenor of CCAPP changed when the Dean said to speed things up, make decisions and get on with it. Another reported that faculty members, both those supporting the reform and those opposing it, would “peter out” just wanting to be done with the whole CCAPP process. Meeting frequently, but not too frequently to allow for reform work to be done, will be an important consideration, though admittedly a challenging balance to achieve.

Simultaneous with keeping the pace going, be aware of the pace and nature of change in the external environment. The environment in which curricular change was initiated may be vastly different by the end of the reform initiative if the process takes too
long. Additionally, changes in the external environment may override or contradict reform initiatives.

Strategy 9. In institutions where students have a strong voice in the shaping of their educational program, the proposed changes should explicitly outline the benefits of the reform to the students. The data from this study indicated that students played an important role in the reform efforts. For example, heavy weight was given to students’ resistance against proposals that would build requirements into their fourth year. From the perspective of Abbott’s professionalism/jurisdiction, the students, as clients, rejected the proposals effecting their fourth year. One rationale for building a continuum for years III/IV was that University College of Medicine was one very few medical schools in the country with an entirely elective fourth year. From the perspective of this strategy, the reformers could have pointed to the disadvantage the students may have in the marketplace if they come from a program with an elective fourth year while most everyone else does not – students may fair better in competing for residencies if they are more similar to students across the country who come from programs with a more rigorous fourth year. Student resistance to proposed changes must be addressed in the initial stages of the attempted change. Including a description of how reform efforts will advantage students and make them more competitive may help decrease their resistance to proposed changes.

Strategy 10. Based in Lukes’ (1978) first dimension of power, avoid open conflict and debate in forums where proposals are being presented for approval. When trying to reform medical education, use committees to figure out if proposed reforms will
be acceptable to the General Faculty. If the committee doubts faculty approval, do not yet bring the proposal to them for confirmation. Having the faculty reject initiatives in the public forum of a General Faculty meeting results in a loss of momentum in the reform effort and a loss of credibility on the part of the reformers.

If the decisions about curricular reform reside with a smaller subset of the General Faculty, for example with the Curriculum Committee, ensure full Committee support before bringing the reform initiative to them for their vote. This strategy is similar to that which is used in political arenas. Politicians lobby for support and count votes ahead of time, then bring their ideas forward once they have secured the support of the majority.

Summary

This study focused on the change process from the perspective of those who were involved and those in leadership positions in the University College of Medicine. It reinforced many of the issues reported in the literature. It also brought to light strategies that one might consider before embarking on a comprehensive curricular reform effort. The strategies listed here are not offered as a recipe for success. They are meant to highlight issues to consider when attempting curricular reform. There is no one recipe for success. It is important to keep in mind that every institution has its own personality, and every individual within the institution has his/her own personality. As the data here indicated, individual personalities may be the most influential factor in facilitating or inhibiting curricular reform.

There was much to be learned from these participants as the curricular change process attempted at University College of Medicine was comprehensive, it involved
many faculty members, and it was not entirely successful. However, future studies might benefit from including the perspectives of those who opposed the changes. Perhaps additional strategies for successful curricular could be gleaned from their input.
REFERENCES


Liaison Committee on Medical Education. (2002). Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree. Washington, DC.


