A Grounded Theory of Knowledge Utilization in Undergraduate Management Majors: An Institutional Study

Alfred Rosenbloom

Loyola University Chicago

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LOYOLA UNIVERSITY

A GROUNDED THEORY OF KNOWLEDGE UTILIZATION
IN UNDERGRADUATE MANAGEMENT MAJORS:
AN INSTITUTIONAL STUDY

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

BY
ALFRED ROSEN BLOOM

CHICAGO, ILLINOIS
JANUARY 1995
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One hears many accounts of how awful and horrible dissertation committees can be. Most of that is probably apocryphal. By all accounts I have had a dream committee. Each member has encouraged and supported my efforts every step of the way. John Eber in his quite, thoughtful way has always challenged me to see the big picture and not get bogged down in minutia. Steve Miller always prodded me to think "deeply" about words, their meaning and the underlying epistemology behind qualitative research. I know I'm a better teacher because of that. Finally, Terry Williams has been the ideal Director. No matter how swamped and busy he was, he always found time to encourage, guide and support me. Whenever I was with Terry, my research was the only thing that mattered. In the end, the greatest thanks and strength of my committee were that they let me write the dissertation that I wanted to write.

Of course I owe this entire dissertation to my former students. Without them and without their willingness to talk with me at a time in their lives when they are building their careers and families, there would be no dissertation.

Five family members have been important to me throughout. My aunt
has demonstrated that it is possible to have a rich, full career in academe, be a world-renowned scholar and still keep one's sense of purpose and humor through it all. My parents have always supported me in everything that I've done. Like going back to school, no less than earlier forays into being a public health administrator and a chef. They're the best.

Finally, there are my niece and nephew, Jessie and Aaron. They will no doubt live in a world that will be so far different from the one I know that I can scarcely imagine it; thus, they will "use" knowledge in ways that I now can only begin to dream of and some of their knowledge use I will never know. I lovingly dedicate this dissertation to them.
TABLE OF CONTENTS

ACKNOWLEDGEMENTS .......................................................... iii
LIST OF FIGURES .............................................................. x
LIST OF TABLES ............................................................... xi

Chapter

I. INTRODUCTION .............................................................. 1

Current Criticisms of the Curriculum: Debate Over the Canon

A Historical Perspective on the Curricular Debate

The Rise and Decline of Business Majors

Criticisms of Business Education

A New Field of Inquiry Emerges: Knowledge Utilization

A Conceptual Framework of Knowledge Utilization

Research Question and Overview of Study

II. LITERATURE REVIEW .................................................... 21

Introductory Thoughts on Literature Reviews

Establishing the Boundaries for This Review

Of Rhetoric and Research

Curriculum Design Literature for Undergraduate Education

Problems with the Concept of "Liberal Education"

The Rise of Vocationalism in Higher Education

Curricular Design Literature for the Professions

What Is a Profession?

Defining Common Ground for All Professions

The Reflective Practitioner
Curriculum Design Literature for Business Education

A Short History of Business Education

Tensions Between the Liberal Arts and Business Education

Three National Studies of Business Education

The Literature on Knowledge Utilization

III. METHODOLOGY .................................................. 95

The Research Population

The Logic of a Mixed Methodological Study

An Introduction to Grounded Theory

How Categories Were Derived

Summary of the Research Design

The Survey Instrument

Initial Draft

External Validation

Survey Pilot Test

The Cover Letter

The Reminder Postcard

The Mailing List

The Mailing Strategy

The In-depth Interview Schedule

IV. FINDING STUDY INTERVIEWEES ........................... 124

A Recap of the Survey Methodology

Profile of All Respondents

Graduates with Undergraduate Management Degrees Only
Knowledge Utilization in Management Majors

Descriptive Statistics: Mean, Median, Standard Deviation and Range

The Initial Model for This Research

T-tests

Additional Discussion of the T-tests

Finding the Key That Unlocked the Data

V. THE QUALITATIVE INTERVIEWS

Links with Other Research

The Interviews

Interviewee Profiles

The Four Key Findings

Remembering Knowledge in Contrast to Having Knowledge

Patterns of Remembered Knowledge

Feeling of Knowing

Gaining Confidence to do Things

Practice Builds Confidence

Course Content Builds Confidence

The Centrality of Good Teaching

Bad Teaching

Perceptions of General Education

General Education is Dispensable

The Undergraduate Curriculum and Knowledge Utilization

Knowledge Utilization and Four Basic Business Competencies

Teachers, Teaching and Knowledge Utilization
VI. THE GROUNDED THEORY

A Critique of the Conceptual Framework of Knowledge Utilization

A Grounded Theory of Knowledge Utilization

Preexisting Conditions

Knowledge Context

Career Line

The Grounded Theory "Explained"

Transformational Learners

Frank: The Paradigm Case for a Transformational Learner

Transactional Learners

Joe: The Paradigm Case for a Transactional Learner

Transitional Learners

Nikki: The Paradigm Case for a Transitional Learner

Some Reflections on Method

VII. SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

A Context for Study Recommendations

Revisiting the Issue of Generalizability

An Ongoing Research Program

Specific Curriculum Recommendations

Conclusion

Appendix

A. SURVEY INSTRUMENT

B. COVER LETTER FOR SURVEY

C. COPY OF FOLLOWUP POST CARD
D. LIST OF COURSES BY CURRICULAR DOMAIN . . . . . . . . . . 278
E. IN-PERSON INTERVIEW SCHEDULE . . . . . . . . . . . . . . 280
F. ONE-WAY ANALYSIS OF VARIANCE TABLES FOR USABLE
   GENERAL EDUCATION KNOWLEDGE PARTITIONED IN THIRDS . 284
REFERENCE LIST . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 296
VITA . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 310
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The Kilmann Conceptual Framework of Knowledge Utilization</td>
<td>17</td>
</tr>
<tr>
<td>2.</td>
<td>Overview of the Content Domains in This Literature Review</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>The Kilmann, Slevin and Thomas Conceptual Framework of Knowledge &quot;Use&quot;</td>
<td>89</td>
</tr>
<tr>
<td>4.</td>
<td>The Relationship Between &quot;Usable,&quot; &quot;Useful&quot; and &quot;Effective&quot; Knowledge</td>
<td>91</td>
</tr>
<tr>
<td>5.</td>
<td>The Relationship Between &quot;Usable,&quot; &quot;Useful&quot; and &quot;Effective&quot; Knowledge</td>
<td>126</td>
</tr>
<tr>
<td>6.</td>
<td>Diagram of the Hypothesized Independent and Dependent Variables as Initially Conceptualized for This Research</td>
<td>140</td>
</tr>
<tr>
<td>7.</td>
<td>Diagram of a Revised &quot;Model&quot; of Knowledge Utilization when General Education &quot;Usable&quot; Knowledge is Recast as an Independent Variable</td>
<td>154</td>
</tr>
<tr>
<td>8.</td>
<td>A Grounded Theory of Knowledge Utilization</td>
<td>222</td>
</tr>
<tr>
<td>9.</td>
<td>A Grounded Theory of Knowledge Utilization for a Transformational Learner</td>
<td>235</td>
</tr>
<tr>
<td>10.</td>
<td>A Grounded Theory of Knowledge Utilization for a Transactional Learner</td>
<td>239</td>
</tr>
<tr>
<td>11.</td>
<td>A Grounded Theory of Knowledge Utilization for a Transitional Learner</td>
<td>242</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of New Schools of Business Founded Between 1880-1930</td>
<td>60</td>
</tr>
<tr>
<td>2. Employment Status of Respondents</td>
<td>128</td>
</tr>
<tr>
<td>3. Response Rate by Academic Year</td>
<td>128</td>
</tr>
<tr>
<td>4. Respondent Classification as Full-time or Part-time Student</td>
<td>129</td>
</tr>
<tr>
<td>5. Number of Single and Double Majors of All Respondents</td>
<td>129</td>
</tr>
<tr>
<td>6. Number of Respondents Having Taken at Least One Graduate Class Since Graduation</td>
<td>130</td>
</tr>
<tr>
<td>7. Employment Status of BA-Only Respondents at Time of Survey</td>
<td>131</td>
</tr>
<tr>
<td>8. Year of Graduation for BA-Only Respondents</td>
<td>132</td>
</tr>
<tr>
<td>9. Transfer Status of BA-Only Respondents</td>
<td>132</td>
</tr>
<tr>
<td>10. Number of BA-Only Respondents with Single and Double Majors</td>
<td>132</td>
</tr>
<tr>
<td>11. Classification of BA-Only Respondents as Full Time or Part Time Students</td>
<td>133</td>
</tr>
<tr>
<td>12. Gender of BA-Only Respondents</td>
<td>133</td>
</tr>
<tr>
<td>13. Age at Time of Graduation for BA-Only Respondents</td>
<td>134</td>
</tr>
<tr>
<td>14. Univariate Statistics for Knowledge Utilization Scores from General Education Courses</td>
<td>137</td>
</tr>
<tr>
<td>15. Univariate Statistics for Knowledge Utilization Scores from Foundation Business Courses</td>
<td>137</td>
</tr>
</tbody>
</table>
16. Univariate Statistics for Knowledge Utilization Scores from Management Courses ........................................... 137

17. Univariate Statistics for Knowledge Utilization Scores from Elective Courses ........................................... 138

18. Comparison of Knowledge Utilization Mean Scores by Gender Across All Curricular Domains ........................................... 142

19. Comparison of Knowledge Utilization Mean Scores by Transfer Status Across All Curricular Domains ........................................... 143

20. Comparison of Knowledge Utilization Mean Scores by Age Across All Curricular Domains ........................................... 144

21. Comparison of Knowledge Utilization Mean Scores by Major Across All Curricular Domains ........................................... 146

22. Correlation Matrix Between "Usable," "Useful" and "Effective" Knowledge Across All Four Curricular Domains ........................................... 150

23. Classification of Interviewed Individuals by Type of Learner ........................................... 232

24. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Useful General Education Knowledge with Accompanying Tukey's B ........................................... 285

25. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Effective General Education Knowledge with Accompanying Tukey’s B ........................................... 286

26. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Usable Foundation Business Course Knowledge with Accompanying Tukey’s B ........................................... 287

27. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Useful Foundation Business Course Knowledge with Accompanying Tukey’s B ........................................... 288
28. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Effective Foundation Business Course Knowledge with Accompanying Tukey's B ........................................ 289

29. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Usable Management Course Knowledge with Accompanying Tukey's B ........................................ 290

30. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Useable Management Course Knowledge with Accompanying Tukey's B ........................................ 291

31. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Effective Management Course Knowledge with Accompanying Tukey's B ........................................ 292

32. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Useful Elective Course Knowledge with Accompanying Tukey's B ........................................ 293

33. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Useful Elective Course Knowledge with Accompanying Tukey's B ........................................ 294

34. One Way Analysis of Variance for Usable General Education Knowledge (Partitioned in Thirds) and Effective Elective Course Knowledge with Accompanying Tukey's B ........................................ 295
Franz Joseph, Emperor of Austria: So, Mozart -- a good effort. Decidely that. A good effort.
Mozart: Did you really like it, Sire?
Franz Joseph: I thought it was most interesting. Yes, indeed. A trifle...how shall one say? [To Rosenberg] How shall one say, Director?
Rosenberg: [Subserviently]. Too many notes, Your Majesty.
Franz Joseph: Very well put. Too many notes.
Mozart: I don't understand.
Franz Joseph: My dear fellow, don't take it too hard. There are in fact only so many notes the human ear can hear in the course of any evening. I think I'm right in saying that, aren't I, Court Composer?
Saleri [uncomfortably]: Well, yes, I would say yes, on the whole, yes, Majesty.
Franz Joseph: There you are. It's clever. It's German. It's quality work. And there are simply too many notes. Do you see?
Mozart: There are just as many notes, Majesty, neither more nor less, as are required.
[Pause]
Franz Joseph: Ah...Well--there it is!

--- Part of Scene 8
Amadeus by Peter Shaffer
CHAPTER I
INTRODUCTION

Richard Wagner, in the opening scene of Act III of his monumental opera, Gotterdammerung, uses Norse mythology to explicitly foreshadow the end of the world. In Norse mythology the Norns were seers who literally controlled the world’s fate. The Norns "spun" the three threads of fate: One thread was the past, another was the present and the third thread was the future. Wagner opens Act III of Gotterdammerung with the Norns spinning the world’s fate out of its traditional three threads. Soon, however, the three threads break, symbolizing not only the loss of control that the "gods" (Wotan, Fricka, Erde and Loge) have on the world but also the rebirth of a new world order that is inhabited by humans who have free will. It is, indeed, "The Twilight of the Gods" (the traditional translation of Gotterdammerung).

This image, that the world’s fate or destiny is composed of three threads, all having a common origin and all "tied" together in some unified whole, is not only a powerful mythic symbol in Wagner’s opera but is also a potent metaphor for the curriculum in higher education. As currently conceptualized, a college or university curriculum consists of three components: There is the general education component; there are courses in the major; and there are
free electives (Levine, 1978). And like the Norn's three threads, any curriculum deals with the past and present in relationship to the future. Historical knowledge, the past, is taught to students in the present with the expectation that somehow students will "use" this knowledge in the future. But Wagner's image of the Norn's inability to control the threads of fate (past, present, future) also suggests that historical continuity is no longer tightly woven or bound with the present. Shakespeare might have been right when he said, "What's past is prologue," but Wagner's image of the broken and frayed threads of time raises these provocative questions: just what is the relationship between "the past" and the present, and does anyone "control" the past? These are profound questions in and of themselves, but they are also questions that are central to the design of a college's curriculum, especially its general education component in the early 1990s.

Current Criticisms of the Curriculum: Debate Over the Canon

In 1993, the general education curriculum is hotly debated -- and contested. The debate has crystallized around the idea of

---

1The philosopher/mathematician, Alfred North Whitehead, has said essentially the same thing at the beginning of his famous essay, "The Aims of Education." Whitehead said, "The understanding that we want is an understanding of the insistent present. The only use of knowledge of the past is to equip us for the present...The present is all there is. It is holy ground; it is the past, and it is the future" (1929/1961, p. 14).

2A rash of books have recently been published on all sides of the debate. At a minimum, one should read Bloom (1988), The Closing of the American Mind (the book which started the current debate); Gless and Smith (1990), The Politics of Liberal Education; Graff (1992),
"the canon." In essence, is there a common set of books or readings that every undergraduate should read and if so, what criteria should be used to choose those books and readings? One group of scholars states firmly, yes, there is a common, core set of readings that are essential for every undergraduate to read. As a shorthand, these seminal works of literature, philosophy, history and science have been called The Great Books, and they embody Matthew Arnold's idea of "the best that is known and thought in the world" (Arnold, 1869/1994).

On the other side of the debate are scholars who ferociously attack the Great Books idea. The "great works" of literature, science, philosophy and history, they say, are elitist. These works were all written by white, European males, and even if one were to use Arnold's standard (a highly debatable one at best they say), these works of literature could hardly embody the best that is known and thought in the world. At best, the Great Books represent a small selection of European white male writers who express a Western European (Judeo-Christian) point of view. At worst, the Great Books are a collection of elitist European white male authors whose ideas are narrow, exclusionary and repressive.³

³Bernard Knox (1993), a well-known classical scholar, adds his voice to the debate by sarcastically titling his most recent collection of essays on Greek tragedians, The Oldest Dead White European Males: And Other Reflections on the Classics.
Atlas (1993) traces the origins of this latter attack on "the canon" to academic English Department's enthusiasm for deconstruction as a valid approach to literary analysis and critique. Paul de Man, one of the leading theorists in deconstruction, has said that "all language is about language" (de Man, 1988, p. 27). A central premise of deconstruction is that all language is unstable: Words never really "mean" what they appear to mean on the surface. Further, every author is unconscious of the inherent ambiguity of language but proceeds as if his or her writing is logical, is internally consistent and without contradiction. In fact, according to deconstructionist theory, it is not. Thus, "To deconstruct a text is to question its literal meaning, the validity of its authorial point of view -- to challenge its intention" (Atlas, 1993, p. 46). Writers routinely and unconsciously use the socially accepted meanings of words without realizing that the words themselves embody social or historical determined value judgments, and it is the

---

4This theme, that language creates "reality," has had a pervasive and profound effect across many academic disciplines. Kimball (1988) has called this attention to language "part of a profound redefinition of knowledge and culture that is occurring throughout academe" (p. 295). For example, Guba and Lincoln (1989) have become virtually synonymous with explaining the constructivist point of view in the domain of educational research and evaluation. Middleman and Goldberg Wood (1992) have applied constructivist thinking to social work; and in a recent study of how managers actually get things done in organizations Eccles, Nohira and Berkley (1992) explicitly state that it is the manager's use of language which is the key to collective actions. They state, "A rhetorical view of management, it must be stressed, does not absurdly deny the existence of facts. It merely asserts that whatever these facts are, their importance and meaning are only established through language. And as any manager intuitively knows, it is language, not facts, that ultimately shapes the way we see things" (p. 29).
literary critic's role to make these value judgments explicit. The purpose of literary analysis, then, is no longer to explain what a literary work "means" as a self-sufficient, aesthetic entity. English professors no longer conduct research on nor do they teach students about form, content and structure, as fundamental organizing principles of every literary work. Instead, their research interests focus on unearthing and explaining the larger social and political forces embedded in every literary work. Concepts such as "power," "repression," "domination," "sexual ambivalence," "marginal groups" and "struggle" are central to the work of these literary critics. Literary analysis has now become overtly political and ideological.

Waged within the context of the general education debate, the issue is clear: Should the "standard" or "traditional" works of Western Civilization (Aristotle, Plato, Chaucer, Shakespeare, Milton, Rousseau, Kant, Darwin, Marx, etc.) form the central core of general education requirements, or should the general education curriculum be more "inclusive," more multicultural? Should students be required to take courses that explore non-Western civilizations, literatures, languages and artistic forms? Should a feminist perspective be central to analyses in literature, history, philosophy and science? These questions go to the center of the debate.

A Historical Perspective on the Curricular Debate

Swift in 1792, The Battle of the Books. And in so doing, Atlas reminds one that debates over what knowledge is most worth having (the central question underpinning every curriculum) occur frequently. Since the current debate is so vociferous and widespread, there is always a temptation to wax nostalgic for "earlier times" when there was more "agreement" about the purpose and content of the undergraduate curriculum. A reading of the historical record, however, will not support such an interpretation. In fact, Rudolph (1977) and Sloan (1971a, 1971b) make clear in their seminal work on the history of the higher education curriculum in American that the curriculum has always been one of contested terrain. Except for the first curriculum at Harvard in 1636 (which was a duplicate of the curriculum then in place at Emmanuel College, Cambridge), there have been continual "battles" over the curriculum. Sometimes the battles were waged locally, as when William and Mary College (the second colonial college in America) created a curriculum that would differentiate itself from Harvard. Sometimes the battles were writ large, as in the national debate over the Yale Report of 1828 (which attempted to defend a Harvard-like classical curriculum over a more contemporary one). Sometimes the battles were ideological, as in the latter half of the nineteenth century when "religion" confronted "science" over the capstone course in moral philosophy. Sometimes the battles were overtly political as when student freedom of choice became the central curricular issue debated during the era of the Vietnam War.
In the early and mid 1980s, the curricular battleground shifted again. In part, the debate was a direct response to what critics saw as the excessive freedom of choice precipitated by student activism during and after the Vietnam War. Students were allowed free reign in selecting courses to fulfill graduation requirements, and faculty complicitly agreed. As a consequence, coherence, "integrity," purpose and standards of excellence had all but evaporated from the undergraduate curriculum. In "a whole galaxy of [national] reports" (Smith, 1993, p. 244), critics called variously for "Integrity in the College Curriculum" (Association of American Colleges, 1985), for revival of the humanities as the cornerstone of the general education emphasis (Bennett, 1984), for a renewed commitment to "basic skills" as the key to national competitiveness (Newman, 1985), for better teaching and higher academic standards in all undergraduate courses (Study Group on the Condition of Excellence in Higher Education, 1984), and for a more cohesive, meaningful undergraduate "experience" inside and outside the classroom (Boyer, 1986). Taken as a whole, these national reports simply (and colloquially) have become known as "the reform reports," and Eaton (1991) correctly states that "The 1980s may be described as a decade of reports" (p. 55).

From his perspective later in the decade, Gary Rhoades is an excellent exemplar of the above mentioned scholarly fascination with deconstruction throughout the academy.\(^5\) Rhoades (1988)

\(^5\)Another essential reading on the relationship between deconstruction and the undergraduate reform reports is Kimball's (1988) crystalline, elegant and insightful analysis of the historical origins of the curriculum debate.
deconstructs four of the reform reports, paying particular attention to the metaphoric language used in each. Rhoades finds that "problems" with the undergraduate curriculum are consistently described through pejorative business metaphors. The curricular metaphors in the Bennett report, to cite but one example, "reveal a strong antibusiness tone, and business language carries negative connotations in nearly all references....Most of the business metaphors in this report (and in the others) refer to cheap, lowbrow, low quality enterprises....These reveal not just the derogatory nature of the references but the aristocratic nature of the tastes expressed" (emphasis added, p. 522). Rhoades correctly discerns that the "ideal" college type, implied but never overtly stated in these reports, is the antebellum liberal arts college: small, private and elitist. By extension, then, the "ideal" curriculum is one firmly rooted in the classical liberal arts. Further, by tracking the metaphors used throughout, Rhoades supports the deconstructionist assertion that metaphors reflect larger social values, which are often hidden from the author him or herself. By explicitly enumerating the negative business metaphors, Rhoades rightly demonstrates that the reform reports were also strong responses to the steady rise in vocationally-oriented courses creeping into the curriculum.

The Rise and Decline of Business Majors

Beginning in the early 1970s, evidence of a new trend can be
found in the college curriculum. Shorthand phrases variously term this trend as a rise in "vocationalism," a renewed emphasis on "career education," "the new practicality" (all three cited in Scott, 1992, p. 88), or (pejoratively) "vocomania" (Levine, 1980, p. 62). Whatever the label, the trend was clear: Students enrolled in colleges and universities with the explicit intent of learning skills and tasks as preparation for a job. One clear indicator of this change was the changing enrollment patterns in various academic majors. Simply stated, the number of humanities and education majors plummeted, while the number of business, health care and engineering majors sky-rocketed (Katchadourian & Boli, 1985; Levine, 1980). And underpinning these changes was a fundamental change in student values. As tracked by the American Council on Education's survey of freshmen attitudes, the percentage of freshman who said that the primary purpose for attending college was to be well-off financially rose from 45% in 1967 to 74% in 1983 (cited in Katchadourain & Boli, 1985, pp. 12-15).

Green (1993) summarizes the data on the dramatic surge in business majors from 1970 to 1990 as follows:

(1) The proportion of entering college freshmen planning to major in business almost doubled, rising to a peak of 26.0 percent in fall 1987.

(2) The total number of undergraduate management degrees more than doubled (from 115,000 in 1971 to over 249,000 in 1990), even though the total number of baccalaureate degrees grew by only 21 percent.

(3) The market share of business degrees awarded to undergraduates almost doubled, from 13.7 percent in 1971 to 24.3 percent in 1990.
(4) The total number of U.S. four-year colleges and universities offering undergraduate business majors or two-year colleges offering a business concentration rose from 1,547 campuses in 1974 to 2,678 campuses in 1991, a gain of nearly 75 percent. (p. 7)

These data led Green to conclude that the undergraduate business major was the most popular major in the United States during this period. Johnston (1986) similarly concludes that "Each year now, virtually one in every four of the nation's nearly one million graduates takes a degree in business. Business enrollments dwarf those of all other fields of study" (p. 2). However, after 1986, which was the high mark in business enrollment, there has been a steady decline in the number of declared business majors in colleges and universities. After two decades of unprecedented growth, schools and colleges of business will now be facing new enrollment and curricular challenges. If the title of a recent report gains acceptance, the 1990s could become known as the period "after the boom" (Green, 1993).

However, just as the number of students wanting to become business majors surged, businesses in America underwent some new and painful transformations. The period between 1970 and 1990 saw uneven economic growth. First, there was the double-digit inflation of the early 1970s, followed by the crushing recession of the early 1980s. Corporate earnings growth stagnated as did the real income of the average worker. The trade deficit mounted and the national debt soared. There were massive corporate lay offs and restructurings. Ironically, in 1985, only one year before business enrollment peaked
in colleges and universities (Green, 1993), the U.S. Commerce Department noted gravely that for the first time in the twentieth century, the United States was a debtor not a creditor nation (cited in Schmidt & Finnegan, 1992, p. 7). In a word, the world had become a global marketplace and the U.S. business was just not competing effectively.

Explanations for the United State's overall economic decline were (and still are) as numerous as the people writing books and articles on the topic. Choate (1986) provides a basic laundry list of "causes": Mismanagement of the country's fiscal and monetary policies; high taxes; excessive regulation; hostility between labor and management; unrealistic wage demands by unions; productivity declines; predatory trade practices by other nations; expensive capital; an overvalued dollar; the persistent, short-term focus of upper management; and just plain old incompetence (p. 4). As American business went into this overall decline, corporate managers were left in an uncomfortable position: stockholder and internal management expectations continued to pressure them for solutions that would revitalize or turnaround weak corporate performance. It is not surprising, then, that many corporate managers turned to fads and quick fixes for "solutions" to their business problems. McGill (1988) provides an excellent, decade-by-decade summary of all the well-known management fads from 1950 through 1985. Part of the reason for managers' perennial interest in these quick fixes and fads, McGill finds, is "the human habit of looking for the quick and
easy way, the added allure of self-managed simplicity in a complex world and managerial insecurity" (p. 31). It is hard, he concludes, to change human nature.

Criticisms of Business Education

Inevitably, these sharp reversals in American competitive standing led to a reappraisal of management education. Business leaders increasingly asserted that the skills they needed most in employees were either not being taught or were not being taught effectively in the nation's colleges and schools of business. Writing in the Harvard Business Review, Berhman and Levin (1985) echoed these claims: "In the assessment of the part U.S. managers have played in our reduced industrial competitiveness, one theme emerges -- that business schools are part of the problem" (p. 140). And findings from the first comprehensive, national study of management education in 30 years boldly summarized the opinions of Fortune 500 executives: Business schools did a mediocre job of preparing graduates for "the real world." Graduates from schools and colleges of business, at both undergraduate and graduate levels, lacked not only the "vision" and the ability to integrate knowledge and to problem-solve across disciplines, but also lacked sensitivity to the contextual dimensions of key problems: both internationally and ethically. Further, and most painfully, graduates were strong on sophisticated, quantitative models of financial planning and analysis, but were woefully weak on the more basic, "soft" people
skills -- the very skills most corporate executives thought essential for business success (Porter & McKibbin, 1988). But unlike other business school critiques, which analyzed only the graduate, MBA component of business education, the Porter and McKibbin report dealt with the undergraduate business curriculum as well. When placed within the context of the larger curriculum debates, Porter and McKibbin's findings revolve around two perennial, undergraduate curricular design problems: (1) what portion of a student's total undergraduate education should be devoted to general education versus the major; and (2) what is the proper mix of courses in the student's major?

In part, the explosive growth of disciplinary knowledge in all fields, including business, makes these last two questions increasingly difficult to answer. As "new" knowledge enters a field and as "old" knowledge is reformulated, the total amount of knowledge in any field increases. Simultaneously, specialization occurs, as the total field of knowledge sub-divides into more manageable, more meaningful but much smaller units. At this point, knowledge becomes fragmented. As scholars and researchers work on furthering their knowledge in one small area, it becomes harder and harder to see the connectedness between this one knowledge arena and the larger domain (Clark, 1987). Management knowledge is not immune from this phenomenon. John Slocum, former president of the Academy of Management, pinpointed the problem with most management research in his presidential address in 1984. He said, "It seems management
scholars have traded off solving smaller or more trivial problems well, instead of larger ones. It's what we call 'the error of the Third Kind,' solving the wrong problem well" (cited in McGill, 1988, p. 32). Thus, the question that is central to all education and to every curriculum, including the business curriculum, becomes much more difficult to answer: What knowledge is most worth having?

A New Field of Study Emerges: Knowledge Utilization

Government-sponsored research experienced unprecedented growth during the 1960s. This was, after all, the era of John Kennedy's New Frontier and Lyndon Johnson's Great Society. Central to each president's domestic policy program was the proliferation of numerous social welfare programs, all aimed at improving the health, education and living conditions for low income, disadvantaged Americans. In aggressively funding such programs, the federal government mandated that all federally-sponsored programs follow the "standard" scientific model of experimentation and evaluation. Greatly simplified this process would proceed as follows: establish program goals and objectives; design and conduct pilot test(s) prior to nationwide implementation; evaluate the pilot test results in relation to stated objectives; disseminate test results nationally; and finally, based upon what was learned in the pilot(s), design large-scale programs to be carried out throughout the country. In theory, this model would insure not only governmental effectiveness (did the program do what it was intended to do?) but also
governmental efficiency (comparing two possible approaches to ameliorating a given problem, which program, relative to its overall cost, produced the "best" results?). In essence, the government was attempting to hold itself accountable to its citizenry for the money spent. Gradually, however, researchers working within various governmental departments, along with academics working in colleges and universities, began to question the growing gap between the tremendous volume of funded research and the paucity of programs that actually "used" these research findings in program design and implementation. Out of this disjuncture emerged a new field of study, knowledge utilization.

Backer (1991) provides the most complete summary of the field's historical origins and development. Intellectually, knowledge utilization had its origins in applied economics and social policy evaluation. From economics, knowledge utilization drew on the research of Machlup (1962) and Holzner and Marx (1979), which attempted to explain, by utilizing the economic concept of utility, how large social entities (such as government research projects) produced, distributed and consumed "knowledge." From social policy analysis, individuals like Carol Weiss (1972) had long asked, how did one evaluate the "success" of massive, federal social welfare programs? By grounding the lineage of knowledge utilization back to these two fields, Backer (1991) states that knowledge utilization is a series of "research, scholarly and programmatic activities aimed at increasing the use of knowledge to solve human problems" (p. 226).
Interestingly, Backer spends considerable time chronicling issues such as "dissemination" and "integrated systems for knowledge utilization" but completely begs the question of what is meant by the phrase "knowledge utilization." Kilmann, Slevin and Thomas (1983), fortunately, help provide an answer.

Ralph Kilmann and colleagues looked at the problem of knowledge utilization from a business/management perspective and asked: Why was it that so little of the voluminous research published by professors in schools and colleges of business was actually "used" by practicing managers? Kilmann, Slevin and Thomas's (1983) answer was an updated version of C.P. Snow's (1964) classic statement about "two cultures." Business professors, Kilmann posited, reside in an academic culture that rewards theoretical, analytic and highly quantitative explanations of business phenomenon. Practicing managers, on the other hand, reside in a culture that values immediately "useful," action-oriented knowledge. For the practicing manager the central criteria are never whether this research contributes significantly to the intellectual knowledge base of a discipline (which is what business professors are most concerned with) but whether this research will actually work in my company or in my business setting - and how soon. Thus, as Snow stated, the two cultures "talk past" each other. Along the way, Kilmann, Slevin and Thomas (1983) differentiated between what they hypothesized were four closely linked but distinct aspects of knowledge utilization.
### A Conceptual Framework of Knowledge Utilization

The conceptual framework Kilmann, Slevin and Thomas (1983) proposed tried to untangle what managers meant when they colloquially said they "use" some piece or bit of knowledge on the job. Knowledge "use," they proposed, was really a shorthand for four closely related terms. These terms were: usable knowledge, useful knowledge, knowledge that is used and effective knowledge. Kilmann, Slevin and Thomas (1983) arrayed their framework in a 2 X 2 matrix as shown in Figure 1.

Kilmann suggested that "usable" knowledge refers to the potentiality of knowledge; it is evaluated before the fact and is not

<table>
<thead>
<tr>
<th>Descriptive</th>
<th>Potential: Evaluated before the fact</th>
<th>Actual: Evaluated after the fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not related to a person's values or goals</td>
<td>USABLE Knowledge</td>
<td>Knowledge that is USED</td>
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<tr>
<th>Evaluative</th>
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<th>Effectiveness Knowledge</th>
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<tbody>
<tr>
<td>Related to a person's values or goals</td>
<td>USEFUL Knowledge</td>
<td>EFFECTIVE Knowledge</td>
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Figure 1. The Kilmann Conceptual Framework of Knowledge Utilization.
related to any specific goal. Determining whether knowledge was "used" can only occur after the fact and is applied to situations that are general and nonspecific. "Useful" knowledge is also assessed before the fact, but it is always allied with specific goals. Knowledge is "useful" because an individual believes that a specific piece of knowledge will help him or her either solve a problem or do something tangible. Only after the fact is that piece or bit of knowledge evaluated as to whether it was, indeed, the right or correct piece of knowledge to apply in that particular situation. Knowledge is thus said to be "effective." And it is this conceptual framework by Kilmann, Slevin and Thomas (1983) that grounds this research.

The Research Question and Study Overview

Research questions sometime arise from personal experience. As an assistant professor in the business administration department of a small, church-affiliated college located on the outskirts of a large urban city, this researcher wondered whether the information and theories he presented in class were actually being "used" by students in their respective jobs. There seems to be an implied assumption, especially in schools and colleges of business, that what the professor "teaches" in class is what the student "needs to know" to perform successfully on the job. Since business is an applied field of study, the professorial reasoning goes, there should be strong linkages between the concepts, theories and skills taught in class
and the "real world" application of these same concepts, theories and skills at work.

However, as this opening chapter has demonstrated, there is substantial unease with the current configuration of business education. Calls for change have come from practicing managers, from accreditation bodies (the Porter and McKibbin report), from business faculty themselves and even from students. The tactic assumption that, collectively, business professors are teaching their students the knowledge that is most worth having is now a matter of ongoing, heated debate.6 Coupled with the general intellectual ferment swirling around the general education component of the undergraduate curriculum, the time seemed right for an exploratory research project to gauge whether and to what degree undergraduate management majors "use" course knowledge on their jobs. This is, in fact, the research question to be explored here.

College of Business alumni from a small, private, church-affiliated university outside of Chicago were the relevant research population. Specifically, all alumni who majored in management and who graduated between May, 1988 and May, 1992 were targeted for study. Research was conducted in two distinct phases. In phase one,

6Total quality management (TQM) is the latest, most visible battle ground here. Within the past two years, three rather large conference proceedings were published that explored the relationship between higher education's lethargic, piece-meal acceptance of TQM and business's desperate plea for professionals firmly educated in TQM techniques (Petak, 1991; Proctor & Gamble, 1992a; Proctor & Gamble, 1992b). The underlying theme throughout these proceedings is the general failure of higher education to educate students in the knowledge most worth having, in this case, TQM.
all alumni in the targeted group were sent a questionnaire asking them to evaluate the degree to which they "used" course knowledge on their jobs. Kilmann, Slevin and Thomas's (1983) conceptual framework of knowledge utilization was applied throughout the questionnaire. Basic demographic and job-related data were also collected. Surveys were statistically analyzed to determine the most "interesting cases" in terms of knowledge utilization. This led directly to phase two. Phase two involved 12 in-depth interviews with these interesting cases. The interviews explored, in detail, just how these individuals "made sense of" and "used" course knowledge on their jobs. The interviews provided the "thick description" (Geertz, 1973) necessary for the grounded theory (Strauss & Corbin, 1990) that emerged.

This, then, introduces the main themes and "sets the stage" for the research that follows. In succeeding chapters the reader will find a review of the relevant literature related both to the undergraduate business curriculum and to knowledge utilization (Chapter II), a detailed presentation of the research methodology used (Chapter III), a report of findings (Chapters IV and V), presentation of a grounded theory that "explains" knowledge utilization within the 12 interviewed individuals (Chapter VI) and a concluding chapter (Chapter VII) that suggests how the undergraduate management might change based on the research findings along with some suggestions for further research on knowledge utilization in higher education.
CHAPTER II
LITERATURE REVIEW

Introductory Thoughts on Literature Reviews

In Greek mythology, the goddess Athena is said to have sprung fully formed and fully clothed from the forehead of Zeus. One wag has commented that Athena began as a headache for Zeus and continued to be so throughout mythological history. Only in the realm of mythology, however, could a goddess be born de novo, with all her features, personality traits and desires fully formed. In the realm of reasoned inquiry, all ideas have distinctive genealogies. It is traditional that dissertations include a chapter tracing the intellectual origins of the research under discussion. These literature reviews attempt to answer the question: Where did the ideas, concepts, themes, problematic findings or unexplored issues that are central to the research come from? In other words, the literature review attempts to relate the "new" knowledge of the dissertation's succeeding chapters with the relevant knowledge base that currently exists. Doing so is often no easy task.

Literature reviews in this postmodern, information-rich age are always a matter choice: What does one include and what does one exclude? Synoptic reviews are often impossible -- and almost always unmanageable. Thus, the scholar conducting the review needs to state
clearly the criteria or principles used in making his or her choices.

Further, how far back in the genealogy or history of an idea, concept or theme should the reviewer go? Unlike the goddess Athena, ideas, concepts and themes do not spring de novo, out of nothingness. Each has its own unique and complex origin in earlier times and places.\(^1\) Tracing one, current idea in the literature leads to a discussion of earlier literature which in turn leads to a still earlier literature, \textit{ad infinitum}.\(^2\) Where does the reviewer stop? Philosophers term this the problem of the infinite regress. Again it is the scholar's obligation to "bound" or limit the literature review in a meaningful way and to present the logic for so doing. But by so

\(^1\)This creates, in turn, one of the more interesting paradoxes about literature reviews in dissertations: To some degree, all literature reviews are historical. Ironically, they are historical without being historiographical. The paradox is that they are "about" history without necessarily being concerned with the methods "of" history, unless (of course) the dissertation is documentary in nature.

\(^2\)One of the most arresting images of a "good" literature review comes from a recent work of fiction by Alan Kurzweil, \textit{A Case of Curiosities}. A good literature review should engage the reader as if all the works of literature mentioned were talking amongst themselves. The literature review should be the kind of "silent dialogue" that Kurzweil (1992) describes in this passage: " 'Let us move on...This is the library.' To avoid any misunderstanding, he added, 'Where the books are kept.' But misunderstanding was impossible. Massive atlases topped by dictionaries, topped in turn by a succession of trade manuals and opuscules of diminishing size, formed stalagmites of knowledge through which Claude found it difficult to maneuver. He was waist-high in words....There was, in the arrangement of books, a clear hierarchy of respect, with central placement revealing central concerns...Claude was amazed that the number of open works far exceeded the number that were closed. They often faced one another and seemed, without the aid of readers, to conduct a silent dialogue, their authors -- naturalists and mechanicians and philosophers -- proclaiming competing and concurring ideas" (pp. 45-46).
"bounding" or limiting the review, the scholar may inadvertently give
the appearance of a neat intellectual order to the issues at hand
when, in fact, there may be none.

There is no doubt that human beings have a preference for order
over disorder. William James reminds one that even these helpful and
utilitarian concepts are essentially human constructs:

Order and disorder are purely human inventions. . . . If I
should throw down a thousand beans upon a table, I could
doubtless, by eliminating a sufficient number of them, leave the
rest in almost any geometrical pattern you might propose to me,
and you might then say that that pattern was the thing
prefigured beforehand, and that other beans were mere
irrelevance and packing material. Our dealings with Nature are
just like this. She is a vast plenum in which our attention
draws capricious lines in innumerable directions. We count and
name whatever lies upon the special lines we trace, whilst the
other things and the untraced lines are neither named nor
counted. (James, 1895, p. 142)

Yet again, the scholar is forced to grapple with the human
construction of "reality" (Berger & Luckman, 1968).

So where does this leave the scholar attempting the traditional
review of the literature? With a headache comparable to Zeus! The
scholar's obligation is three fold. It is (1) to define the academic
content domains relevant to the research; (2) to review and critique
what other scholars have said on the topic; and (3) to be humbled by
the fact that the scholar is discussing but one, small domain within
the totality of human knowledge. To echo James, the scholar counts
and names whatever lies upon the "special lines" of his or her
dissertation topic, while the rest of the world's knowledge is
neither named nor counted.
Establishing the Boundaries for This Review

This dissertation is fundamentally about how management majors in one small, church-affiliated university "use" or apply their undergraduate course work on their job. And as noted in Chapter I, the topic originated in the teaching experience of the researcher. Several aspects of the topic are immediately worth noting:

1) The topic casts a wide net, for it takes as its domain the entire undergraduate curriculum. No scholar could ever hope to summarize all that has been written about the undergraduate curriculum. The content domain is just too vast. Stark and Lowther (1986) eloquently make this point in their attempt to propose a comprehensive framework for analyzing "the college curriculum." They define twelve overlapping content domains that directly effect the college curriculum. These content areas range from historical studies of curriculum trends to philosophical treatises on epistemology and the sociology of knowledge; from sociological studies on the changing purposes and roles of American higher education to the vast educational psychology literature on student learning and development; from research on faculty socialization, development and career patterns to research on faculty governance and organization issues; and finally from the higher education literature on institutional change to that on institutional and program assessment. Inevitably they reach the conclusion that "a review of the college curriculum literature that included...all of the twelve literature bases and their disciplinary origins would be
unmanageable" (p. 9). Consequently, the following literature review will focus on the central issue of curricular design.

2) The topic's central focus is how management majors, the research population of interest, actually "use" course knowledge on their jobs. Defining the word "use" is fundamental to the research. Kilmann, Slevin and Thomas's (1983) conceptualization of knowledge "use" and supporting literature from the field of knowledge utilization will provide the theoretical base for understanding the concept of "use."

3) The topic assumes that there is a relationship between what management majors learn in class and what they do on their jobs. Thus, implied within the topic is an answer not only to the question of what is the main purpose of going to college (for these management majors it was to help them get a job) but also to the question of how to define the term "curriculum" (it is the set of courses formally required by a college or university for graduation).

3Defining the word "curriculum" is a tricky, complicated matter which could, in fact, have a whole dissertation devoted exclusively to its analysis. The American Educators' Encyclopedia (1991) begins its entry on the curriculum thusly: "Curriculum, a complex term that has no agreed upon definition" (p. 151). In the higher education literature Stark and Lowther (1986) echo this point by noting that the word "curriculum" has at least six different meanings. It can mean "(1) a college's or program's mission, purpose, or collective expression of what is important for students to learn; (2) a set of experiences that some authorities believe all students should have; (3) the set of courses offered to students; (4) the set of courses students actually elect from those available; (5) the content of a specific discipline; and (6) the time and credit frame in which the college provides education" (p. 5). Yet even this extensive list doesn't exhaust the "dimensions" of the curriculum. There is also the "extracurriculum" [the totality of experiences outside the classroom that "teach" students things (Carnegie Foundation, 1977)] and the "hidden curriculum" [that "learning that is informally and
4) Finally, the topic is supported by the growing consensus among executives, business faculty and educational theorists that "management" includes many of the salient characteristics of a profession. This raises the very important issues of first, attempting to differentiate a professional, management education from merely a "technical" education and/or a liberal arts education and second, based upon that differentiation, considering what implications that has for the design of a professional management/business curricula.

Conceptually, then, the following literature review can be thought of as a series of nested and interrelated content areas (see Figure 2). The largest and broadest content area in the domain of higher education is the literature on the design of a college's or university's entire undergraduate curriculum. A subset of that literature is the literature on the design of professional curricula. And as a further subset of the professional curricular design literature is the literature concerned with design of business/management curricula. Finally, encompassing all three levels of the higher education literature is the literature on knowledge utilization. In a sense, then, the knowledge utilization literature is the grandest of the grand since it provides the

[sometimes inadvertently acquired by students in interaction with fellow students and faculty members and inferred from the rule and traditions of the institution" (Levine, 1978, p. 526)]. In the end, one can only bow to Rudolph's (1977) terse assertion that "the word curriculum [is] a concept of convenience rather than precision" (p. 245).
Of Rhetoric and Research

Stark and Lowther (1986) make a trenchant observation about the literature on the undergraduate curriculum that helps frame the entire literature review which follows. Stark and Lowther state that much of the literature on the undergraduate curriculum falls into two large categories. There are studies, reports, essays and books that are essentially rhetorical and there are studies that are basically
Although they never state what they mean by rhetorical, a careful reading of Stark and Lowther (1986) makes it clear that rhetorical studies have as their starting point the personal value-structure of the writer or writers. Thus, rhetorical studies simply affirm (often quite forcefully and elegantly) that such-and-such should be the aims, purposes or outcomes of an undergraduate education. The reader simply has two choices: agree or disagree. There is no middle ground. Stark and Lowther capture the pervasiveness (and insidiousness) of the rhetorical approach when they contrast the voluminous literature in higher education "containing visions of the educated person, exhortations for holistic education, and clarion calls for the values of particular educational processes" (p. 69) with the lack of rigorous study of any aspect of the admittedly complicated and complex curriculum design process. Regrettably, not much had changed from an earlier review that found a "dearth of...literature on systematic approaches to the design and evaluation of higher education curricula" (Wood & Davis, 1978, p. 6). This dichotomy between the rhetorical and the empirical approach to curriculum design will be evident in each succeeding section. So, too, will be the preponderance of the former and the paucity of the latter.

Curriculum Design Literature for Undergraduate Education

Like axioms that are foundational to geometry, thinking about
the curriculum begins with this fundamental axiom: No curricula can ever encompass all the world's knowledge (Booth, 1972; Gaff, 1991; Levine, 1978). This presents a problem. Since only a fraction of the world's knowledge can ever be included in any one curriculum, individuals or faculties that design or create curricula are confronted with the Herculean task of deciding what knowledge to include and what knowledge to exclude. Simply stated, this is the fundamental task of deciding what knowledge is most worth having.4 And one very helpful conceptual tool, as many academic disciplines have found, for organizing the discussion is to consider the difference between means and ends. In his conceptualization of the undergraduate curriculum, Weingartner (1992) explicitly makes this distinction and frames his entire discussion within this means-end context. A brief excursion into the entomology of the word "curriculum" confirms the utility of the means-end distinction.

Curriculum has its origin in a Latin word meaning "race course" (Dressel & Marcus, 1982, p. 23). And Conrad (1978), playing with the metaphor implied in this etymology, notes that a race has a beginning and an end; a race typically has a "course" to follow; and a race has a purpose. "A curriculum, therefore, at the very least, implies an ordered set of experiences with a beginning and an end and hopefully some cumulative impact" (Conrad, 1978, p. 4). Said another way, a

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4By using a Foucauldian framework that analyzes society in terms of power relationships and issues of social control, Apple (1992) adds another, even more contentious question: Whose knowledge is most worth having? (p. 4).
curriculum should do something. That "something" is the starting point for all curricular design.

Bergquist, Gould and Greenberg (1981) understood this difference between means and ends. They have, as a result, created a curricular design framework that is vastly superior to other, more descriptive and content based approaches (Bergquist, 1977; Conrad, 1978). Bergquist, Gould and Greenberg (1981) conceive of the curricular design process as comprising six, interrelated and hierarchical elements. These six elements can be rank ordered from least important to most important and from the elements that are easiest to change to those that are most difficult to change. In rank order from least important to most important the curricular elements are: time, space, resources, organization, procedures and outcomes.

Strengths of the Bergquist, Gould and Greenberg (1981) framework are:

- It is simple to understand.
- It is comprehensive.
- It places emphasis on the most important aspect of the curriculum: outcomes, that is, what the curriculum is intended to do. And, finally, it is evaluative. Both curricular innovation and change can be evaluated in terms of at what level in the hierarchy the change or innovation is directed.

Bergquist, Gould and Greenberg (1981) note that what mainly passes for curricular "change" and "innovation" is really low level curricular "tinkering." Halliburton (1977) made much the same point by comparing curricular change to a machine: "The curriculum tends to become, like the machine...a self-activating thing: once started, it
keeps on going at its own clip; and the changes that occur within it amount to a sort of tinkering. Replace a part here, clean a clog or two, add a little oil from time to time -- and let it run" (p. 42). It is simply easier for faculty to agree on changing the less important elements in the Bergquist, Gould and Greenberg (1981) framework (time, space and resources) than it is to reach agreement on the most important element, outcomes. This last point is especially acute since it grounds this framework in the real life, nitty-gritty of academic life. A well-known aphorism says it best: It is easier to move a grave yard than change a curriculum!

Other generic "models" of curricular design, especially those proposed earlier by Begquist (1977) and Conrad (1978), simply do not have the strengths of the Bergquist, Gould and Greenberg (1981) framework. "Models" is an interesting word and pinpoints one of the perennial design problems for the undergraduate curriculum. The "models" proposed by these scholars are "models" in the simplest sense of that word: They are examples to be imitated or copied. These "models" are all content and course focused. They imply the kind of courses that should be taught. As one might imagine, these "models" tend to duplicate each other and tend to reflect common, historical themes about undergraduate education. The undergraduate curriculum should be designed around the Great Books, or individual academic disciplines, or a current social problem, etc. None of these curricular design "models" (Conrad & Wyler, 1980) captures the deeper and much more interesting aspect of a model, as a simplified
version of "reality" that identifies and describes the interaction between constituent parts.

Diamond (1989) presents a very linear planning model for curricular design. And therein lies its fatal flaw. Diamond's model begins, for example, by establishing curricular objectives; then it develops instructional formats to achieve those objectives; it next selects teaching materials and pilot tests them; after this, it considers the logistics of full scale curricular implementation; and in the last steps the curricular design is carried and evaluated. Planning, especially for an entity as all encompassing as an entire undergraduate curriculum, is never this linear, is never this smooth nor is it even this "logical." Diamond's model totally ignores the fact that every curriculum results from a complex series of internal and external forces (Carnegie Foundation, 1977) that are outside of but directly linked with his linear planning model. Diamond's model appears to have sprung de novo like the goddess Athena out of some idealized, mythic conception of college functioning, unrelated to the messiness and ambiguity of the real world.

Indeed, the internal and external forces that buffet any curricula are often most easily identified in the first person accounts of curricular debate at various institutions (Keller, 1982; Rosovsky, 1990). In reading these accounts, they remind one that the curriculum is, in the famous words of JB Lon Hefferlin, "the battlefield at the heart of the university" (Hefferlin, 1969, p. xx). So why is the debate frequently so contentious, divisive and
ultimately inconclusive?

The answer is startling simple. Both the means and the ends of higher education are illusive. What is the "educated" undergraduate suppose to "look like" at the end of approximately four years of higher learning? Further, what combination of courses and experiences, both in and outside the classroom, will help produce such a person? Bok (1986), in a few simple sentences, captures both the essence of the situation as well as the eternal pull faculty feel towards this topic. "How to educate the whole person? The subject is irresistible.... [Since 1900] all the fundamental issues have remained the same. Almost every important proposal has already been tried. No permanent victories are ever won, nor are serious arguments ever conclusively defeated" (pp. 39-40). Yet for Bok, the very act and process of the discussion is sufficient justification for the curricular debate. "In the absence of periodic discussion and review, a curriculum loses direction and slowly grows formless...A faculty that has made a considered choice of some common philosophy is vastly better off than one that struggles along with no philosophy at all" (Bok, 1986, pp. 44-45). But even Derek Bok,

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5Clearly, Bok holds a traditional view of faculty governance: that the faculty are a collegium. In the collegium, intelligent men and women have reasoned, spirited but ultimately cooperative debate. Harmony reigns within the collegium because there is tolerance and respect for differing faculty opinions. But as Birnbaum (1990) notes, there are other models of faculty governance besides the collegium. When viewed through the perspective of these other governance models (cybernetic, power, organized anarchy, etc.), alternative perspectives on the tone (as well as the ultimate "value") of the curricular debate emerge.
former president of Harvard University, is humbled and restrained by the challenges of curricular design. In the end, the best that he can hope for from the faculty is some agreement on philosophy. There is scant agreement on means or ends in higher education -- but there is always a superfluity of words.

Nevertheless, two broad approaches appear in the literature that answer the question: What should an "educated" undergraduate look like? The first approach, as exemplified by Bouswma (1964), is wholistic. The second approach is skill or competency oriented. Bouswma suggests that the purposes of education have historically produced seven different "ideal" types of individuals. These ideal "types" are: (1) the aristocrat, (2) the scribe, (3) the civic, (4) the aesthete, (5) the Christian, (6) the naturalist, and (7) the scholar. For Bouswma, different curricula can be designed to produce different types of individuals. The major strength of Bouwsma's approach is to stress the outcomes of a college education; it directly focuses on the kind of individual that the educational process is attempting to produce. Noble in intent, but weak in most other aspects. One wonders about not only the contemporary application and meaning of such ideal types as "the aristocrat" or "the scribe," but also about the numerous, thorny problems about implementation. Bouwsma is no help on the pragmatic "how-to"s.

The second approach, that of defining the "educated" undergraduate in terms of the skills or competencies he or she should possess, is the approach most frequently found in the literature. It
reads something like this: "A well-educated individual upon graduation from this institution should have competence in or should be able to...." and then there is a list of skills or competencies. Each of the major reform reports cited in Chapter I (Association of American Colleges, 1983; Bennett, 1983; National Institute of Education, 1984) are examples of this approach as are most of the prefatory, statements found in university and college catalogs that define or describe the ideal "educated person." And in reading these lists of skills, qualities or competencies, one phrase continually crops up: It is "liberal education."

**Problems with the Concept "Liberal Education"**

The concept of "liberal education" is simultaneously a help and hindrance to every discussion of the curriculum. It is at once the highest goal of higher education (to become liberally educated) and the tritest of phrases (often sinking to become a shield behind which faculty, educational theorists and politicians alike can campaign for their own parochial view of higher education). Like the word "curriculum," the words "liberal education" have several distinct and conflicting meanings:

What does anyone mean by "a liberal education?" People shift their ground when they try to explain what it is and why it is

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6Gaff (1991) acutely notes this point when he characterizes curriculum discussions as follows: "The issues in the public debate, like those in an faculty meeting, are many and various. That is to say, in addition to discussion of substance and argumentation, many things are said for their theatrical quality, shock value, and, frankly, the partisan political agendas of some participants" (p. 14).
so important. It's hard to tell whether they're talking about subjects that can be studied in school, such as philosophy and literature; a process of learning or thinking; or a personal transformation ("college opened my eyes"); or a value system to which the wise and honest can repair. (Bird, quoted in Conrad, 1977, p. 46)

Lacking any agreed-upon meaning, the term "liberal education" is thus left open to idiosyncratic use by scholars. And even when an author attempts to define the term (Bell, 1967; Gamson, 1984; Veysey, 1981), the resulting definition often raises more questions than it answers. Take Paul Dressel, for example. Dressel (1963) states that liberal education "emphasizes broad knowledge of the cultural heritage, the ability to think critically and to make wise judgements, and some awareness of the methodologies of the major disciplines" (p. 60). From a vantage point thirty years later, Dressel's statement seems hopelessly naive and superficial and seems unworthy of a scholar who has spent the vast majority of his professional life researching the undergraduate curriculum. Each phrase in Dressel's statement, for example, raises important, fundamental questions about liberal education; questions that Dressel, himself, leaves unanswered: whose cultural heritage is refered to as "the" cultural heritage? what really does it mean to "think critically"? what constitutes some awareness of a disciplinary methodology? and exactly what are "the major disciplines"?

But one of the largest areas of confusion and entanglement is the melding of "liberal education" with "general education."

Inevitably scholars see the two terms as synonymous and often lapse into an easy going prose that wanders from one term to the other and
back again, without much concern for the problems that conflating the two terms create. No less a scholar than Burton Clark provides a representative illustration. Clark (1970), in his extended case study of three distinctive colleges (Reed, Antioch and Swathmore), says, "In the United States the private liberal arts colleges...are expected to devote themselves to the liberal arts and general education. The private colleges accept this expectation, seeing their own efforts concentrated on liberal education more than is possible at the universities, the state colleges, and the junior colleges..." (p. 5). Conflating the two terms creates two problems. First, if the terms are, indeed, synonymous, then some scholar should say so and present a rationale for using one term over the other. But scholars hold diametrically opposite opinions even on this point. Levine (1978), on the one hand, states emphatically that "liberal education is perhaps the most commonly used synonym for this term [general education]" (p. 4), while Brubacher and Rudy (1976), on the other, state just as emphatically that "At the outset one may note the close similarity between general and liberal education. General education, however, was not so much a synonym for liberal education as it was a way of organizing it" (p. 272).

Confounding the situation even further is the second problem. "General education" has its own set of indistinct, contradictory and short hand definitions. Levine (1978) and Boyer and Levine (1981) are most useful in simply listing the numerous definitions of general education over the past 80 years. But only Gary Miller (1988) has
tried to disentangle the two terms. Miller (1988) summarizes the differences thusly:

Essentially, the liberal education perspective looks to the past for a sense of direction, for a pattern of meaning....Knowledge, historically viewed as a priori and universal, becomes an end in itself....The curriculum is merely a vehicle for the acquisition of knowledge, most commonly in disciplinary segments. In the general education view, on the other hand, knowledge is hypothetical and should be regarded as means to a desirable end: a fuller, more abundant personal life and a richer, freer society. To achieve that goal, knowledge from various sources, past and present, is utilized as and when it is needed, often in the solution of human problems. Indeed, general education is fundamental to the quality of life in a democratic society and has, in fact, been conceived in that context. (pp. ix-x)

Miller's effort is heroic. He charts the general education movement throughout the twentieth century, describing in detail the historical contexts and philosophical underpinnings of all the major general education curriculum design efforts in this century. Yet, his efforts to bring clarity to the two concepts have been, to date, largely a noble failure. As Smith (1993) correctly observes, "His distinctions have not been widely used in current discussions on campuses...nor have these distinctions been used in achieving the kind of consensus needed for [curricular] improvements (p. 245). The problem, as Miller (1988) himself clearly sees, is that "each person brings to the discussion a definition of the term [general education] that is colored by his or her own perception of purpose" (emphasis added, p. 3). And therein, for this writer, resides the solution to this problem. Simply stated, liberal education is an end, while general education is a means.

In a nut shell, then, as this literature review so far makes
clear, without first obtaining agreement on the purpose or ends of undergraduate education, any meaningful discussion of curricular design and a disentangling of the various terms bandied about to describe curricular intent, is doomed to fail. Faculty will talk past one another, for each will insert into the conversation his or her idiosyncratic "view" of undergraduate education or his or her personal definition of general education or liberal education. Thus, in Jerry Gaff's (1991) fine words, "The debate is confusing, because there are many speakers, the diagnoses and prescriptions are various, the voices are strident, and issues often are not joined" (p. 5). Without a careful distinction between means and ends, the resulting curricular conversation is merely a cacophony of voices. W.B. Yeats captured the dissolution of civilization, in his poem, "The Second Coming," when he said,

Turning and turning in the widening gyre,
The falcon cannot hear the falconer;
Things fall apart; the center cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.

This might well serve for the current state of affairs about the undergraduate curriculum.

The Rise of Vocationalism in Higher Education

One of the enduring "themes" in the history of American higher education has been the relationship between courses and curricula that have an avowedly vocational/occupational emphasis to them and
those that don't (Brubacker & Rudy, 1983; Rudolph, 1962, 1977; Westmeyer, 1985). Beginning in 1707, with the College of New Jersey (which was later to become Princeton University), higher education has struggled with how to include "new," more practical-oriented learning into the rigidly proscribed, fixed, classical curriculum that Harvard College borrowed from Emmanuel College, Cambridge (Sloan, 1971). Up until the Morrill Act of 1862, these new, more practical courses were isolated in either a secondary or "shadow" curriculum which a student could sample or in a free-standing "institute" which did not award a degree. The Morrill Act changed that, at least for the land grant colleges and universities it created. The Act funded at least one college or university in every state designed to "promote the liberal and practical education of the industrial classes in the several pursuits in life (Morrill Act cited in Levine, 1978, p. 588). In land grant colleges, practical courses (i.e., vocational ones) and traditional courses (i.e., liberal arts ones) coexisted side by side. For a short time there was a truce (Chiet, 1975; Miller, 1988). But beginning at the end of the 19th century and reaching its peak in the mid 1980s, student interest in vocational/career-focused education has surged. Colleges and universities, as they historically have done, responded to these "market" forces. Colleges and universities designed new, vocational and career-focused majors and administered them often through newly created professional schools. In the process, the tensions and conflict over the "purpose" of an undergraduate education were
renewed; this time with vengeance.⁷

Nowhere is the hostility provoked by higher education's collective response to the vocational interests of students more pronounced than in the American Association of Colleges' (AAC) "reform report." Called, Integrity in the College Curriculum (1984), the writers placed "up front" a strident criticism of higher education's responsiveness to student demands for vocationally-oriented courses and career programs. The AAC report bluntly stated, "The [traditional liberal arts] curriculum has given way to a marketplace philosophy; it is a supermarket where students are shoppers and professors are merchants of learning. Fads and fashions, the demands of popularity and success, enter where wisdom and experience should prevail" (p. 2). The report asked this pointed question: "Is the curriculum an invitation to philosophic and intellectual growth or a quick exposure to the skills of a particular vocation?" (p. 2). Both the colorful language and the schematic way that the report writers frame their analysis (as a simple, black-

⁷One of the most unsettling "crises" has been with the traditional liberal arts colleges. McGrath and Russell (1958), in a seminal essay, asked, "Are liberal arts colleges becoming professional schools?" In other words, did the inclusion of professional and pre-professional programs (such as business administration, nursing and engineering) inexorably change not only the character of but also the mission of liberal arts colleges? McGrath and Russell (1958) said, "no," and saw a convergence of professional and liberal arts education. "The professionalization of liberal arts curricula and the liberalization of professional curricula" both serve the same purpose, they concluded: "to prepare youth to live and work" (p. 16). Other scholars aren't so sanguine about the compatibility of professional programs within a liberal arts college, and the issue still continues to be debated (Breneman, 1990, 1993).
white dichotomy: fads and fashions are opposed to wisdom and experience; intellectual growth is counterpoised to quick exposure to a vocation) leave little doubt as to which side of the debate the report writers and any "right thinking" faculty member should be on. While provocatively stated to gain the reader's attention (and who could not be galvanized one way or the other?), the AAC report is flawed.

The AAC report sternly rebukes American higher education, en masse, for responding to student vocational interests, and the inference is that, in the process, undergraduate education has been debased. The AAC admonishes higher education to "take the high road": Don't subvert the integrity of the traditional liberal arts curriculum with professional, career-oriented curricula. This is a lofty, nay, nostalgic sentiment that is a fundamental misreading of higher education's curricular history (Brubacher & Rudy, 1965; Cheit, 1975; Jenks & Riesman, 1965; Rudolph, 1977; Westmeyer, 1985). If the history of the undergraduate curriculum in America tells one anything, it is that the undergraduate curriculum does not lead, it lags. It is not proactive, it is reactive. Robert Byrnes, chair of the history department at Indiana University, accurately summarized, in 1965 (!), the historical stance of undergraduate education this way:

We should not be surprised if the curriculum and everything about a college is buffeted by forces outside the college to a degree greater than it influences or creates these forces. Indeed, if we review the relatively few changes in curriculums [sic] over the past 30 years, we must admit that these revisions have been produced because of pressures from the outside. The college follows, it does not lead. The curriculum reflects the
Thus, if the curriculum reflects society, then another important element in understanding undergraduate curricular design issues centers on the integration of professional schools and their curricula into higher education. The rise of professional business/management education falls within this domain. And when Cheit (1975) conducted his review of the "new" professions in higher education, business administration (his term for the general study of business) was one of them.

Curricular Design Literature for the Professions

What Is a Profession?

In recent years, there has been growing scholarly interest in moving beyond understanding each profession as a separate, discrete entity. Scholars are now attempting to aggregate the concept of "profession" into a kind of meta-category, and by so doing are exploring whether there are fundamental unities across professions. If there are, then what are the educational/curricular implications which would follow therefrom? This is a fruitful literature to explore for this dissertation because it places management education within a much "richer" context and thus breaks through the narrow, parochial view of business education that is endemic in most discussions. But first, is management a profession? Answer: It all
depends -- that is, it all depends on how one defines a profession.

Dinham and Stritter (1983) provide a review of the reviews on the literature defining "profession." They state, "The term 'profession' may be found in most lexicons, but there the agreement ends" (p. 953). Just like the previous discussions of liberal and general education, there is no consensus on what defines a profession.

One traditional approach has been to define a profession by looking at "exemplars," a word popularized by Thomas Kuhn (1962) in his influential work on the philosophy of science. Exemplars in this case would be theology, law and medicine, the three oldest and most highly developed professions. Based on these three "learned" disciplines, a profession has four fundamental characteristics: (1) it has a well-defined body of specialized, often esoteric knowledge; (2) it has restricted entry; not everyone can "enter" even when they have the requisite education; (3) its codes of conduct for members are self-determined and self-regulated; and (4) its members are obligated to have a service orientation in addition to any "profit"

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8Kuhn (1962) is always provocative and has some interesting things to say about the education process for scientists. For Kuhn, one of the essential transformations in a student's education, as she or he moves from being a novice to a professional, is a change in "gestalt." The example Kuhn uses is striking: "Looking at a bubble-chamber photograph, the student sees confused and broken lines, the physicist a record of familiar subnuclear events. Only after a number of such transformations of vision does the student become an inhabitant of the scientist's world, seeing what the scientist sees and responding as the scientist does" (p. 111). Professional education is a process by which the student comes to see "order" where, at first, there was none. Echos of the William James quotation given earlier are unmistakable and profound.
orientation that may exist (Abbott, 1988; McGuire, 1993; Starr, 1982). Strengths of this definition are: (1) it is historically determined; (2) it accurately captures the essence of these exemplars, especially medicine which is often considered the "queen" of the professions; and (3) it helps differentiate a trade from a profession.\(^9\) Limitations, on the other hand, are that it only accurately describes law, medicine and theology or the newer professions which model themselves after these three (like psychiatry, nursing and social work). Thus, the definition is very limiting for it excludes generally-accepted professions such as engineering and architecture. It surely could not be used convincingly to establish management as a profession.

Abbott (1988) does an excellent job in reviewing various sociological analyses on the professions and summarizes one of the most common theories of how professions originate and how they "professionalize" members. His extended summary of Howard Wilensky's work is as follows:

Professions begin when people "start doing full time the thing that needs doing." But then the issue of training arises, pushed by recruits or clients. Schools are created. The new schools, if not begun within universities, immediately seek affiliation with them. Inevitably, there then develop higher standards, longer training, earlier commitment to the profession, and a group of fulltime teachers. Then the teaching professionals, along with their graduates, combine to promote

\(^9\)Auto mechanics, for example, would not be considered a profession and rightly so. Even though auto mechanics does involve a very specialized body of knowledge and increasingly these days auto mechanics are "certified," auto mechanics do not regulate other mechanic's behavior the way lawyers and physicians do through peer review nor do they contribute pro bono work to disadvantaged groups and "those in need" like theologians, lawyers and physicians.
and create professional associations. The more active professional life enabled by this association leads to self-reflection, to possible change of name, and to an explicit attempt to separate competent from incompetent. Reflection about central tasks leads the profession to delegate routine work to paraprofessionals. At the same time the attempt to separate competent from incompetent leads to internal conflict between the officially trained younger generation and their on-the-job trained elders, as well as to increasingly violent confrontations with outsiders. This period also contains efforts to secure state protection, although this does not always occur and is not peculiar to professions in any case. Finally, the rules that these events have generated, rules eliminating internal competition and charlatanry and establishing client protection, coalesce in a formal ethics code. (p. 10)

Wilensky's "theory" of how professions develop has many strengths: (1) it is process oriented, and thus attempts to "explain" how new professions develop or come into being; (2) as Wilensky himself noted, this storyline (Abbott's word) is flexible; some professions will develop in slightly different sequences but all will conform to the general "arch" of this story; and (3) it explicitly includes the formative role of higher education in "creating" professionals. Without getting too far ahead of this literature review's own storyline, Wilensky's process theory describes business and management's development as professions (Cheit, 1975; Kirkland, 1956).

Limitations of Wilensky are that (1) it is too teleologic, and (2) doesn't adequately differentiate between a guild and a profession.

But before proceeding, one final distinction needs to be made. Professions are often defined in terms of their stance toward knowledge (Dinham & Stritter, 1983; McGuire, 1993). One salient feature of a profession is that professions are users of knowledge as opposed to pursuers of knowledge. There is, for example, this
exemplary distinction from the field of engineering: "The difference between engineering and science arise from differences in purpose. An engineer is a user of knowledge; a scientist is a pursuer of knowledge (Lawrence, cited in Dinham & Stritter, 1983, p. 953). Three points are noteworthy in this distinction. First, it can easily be rephrased to describe the field of management: A manager is a user of knowledge; a business faculty member is a pursuer of knowledge. Management, when analyzed from this perspective, now shares a common, core characteristic of all professions. Second, this statement clearly and unambiguously states that professionals use knowledge. Members of professions, or practitioners as they frequently are called, want knowledge that is immediately useful. The words "use," "useful" and "usable" are simply unavoidable in discussing professional practice knowledge. Here, then, is the logical link to this literature review's last section on knowledge utilization where the terms "use," "useful" and "usable" will be defined. And third, the statement helps pinpoint the growing dissatisfaction of practitioners, who are the users of knowledge, with the kind and quality of knowledge that the pursuers or creators of knowledge are propounding. As noted already in Chapter I, much of the current criticism of business education focuses precisely on this point. Managers want usable, practical knowledge. Management faculty (because this is, in part, what they are rewarded for) produce theoretical knowledge. But this is not the whole story. Management faculty emphasize theoretical knowledge because this also
helps establish management as a bona fide profession. "Reliance on
theory is among the most telling distinctions between a profession
and a trade or a craft" (Dinham & Stritter, 1983, p. 952). The
professional status and stature of management as a profession
increase as it develops its own, unique theoretical body of knowledge
separate and apart from the social sciences. Thus, the relationship
between the theoretical knowledge base of any profession (which is a
necessary foundation for all professions) and practitioner needs for
usable, applicable knowledge is a complicated one.

As Wilensky stated, the role of formal education, higher
education, is essential in developing professional practitioners. In
fact, the formative role of higher education distinguishes a
profession from a trade or a craft. Trades and crafts are learned
through apprenticeships, extended on-the-job training so to speak. A
profession is learned -- or at least the theoretical knowledge base
is learned -- by going to school.

This, then, opens the very important "door" of asking: What kind
of education, better yet, what kind of curriculum, is "best" for
students wanting to become members of a profession? Again, it all
depends. It all depends on the profession. Some professions have
evolved educational sequences that require post-baccalaureate
education, such as medicine and law. The student's undergraduate
education in these instances is merely "pre-professional." The
technical knowledge that students need to practice the profession is,
in these cases, acquired after they have received their baccalaureate
degree. Other professions, such as social work and nursing, have developed a two-tiered educational sequence. Entry into the profession can be accomplished with only an undergraduate education; but advancement and one's ability to participate in "higher level" practice situations is predicated on having a master's degree. Some professions, like engineering and pharmacy, have an extended, five-year undergraduate program. Until recently, these differences have been barriers to researchers looking for commonalities or unities across all professions. This has lead McGuire (1993) to conclude, incorrectly, that "there is essentially no research on professions education per se; rather it is virtually all profession-specific..." (p. 1059).

Defining a Common Ground for All Professions

Joan Stark and her colleagues at the University of Michigan have done essential work on abstracting ten core characteristics that apply to all professionals and in so doing have proposed a truce between faculty who claim widely different aims for a "liberal" versus a "professional" education (Stark & Lowther, 1986, 1988, 1989; Stark, Lowther, & Hagerty, 1986). In disagreement with the earlier work of Stark and Lowther (1988), McGuire (1993) continued to say, "Educators in professional fields have failed to satisfactorily define the educated professional graduate. While each field has identified its own body of professional knowledge and skills, few have articulated the general abilities and characteristics common to
most professional roles" (p. 16).  

For Stark and Lowther (1988) the consequences of this "failure" are monumental: Faculty are divided, needlessly, because they separate education "for life" (general and liberal education) from education "for work" (professional education). This, in turn, leads to mutual finger pointing and blame because neither faculty group perceives the other as adequately doing its job. Arts and sciences faculty believe that overemphasis on vocational/technical subjects devalues the "humanizing" quality of the liberal arts tradition, while professional faculty assert that students come to them underprepared because arts and sciences faculty aren't rigorous or demanding enough in teaching students "the basics," such as writing, mathematics, oral communication, etc. For faculty, "solutions" to this situation are typically framed as "either/or:" Either require students to take more liberal arts courses to counteract the narrowness of professional education, or have faculty in the professions teach "the basics," thereby increasing their control over

10McGuire's (1993) statement is an exemplary and shocking example of the barriers that separate disciplines. Clearly, Joan Stark and her colleagues had done work that counters McGuire's assertion. They had done work on the characteristics common to most professions. But nowhere in her review article on "professions education" in The Encyclopedia of Educational Research does McGuire mention this research. Such an oversight is unpardonable and leads to the question of explaining the omission. Was it that McGuire's expertise was in medical education and that the review article's focus was also on medical education? Was it that any comprehensive review is precluded merely because of the knowledge explosion? Was it that McGuire actually knew this research but found it not worth including for some reason? The McGuire-Stark conflict represents a dilemma for all scholars.
a larger portion of the entire undergraduate curriculum. As Stark and Lowther (1988) succinctly noted: "We submit that such a win-lose concept of balance is counterproductive. A student's whole education must be greater than the sum of its parts and is a joint responsibility of all faculty" (emphasis added, p. 8). Stark and her colleagues have set themselves the task of nothing less than reconciling professional and liberal education.

Stark's research has two unassailable strengths: (1) It starts with and explicitly acknowledges the technical and theoretical foundations that undergird every profession. The framework expands inductively outward from this base. (2) It focuses on outcomes (a prominent and central tenant that even organizes this literature review). Stark and colleagues asked, "What should an educated professional look like and what should he or she be able to do?" They proceeded from there.

In short form, they said, every professional should exhibit four general competences: There is conceptual competence (understanding

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11Caff (1991) is especially germane here for he reminds scholars that the way one frames a question often determines the type and quality of the answer one gets. He states that when one asks, what should students know? the answer is invariably about kinds of knowledge. When the question is, what should students be able to do? the answer is framed as a set of skills. And when one asks, what kind of person does one want to form? the response is terms of personal qualities. "This [third] question recognizes that both knowledge and skills may stagnate...An educated person is one who not only possesses knowledge and abilities but personal qualities such as self-consciousness, empathy for others, curiosity and a sense of civic responsibility" (p. 17). Stark and colleagues clearly see a professional as located within the first two questions (knowledge and skills) with selected elements of the personal qualities from the third question (mainly ethical and aesthetic).
theoretical foundations); there is technical competence (performing required skills); there is integrative competence (melding theory with skill -- the requirement that professional practitioners are users not creators of knowledge as mentioned earlier); and there is career marketability (being marketable because of one's education and training). In passing, it should be noted that these four competencies (especially career marketability and integrative competence) apply particularly well to managers as a professional group. Furthermore, by conducting an extensive literature review (Stark, Lowther & Hagerty, 1986), by talking with practitioners in various professions and by surveying faculty in different professions, they isolated ten outcomes or characteristics that could describe a "well-educated" professional at the undergraduate level. These ten outcomes are: communication competence, critical thinking, contextual competence, aesthetic sensibility, professional identity, professional ethics, adaptive competence, leadership capacity, scholarly concern for improvement and motivation for continued learning (Stark & Lowther, 1988, pp. 21-29; Stark & Lowther, 1989, pp. 8-17). Certainly these ten outcomes can describe the well-educated manager as well as the well-educated registered nurse, chemical engineer or high school teacher.

Stark and colleagues affirm that when the outcomes of a professional education are stated thusly, every faculty member not only can but has a professional responsibility to contribute to each outcome. Further, when stated in this way, liberal education and
professional education are mutually supportive and interdependent educational constructs; they are not antagonistic or antithetical types of education, as much of the literature on the two would suggest.

However, with the great strengths of Joan Stark and her colleague's research come two very important weaknesses. First, they completely sidestep the rancorous debates about what constitutes a liberal education along with the underlying confusion over liberal versus general education noted earlier. Second, they provide no exemplars of a curriculum design that actually produces these ten outcomes. It is, in fact, a theoretical framework. And although it sounds good in theory, how does a college or university actually bridge the divisions that separate colleges, disciplines and departments from one another to bring such a curriculum into existence? On this most important question of all, Stark and colleagues are silent.

Armour and Furhmann (1993) clearly and eloquently "make the case for" the compatibility of liberal and professional education, and in so doing cut through much of the academic bickering that surrounds the two topics. Simply stated, they affirm that liberal learning (their words for liberal education) "fosters thinking skills in students, provides them with an intellectual and social context for that thought, helps them develop and question values, and provides them with the skills to communicate the results of the thought process" (p. 127) and is in its essence, very different from general
education. Their short essay can, in fact, be read as a synopsis of several key points thus far noted in this literature review. They state, for example, that a lot of the discussion around liberal learning is solely rhetorical. There is a huge gap between the rhetoric and the practice of liberal learning in all of higher education; the failure to "practice what you preach and teach" is not only a "problem" found in professional programs or liberal arts programs, but in all programs in higher education (p. 139). Further, they note that general education is an element in, but not the totality of, liberal learning. General education is needed in all undergraduate curricula because it introduces students to a wide range of disciplines and ideas that will enrich later professional practice: "A professional must have a breadth of education in order to master an array of knowledge on behalf of her or his specific professional skills. Liberal learning acknowledges the value of coverage and breadth, but they are not the defining factor of liberal learning" (p. 129). And finally, Armour and Fruhmann (1993) view liberal learning in terms of outcomes -- a point continuously emphasized here. The whole purpose of liberal learning and the reason why it is so compatible with professional education is that it produces a certain kind of practitioner -- a practitioner who is wide-ranging in her or his interests, is intellectually rigorous, is humane, is guided by a set of moral values and who can communicate both passionately and compassionately. In their eloquent words, "Liberal learners have the freedom to follow wherever the paths of
clear and imaginative thinking lead them... Students mastering the principles of liberal learning exhibit habits of mind that make intellectual activity a joy and an opportunity for both personal and societal enrichment (Armour & Furhmann, 1993, pp. 136-37).

**The Reflective Practitioner**

Finally, the landmark research of Donald Schon (1983, 1987) will serve as the lynch pin that holds this section on professional curricular design together. Schon did not directly study or evaluate educational curricula. Instead, he investigated the direct practice situation of several exemplary professions (psychology, architecture, engineering, medicine). His investigations began in the 1980s when national public opinion converged with observations of professional educators that "professionals" were increasingly making "poor" public policy decisions. How could these "elite" professionals be making such "bad" decisions? Schon's findings were startling. His qualitative research lead to the inescapable conclusion that the "knowledge" practitioners needed to function meaningfully in a practice setting was not the knowledge they acquired in school (in their baccalaureate or post-baccalaureate education).

Schon observed that the problems professionals were asked to solve generally had these characteristics: They were extremely complex; there was a "uniqueness" to them which mitigated against a "standard" or "pat" approach; the situation was highly uncertain; and there were value conflicts embedded within any "solution." Schon
proposed that the goal of practice is wise action. "Wise action may involve the use of specialized knowledge, but central to it is judgement in specific situations, with conflicting values about which problems need to be solved and how to solve them" (emphasis added, Harris, 1993, p. 27). Schon consequently concluded that the epistemological assumptions behind the organization and sequencing of professional education courses were incomplete. Professional education, Schon said, was based on technical rationality, which is a positivist epistemology. Technical rationality, as its positivist name implies, assumes that practice "problems" are unambiguous and clear, and that there is an instrumental means for "solving" them. All one needs to do is clearly define "the problem" and then apply the "correct" theory, technology or technique to it (Schon, 1983, pp. 21-36). Clearly for Schon, the skills and techniques that professional practitioners need in their education to effectively function in practice are not the one's that technical rationality provides.

Schon's insights both into the practice setting professionals inhabit and into the education they need are directly applicable to business/management education. Foremost, for anyone who has ever worked as a manager or who has studied managerial behavior (Hill, 1992; Mintzberg, 1973), Schon's view of professional practice as highly ambiguous, conflict ridden, very uncertain and replete with value-laden decisions precisely describes the managerial predicament. Managerial work is thus allied with the characteristics
common to professional practice and managers are a type of professional. Second, liberal learning, as defined by Armour and Furhmann (1993), is essential for developing the well-educated manager. But, third, the organizing principles of undergraduate management education are grounded in technical rationality. Students learn a positivistic, scientific approach to management (Fayol, 1949; Taylor, 1914): Management theory is logical; "objective" data are the cornerstone for all effective decision making; and there is one best "solution" to managerial problems (Duncan, 1989). Students learn that the manager's role is to "find" that best (optimum) solution.

For this scholar the significance of Schon's research is two fold. First, it places what managers do and the aims of management education firmly within the larger, richer context of professional education. This helps counteract the narrowness and parochialness

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12The strangle hold of positivism is pervasive across a wide range of management content areas. The assumptions of positivism are endemic in introductory management textbooks, in the organizational design literature, and in the strategic management literature. Only recently have some scholars sought to challenge the assumptions behind the scientific approach to management (Bergquist, 1993; Boje, 1992; Burrell & Morgan, 1979; Lincoln, 1985; Mintzberg, 1988; Mitroff, 1993; Morgan, 1986, 1988).

13Schon (1983) astutely observes just how inaccurate this view of "reality" is: "In the real world of practice, problems do not present themselves to the practitioner as givens. They must be constructed from the materials of problematic situations which are puzzling, troubling, and uncertain. In order to convert a problematic situation to a problem, a practitioner must...[make] sense of an uncertain situation that initially makes no sense" (p. 40). Certainly this description would resonate with managers as typifying "their world."

14In truth, however, there is a small minority that believe management is not a profession. Raelin (1990) expresses this view.
that occur when managers and management educators alike view their "world" as self-contained and unrelated to anything else. Second, it leads to this inescapable conclusion: Undergraduate management education does not match nor does it prepare students for the "realities" of work. And it is precisely to a critique of undergraduate business education that this literature review now turns.

Curriculum Design Literature for Business Education

To paraphrase Derek Bok's earlier statement about the undergraduate curriculum: How to educate the whole business man or woman....The subject is irresistible. And all themes thus far noted in this literature review reappear when one discusses the undergraduate business curriculum. For example, central questions about the undergraduate business curriculum are:

(1) What should a competent business woman or man "look like"? In other words, what skills, abilities and competencies should an undergraduate business major acquire during his or her four or five years in college?

(2) What type of curriculum is necessary for developing such an individual?

(3) What is the relationship between the liberal arts curriculum and the business curriculum?

(4) What has systematic evaluation of the undergraduate business curriculum told faculty about how well they are doing and about what more needs to be done?

And as one would imagine, although the questions have remained the same, the answers have varied at different points in time. A metaphor for describing the broad sweep of the undergraduate business
curriculum might be that of a plumb line, but it is a plumb line that several times is thrown "off balance." The plumb line is set in motion by a large external push, but the force is so great that the plumb line begins moving with "chaotic" rather than regular motion. At first the plumb line moves with random, wide variations in its arc. There is no discernable "pattern" or regularity to its movement. Eventually, however, the oscillating plumb line begins to move with repetitive motion and a "pattern" seems to emerge. Regularity of motion does not remain very long because another forceful, external push comes along to set the plumb line moving, once again, in chaotic motion. This is the pattern of the undergraduate business curriculum.

A Short History of Business Education

Initially, there was little disagreement about the means and the ends of a collegiate business education. It was to provide the student with an essentially liberal arts education. Commerce courses could be taken as a "specialization" within the context of a broadly based liberal arts course of study. Wharton School of Finance and Economics, generally cited as the first collegiate business school, was founded on just such principles. Joseph Wharton donated $100,000 in 1881 to found the school and befitting its aim to educate gentlemen for business, the school was created within the University of Pennsylvania’s College of Arts and Sciences. Kirkland (1956) comments that "the Wharton School was in light of modern education
Table 1. Number of New Schools of Business Founded Between 1880-1930 (American Council on Education, 1939).

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of new business schools founded</th>
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<tbody>
<tr>
<td>1880-1884</td>
<td>1</td>
</tr>
<tr>
<td>1885-1889</td>
<td>0</td>
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<td>1890-1894</td>
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<td>1895-1899</td>
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<td>1900-1904</td>
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<td>1905-1909</td>
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<td>15</td>
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<td>1920-1924</td>
<td>13</td>
</tr>
<tr>
<td>1925-1929</td>
<td>5</td>
</tr>
</tbody>
</table>

practice largely a device to give students at the University of Pennsylvania a major in history and the social sciences" (p. 98), as its curriculum emphasizing philosophy, world history and government suggest. Cheit (1975) supports this notion by observing that a business education at the end of the 19th century was "to provide more character development than vocational training, to emphasize moral and intellectual training, but not lead directly to a career" (p. 86). The practicalities of running a business were learned "on the job," often in the family business of the recent graduate. All of this changed with America's rapid industrialization in the late nineteenth and early twentieth century.

As the modern corporation evolved, so, too, did collegiate business education. Responding to the need for "professionally prepared" accountants and "managers," growth in collegiate schools of business accelerated. Table 1 presents an overview. As Table 1 indicates, 33 new schools of business were created within the 15 year
span between 1915-1929. Thus, American higher education responded as it has traditionally done to external demands. But the overall response was slipshod and unfocussed. And the plumb line that metaphorically represents the undergraduate business curriculum now starts to gyrate widely.

Writing from a relatively "recent" perspective in 1939, the American Council on Education (ACE) characterized early schools of business as having these features: "haphazard, opportunistic curricula which grotesquely combined pure theory with clerical techniques; hasty assembling of ill-assorted faculties; a paucity of adequate instructional material -- in short, the educational counterpart of a gold rush. The schools of business had no clear idea of what they were trying to do or how best to do it" (American Council on Education, 1939, p. 11). In a phrase that was to epitomize post-World War II undergraduate business education, Clark Kerr said that business education was "busy searching for its soul" (cited in Cheit, 1985, p. 45). It seems, though, that almost from the beginning, collegiate business education has been searching for its soul.

The question that undergraduate business education has always faced was aptly stated in the American Council on Education (ACE) review: What is the school of business try to do? Its answer was, "It is trying to train business leaders" (American Council on Education, 1939, p. 15). In framing its answer thus, ACE hit upon one of the most nagging questions undergraduate education faced (and
still faces): Is the purpose of undergraduate business education to prepare students for their first job, or is it to provide them with the "basic" skills they will need later on in their career, when they become, in the words of the ACE review, "business leaders"? If the former is the purpose, vocational courses are emphasized and explicit career tracks are developed. If the latter is the purpose, general education courses are stressed and the concept of liberal education is instilled. The plumb line oscillates and gyrates between the two.

**Tensions Between The Liberal Arts And Business Education**

The business literature is replete with calls to rebalance the undergraduate business curriculum. In essence, the undergraduate business curriculum should become more "liberal" (Alexander, 1986; American Council on Education, 1939; Bowen, 1960; Butler, 1986; Callander, 1986; Cole, 1967; Durham, 1989; Foy, 1960; Gordon & Howell, 1959; Green & Seymour, 1991; Goldwin & Nelson, 1957; Hugstad, 1983; Handler & Sorenson, 1959; Johnston, 1986; Jones, 1986; Kantrow, 1986; Kantrow & Burns, 1986; McGuire, Poole, Lindholm, & Seeber, 1969; Newcomer, 1959; Pierson, 1959; Porter & McKibbin, 1988; Smith, 1986; Task Force on the Liberal Arts, 1988). What commentators mean by that word is that the curriculum should emphasize a preponderance of courses outside the business domain through which a student can develop a comprehensive and well-honed set of generalizable thinking, communicating and interpersonal relating skills. No commentator, in
should be noted, suggests that functional area business courses be eliminated -- only that a rebalancing of curricular emphasis take place. Thus advocates of a more "liberal education" emphasis in the undergraduate business curriculum make these very cogent and impassioned arguments:

(1) Business is complex; so students primarily need critical thinking and reasoning skills.

(2) Business thrives on technical and intellectual innovation; thus students need to develop creative thinking and problem finding skills.

(3) Business is a social as well as a technical enterprise; and as one's career progresses, social skills typically become more important than technical knowledge; students must learn interpersonal and team work skills.

(4) Business is increasingly characterized by diversity; students will need increased exposure to and a sensitive understanding of cross-cultural and individual differences if they are to deal effectively with both the changing demographic profile of the American workforce and the expansion of many businesses into foreign markets.

(5) Business operates increasingly in a dynamic and discontinuous environment; the "shelf-life" of many business ideas and practices is short-lived; and because many business ideas and concepts will inevitably become obsolete, students must learn how to become life long learners if
they, themselves, don't want to become, in the long run, obsolete as well.

When read as a self-contained body of work, isolated and hermetically sealed off from the larger curricular debates in the academy, the business literature is interesting. But when read within the context of the elaborate and elaborated general education and liberal education literature, the business literature on a liberal education for business majors is excruciatingly repetitive and markedly unoriginal. No new ideas are proposed. The business literature is simply a rehash of the arguments that have long surrounded general and liberal education. This poses an interesting question, at least to this scholar: Why should this be?

Several hypotheses present themselves. A first hypothesis is that the business writers are unaware of the larger body of work "out there" in the higher education literature. By reading the citations at the end of these articles and books, this hypothesis appears to be true. With few exceptions, there are no references to the larger body of work in the higher education literature, as noted above, that defines the goals of a liberal education. As a result, the business literature on this topic is highly repetitious and self-referential. It is as if the reader had inadvertently walked into a hall of mirrors: the same authors, the same works, even the same quotations from earlier business articles are seen over and over again, ad nauseam. Perhaps this accounts for the intellectual numbness that
this scholar felt when the above cited body of literature was read en masse.

A second hypothesis is that the departmental and disciplinary structure of colleges and universities requires this retelling. As has been often noted, faculty are socialized through their doctoral education to feel greatest allegiance to their respective disciplines. They, therefore, are most likely to accept, albeit sometimes grudgingly, the ideas, opinions and judgements of esteemed and respected colleagues from their own discipline. What faculty tend to reject out of hand are opinions from colleagues in other disciplines. As noted above in the section on professional curricular design, this is precisely what happens when liberal arts professors try to offer suggestions to faculty in professional schools. So perhaps business faculty must repeat the rationale for and purposes of a liberal education, since only their presentation is perceived as legitimate and given credence by other business faculty.

A third possibility is that these ideas (the tension between a liberal and a vocation education) are timeless, and like all truly great or timeless ideas, they must be periodically restated. Aristotle, as is oft quoted (Cheit, 1975; Hugstad, 1983; Levine, 1977), framed his discussion about education's purpose within the context of this ongoing debate. He asked, "Should the useful in life, or should virtue, or should the higher knowledge be the aim of our training?" (cited in Hugstad, 1983, p. 29). In a sense, then,
an analogy can be made between the liberal-versus-vocational-education debate and the Homeric poems, the *Iliad* and the *Odyssey*. It is often said that each generation must translate these great Homeric verses anew, for it is only through such "contemporary" retelling, in a language and meter that capture the speech patterns of the times, that new readers can begin to appreciate the universality and timelessness of these epic poems. This is, in fact, the very wonder and awe that John Keats captures in his poem, "Upon First Reading Chapman's Homer." So in like fashion, perhaps business scholars must periodically renew their discussion over a liberal and a vocational education in light of the ever shifting and always changing contours of contemporary business practice. And in so doing, they reaffirm that these are fundamentally important ideas, maybe even eternal verities, that demand continual explication and discussion by the total business community.

Finally, a fourth hypothesis merits consideration. Perhaps there is something inherent in the very concept of a collegiate education for business that literally forces this discussion of liberal and vocational education (Durham, 1989). For this reviewer, business (as a generic entity) is built upon a set of dualisms with the most fundamental dualism being between action and reflection. Business is fundamentally a pragmatic, action-oriented enterprise. Leavitt (1989) says, "Although we occasionally try, we don't teach [students] much about that most vital characteristic...of management, action...The implementing part of managing is about action, about
getting things done" (Leavitt, 1989, pp. 39-40). Businesses exist to do things, and students are hired, in large measure, because their education gives them the skills and abilities that will tangibly, concretely make those "things" happen. Herein is the need for a strong vocational emphasis in the undergraduate business curriculum. Duncan (1989) calls this fundamental focus of every business "practical action."

Yet if a business concentrates only on the technical aspects of operation, even in entry and lower level jobs, it soon fails. Why? Because, as Schon (1983) found out, many business situations are ambiguous, conflictual, uncertain and complex; job holders cannot apply simple, "straight line" thinking to their solution. Divergent and creative thinking is demanded in these situations. And this requires the job holder to engage in reflection, sometimes extended reflection. Herein is the need to provide undergraduate business majors with a "liberal" education. But paradoxically, reflection, which is necessary for successful problem-solving, creative insights and wise action, is at loggerheads with the daily, operating pressures in a business to "get things done," for example, to increase operating efficiency, to generate additional sales, to be first in the market with a new or improved product, to initiate a

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15 Twenty-five years earlier, MacKenzie and Christensen made the same point: "Business administration, properly taught, is much more than information, generalization, and memorization, or merely techniques and skills -- it is knowledge put to work, used to achieve objectives" (emphasis in original, MacKenzie & Christensen, 1964, p. 69).
total quality management program, to hire a racially balanced work
force, etc., etc. The tension between vocational preparation and
liberal education is inherent in a duality that defines business. It
cannot go away. The best that can be hoped for is that it be well
managed (Durham, 1989). And thus the plumb line that metaphorically
represents the undergraduate business curriculum will always be in
motion; the curriculum will forever be pulled, stretched and
contorted by these two concepts. Just how contorted the curriculum
can become can be gauged by looking at three national studies that
evaluated undergraduate business education.

Three National Studies of Business Education

In 1959, Robert Gordon and James Howell published their work, Higher Education for Business. Amazingly, also in 1959, Frank Pierson published his study entitled, The Education of American Businessmen. Together, the two reports had a profound effect on collegiate business education. First, sponsorship of the two studies made them virtually impossible to ignore, no matter what their findings. The Gordon and Howell study was funded by the Ford Foundation, while the Carnegie Foundation funded Pierson's study. Second, unbelievably, although they were conducted independently, on almost every major recommendation the two studies agreed! In a nutshell, both studies found that the undergraduate course of study for business was excessively vocational; that many business courses lacked rigor and integrity; that many courses were inappropriate for
four year institutions but *were* appropriate for trade schools and junior colleges; that faculty teaching methods were weak; that the business faculty were inadequately educated, themselves, for college and university teaching; and that the business schools were literally the dumping grounds for the weakest and poorest prepared students in the entire university or college.16

Two quotations not only will capture the unanimity of observation in both reports but also will pinpoint the overemphasis and absurdity of vocationalism in the curriculum circa the mid to late 1950s:

It seems to us that the time has come to face up to the fact that "specialization has been running riot" in American business schools. Dozens of minor fields of specialization have been permitted to develop that never should have been introduced at all. Many of these involve specialization of the problems of some industry, and...there is little evidence that business itself needs this kind of specialized training at the undergraduate level. (Gordon & Howell, 1959, p. 217)

[An example of an absurdly vocational major is] an eight-course major at a large Southern university in baking science and management which includes courses in Principles of Baking: Bread and Rolls; Principles of Baking: Cakes and Variety Products; Bread and Roll Productions -- Practical Shop Operation; and finally Cake and Sweet Baked Products -- Practical Shop Operations. (Pierson, 1959, pp. 219-220)

Both reports recommended these changes:

(1) Eliminate all the narrow, industry-specific business courses (e.g., transportation, insurance, baking, etc.). Replace them with required, core business courses that represent the functional areas common to all businesses.

(2) Limit the total percentage of business courses to no more than 40% of of the entire undergraduate curriculum.

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16Extended summaries of both the Gordon and Howell and the Pierson studies can be found in Hugstad (1983), Porter and McKibbin (1988), Silk (1960).
(3) Increase the total percentage of required liberal arts courses to at least 50%.

(4) Increase the rigor with which all courses, both liberal arts and business, are taught.

(5) In the business curriculum, (a) increase the amount and sophistication of quantitative analyses, and (b) stress how theory from the behavioral sciences applies to business.

(6) Require all faculty to have a Ph.D.

As can be seen from this summary, most of the report's recommendations dealt with the curriculum. Revisions in the undergraduate curriculum were deemed so fundamental and essential to improving the overall quality of collegiate business education that the authors of both reports included a "model" curriculum for faculty, deans and provosts to follow (Gordon & Howell, 1959, pp. 173, 209; Pierson, 1959, p. 227). They simply did not want to leave this open to idiosyncratic interpretation. Essentially both reports designed curricula that stressed "general" education. "General" is so written because the reports clearly wanted more general education (i.e., liberal arts) courses to be required for undergraduate business majors. But the reports also wanted the business sequence to be "general" as well. And by "general" the report writers meant not specialized. In other words, both reports defined the goal of the undergraduate business curriculum as producing business generalists not technical specialists.

The effect of the Gordon and Howell and the Pierson reports were immediate, wide-spread and long term. In a national follow-up study, Clark and Opulente (1963, pp. 5-7) found that four years after the
reports' release most of the major recommendations were being carried out. A "professional core" of functional-area business courses had developed in schools and colleges of business nationwide. Also in the professional core, quantitative analyses were being stressed, as was the integration of behavioral science theory into selected courses (especially in the areas of marketing and management). So, too, were more liberal arts courses being required of business majors. And faculty credentials were being upgraded. Doctoral programs in business administration expanded and schools and colleges of business were increasingly hiring faculty with the coveted Ph.D.

One area, however, where several scholars (Clark & Opulente, 1963; Lohman, 1993, pp. 90-91) found little progress was in refocussing the undergraduate business curriculum to create business generalists. Clark and Opulente (1963) were specially vehement in voicing (nay, editorializing) their own views here:

[We] agree with survey participants in their rejection of an exclusively generalistic philosophy, especially espoused by Gordon and Howell. We feel the Ford Foundation authors misread the issues involved. The crux of the debate was never concentration per se but the degree and quality of specialization. If business colleges have a raison d'être at all, it is to prepare the student for his [sic] first employment in one of the functional areas as well as to instill the virtues and attributes necessary for advanced professional assignments. A generalized exposure to business will not suffice to accomplish the objective of collegiate education for business. (emphasis in original, p. 28)

Clark and Opulente (1963) go on to attack the rather simplistic thinking (in their view) of survey respondents who thought that by merely requiring more liberal arts courses business students would,
**Ipso facto**, receive a "liberal" education. ¹⁷ Overwhelmingly, though, they found that, nationwide, schools and colleges of business were well on their way to implementing the two reports' major recommendations.

To summarize the importance of these two foundation reports, an apt comparison is with Abraham Flexner's famous evaluation of medical education at this century's turn. Gordon and Howell (1959) and Pierson (1959) did for business what Flexner's (1910) report did for the study of medicine (Ouchi, 1987, p. 13; Schossman, Sedlak & Wechsler, 1987, pp. 23, 27). All three reports were grounded in the assumptions that collegiate study should be rigorously conceived, that it should be theory driven, that it should have researchers not practitioners doing the teaching, that it should be intellectually demanding for both student and teacher and that it should demand

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¹⁷ Clark and Opulente's "solution" is three fold. First, business deans and faculty need to develop an "integrative philosophy" that articulates the relationship between liberal arts courses and professional business courses. "Although business educators have conceded the desirability of augmenting the academic curricula [with more liberal arts courses], they have yet to achieve an integrative philosophy which will form a nexus between the academic and professional and relate the 'man [sic] of business to the business of man'" (Clark & Opulente, 1963, p. 30). Second, interdisciplinary courses help force this integration. And third, superb teaching is the "intellectual spark" that can make any course potentially a liberating one: "The history of great teaching illustrates this idea vividly: that nay subject matter -- from philosophy to accounting -- however dull, however unchallenging it may seem to the uninitiated, can be brought alive, can be made challenging and unforgettable experience, provided there is a great teaching in the classroom. Substituting the humanities for the specialities will accomplish little expect perhaps to export the business school's confusion to another division of the university" (Dean Frederick, quoted in Clark & Opulente (1963), p. 35).
excellence in every aspect of the program. Quite simply, both Gordon and Howell along with Pierson found that collegiate business education did not measure up to these standards. Business education needed to become professionalized (Schmotter, 1984, p. 10; Schlossman, Sedlak & Wechsler, 1987, p. 27).

In 1959 both foundation reports challenged business faculty to grapple with the central educational and curricular issue: what is the purpose, or end, of undergraduate business education: Is it to develop undergraduates who are generalists or specialists? The report authors advocated the former, and the 1960s can be summarized as a decade when business schools moved back toward the the liberal arts (Hugstad, 1983, p. 26). But the movement was short lived. Why? The answer is multifaceted.

(1) As noted in Chapter I, significant changes in the U.S. economy forced students to rethink the "value" of a strictly liberal arts education. Liberal arts undergraduates were simply not finding jobs after graduation. The number of students majoring in the liberal arts plummeted as student interest in business majors sky-rocketed.

(2) Also, students, themselves, changed. This was the post-Vietnam era, and the altruism and social consciousness that defined most undergraduates in the 1960s gave way to the central focus of putting one's own self first. Making money was the primary criterion for selecting a college major.

(3) Business faculty took the path of least resistance. As the
the business faculty never really engaged in extended, probing discussions of curricular "purpose." What was the goal of undergraduate business education at a given school? Was it to produce business generalists or specialists? Faculty, by default, continued to design courses and to engage in outside consulting that supported the latter.

(4) Finally, business itself sent conflicting messages about the qualities it desired in graduates. On the one hand, business said, "We need broadly developed, creative and articulate individuals to help us manage and run our business." Yet on the other hand, business continued to recruit by looking for applicants in narrowly defined, functional business areas. "We need a marketing major, or a business administration major, or an economics major for this job. Other majors need not apply."

And herein, at least for this scholar, turns the entire undergraduate business curriculum debate. In essence, business espoused and gave lip service to its need for the "liberally" educated business person, but hired based on the functional area business major.

William Whyte, Jr. (1956) astutely noted this very wide difference between what business leaders said and what they did in the mid 1950s. He said, "Lately, leaders of U.S. business have been complaining that there are nowhere near enough 'generalists.' The average management man [sic], they have been declaring, has been far
too narrowly educated...Give us the well-rounded man, business leaders are saying to the colleges, the man steeped in fundamentals; we will give him the specialized knowledge he needs. Convention after convention they make this plea -- and their recruiters go right on doing what they've been doing: demanding more specialists" (Whyte, 1956, p. 101). For students and faculty alike, this hiring behavior was the only thing that counted. Hence, faculty emphasized occupational skills in class and college recruiters stressed the wide choice of vocational career majors in the marketplace. Whyte's observation applied to the 1970s and it still applies to the 1990s. The plumb line representing the business curriculum swings back toward the occupational.

The business curriculum in the 1980s continued to emphasize specialized, vocational courses. The 1980s, as described in Chapter I, was a decade of upheaval for business. Companies were being challenged as never before. Not only were American products "failing" in foreign markets, but also selected companies were losing

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18A recent Chicago Tribune article (July 22, 1992) supports this point. Titled, "Liberal arts get cool reception in business world," the article summarizes the lack of hiring opportunities for the liberal arts undergraduate. " 'People are still saying that they want broader-educated students,' says Raymond Brown, the director of admissions at the University of Chicago Graduate School of Business. 'But I think there is more lip service paid to this' than anything else. Mike Kelley, director of the Graduate School of Business at Loyola University Chicago, concurs. 'My own feeling is that there is still more rhetoric there than reality' he said of talk from business recruiters that they are interested in job candidates with diverse skills...Students being hired don't have backgrounds in the humanities or social sciences, [Kelley] noted, 'They are hired for technical skills rather than their broad background.'"
market share at home. The United States economy was in recession, corporate layoffs were extensive, and innovative product introduction slowed. Overall business in the United States was in the dumps (Whetton & Cameron, 1991, pp. 1-3). Competitiveness became business' new rallying cry. This sparked yet another round of curricular soul searching about collegiate business education.

Useem revived the longstanding issue of generalists versus specialists that Whyte noted above. Useem (1986, 1989) asked and investigated for the first time in a national study whether liberal arts majors could actually "succeed" in business. And by "succeed" he meant not only that the liberal arts major got hired, but also that the liberal arts major stayed within business long enough to develop a personally rewarding career path. Useem (1986, 1989) found that:

1. Liberal arts majors had a more difficult time than business majors getting hired immediately after college, but they were getting hired.

2. Early in their careers, liberal arts majors received fewer promotions compared to business majors, but over time the two reach parity in terms of position title. Pay equity was a different matter. Liberal arts majors were paid less than business majors, but this was because the job categories for which they were hired had lower salary scales overall.

3. Corporations that hired liberal arts majors had a distinctive corporate culture, one which valued diversity. Inevitably, the undergraduate experiences of the CEO heavily influenced a company's recruiting philosophy for liberal arts majors. If a CEO valued his or her own undergraduate, liberal arts education, then the CEO would advocate the hiring of liberal arts majors.

At first glance it appears that Useem's findings support the assertion that liberal arts majors can "make it" in business. But
Useem's methodology is seriously flawed and any generalizations derived from his study must be made cautiously.

First, there is a preexisting bias in his finding that liberal arts majors are being hired. This stems from the fact that some essential business majors, like economics and computer sciences, are often taught in liberal arts colleges and with liberal arts faculty. So when a company hires these majors the company is technically hiring liberal arts majors.

Second, Useem (1989) surveyed only Fortune 500 companies. Fortune 500 companies have characteristics that predispose them to hire liberal arts graduates. Fortune 500 companies are often global entities (so, hiring foreign language majors to do "translations" lets the company check "yes" to Useem's question: Do you recruit liberal arts majors?). Furthermore, these companies are typically very large and multidivisional in structure. With thousands of jobs to fill, a Fortune 500 company can more readily "take a chance" on hiring a liberal arts major and by so doing, fulfill in a literal sense the CEO's policy of hiring liberal arts graduates. Would Useem's findings have changed if he had surveyed midsized companies instead?

Third, and most seriously, the type of "business" job that liberal arts majors are hired for is suspect. Useem (1989) inadvertently undermines the overall strength of his findings when he says that most liberal arts majors are hired to fill marketing and communications-related jobs: "The placement of liberal-arts graduates
is skewed toward areas in corporations where communications and nontechnical skills are at a premium" (p. 32). So that when a corporation hires a journalism major to work in its corporate communications department, it technically is hiring a liberal arts graduate. For this writer, such findings are ho-hum. A much more interesting finding -- and one that really would have gotten at both a "deeper" as well as a more commonsense, man-in-the-street understanding of liberal arts majors being hired for a business job -- would have been that corporations regularly hire philosophy majors for management positions. Now that would have been interesting! Useem’s (1989) findings turn on literal, categorical applications of the liberal arts major to business, and in the end, he fails to make a strong, convincing case that a liberal arts major is just as marketable as the traditional business major for a mainline career in business.

Finally, there is the the Porter and McKibbin (1988) study of business education, the last of the three comprehensive evaluations of business education in the United States. The Porter and McKibbin study "closes the circle," so to speak, for its very rationale includes all the major "themes" in this section of the literature review. A new, comprehensive study of business education\textsuperscript{19} was

\textsuperscript{19}The Porter and McKibbin (1988) Report was, indeed, comprehensive. It analyzed and made recommendations on MBA programs, Executive Education and Development programs, accreditation standards, as well as on business faculty teaching and research responsibilities. However, only the sections on the design and content of the undergraduate business curriculum will be analyzed here.
needed because (1) the Gordon and Howell (1959) and Pierson (1959) studies were twenty-five years old and needed up-dating; (2) business ineffectiveness was still being ascribed to faults in collegiate business education, but this time both the undergraduate and the graduate programs were suspect; (3) there was a growing interest in "life long learning" for executives; and (4) as time moved closer to the twenty-first century, a kind of millennial reappraisal prompted executives, faculty and the business accrediting agency (the American Assembly of Collegiate Schools of Business) to ask, what kind of business skills, abilities and casts of mind will be needed to manage businesses in the twenty-first century? (Porter & McKibbin, 1988, pp. 3-10).

The business accrediting agency's role in this study is critical. Not only did the American Assembly of Collegiate Schools of Business (AACSB) sponsor Porter and McKibbin's research, they also funded it. As a result, Porter and McKibbin surveyed only AACSB member schools. At the time, AACSB had 620 member schools. Whether these 620 members were representative of all programs, schools and colleges of business in the country is unclear. Also, because of AACSB sponsorship, study recommendations tended to be only mildly critical and very global. In other words, never bite the research hand that feeds you.¹

¹This point is especially ironic for Lyman Porter makes exactly the same charge about the unwillingness of business faculty to actually criticize business as this writer makes about the Porter and McKibben report itself. Porter (1989) says: "Constructive and incisive criticism of business by business faculty has been largely absent for at least the last decade or so. One fairly obvious explanation for
Porter and McKibbin (1988) concluded that, like every other study, undergraduate business education was too focused on teaching narrowly defined, major-specific and basically quantitative skills (pp. 67-75). Further, when Porter and McKibbin interviewed sixty-two human resource vice presidents in Fortune 500 companies, these human resource officers said that the skills their business needed most, the "soft" skills of interpersonal relations (getting along with people, working effectively in a team, conflict management skills, and the ability to speak and write clearly), were not being taught at the undergraduate level -- and if they were, the end-product (the student) was largely defective. Overall, Porter and McKibbin found business faculty to be complacent and interested primarily in maintaining the curricular status quo in their institutions. "In marked contrast to the situation reported in the 1950s, we found no forceful push for systematic curriculum change emanating from business schools themselves" (emphasis in the original, Porter & McKibbin, 1988, p. 80). Thus there were no innovations found in the undergraduate business curriculum.

Six recommendations pertain directly to the undergraduate business curriculum. The undergraduate curriculum should (1) include more courses designed to analyze the intricate web of external business relationships as opposed to including more courses that focus solely on internal operating efficiency; (2) emphasize the

this is that business schools and their faculty have a tendency not to bite one of the [corporate funding] hands that feeds them" (p. 29).
global dimension of business; (3) integrate an understanding of service and information management across a broad array of courses rather than isolate these content areas in one course; (4) strengthen (or in fact, design) courses which literally teach students "soft" people skills; (5) create generalists as opposed to specialists; and most importantly, (6) broaden the scope of student interest and not just increase narrow specialization:

In our view, business/management schools need to recognize and support the importance of breadth for breadth's sake; they should avoid the temptation to specify business school electives and requirements at the expense of opportunities of enrichment elsewhere in the university -- the course in Greek mythology should not always be sacrificed on the altar of advanced electives in business." (Porter & McKibbin, 1988, p. 316)

Two years after the report's release, Walter Nord, book review editor for The Academy of Management Review, said that the report had been "widely read and discussed" (p. 694). Only four comprehensive critiques of the report, however, have made it into the literature (Calas & Smircich, 1990; Cummings, 1990a, 1990b; Harrigan, 1990). No critique sees the report as yielding any significant change. Cummings (1990a) is best in summarizing the report's limited effect on the curriculum. He notes, correctly, that business faculty, like all faculties, often make curricular decisions based on self-interest. Status inequities exist even within business disciplines. To change the curriculum, he says, always raises political issues "around the relative power of different faculty interests (e.g., behavioral and nonbehavioral)...These major shifts imply realignments of faculty power and influence. In terms of time taken away from
research and scholarship, or from doing an outstanding job in implementing the existing curriculum, such shifts are disruptive at worst or inefficient use of time at best. Vested interest of the faculty tend to exist elsewhere" (Cummings, 1990a, p. 67).

In some sense, then, the Porter and McKibbin (1988) report can be read as a commentary on the earlier Gordon and Howell (1959) and Pierson (1959) reviews. And to a large degree, the recommendations of the two 1959 reviews were firmly entrenched by the time Porter and McKibbin did their analysis. But in one aspect, however, schools and colleges of business may have succeeded "too well" in carrying out the recommendations of the 1959 reports: that of making the study of business more theory driven and more quantitatively focused.

In the early 1970s a curious phenomenon became evident (and is still evident in 1994). Although there was an avalanche of new research being published by business faculty in scholarly journals, little of that published research was being incorporated into the day-to-day business operations. For the business community the issue was simple: The research that management faculty published was totally irrelevant to and therefore of no "use" in running and managing a business. What in theory should have been a tightly-coupled bond (Weick, 1976), with well-grounded management research inexorably guiding managerial action and thereby improving business performance, turned out to be a total uncoupling of management research from business practice. Practicing managers avoided consultation with management faculty and increasingly looked to both
outside consultants and fellow managers to help them "solve" their management problems (Kilmann, Slevin & Thomas, 1983; Martin, 1983, p. 571-72; Mathias, 1983). Why?

As noted in Chapter I, it soon became clear that the world of the manager was entirely different from that of management faculty. Mathias (1983) is especially eloquent in summarizing these two world views and is worth quoting at length:

I have been surprised by the differences between practitioners and academics in approaching a similar problem... Both communities often look at the same data about a phenomenon, but then ask different questions, arrive at different answers, and have an entirely different set of priorities in proposing solutions. . . .

Managers often approach problems through thinking by analogy, whereas researchers are prone to specification, quantification, and model building.

Managers believe and accept the test of the marketplace, whereas researchers are more concerned about the fit with literature and research.

Managers, of course, are concerned with the practice of management, improvement in organization performance, and the management of change, whereas researchers are concerned with communicating with social scientists.

Implementation of a concept or program is critical to a manager's thinking, whereas researchers are concerned only with "application" of concepts.

Managers are concerned with utility in any framework that they use, whereas academics and researchers are concerned with the rigor of construction. (p. 134)

Thus it became evident that if management faculty wanted their research to be "used" by practicing managers, they would have to rethink their relationship to these practitioners. The field of knowledge utilization gave them the conceptual tools to do so.
The Literature on Knowledge Utilization

Knowledge utilization is essential for understanding this dissertation. On the one hand, it serves as the conceptual framework for the research that follows. On the other hand, it serves as both an overlay to and as an external disciplinary commentary on each previous section of this literature review. One needs only consider the following.

The "use" of knowledge is a perennial and perplexing issue as this literature review has shown. For a long time, it has been a central issue in the philosophy of education. As noted earlier, Aristotle raised a philosophical question about the purposes (i.e., the ends) of education and explicitly framed it terms of knowledge "use." He asked, "Should the useful in life, or should virtue, or should higher knowledge, be the aim of our training." Out of this simple statement (and also discussed earlier) came the never-ending debate in higher education over a "liberal" versus a vocational education: Should the end purpose of an undergraduate education be simply knowledge for knowledge's sake (Aristotle's "higher learning") or should the end purpose be fundamentally utilitarian and instrumental (to teach students skills that are vocationally useful)?

Alfred North Whitehead brings this centuries old question into the twentieth century and in so doing, gives it a contemporary feel and cast. In his famous essay, "The Aims of Education," he says, "Pedants sneer at an education which is useful. But if education is
not useful, what is it? Is it a talent, to be hidden away in a napkin? Of course, education should be useful whatever your aim in life" (Whitehead, 1929/1961, p. 14). He then goes on to state unequivocally, "Education is the acquisition of the art of the utilization of knowledge" (p. 16). For scholars in both fields the links and shared interests between their respective professions could not be more clearly joined. But what precisely is the field of knowledge utilization?

Knowledge utilization is a relatively new field of study. Backer (1991) traces its origins to the early 1960s, when social scientists were increasingly worried about this "problem": How could one explain the large (and ever widening) gap between the volume and level of federally-funded social science research and the limited application of the research findings from these very same studies to the formation of effective national social policy? In essence, the government spent tremendous sums of money on social science research, yet social policy analysts "used" only a miniscule portion of the research findings (when they even "used" them at all!) in recommending or crafting national social policy (Lindblom & Cohen, 1979; Scott & Shore, 1979). How could this be? The answer that eventually emerged was that the process of knowledge utilization (i.e., the application of knowledge to specific situations) was dependent on but was essentially different from the act of knowledge creation (i.e., research). In short form, then, the field of knowledge utilization established as its "unique" area of scholarly
interest how to increase the "use" of knowledge in society.

Backer (1991) provides the best summary of the interdisciplinary nature of knowledge utilization. At once, he affirms the obvious: that to really understand why some knowledge gets "used" and some doesn't is a complicated process. At the same time he succinctly describes the various, interrelated elements that effect knowledge "use." Knowledge "use," Backer (1991) says, is influenced by (1) systems of technology transfer; (2) systems of information dissemination; (3) the "quality" and relevance of the research itself; (4) the diffusion of innovation process; (5) the sociology of knowledge; (6) intraorganizational barriers to change; (6) social policy mandates; and (7) the effects of interpersonal and mass communications (pp. 226-228).

In the business domain, marketing is the leading proponent of using the knowledge utilization framework to evaluate and understand barriers to marketing managers "using" marketing research. Recently, Menon and Varadarajan (1992) conducted a comprehensive marketing literature review on the topic "marketing knowledge use in firms." After analyzing 88 articles and books they concluded that while knowledge utilization is exceptionally important for effective marketing action, the terms used to describe knowledge utilization are ambiguous and are often difficult to operationalize. They also concluded from the research they reviewed that the idiosyncratic nature of different marketing organizations themselves "explains"
No reader can escape the fact that word "use" has been put in quotations each time it has been used. And this very last sentence is an exemplar of why quotation marks are needed. For the ordinary man or woman in the street, going about his or her daily business, the words "use," "used," "useful" and "usable" are all interchangeable. They all have approximately the same meaning. To the ordinary person, to "use" something is a synonym for "employing something in a given situation." "I will use a word processor to write this dissertation." "Useful" and "usable" are, in turn, judgment calls about how well, in that given situation, the goals, purposes or ends were achieved or realized: "I found a word processor useful in writing this dissertation." "A useable word processor is simple to use!" The tautological nature of these words -- and their reflexive, unconscious choice -- is self-evident when they are used in ordinary speech.

However, the scholar, the researcher and the philosopher operate from a different set of assumptions about language than the ordinary person in the street. Each of the former individuals is professionally obligated to speak and write precisely. Berger and Luckman (1968) hit the nail on the head when they say of the philosopher, "The philosopher....is professionally obligated to take nothing for granted, and to obtain maximal clarity as to the ultimate status of what the man in the street [takes for granted.] Put
differently, the philosopher is driven to decide where the quotation marks are in order and where they may be omitted, that is, to differentiate between valid and invalid assertions about the world" (p. 2). What is true for philosophers is true for all scholars and researchers. And so one must now turn to the issue of what the quotation marks mean around the words "use," "useful" and "usable."

"Use," "useful" and "usable" are all ambiguous terms (Beres, 1983; Kilmann, Slevin & Thomas, 1983; Larsen, 1980; Louis, 1983; Webber, 1992). And, to a large degree, the terms are ambiguous not because there are numerous dictionary definitions that create confusions (there aren't), but because the words, themselves, are slippery and shade off into subtle distinctions with other words. For example, is "useful" the same or different from "helpful?" Is "use" the same as "employ"? Is "useful" the same as "relevant"? and so on. Further, if a manager receives a report with four recommendations for action, reads the report, gives careful consideration to each recommendation but in the end does not carry out any of the four recommendations, in what sense (if any) can one say that the manager "used" this report in making or reaching her or his decision? For the scholar, researcher and philosopher, understanding these distinctions are paramount. For the ordinary person, this is mere hair-splitting, and "use" is the generic concept covering all of these other words. For this dissertation, the quotation marks must, perforce, stay in place.

Kilmann, Slevin and Thomas (1983) provide one of the most
thoughtful conceptual frameworks on knowledge "use." They suggest that the concept of knowledge "use" is actually a covering term for four interrelated words. These words are "use," "useful," "usable" and "effective." Figure 3 presents their conceptual framework.

Kilmann, Slevin and Thomas (1983) suggest that "usable" knowledge refers to the potentiality of knowledge; it is assessed before the fact and is not related to any specific goal. "Useful" knowledge is similarly assessed before the fact, but it is always allied with specific goals. Knowledge is "useful" because it is believed that a specific piece of knowledge will solve a problem or help someone do something tangible. Only after the fact can that piece or bit of knowledge be evaluated as to whether it was, indeed, the right or correct piece of knowledge to apply in that particular situation. Thus, knowledge is said to be effective in relation to some goal or criteria. To borrow a phrase from statistics, the test

<table>
<thead>
<tr>
<th>Descriptive</th>
<th>Potential: Assessed before the fact</th>
<th>Actual: Assessed after the fact</th>
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<tr>
<td>Not related to a person's values or goals</td>
<td>USABLE Knowledge</td>
<td>Knowledge that is USED</td>
</tr>
<tr>
<td>Evaluative</td>
<td>USEFUL Knowledge</td>
<td>EFFECTIVE Knowledge</td>
</tr>
<tr>
<td>Related to a person's values or goals</td>
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Figure 3. The Kilmann, Slevin and Thomas Conceptual Framework of Knowledge "Use."
of effective knowledge is "goodness of fit."

An example demonstrating these distinctions would be as follows.

**Usable knowledge** occurs when an individual learns something and thinks that this piece of new knowledge might be applicable to some situation in the future. A business major learns in a personnel class that one common error managers can make in performance reviews with their subordinates is called a halo error. This business student would classify this piece of knowledge as "usable" because he or she has *not yet* had to conduct an employee performance review but anticipates some time in his or her career he or she will be asked to do so. "Usable" knowledge is knowledge, so to speak, that is waiting for specific situation.

**Useful knowledge** occurs when an individual acquires knowledge and has a specific, immediate situation in which to apply or employ that piece of knowledge. Thus, the business student transforms usable knowledge into useful knowledge when actually confronted with conducting a subordinate's performance review.20

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20 Unfortunately, the Kilmann, Slevin and Thomas (1983) conceptual framework has received scant discussion in either the organizational sciences or the knowledge utilization literature. In the absence of any critical discussion of this framework, scholars and practitioners define these terms in their own unique ways. A recent example is Beer (1992), who, in a personal opinion piece, argues that business executives who are concerned with strategic change need more "usable than useful information" (p.111). What Beer means by this is that executives need less theoretical and more applied, how-to research. He asserts that "A [theoretical] framework for diagnosis [of strategic change] may be useful, but does not provide usable knowledge" (p. 113). Ironically, what Beer means by "usable" and "useful" is exactly the opposite from the meanings operationalized in the Kilmann, Slevin and Thomas (1983) framework!
Effective knowledge can only be determined after the fact. "Effectiveness" is an evaluation of how well a piece of knowledge functioned within the specific situation for which it was employed. Thus the business student would judge his or her handling of the employee's performance review as effective if the student conducted the performance review without making a halo error.

Figure 4 provides another summary of these concepts, and does so by showing the hierarchical relation between the terms.

As is evident by now, the one word in the conceptual framework that has not been explained is "use." Kilmann, Slevin and Thomas (1983) claim this is the easiest case to understand. But this
writer believes just the opposite: It is the most difficult case to understand.

Kilmann, Slevin and Thomas (1983) say that "use" is defined "in terms of influence -- some change in the user's decision process or behavior" (p. 5). Knowledge "use" is not related to the user's value system or goals and can be determined only "after the fact." But what precisely does that mean? Kilmann, Slevin and Thomas (1983) provide part of the answer by noting that "given adequate data and definitions of these constructs, it would be possible in principle for researchers with different value systems to reach agreement on whether a piece of knowledge had been used in one situation..." (p. 5).

This scholar interprets knowledge "use" to apply to those situations when a person becomes aware that a piece or bit of knowledge that was not thought of being invoked or involved in a situation is, indeed, shown to be invoked or involved. Take the simple case of an adult student sitting through a class who finds out that the reason for his or her success resolving employee conflicts has been that he or she has consistently used the three steps of descriptive communication (Whetton & Cameron, 1992, pp. 241-43) even though he or she never really knew that that was what he or she was doing. This raises an interesting philosophical question: Is it possible for an individual to have "knowledge" of something that he or she can't quite articulate or isn't totally aware of? Michael Polyani (1966) says, "Yes!" and calls such knowledge "tacit
knowledge." To the degree that one agrees with Polyani is the degree to which one agrees with Kilmann, Slevin and Thomas (1983) that one can "use" knowledge without being aware that one is doing so. The overwhelming difficulty with operationalizing the word "use" in this dissertation's research according to the Kilmann, Slevin and Thomas (1983) framework is that knowledge "use" can not be determined by the person him or herself. Knowledge "use" can only be determined by individuals external to the knower, and for the research that follows, this is a strong limitation. Does this limitation undermine the research? For this writer, the answer is "no."

The research methodology described in Chapter III is fundamentally qualitative, with an antecedent quantitative (i.e., survey) component. As such, the research attempts to explore knowledge "use" from the "actor's viewpoint," that is, from the perspective of a five-year sample of one university's undergraduate alumni who were working in business. The methodological problems were too complex to gather external comments on an individual's knowledge "use." Thus, by excluding the term "use" from investigation the research methodology became internally consistent. It asked participants to explain knowledge utilization only in terms that they, themselves, could access and evaluate. In the Kilmann, Slevin and Thomas (1983) framework these were the categories "usable," "useful" and "effective." What this discussion does highlight, however, is that even the Kilmann, Slevin and Thomas (1983) conceptual framework is complicated and difficult to put into
practice. As Webber (1992) most recently noted: "The knowledge utilization literature has been hampered by difficulties in clarifying and operationalizing the notion of 'use'" (p. 398). It still continues to be so.

And it is now to a more detailed description and discussion of the research methodology that this dissertation turns.
CHAPTER III

METHODOLOGY

Methods are essential for conducting reasoned inquiry, and it is the aim of this chapter to describe in detail both this dissertation's research question as well as the methods used in the question's investigation.

The research question explored here was the degree to which undergraduate management majors at one small, church-affiliated university, in the suburbs of a large metropolitan United States city, "used" or applied knowledge gained from their undergraduate courses on their jobs after graduation. As a matter of personal interest, the research question stemmed from this writer's more than ten years teaching experience with undergraduate management majors. As a matter of scholarly and intellectual interest, the research question attempted to explore the unstated assumption behind one business faculty's view of undergraduate business education: that a central goal of business education was to make connections between what students studied in class and the "real world" in which they would eventually work. In other words, this business faculty viewed undergraduate business education as a profession and thus attempted to teach students, in each of the business majors offered, both the fundamental theories of the profession as well as some of the
practice wisdom gained through faculty experience in the field. Thus this dissertation's research was, in some sense, an evaluation of just how well these twin goals of professional education, to meld theory with practice, were accomplished.

Obviously, then, the research population had to be graduates of this university's business college. But the research population needed to be narrowed. This university offered six business majors (accounting, economics, finance, management, management information systems and marketing) within its college of business. A quantitative study of knowledge utilization across all six majors was at first considered, but ultimately rejected.

One of the first considerations in any research is the unit of analysis (Bernard, 1988). Should the unit of analysis be the college of business as a whole, or should it be a smaller, narrower unit, such as accounting majors, marketing majors or management majors? Three factors mitigated against defining the unit of analysis as the college of business as a whole. First, there were radically disproportionate numbers of students in each major. Economics, for example, typically had four to six majors in any given semester, while management generally had over 100. Immediately this presented data analysis problems. Given the small number of majors in some disciplines, some potentially important statistical tests (such as chi square) were immediately jeopardized. Eliminating even one major, such as economics, meant that summary statements about knowledge utilization for all college of business students would be
impossible.

Second, each major had its own unique curricular history; course requirements had changed within every major in this college of business -- but they changed at different times. To make the unit of analysis "the college" would have built in flaws into the research design at the front end. If this research design had been carried out, not only would it have been comparing apples and oranges across majors (for accounting is very different from management information systems) but also it would have been comparing apples and oranges within any given major (because the course requirements of that major had changed over time). In other words, any statistically meaningful comparison across majors would be overshadowed by the extensive variation within majors. Essentially, if the unit of analysis was "the college," there would have been numerous threats to internal validity. What meaningfully could be said about knowledge utilization of all college of business students when students, themselves, all had different curricula? Not much.

Third, and perhaps most important, as is clear from the above discussion, if the unit of analysis was the entire college of business, a quantitative study would have been the logical research paradigm. But as the literature review indicated, a quantitative study was clearly not warranted given the embryonic state of knowledge utilization as a field of study.

Two "solutions" immediately presented themselves in terms of research design. First, the unit of analysis had to be narrowed and
more tightly defined. This was done by limiting the research population to one group in this specific college of business: management majors. Second, exploration rather than verification seemed the logical starting point for the research. Since there was no previous research validating the Kilmann, Slevin and Thomas (1983) conceptual framework as a framework, nor had there been any previous research relating knowledge utilization to curriculum design in any aspect of education (let alone higher education), a totally quantitative research design clearly was not applicable. Qualitative research methods were best suited for exploring this specific research question: How management majors "used" course knowledge on their job.

The Research Population

Management majors, who had graduated from one institution's undergraduate business program between May, 1988 and May, 1992, were the research population of interest. And by narrowing the research population to this one major, during these five years, the research design gained strength. First, the population was well-defined. Students need to declare a major at any undergraduate institution in order to graduate. Management majors were thus easily defined by official university records. And because there was an official university record of those students, an accurate count of individuals comprising the research population was possible. There were, officially, 245 individuals who graduated as management majors from
the institution of interest between May, 1988 and May, 1992.

Second, because the population was known, the university's alumni office could generate a mailing list of management majors. Thus, it was theoretically possible to find the population of interest. Third, graduates from this institution tended to stay in the metropolitan area after graduation. Access to the population, while not guaranteed, increased. Fourth, some individuals in the population were this scholar's former students. It was hypothesized that this fact could increase participation in the research. The person conducting the research was, in a sense, known to and generally liked by some graduates. However, this same fact could also have been a deterrent to participation. Some graduates might have negative associations regarding the scholar, thereby reducing participation. And finally, by limiting the research population to those management majors who graduated between May, 1988 and May, 1992, the possibility that research participants would all be evaluating the same courses increased. Both the management curriculum and the general education curriculum remained fixed during that period. There were no course or requirement changes to either curriculum. This meant, in effect, that students who enrolled in the institution immediately after high school (the "traditional" college student) would have shared a substantial number of common courses. Threats to internal validity were thus reduced.

Thus, the essential characteristics of the research population became the following:

(1) Research participants had to have graduated from the

(2) They had to have been a declared management major.

(3) They had to have been employed either full time at the time of the research or have been employed full time three months prior to the research if they were unemployed at the time the research was conducted.

(4) Participants must not have begun any formal graduate course work. This requirement had the primary objective of clearly limiting participants to individuals who had only an undergraduate education (the primary area of interest).

The Logic of a Mixed Methodological Study

This research was fundamentally but not exclusively qualitative in nature. It was, in fact, a mixed methodology study combining both quantitative and qualitative methods. Clearly, it is not the aim of this section to dissect the various claims made for and against either research paradigm. However, "making the case for" this mixed methods design is essential for the integrity of the overall research effort as well as for increasing reader confidence in the trustworthiness of its findings.

In thinking through the research design, it is well to keep in mind the wise words of Ackroyd and Hughes (1992). They note that all too often discussions and justifications of research methods devolve into simplistic dichotomies between the "quantitative" and the "qualitative." "Thus we have a collection of antimonies which pretend to describe the two sets of methods: hard versus soft, explanatory versus exploratory, objective versus subjective, causal versus interpretative, generalising versus particularising, rigorous versus unrigorous and so on" (Ackroyd & Hughes, 1992, p. 30). And
although there are significant differences between the two research paradigms and the epistemological assumptions that underpin them, to assign a "preferred status" to one or the other is clearly not warranted. In these cogent words, Ackroyd and Hughes (1992) remind all researchers that:

There is no intrinsic virtue to either style of method. What we are being asked to choose between are promissory notes, not achievements. There is a great deal wrong with quantitative methods just as there is a great deal wrong with qualitative ones. Both kinds are, as it were, in much the same boat. Both have much to do to achieve the aspirations that they set for themselves: we cannot choose between them in terms of which is going to take social research forward. We simply do not know. This is not to say that a preference for one style or the other is inappropriate; it is to recognize that both are in their infancy and neither one markedly superior to the other in all respects. (emphasis in original, p. 30)

Support for the qualitative aspect of this research came most strongly from the insights of Toombs and Tierney (1992). In their updated literature review on the undergraduate curriculum, they note that curriculum design is always highly paradoxical: "The first paradox is that the instrumentalities of education are almost all collective -- courses, classes, programs -- but the essential process of learning is highly individual.... A second paradox is that only the student engages the curriculum directly: Everyone else must deal with it by symbolic reference. Faculty construct the curriculum but do not live it: Students live it but have only a small part in making it" (pp. 53-54). And it is precisely this notion of capturing "the lived experience" (van Manen, 1990) of former management majors as they sought to evaluate the Kilmann, Slevin and Thomas (1983) conceptualization of knowledge utilization on their job that
suggested a qualitative method: in-depth interviews. In fact, in-depth interviews are ideally suited for uncovering and exploring just how any individual or group of individuals "makes sense of" their world. This was the core research method.

At this point, however, there were still two "problems" with the research design. One dealt with the overall management of the research, the other still concerned its scope. It would have been both impossible as well as illogical to interview all 245 graduates in the research population of interest. In-depth interviews produce vast quantities of data to analyze. No researcher could have dealt adequately and competently with the tens of thousands of pages of verbatim transcripts that such a research design would have produced. Time and money also forced a narrower focus. Limiting the number of in-depth interviews was therefore essential. Referring back to the research question itself as well as to some methodological assumptions behind grounded theory (Glaser & Strauss, 1967) (which was the approach to theory construction that this writer took) helped narrow and sharpen the research design even further. First, the research question.

"Use" rather than non-use of course knowledge was the central focus of this entire dissertation. But how could one find those individuals when there were no previous predictors or indicators of knowledge utilization in management majors to guide the researcher? The solution was to construct and conduct a survey that would both qualify and find graduates to be interviewed. "Qualifying" graduates
meant that they had to have all the essential characteristics of the research population stated above. Most importantly, they had to have been working at the time of the interview (or have been working within the previous three months) and must not have had any graduate education. "Finding" interesting graduates meant evaluating the degree to which respondents said they actually "used" course knowledge on their jobs. The more extensive the respondent's reported pattern of knowledge "use," the more likely his or her potential for interview. The task now was to find the "most interesting" cases and to interview them. But two further methodological questions arose: why only X number of cases and according to what criteria would those interviewees actually be chosen? Statistical analysis helped with the latter; grounded theory with the former.

One by-product of conducting a preliminary quantitative survey was that responses could be statistically analyzed. Statistical analysis is an important part of the quantitative research paradigm and has tenaciously grabbed hold of researchers because it seems to be an "objective" method of data analysis. "Objective," in this instance, means that by expressing the data in terms of numbers and by manipulating the data set according to the rules of mathematics that the results are "free of bias." Freedom from bias means, in this positivist framework, that the numbers are "neutral" and that they "speak for themselves."

This notion that there can be truly "objective" research and
that quantitative research gets at that ideal better than qualitative research has come under close scrutiny by philosophers of science in the past two decades. There now seems to be general agreement that no research method is truly "objective." That is, that there is a "God's eye view" of the world (Putnam, 1990) that all research, but especially quantitative research, can capture. As Maxwell (1992) has cogently stated, "As observers and interpreters of the world, we are inextricably part of it; we cannot step outside our own experience to obtain some observer-independent account of what we experience" (p. 283). Furthermore, Maxwell (1992) quotes Hammersley and Atkinson about the "objectivity" of numerical data, as saying, "Data in themselves cannot be valid or invalid; what is at issue are the inferences drawn from them" (p. 283).

Taking a much more rhetorical approach to undermine the notion of "objectivity" of methods is Firestone. Firestone (1987) has written persuasively that the "stripped down, cool style [of science]" (p. 17) is actually a rhetorical style in its own right that attempts to persuade by its seeming neutrality and detachment. Firestone (1987) writes that the positivist/empirical approach to reasoned inquiry uses propositions, hypotheses and mathematics as "a means to empty language of emotion and convince the reader of the writer's disengagement from the analysis. If one of the threats to the validity of a conclusion comes from the writer's own biases, as is considered in the case of science, then any technique that projects a lack of emotion has considerable persuasive power" (p.
What all this meant in terms of this research was a bracing reminder that no single method assures or guarantees research "success." All methods have their limitations. By combining quantitative and qualitative methods within one research project, care had to be taken to employ each method wisely and sensitively. The great strength of quantitative methods, as Maxwell (1992) crisply notes, is that they deal with threats to validity in "an anonymous, generic fashion by prior design features (such as randomization and controls)" (emphasis added, p. 296) and by so doing they can deal with both anticipated and unanticipated validity threats. Thus, the statistical analysis of the survey data played an important role in attempting to determine which individuals were legitimately, that is, logically defensibly, the "most interesting" cases to interview. "Most interesting" in this instance meant that the individuals (ultimately 12) had "statistically significant" responses in terms of knowledge utilization.

Statistical significance means, in lay terms, that the amount or degree of variation represented in any given sample of individuals or objects could not have occurred "by chance." Variation is a naturally occurring phenomenon in the real world. The true power and strength of statistics, then, is that mathematical procedures that define the various statistical tests are all directed toward distinguishing naturally and randomly occurring variation from variation that could not have occurred "by chance." If the observed
variation was not caused "by chance," then scientists presume that some other mechanism must have influenced or "caused" the variation. Science tries to understand and "explain" the variation. Statistical tests aid in this endeavor by attempting to both isolate and quantify the source(s) of the variation.

Thus in this research, when a one-way analysis of variance (ANOVA) was conducted on the survey results and the resulting F statistic was found to be "significant," this indicated that the found variation could not have occurred "by chance." Something "interesting" was occurring in this sample of individuals that suggested that individuals differed "meaningfully" along that particular dimension. Statistical levels of significance quantify the probability that the relationship thus described could not have occurred "by chance" say, five times out of hundred (p < .05), or one time out of hundred (p < .01), or even less infrequently (p < .001). Statistical analysis thereby replaced this scholar's own impressionistic, incomplete or intuitive "interpretation" of the survey data, and in so doing, provided the logical link between the research's use of quantitative (survey) methods antecedent to its use of qualitative methods (in-depth interviews). Chapter IV describes the statistical analysis in detail and provides "the logic" for the selection of the 12 individuals who were interviewed.

Still, however, the question of "why 12 interviews?" has not been explained. For this, a brief discussion of grounded theory (Glaser & Strauss, 1968) is necessary.
An Introduction to Grounded Theory

All research is concerned with potentially creating "theory" or verifying predictions from existing theory(ies). But how that "theory" is created is a decidedly different process when qualitative methods are used from when quantitative ones are employed. Henwood and Pidgeon (1992) schematize the vast literature on research paradigms by noting that quantitative researchers are typically interested in the testing of prior theory and that for the quantitative researcher "a priori theory is assumed to direct the process of collection, analysis and interpretation of data" (p. 19). The research data are thus seen as confirming or criticizing the a priori "theory." Qualitative researchers, in contrast, "may be unwilling or unable to fully specify their theoretical concerns in advance of the study" (p. 19). The qualitative researcher often has no prior theory to guide him or her. So instead the act or process of research becomes one of discovery. This means for the qualitative researcher that "theory" must emerge inductively from the research data itself. The qualitative researcher moves explicitly from data towards theory. Henwood and Pidgeon (1992) prefer to call this process one of theory generation. "To talk in terms of discovery assumes a model of the individual researcher dispassionately uncovering pre-existing objectively defined facts. The notion of theory generation, however, highlights the process of inserting new discourses within old systems of meaning -- the active constitutive
process of representation and re-representation in science" (LaTour, 1967, p. 19).

Grounded theory (Glaser & Strauss, 1967) is just such an inductive, "theory" generating process:

A grounded theory is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to the phenomenon... One does not begin with a theory and then prove it. Rather, one begins with an area of study and what is relevant to the area is allowed to emerge. (Strauss & Corbin, 1990, p. 23)

Grounded theory "fits" within the context of this research design precisely because there was no prior "theory" that explained knowledge utilization within college graduates. It had to be "discovered" or generated.

Furthermore, in strong contrast to quantitative research methods, qualitative methods which support grounded theory are not built upon the inferential apparatus of probability statistics. Thus, there is no formal requirement, as there is in survey research or other quantitative methods, to have a certain number of subjects. The main formal requirement in terms of numbers of subjects for grounded theory is that the number of subjects be sufficient to justify the inductively generated conceptual categories used to "create" the grounded theory itself.

How Categories Were Derived

All research concerns categories and their proposed or hypothesized relationships. As Miller (n.d.) has nicely said, "All
research activities are ultimately concerned with the formation and justification of categories that are proxies for (social) reality." So how the researcher forms categories in his or her research is inextricably tied to the overall trustworthiness and warrant of the research itself.

Category formation in grounded theory is often highly inductive. Since the researcher is often exploring "unique" or one-of-a-kind or first-of-its-kind situations, there generally are few preexisting categories to use. This is not to say, however, that category formation is a willy-nilly, anything-goes process. Strauss and Corbin (1990) have described the steps through which the researcher attempting to use grounded theory should proceed. Their overall approach was used in this research.

Fundamentally, this writer tried to develop categories that were faithful foremost to the actual language that the interviewed individuals actually used. Thus, when individuals discussed whether a specific teacher was "good" or "bad," these instances were simply labeled "good teaching" or "bad teaching." Strauss and Corbin (1990) label these as "in vivo" codes (p. 69). Maxwell (1992) makes the compelling case that this gives "interpretive validity" to qualitative research. "Interpretive accounts are grounded in the language of the people studied and rely as much as possible on their own words and concepts. The issue, again, is not the appropriateness of these concepts for the account, but their accuracy as applied to the perspective of the individuals included in the account" (emphasis
added, p. 289). Every attempt was made to limit the use of theoretical abstractions for category names. Thus, the categories found in this research are labeled "good teaching" and "bad teaching" as opposed to the more theoretical "pedagogical style." As much as possible, then, categories sprang out of the actual language participants used.

But, as Strauss and Corbin (1990) also note, grounded theory cannot remain at this "lower" level of conceptual development. Categories must be integrated and given higher levels of abstraction. In this research, this was done when the researcher asked himself: Do some categories meaningfully and logically go together? Sometimes the logic or the fundamental insight was provided by the study participants themselves. As will be noted in Chapters V and VI, a category, "Competence to do things" is central to understanding knowledge utilization within the individuals interviewed. One interviewee stated that there were four skills he thought were essential for being a successful manager. This gave rise to the category, "competence to do things." Its "validity" came when other interviews were read against or in relation to it. (This technique is called the constant comparative method.) If other instances were found (and they were), the category remained.

Other times, the researcher, himself, named a higher level category. Fundamentally, the question was: What was going on here? How could the phenomenon being studied (knowledge utilization) be "explained?" Thus, a category like the one labeled "knowledge
context" was created by this researcher because it seemed to summarize a common quality found in two "lower level" categories (part time jobs and teacher's examples). The question here was: How did both the interviewees' positive statements about the value of their part time jobs and the value of "good," teacher developed examples relate to knowledge utilization? The answer, as will be developed more fully in Chapter VI, was that both categories provided a meaningful learning context within which students could apply new knowledge; hence the name, "knowledge context." In every instance, no matter whether the category label was in vivo or researcher devised, categories were always grounded in and were linked to the language, evaluation and/or interpretation of the research participants, themselves. This is what Geertz terms as categories being "experience-near" (quoted in Maxwell, 1992, p. 289). Detailed discussions of the categories can be found in Chapters V and VI.

Summary of the Research Design

And so the total research design involved both quantitative and qualitative methods. The first phase was quantitative. It consisted of a survey sent to all 245 management majors who graduated from one, church-affiliated university between May, 1988 and May 1992. The survey served to simultaneously screen out graduates who did not meet all the essential characteristics of the research population of interest while it screened in and pinpointed respondents for follow-up interviews who reported extensive knowledge "use" from course work
on their jobs. Statistical analysis helped define the 12 most "interesting cases" for interview in the second, qualitative phase. Twelve in-depth interviews were conducted with those "interesting cases" on knowledge utilization and their jobs. From those interviews, a grounded theory of knowledge utilization in these 12 management majors was developed.

The Survey Instrument

Initial Draft

As noted above, the survey had two main goals. First, it had to identify graduates who did not meet all the essential characteristics of the population of interest so that they could be eliminated from the potential interview pool. Second, it had to indicate which of the remaining respondents had the most extensive or most "interesting" reported knowledge use patterns so that they could be included in the interview pool. The survey was thus divided into two parts.

The first section captured basic demographic information. It asked whether the respondent was presently working; it asked for the respondent's current job title, for the respondent's current job duties as well as for the respondent's length of time on the current job. If the person was unemployed at the time of the survey, the survey asked the respondent to answer these same questions but in relation to the respondent's most recent job. This section also
asked the respondent's graduation date from the institution at which the study was conducted, whether the respondent was a management major, whether the respondent was a day or evening student and whether the respondent had taken any graduate course work. Finally, each respondent was asked his or her gender and his or her age at time of graduation. Questions in this section were sequenced so that whenever a respondent failed to have a characteristic essential for the interview pool, the respondent was politely asked to stop completing the survey and to return it in an enclosed postage-paid return envelop. This meant, in effect, that only respondents who had all the characteristics of the interview sample were instructed to complete the survey's second section on knowledge utilization.

The second section was an extended introduction to and measurement of respondent perceptions of the extent to which the Kilmann, Slevin and Thomas (1983) framework applied to their job. The challenges of this section were enormous. First, each major domain of the undergraduate curriculum had to be dealt with separately. A global rating of knowledge utilization for one's entire undergraduate education simply was not meaningful. Thus four separate sections on knowledge utilization for each of the four curricular domains (general education, common business core, the management major and electives) were constructed for the survey. Second, this section had to define for the respondent the very specific and subtle differences between the terms "usable," "useful" and "effective" knowledge, and it had to do so in a clear, concise
and easy-to-understand manner. The terms, as Chapter II indicated, simply could not be left to individual, "commonsense" interpretation. Third, respondents had to be reminded of the courses that fell within each curricular domain. The longer one was out of college, the more likely it would be that respondent would forget which courses were part of which curricular domain. And fourth, open ended questions were needed to give a preliminary indication of why respondents evaluated their extent of knowledge utilization as they did. Responses to the open ended questions would thus serve as the initial starting points for the in-depth, follow-up interviews.

The "solution" to all four challenges was to structure each section the same. Each section began by indicating which curricular domain the respondent was to evaluate: general education, common business core, the management major or electives. Next, a list of the courses within that curricular domain was given. Following this, an extended example of each knowledge utilization category was highlighted in a boxed presentation. The terms "usable," "useful" and "effective" were always defined and a parallel example from a course in that specific curricular domain was given. Thus, when respondents were asked to apply "usable," "useful" and "effective" knowledge to their general education courses, the illustrative example was from a philosophy course. Similarly, when respondents were asked about knowledge utilization from courses in the management major, the example was from a human resources course, and so on. Immediately following the example was an alternating sequence of
questions that asked each respondent first to rate the percentage of "usable" knowledge gained in a specific curricular domain by placing an X on a continuous line divided into ten units. Units increased in ten percent increments so the entire scale ranged from zero to one hundred percent. Next, respondents were asked to complete an open-ended question asking them to explain why they rated the percentage of "usable" knowledge in that domain as they did. The question also prompted them to be as specific as possible. Questions about "useful" and "effective" knowledge followed sequentially, with the closed-ended rating question always preceding the open-ended explanatory question. The survey concluded with a "thank you" for completing the survey and a reminder to return the survey in an enclosed postage-paid return envelop. The final survey is in Appendix A.

External Validation

Central to the overall integrity of this research were validity issues related to the Kilmann, Slevin and Thomas (1983) conceptual framework. In an effort to "validate" this conceptual framework, five well-known management professors were asked to critique the survey. The five professors were chosen because they were either expert in the field of organizational behavior or were expert in developing and assessing programs related to managerial competence (Bigelow, 1992; Whetton & Cameron, 1991). The five experts contacted were:

(1) David Whetton, Professor, Management Department, University
of Illinois, Champaign, Illinois;

(2) John Bigelow, Associate Professor, Department of Management, Boise State University; Boise, Idaho;

(3) Robert Boudreau, Associate Professor, Business Administration Department, University of Lethbridge, Alberta, Canada;

(4) Ann Peterson, Assistant Professor, Department of Accounting, Arizona State University; Tuscon, Arizona; and

(5) Peter Soronson, Professor, Graduate School of Business, Illinois Benedictine College, Lisle, Illinois.

The main issues explored with each expert were:

(1) Did the Kilmann, Slevin and Thomas (1983) conceptual framework make sense?

(2) Were the categories of "usable," "useful" and "effective" knowledge clear and distinct?

(3) Were the examples easily understood?

(4) Had they ever used the conceptual framework themselves?

(5) Were there other questions that the survey needed to include or where there other issues this scholar needed to consider in regards to the research question?

Each of the above faculty was sent a cover letter asking them to be an external, expert reviewer. Included in the letter was a copy of the dissertation's thesis outline. A week to ten days after sending the letter and thesis outline, each faculty was contacted by telephone. Discussion with each individual included both salient points in the thesis outline as well as the five points noted above.

There was unanimous consensus on all five points listed above. The Kilmann, Slevin and Thomas (1983) conceptual framework did make sense and the proposed examples were clear and easily understood.

The contacted faculty also agreed that limiting the research to the
three terms "usable," "useful" and "effective" was a sound research
design choice. All the experts agreed that attempting to
operationalize the term "use" in the Kilmann, Slevin and Thomas
framework presented difficulty. Furthermore, most of the expert
faculty commented on the complexities of knowledge utilization as a
general concept and concurred that any research in this area must be
sensitive to Michael Polyani's (1963) idea of tacit knowing. Faculty
all agreed that the research topic was worthy of investigation. One
faculty member (1993) wrote to this researcher as follows: "First, I
think [this] is a highly appropriate topic, touching on the issue of
the usefulness of university learning. I think that universities are
long overdue in thinking about whether what we are doing has value to
graduates and employers. This investigation has the promise of
providing some answers, both in terms of what graduates may find
useful, and how usefulness may be determined" (personal
communication). None of the faculty contacted had ever used the
framework in their own research.

Survey Pilot Test

As a last check before mailing the survey to the 245 management
majors on a list generated by the Alumni Office, a pilot test of the
completed survey was administered to five graduates. The five
graduates were drawn randomly from the sampling frame and were drawn
without replacement. These five graduates were personally contacted
by this writer and were asked to participate in the survey pilot.
This writer asked for a ninety minute meeting with each graduate and met with each individual at the university from which they graduated. After a short greeting, this researcher verbally told each graduate about the purpose and significance of a pilot test in survey research. A quiet room at the university was found for the person in which he or she could complete the survey. Each graduate was asked to mark on the survey any words, items or instructions that were unclear, ambiguous or confusing in any way. After completing the survey, each individual met with this researcher to review the overall impression of the survey as well as to determine whether there were survey aspects that needed revision.

Each subject took approximately 40 minutes to complete the survey. None of the graduates had any suggestions for revision. This scholar visually inspected each survey and found that each individual had completed the survey accurately and completely. There were no incorrect markings or omissions. Based on the results of this pilot test, as well as the comments of the external judges, this writer concluded that the survey did exhibit an acceptable degree of reliability and validity.

The Cover Letter

In addition to the survey, a cover letter was written. The cover letter (1) described the purpose of the research, (2) asked each recipient to participate, (3) assured the recipient of the confidentiality of results and (4) asked the recipient to return the
completed survey in the postage-guaranteed return envelope as soon as possible. The cover letter is in Appendix B.

The Reminder Postcard

Concurrent with designing the survey and its cover letter, a follow-up reminder postcard was also written. The postcard carried a simple message to the recipient: That their returned survey had not been received and that their participation in the research was important. The postcard asked the recipient to either immediately return the survey they had earlier received or to call the scholar’s consulting office and ask for another survey. The postcard was printed on a bright yellow card stock and was hand addressed to the recipient. Both of these strategies attempted to make the postcard stand out in the daily mail, thereby attracting attention to the postcard’s message. The follow-up postcard is in Appendix C.

The Mailing List

The Alumni Office at the university where this research was conducted produced the mailing list. The mailing list was computer generated and was printed on mailing labels. The list contained the name and most current mailing address for each management major who graduated from the university between May, 1988 and May, 1992. On the top line of each label was a code used by the Alumni Office to classify graduates, with name and address of the recipient centered on the label below this classification number. The mailing list was
continually updated and was presumed to be the most accurate list available.

The Mailing Strategy

All surveys were mailed in large, 8 x 14 white mailing envelopes. In the upper left-hand corner a label from this writer was affixed. The writer's name and university affiliation were on the label. The recipient's label was simply removed from the mailing list generated by the Alumni Office and affixed to envelope. The mailing labels of the five graduates who participated in the pilot test were removed from the list.

Inside each envelope was the printed survey with cover letter and postage paid return envelope. The return envelope was a 4 X 8 white mailing envelope with this researcher's name and consulting address affixed. This writer's consulting address was chosen as the best way for maintaining confidentiality of survey results.

Before being mailed, each survey was numbered. The number corresponded to a photocopy of an earlier version of the mailing list which listed each management major's name, address and telephone number. This number was necessary not only for tracking returned surveys but also for knowing the address of any recipient who requested an additional survey during follow-up. Additionally, this number served as a unique identifier for each survey during statistical analysis of the results.

Surveys were mailed the third week of May, 1993. Thirty-eight
completed surveys were returned as a result of this initial mailing. Only five surveys were returned because a graduate's address was inaccurate.

During the third week of June, 1993, the bright yellow reminder postcard was mailed to all graduates who had not yet returned a completed survey. As a result of this follow-up, fifty additional surveys were completed and returned. In all, 94 completed surveys were returned and were used in the statistical analysis.

The In-depth Interview Schedule

An in-depth interview schedule was prepared in advance of the twenty interviews that comprised the qualitative portion of this research. The schedule (already validated by the five expert faculty) began with a brief review of the demographic and job-related information the subject had completed on the previously returned survey. Each subject was asked to describe a typical day at work. Primary job duties were discussed.

Next came the knowledge "use" questions. Each participant was handed a card with the words "usable," "useful" and "effective" printed on it. These words along with an illustrative example appeared in a boxed format, similar to the one used in the initial survey. In addition the lower portion of the card had a visual presentation of the relation between "usable," "useful" and "effective knowledge." The presentation was exactly that same as presented in Figure 4 on page 92 of this dissertation. To insure
that each respondent did, indeed, have a clear understanding of these three words, this writer verbally presented three different knowledge utilization situations. Each interviewee was asked to classify the situation as representative of "usable," "useful" or "effective" knowledge. When the interviewee correctly classified each situation, the interview immediately went into the first part of the in-depth discussion of the curricular domains. When the interviewee misclassified any situation, this researcher re-explained each knowledge use situation. The subject was "retested." This "vocabulary test" served as an additional check on reliability.

Each subject was next handed a card that had the three knowledge utilization words on it, but in addition the card was labeled "Courses for a Management Major." Listed on the card were all the required courses for that major. Each individual was asked to look at all the courses and to determine the extent to which each course gave the subject "usable," "useful" and "effective" knowledge. Each response was followed-up with the probe, "What was it about the knowledge you gained in this course that made you classify it as such? Please be as specific as you can be." When the interviewee said that none of the management courses gave him or her "useful," "usable," or "effective" knowledge, that response was probed by asking, "Why do you think you didn't get any 'usable,' 'useful' or 'effective' knowledge from any of these courses? Please be as specific as you can be."

A parallel procedure was followed for each of the remaining
curricular domains. Thus, each interviewee was handed, in turn, a card labeled "Foundation Courses in Business" and "Courses that Fulfill the General Education Requirements." Each subject was asked to again consider and describe the extent of knowledge utilization gained from each curricular domain. Copies of the three cards can be found in Appendix D. This appendix, it should be noted, essentially gives the entire undergraduate curriculum by course title that was in place at the institution where this research was conducted.

All interviews were audio taped and were transcribed verbatim.

Appendix E has the in-depth interview schedule.
CHAPTER IV
FINDING STUDY INTERVIEWEES

This chapter has been given a somewhat unique title. This was done purposefully. Fundamentally, this chapter is about the quantitative part of this research. But the moment this writer uses the word "quantitative," a whole host of expectations will probably spring into the reader's mind. A simple example of how powerful -- and sometimes blinding -- expectations can be follows. Please consider the following three sentence completions. (1) Trees that produce acorns are called _______. (Answer: Oaks.) (2) Stories with humorous punch lines are called _______. (Answer: Jokes.) (3) The whites of eggs are called _______. If the reader said, "yokes," then the forces of habit and expectation have lead one astray. One moments reflection (and maybe even chagrin) immediately causes one to correct oneself and say, "The whites of eggs are called albumin." However, the point is made. People are conditioned towards certain expectations and have certain habits that are hard to break. So, if this chapter were titled "Survey Results" readers would have a vast set of automatic, almost habitual expectations. This writer would like to consciously break some of those expectations. Hence, the unique title of this chapter.

The title, it is hoped, will serve as a guide to all chapter
that while this chapter does deal with quantitative analyses, the central purpose of the analyses was always to find individuals to interview. Thus, the survey and the analyses reported here are simply means to an end, not ends in themselves.

With this in mind, the organization of this chapter can be considered. For those readers electing to read only this chapter, the chapter begins with a short summary of the research methodology used in the design and administration of this knowledge utilization survey. Next (and by far the most crucial part of the chapter), data from the survey are presented, along with their interpretation. Essentially, the question here was what did the data indicate about the extent of knowledge utilization in survey respondents? Finally, data analysis indicated which respondents were the most "interesting" cases for in-depth interviewing. The chapter concludes with a discussion of the logic for interviewing these individuals.

A Recap of the Survey Methodology

Fundamentally this research explored the application of a conceptual model of knowledge utilization proposed by Ralph Kilmann and colleagues (Kilmann, Slevin & Thomas, 1983) and a five-year cohort of management graduates from one church-affiliated, four-year university located on the outskirts of a major metropolitan United States city. Kilmann and colleagues suggested that knowledge utilization is a complex idea, which is actually composed of four separate and distinct terms. These terms are "usable" knowledge,
Usable knowledge is all the knowledge that has the potential of helping a student achieve some future-oriented goal. It is retained in a student's memory and becomes...

Useful knowledge when the student takes that knowledge and applies it to a specific, immediate situation. Useful knowledge, in turn, becomes...

Effective knowledge when the student evaluates how well that bit of knowledge actually "worked" in the specific situation.

Figure 5. The Relationship Between "Usable," "Useful" and "Effective" Knowledge.

"useful" knowledge, knowledge that is "used" and "effective" knowledge. In defining each term, Kilmann and colleagues stated that "usable" knowledge referred to the potentiality of knowledge; it is assessed before the fact and is not related to any specific goal. "Useful" knowledge is similarly assessed before the fact, but it is always allied with a specific goal. Knowledge is "useful" because it is believed that a specific piece of knowledge will solve a problem or help someone do something tangible. Only after the fact can that piece or bit of knowledge be evaluated as to whether it was, indeed, the right or correct piece of knowledge to apply in that particular situation. Thus, knowledge is said to be "effective" in relation to some goal or criteria. Figure 5 summarizes the relationships between
these three terms.

The fourth term, "used" knowledge, was not included in this research. Chapter II discussed its exclusion in detail; but succinctly put, although Kilmann, Slevin and Thomas (1983) define "used" knowledge, the term was very difficult to unambiguously operationalize in light of this research. Its exclusion in no way jeopardized the overall research and, in fact, was thought to increase the reliability of respondent answers by removing from consideration the one term that was thought to cause the greatest confusion.

Following standard survey research procedures, the conceptual framework was externally validated by five experts in the field. They all agreed that the three knowledge utilization terms made sense and were clearly differentiated from each other. The survey was pretested on five management graduates from the institution where the research was conducted, and they, too, concurred that both the terms and the overall survey were understandable. The survey was sent to 245 management majors who graduated between 1988-1992. A follow-up, reminder post card was sent to every individual who did not return a completed survey. In all, 94 surveys were returned out of a total 245 mailed. This gave an acceptable, but not great, response rate of 38.4% (Zikmund, 1982).

Profile of All Respondents

At the time of the survey, 76% (n=72) of the respondents were
Table 2. Employment Status of Respondents.

<table>
<thead>
<tr>
<th>Valid Employment Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full time</td>
<td>72</td>
<td>76.6</td>
<td>81.8</td>
</tr>
<tr>
<td>Employed part time</td>
<td>8</td>
<td>8.5</td>
<td>9.1</td>
</tr>
<tr>
<td>Unemployed</td>
<td>8</td>
<td>8.5</td>
<td>9.1</td>
</tr>
<tr>
<td>Left blank</td>
<td>6</td>
<td>6.4</td>
<td>Missing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 3. Response Rate by Academic Year.

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Total</th>
<th>Number of Responses</th>
<th>Percentage Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987-88</td>
<td>31</td>
<td>11</td>
<td>35.5%</td>
</tr>
<tr>
<td>1988-89</td>
<td>48</td>
<td>15</td>
<td>31.2</td>
</tr>
<tr>
<td>1989-90</td>
<td>46</td>
<td>18</td>
<td>39.1</td>
</tr>
<tr>
<td>1990-91</td>
<td>76</td>
<td>26</td>
<td>34.2</td>
</tr>
<tr>
<td>1991-92</td>
<td>44</td>
<td>24</td>
<td>54.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>245</strong></td>
<td><strong>94</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

employed full time, 9% (n=8) were employed part time, while 9% (n=8) were unemployed (see Table 2). For those respondents employed full time, length of time on current job varied greatly. At least one respondent had held his or her job for less than one month, while another respondent had held his or her current job for more than twenty-five years. The average length of time on current job, however, for all respondents was 2.0 years. For those eight respondents holding part time jobs at the time of the survey, they reported that their part time employment ranged from three months to a slight more than two years.

Response rates by academic year are presented in Table 3.
Table 4. Respondent Classification as Full-time or Part-time Student.

<table>
<thead>
<tr>
<th>Day or evening student</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time day, 12+ hours/sem.</td>
<td>69</td>
<td>73.4</td>
<td>81.1</td>
</tr>
<tr>
<td>Part time day, 9 hrs or less/sem.</td>
<td>2</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Full time evening, 12+ hours/sem.</td>
<td>4</td>
<td>4.3</td>
<td>4.7</td>
</tr>
<tr>
<td>Part time evening, 9 hours or less/sem.</td>
<td>10</td>
<td>10.6</td>
<td>11.8</td>
</tr>
<tr>
<td>Missing/left blank</td>
<td>9</td>
<td>9.6</td>
<td>Missing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 5. Number of Single and Double Majors of All Respondents.

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Major: Management</td>
<td>66</td>
<td>70.2</td>
<td>77.6</td>
</tr>
<tr>
<td>Double Major:</td>
<td>19</td>
<td>20.2</td>
<td>22.4</td>
</tr>
<tr>
<td>Item left blank</td>
<td>9</td>
<td>9.6</td>
<td>Missing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

As Table 4 indicates, 81% (n=69) of the respondents were full-time day students, while almost 12% (n=10) were part-time evening students. Only 5% (n=4) of all respondents were full-time evening students (that is, students who took an evening class on each of the four days that evening classes were offered), and only 2% (n=2) of the respondents were classified as part-time day students (students taking less than nine hours per semester during the day).

Slightly more than three-fourths of the respondents (77%) had a single, declared major, management; while 22% (n=19) were double majors, one of which was management. See Table 5.
Finally, as Table 6 indicates, 24 respondents (or 28% of the entire sample) had taken at least one graduate level course at the time they were surveyed. This left 61 individuals who had only their undergraduate, baccalaureate degree as their highest level of education. As described in Chapter III, only these individuals were instructed to complete the entire survey, including the all-important sections on knowledge utilization. These 61 individuals thus became the primary target of interest for this research, and the remainder of the chapter discusses and analyses their responses. For ease of discussion, however, these 61 individuals will henceforth be termed the "BA-only" group.

**Graduates with Undergraduate Management Degree Only: A Profile of the BA-only Group**

Table 7 indicates that the BA-only respondents had the following employment profile at the time they completed the survey:

> Over 90% were employed full time.

> Of those 90%, more than 80% (n=51) were employed full time,
Table 7. Employment Status of BA-Only Respondents at Time of Survey.

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full time</td>
<td>51</td>
<td>76.6</td>
<td>81.8</td>
<td>81.8</td>
</tr>
<tr>
<td>Employed part time</td>
<td>5</td>
<td>8.5</td>
<td>9.1</td>
<td>90.9</td>
</tr>
<tr>
<td>Unemployed</td>
<td>8</td>
<td>8.5</td>
<td>9.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Left blank</td>
<td>6</td>
<td>6.4</td>
<td>Missing</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

while 8% (n=5) were employed part time.

Nine percent of the group were unemployed.

Frequency counts indicated that the length of time respondents held their current job ranged from two months to 25 years. The average length of time on their current job was 2.5 years.

The BA-only group's academic profile was as follows:

(1) The largest number of respondents graduated in May, 1991 (n=17). This followed, in descending order, by May, 1990 graduates (n=11) and then by May, 1992 graduates (n=10). The number of mid-year graduates was small, ranging between two and four individuals each January. See Table 8.

(2) Respondents were split almost evenly on their transfer status, as Table 9 indicates. Forty-seven percent (n=29) of the group transferred into the institution from another school, while 52% (n=32) did not.

(3) More than three-fourths of the respondents (n=48) declared a single major, management, while just more than 20% (n=13) were double majors, as shown in Table 10. (The survey did
Table 8. Year of Graduation for BA-Only Respondents.

<table>
<thead>
<tr>
<th>Value Label</th>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>May, 1988</td>
<td>6</td>
<td></td>
<td>9.8</td>
</tr>
<tr>
<td>January, 1989</td>
<td>3</td>
<td></td>
<td>4.9</td>
</tr>
<tr>
<td>May, 1989</td>
<td>6</td>
<td></td>
<td>9.8</td>
</tr>
<tr>
<td>January, 1990</td>
<td>2</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>May, 1990</td>
<td>11</td>
<td></td>
<td>18.0</td>
</tr>
<tr>
<td>January, 1991</td>
<td>2</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>May, 1991</td>
<td>17</td>
<td></td>
<td>27.9</td>
</tr>
<tr>
<td>January, 1992</td>
<td>4</td>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td>May, 1992</td>
<td>10</td>
<td></td>
<td>16.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>61</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 9. Transfer Status of BA-Only Respondents.

<table>
<thead>
<tr>
<th>Value Label</th>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferred into institution</td>
<td>29</td>
<td></td>
<td>47.5</td>
</tr>
<tr>
<td>Did not transfer into institution</td>
<td>32</td>
<td></td>
<td>52.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>61</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10. Number of BA-Only Respondents with Declared Single and Double Majors.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single major: Management</td>
<td>48</td>
<td></td>
<td>78.7</td>
</tr>
<tr>
<td>Double Major: One of which was management</td>
<td>13</td>
<td></td>
<td>21.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>61</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

not ask respondents to list second majors because of the potential confusion in answering knowledge utilization questions.

(4) Eighty-five percent (n=52) of the BA-only respondents were full-time day students; while almost 10% classified
Table 11. Classification of BA-Only Respondents as Full Time or Part Time Students.

<table>
<thead>
<tr>
<th>Value Label</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time day, 12+ hours/sem.</td>
<td>52</td>
<td>85.2</td>
<td>85.2</td>
</tr>
<tr>
<td>Part time day, 9 hours or less/sem.</td>
<td>1</td>
<td>1.6</td>
<td>86.9</td>
</tr>
<tr>
<td>Full time evening, 12 hours/sem.</td>
<td>2</td>
<td>3.3</td>
<td>90.2</td>
</tr>
<tr>
<td>Part time evening, 9 hours or less/sem.</td>
<td>6</td>
<td>9.8</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 12. Gender of BA-Only Respondents.

<table>
<thead>
<tr>
<th></th>
<th>Valid</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>27</td>
<td>44.3</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>55.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

themselves as full-time evening (n=6). See Table 11.

(5) As Table 12 indicates, more males returned the survey than did females. Fifty-six percent (n=34) of the BA-only respondents were men, while 44% (n=27) were women.

(6) As the frequency counts in Table 13 demonstrate, the most prevalent age at time of graduation was 22 (n=17), with 21 and 23 being the second and third most common age, respectively. Ages ranged in the BA-only group, however, from 21 through 51.

To summarize, a word picture of the BA-only group would read as follows: BA-only respondents were largely traditional, college-aged students, with 75% of the group graduating when they were between 21- 24. The BA-only group matriculated immediately after high
Table 13. Age at Time of Graduation for BA-Only Respondents.

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>13</td>
<td>21.3</td>
<td>21.7</td>
<td>21.7</td>
</tr>
<tr>
<td>22</td>
<td>17</td>
<td>27.9</td>
<td>28.3</td>
<td>50.0</td>
</tr>
<tr>
<td>23</td>
<td>11</td>
<td>18.0</td>
<td>18.3</td>
<td>68.3</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>6.6</td>
<td>6.7</td>
<td>75.0</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>3.3</td>
<td>3.3</td>
<td>78.3</td>
</tr>
<tr>
<td>26</td>
<td>4</td>
<td>6.6</td>
<td>6.7</td>
<td>85.0</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>86.7</td>
</tr>
<tr>
<td>28</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>88.3</td>
</tr>
<tr>
<td>34</td>
<td>2</td>
<td>3.3</td>
<td>3.3</td>
<td>91.7</td>
</tr>
<tr>
<td>35</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>93.3</td>
</tr>
<tr>
<td>39</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>95.0</td>
</tr>
<tr>
<td>41</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>96.7</td>
</tr>
<tr>
<td>47</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>98.3</td>
</tr>
<tr>
<td>51</td>
<td>1</td>
<td>1.6</td>
<td>1.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>1.6</td>
<td>Missing</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

School. Slightly more than 50% of the BA-only group took all four years of their undergraduate instruction at the same institution. In turn, this meant that this research group of interest had a relatively large number of transfer students in it. Most respondents had a single, declared major, management. At the time of the survey, almost all graduates were employed and, on average, had held their current job for two-and-a-half years.

Before proceeding, it should be noted that a series of chi-square tests were conducted between the BA-only group and the some-graduate-work group. Fundamentally the chi-square tests were conducted to assure this writer that there were no statistically significant differences between the subgroup of interest, the BA-only group, and the rest of the respondent pool, the group with some
graduate course work.

The following questions were asked and a chi-square test performed to determine a state of "no difference:"

(1) Did the BA-only group differ from some graduate courses work by age? In other words, was the BA-only group younger or older? Answer: No.

(2) Did the BA-only group differ from the some graduate course work group by employment status? In other words, did the BA-only group have more employment or more part-time employment? The answer again was no.

(3) Did the BA-only respondents differ in any statistically significant way on the length of time they were employed on their current job? No, average length of time on current job was not statistically significantly different between the two groups.

In each instance, then, the issue was whether respondents who had taken at least one graduate course were different from those who had, at the time of the survey, stopped their formal education with their baccalaureate education. The answer was no -- at least for the very few variables used in this screening survey. It should be remembered, though, that the central aim of the survey was not to compare individuals who had some graduate education with those that had none; rather it was to find those individuals who had only their baccalaureate education and to gain some preliminary insight into their knowledge utilization patterns. Presentation and discussion of the BA-only knowledge utilization patterns follow.
Knowledge Utilization in Management Majors

Descriptive Statistics: Mean, Median, Standard Deviation and Range

BA-only respondents were first asked to evaluate the percentage of "usable," "useful" and "effective" knowledge they received within each of the four curricular domains comprising the entire undergraduate education. To recapitulate, these domains were general education courses, foundation courses in business, courses that comprised the management major and free electives.

The mean percentage of "usable" knowledge from General Education courses for the BA-only respondents was 38.08%; the mean percentage of "useful" knowledge from General Education courses was 37.34%, while the percent of "effective" knowledge gained from General Education courses was 33.75%. Univariate statistics along with range scores for general education education courses can be found in Table 14. The mean percentage of "usable" knowledge from foundation business courses was 53.20%. The percentage of "useful" knowledge from foundation business courses as 43.38%, and the percentage of "effective" knowledge from foundation business courses was 36.56%. Likewise, univariate statistics along with range scores for foundation business courses can be found in Table 15.

As Table 16 indicates, the mean percentage of "usable," "useful" and "effective" knowledge gained from all the courses in the management major were 54.29%, 45.67% and 36.95%, respectively. And finally, Table 17 indicates that the mean percentages of "usable,"
Table 14. Univariate Statistics for Knowledge Utilization Scores from General Education Courses.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable Knowledge</td>
<td>38.08</td>
<td>30.00</td>
<td>3.71</td>
<td>29.00</td>
<td>0-100</td>
</tr>
<tr>
<td>Useful Knowledge</td>
<td>37.34</td>
<td>30.00</td>
<td>3.71</td>
<td>28.95</td>
<td>0-100</td>
</tr>
<tr>
<td>Effective Knowledge</td>
<td>33.75</td>
<td>28.00</td>
<td>3.59</td>
<td>28.04</td>
<td>0-100</td>
</tr>
</tbody>
</table>

Table 15. Univariate Statistics for Knowledge Utilization Scores from Foundation Business Courses.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable Knowledge</td>
<td>53.20</td>
<td>50.00</td>
<td>3.55</td>
<td>27.76</td>
<td>0-100</td>
</tr>
<tr>
<td>Useful Knowledge</td>
<td>43.38</td>
<td>30.00</td>
<td>3.20</td>
<td>28.08</td>
<td>0-90</td>
</tr>
<tr>
<td>Effective Knowledge</td>
<td>36.56</td>
<td>40.00</td>
<td>3.60</td>
<td>28.11</td>
<td>0-95</td>
</tr>
</tbody>
</table>

Table 16. Univariate Statistics for Knowledge Utilization Scores from Management Courses.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Courses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable Knowledge</td>
<td>54.28</td>
<td>60.00</td>
<td>3.05</td>
<td>23.79</td>
<td>9-100</td>
</tr>
<tr>
<td>Useful Knowledge</td>
<td>45.46</td>
<td>50.00</td>
<td>3.17</td>
<td>24.79</td>
<td>3-95</td>
</tr>
<tr>
<td>Effective Knowledge</td>
<td>36.95</td>
<td>30.00</td>
<td>3.20</td>
<td>24.96</td>
<td>0-85</td>
</tr>
</tbody>
</table>

"useful" and "effective" knowledge gained from electives were 32.87%, 29.77% and 27.10%, respectively. A ranked ordering of curricular domains based on these mean scores indicated that the extent of
knowledge utilization was greatest for courses in the major, followed very closely by foundation business courses. In other words, those two parts of the curriculum which jointly are designed to provide general and specialized business knowledge were perceived to have the highest knowledge utilization. Also judging from the mean score, respondents perceived knowledge utilization from both general education and elective courses to be a great deal less than from their business courses.

Interestingly, the standard deviation and standard error score show a high degree of uniformity across all domains and all knowledge utilization categories. This suggests that although the "amounts" or extent of knowledge utilization varied considerably by curricular domain and knowledge utilization categories, overall respondents had a high degree of consistency and uniformity concerning the dispersion of their scores. In other words, the same "pattern" of scores occurs across all domains and categories.

Finally, the standard deviations are relatively "large," averaging anywhere between 25-29%. These large standard deviations
are corroborated by score ranges for "usable," "useful" and "effective" knowledge that encompassed the entire continuum from no knowledge utilization at all (0%) to total knowledge utilization (100%).

Clearly, aggregating the data by curricular domains presented a grand overview of knowledge utilization. But further analysis of the data was needed.

This writer's next task was to partition the data using the independent variables and to apply the t-test for independence of sample means. Two questions needed to be asked: Why the t-test? and where did the independent variables come from? First, the question about the independent variables needs explanation.

The Initial Model for This Research

Both Lave and March (1993) and Bateson (1992, p. 89) make some interesting points about the underlying use of "models" in social research. Essentially, both sets of authors remind readers that for some types of social research, researchers, themselves, often have implicit "models" of human behavior embedded in the specific design of the research. This writer made such a model when he designed the survey analyzed here. Figure 6 presents the model that stood behind this survey's construction, and as can be seen, there were a relatively few number of variables chosen as influencing knowledge utilization. Fundamentally, as Chapter II noted, until this research there had not been any research validating the Kilmann, Slevin and
Figure 6. Diagram of the Hypothesized Independent and Dependent Variables as Initially Conceptualized for This Research.
Thomas (1983) conceptual framework for knowledge utilization nor had there been any research designed to "test" which independent variables influenced individual knowledge utilization. This meant, by default, that this writer was left to draw on both his own classroom teaching experiences as well as his own understanding of the vast student development literature to choose those independent variables. Essentially, then, Figure 6 represented the "model" that was initially being tested by this research. T-tests were the statistical tests that would help confirm the validity of this "model." A discussion of this statistical test follows immediately.

**T-tests**

"The t-test asks a simple question: Do two sample means...differ enough to make [the researcher] believe there are real differences between the two populations?" (Bernard, 1988, p. 370).

Gender was analyzed first. Table 18 indicates that men and women do vary on knowledge utilization. Women consistently had higher mean scores than men in general education courses and elective courses; while men consistently had higher scores on foundation business courses. For management courses neither gender had a consistent pattern across all knowledge utilization categories. However, when a t test for independence of sample means was conducted on each curricular domain, the t test proved not to be significant. In other words, although men and women varied on their knowledge utilization scores (as would be expected), the observed differences
Table 18. Comparison of Knowledge Utilization Mean Scores by Gender Across All Curricular Domains.

<table>
<thead>
<tr>
<th>General Education Courses</th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>41.08</td>
<td>44.64</td>
<td>41.75</td>
</tr>
<tr>
<td>Male</td>
<td>39.42</td>
<td>35.19</td>
<td>31.63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundation Business Courses</th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51.56</td>
<td>43.20</td>
<td>37.17</td>
</tr>
<tr>
<td>Male</td>
<td>58.45</td>
<td>47.81</td>
<td>41.42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Management Courses</th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>57.20</td>
<td>47.36</td>
<td>36.46</td>
</tr>
<tr>
<td>Male</td>
<td>56.18</td>
<td>47.33</td>
<td>40.70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>% Usable Knowledge,</th>
<th>% Useful Knowledge,</th>
<th>% Effective Knowledge,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>41.57</td>
<td>36.75</td>
<td>33.80</td>
</tr>
<tr>
<td>Male</td>
<td>33.90</td>
<td>32.73</td>
<td>29.97</td>
</tr>
</tbody>
</table>

could be ascribed to sampling error and not to any "true" difference between genders on the extent of knowledge utilization.

Next, transfer status was analyzed. The question here was how did students who transferred into the institution differ from students who had taken all of their courses from the same institution. Except for elective courses, as Table 19 indicates, students who remained at the institution for all four years uniformly had higher reported knowledge utilization from their general
### Table 19. Comparison of Knowledge Utilization Mean Scores by Transfer Status Across All Curricular Domains.

<table>
<thead>
<tr>
<th>Course Type</th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education Courses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transferred to institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>31.29</td>
<td>34.67</td>
<td>30.00</td>
</tr>
<tr>
<td>No</td>
<td>48.66</td>
<td>43.53</td>
<td>41.52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Foundation Business Courses</strong></th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferred to institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>53.86</td>
<td>44.30</td>
<td>38.64</td>
</tr>
<tr>
<td>No</td>
<td>57.00</td>
<td>47.13</td>
<td>40.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Management Courses</strong></th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferred to institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>51.29</td>
<td>42.21</td>
<td>34.41</td>
</tr>
<tr>
<td>No</td>
<td>61.60</td>
<td>52.13</td>
<td>42.97</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Elective Courses</strong></th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferred to institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>35.75</td>
<td>34.21</td>
<td>33.17</td>
</tr>
<tr>
<td>No</td>
<td>38.07</td>
<td>34.46</td>
<td>30.08</td>
</tr>
</tbody>
</table>

education, foundation business and management courses. However, when the t test for independence of sample means was conducted on each curricular domain, the reported differences between transfer and nontransfer student proved not to be statistically significant.

Age was analyzed next. Table 20 indicates that were very large differences in mean scores between traditional-age college students (ages 21 through 24) and nontraditional college-aged students (ages 25 and over). Consistently across all four curricular domains, nontraditional-aged students had higher -- sometimes much higher --
Table 20. Comparison of Knowledge Utilization Mean Scores by Age Across All Curricular Domains.

<table>
<thead>
<tr>
<th>Age in categories</th>
<th>% Usable Knowledge Gen Ed Courses</th>
<th>% Useful Knowledge Gen Ed Courses</th>
<th>% Effective Knowledge Gen Ed Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional aged students</td>
<td>50.55</td>
<td>46.42</td>
<td>39.33</td>
</tr>
<tr>
<td>Nontraditional aged students</td>
<td>75.00</td>
<td>65.00</td>
<td>65.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in categories</th>
<th>% Usable Knowledge Foundation Courses</th>
<th>% Useful Knowledge Foundation Courses</th>
<th>% Effective Knowledge Foundation Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional aged students</td>
<td>51.08</td>
<td>43.75</td>
<td>36.42</td>
</tr>
<tr>
<td>Nontraditional aged students</td>
<td>65.00</td>
<td>50.00</td>
<td>45.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in categories</th>
<th>% Usable Knowledge Management Courses</th>
<th>% Useful Knowledge Management Courses</th>
<th>% Effective Knowledge Management Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional aged students</td>
<td>64.33</td>
<td>51.17</td>
<td>40.17</td>
</tr>
<tr>
<td>Nontraditional aged students</td>
<td>65.00</td>
<td>65.00</td>
<td>50.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in categories</th>
<th>% Usable Knowledge Elective Courses</th>
<th>% Useful Knowledge Elective Courses</th>
<th>% Effective Knowledge Elective Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional aged students</td>
<td>34.25</td>
<td>30.73</td>
<td>26.73</td>
</tr>
<tr>
<td>Nontraditional aged students</td>
<td>70.00</td>
<td>65.00</td>
<td>60.00</td>
</tr>
</tbody>
</table>
mean scores. Yet, interestingly enough, when the t-test for independence of sample means was conducted, the difference proved not to be statistically significant. In other words, although there were "large" numerical differences between traditional and nontraditional students' mean scores, these differences were attributable to sampling error rather than to an underlying, "true" difference between the extent of knowledge utilization between the two groups.

Finally, students carrying a single major in management versus students carrying a double major, one of which was management, were compared. Double majors consistently had higher mean knowledge utilization scores across all curricular domains except for the foundation courses in business (see Table 21). Again, a t test for independence of sample means was conducted on the data, but none of the differences in mean scores between single and double majors yielded statistically significant results.

Thus, while each independent variable (gender, transfer status, age and major) did produce differences in mean scores across all three knowledge utilization categories and across each of the four curricular domains, none of the reported differences proved to be statistically significant at the .05 level. This meant, in turn, that whatever differences that were reported between groups could be explained by sampling error. Consequently, none of these variables could be used to meaningfully define a group of individuals to interview. At the level of "interesting" findings rather than "statistically significant" findings, the above noted variations in
Table 21. Comparison of Knowledge Utilization Mean Scores by Major Across All Curricular Domains.

<table>
<thead>
<tr>
<th>Courses</th>
<th>% Usable Knowledge</th>
<th>% Useful Knowledge</th>
<th>% Effective Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management major</td>
<td>39.07</td>
<td>37.11</td>
<td>33.70</td>
</tr>
<tr>
<td>Management + one other</td>
<td>44.08</td>
<td>46.85</td>
<td>43.46</td>
</tr>
<tr>
<td>Foundation Business Courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management major</td>
<td>58.22</td>
<td>47.91</td>
<td>40.95</td>
</tr>
<tr>
<td>Management + one other</td>
<td>46.00</td>
<td>38.62</td>
<td>35.08</td>
</tr>
<tr>
<td>Management Courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management major</td>
<td>55.67</td>
<td>45.53</td>
<td>38.82</td>
</tr>
<tr>
<td>Management + one other</td>
<td>59.92</td>
<td>53.62</td>
<td>39.23</td>
</tr>
<tr>
<td>Elective Courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>35.75</td>
<td>32.72</td>
<td>30.58</td>
</tr>
<tr>
<td>Management + one other</td>
<td>41.17</td>
<td>40.09</td>
<td>34.82</td>
</tr>
</tbody>
</table>

mean scores do warrant some further discussion.

Additional Discussion of the T-tests

Table 19 indicates that students who remained at the institution all four years consistently had higher knowledge utilization means scores than students who transferred into the institution. In other words, students who stayed at the institution all four years perceived themselves to have gotten more out of their courses than did transfer students. A number of interesting hypotheses present themselves which might "explain" this difference: Maybe this difference was due to structural characteristics in the curriculum.
itself. That is, that when students remained at this one institution all four years they repeated the benefits of what, in theory, is to be an integrated, coherent curriculum. Or, when students stayed at one institution, they might have taken several courses from the same faculty member thereby increasing the likelihood that key learning points were repeated and reinforced. This could lead, in turn, to the perception that one has "learned" a coherent body of knowledge and thus have higher knowledge utilization scores. Or, students who stayed at the same institution might well have become savvy educational "shoppers," who learned which faculty and courses met their learning style and course grade needs best, which, in turn, resulted in higher perceived knowledge utilization. Or, transfer students were somehow "weaker" students than nontransfer students and thereby had lower knowledge utilization scores.

Nontraditional-aged students as a group consistently had higher knowledge utilization means score than did traditional-aged students. And, as presented in Table 20, nontraditional-aged student uniformly gained a great deal more knowledge from each part of the curriculum. They reported, for example, that from all their general education courses, 75% of the knowledge gained was "usable;" 65% of the knowledge gained from general education courses was "useful;" and, in turn, that same 65% proved to be "effective." In contrast, traditional-aged students reported that about 50% of the knowledge
they gained from all general education courses was "usable;" 45% was "useful" and only 39% of all the knowledge gained from general education courses was "effective." The same pattern, of nontraditional-aged students having more extensive knowledge utilization than traditional-aged students, was uniform across foundation business courses, management courses and elective courses. Possible explanations could be that nontraditional-aged students are, by definition, older and more mature. Thus, they were often more focused in terms of their educational goals; they often brought extensive full-time work experience into the classroom; and they often had richer, more fully developed sets of life experiences through which to filter, compare and evaluate the relevance of class concepts and ideas, especially in the general education courses. In colloquial terms, nontraditional-aged students "get more" from classes because they are in a more mature phase of their work and personal life. This could easily have translated into higher knowledge utilization mean score.

A similar line of reasoning might explain the generally higher knowledge utilization mean scores for double versus single majors (see Table 21). Students who had declared double majors, it might be proposed, had a "richer," more extensive context within which to evaluate the relevance of course knowledge. Thus, for example, a management and industrial psychology double major would have a broader perspective and context within which to assess the "value" of course knowledge. By having knowledge in two disciplines, a double
major could potentially see more connections across and within the curricular domains and this, in turn, could explain high knowledge utilization mean scores.¹

At this point in the data analysis, this writer still had no statistically defensible means for selecting the "interesting" cases for interview. A complete review of the data was in order. Fortunately, one data run, as yet unanalyzed, stood out in that review and it is to that analysis that the discussion now turns.

Finding the Key That Unlocked the Data

Table 22 presents a correlation matrix that was built for all 12 knowledge utilization categories. The correlation matrix had the great strength of simultaneously comparing each of the twelve knowledge utilization categories to one another. Thus it was possible to compare not only the relationship of "usable," "useful" and "effective" knowledge within curricular domains but also to

¹A "quirk" in these data, however, concerned the mean scores in foundation business courses for single and double majors. In this one curricular domain, the patterns was reversed: management majors and not double majors had higher mean knowledge utilization mean scores. One possible explanation might be that the second major was in a discipline other than business and that the student's primary interest was in the nonbusiness discipline. An example of this might be the management and aviation maintenance double major at this institution. In this case, students were basically aviation majors who declared a second major (in this instance, management) to "hedge their bets" in the job market after graduation. Having once declared themselves a management major, they had to take the same foundation business courses (e.g., accounting, finance, business information systems, management science, etc.) as any business major, although their enthusiasm and interest might not be very high. Hence, the lower knowledge utilization mean scores in foundation business courses.
Table 22. Correlation Matrix Between "Usable," "Useful" and "Effective" Knowledge Across All Four Curricular Domains.

<table>
<thead>
<tr>
<th></th>
<th>GEUSABLE</th>
<th>GEUSEFUL</th>
<th>GEEFFECT</th>
<th>FNUSABLE</th>
<th>FNUSEFUL</th>
<th>FNEFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEUSABLE</td>
<td>1.0000</td>
<td>.6173**</td>
<td>.6135**</td>
<td>.5521**</td>
<td>.4325**</td>
<td>.3885*</td>
</tr>
<tr>
<td>GEUSEFUL</td>
<td>.6173**</td>
<td>1.0000</td>
<td>.8307**</td>
<td>.3202</td>
<td>.4191**</td>
<td>.2531</td>
</tr>
<tr>
<td>GEEFFECT</td>
<td>.6135**</td>
<td>.8307**</td>
<td>1.0000</td>
<td>.2398</td>
<td>.5154**</td>
<td>.4958**</td>
</tr>
<tr>
<td>FNUSABLE</td>
<td>.5521**</td>
<td>.3202</td>
<td>.2398</td>
<td>1.0000</td>
<td>.6505**</td>
<td>.3613*</td>
</tr>
<tr>
<td>FNUSEFUL</td>
<td>.4325**</td>
<td>.4191**</td>
<td>.5154**</td>
<td>.6505**</td>
<td>1.0000</td>
<td>.7229**</td>
</tr>
<tr>
<td>FNEFFECT</td>
<td>.3885*</td>
<td>.2531</td>
<td>.4958**</td>
<td>.3613*</td>
<td>.7229**</td>
<td>1.0000</td>
</tr>
<tr>
<td>BAUSABLE</td>
<td>.4748**</td>
<td>.2186</td>
<td>.1008</td>
<td>.5809**</td>
<td>.3355*</td>
<td>.3164</td>
</tr>
<tr>
<td>BAUSEFUL</td>
<td>.4028*</td>
<td>.4853**</td>
<td>.4897**</td>
<td>.3790*</td>
<td>.6155**</td>
<td>.6740**</td>
</tr>
<tr>
<td>BAEFFECT</td>
<td>.3961*</td>
<td>.3970*</td>
<td>.5325**</td>
<td>.2831</td>
<td>.6695**</td>
<td>.7659**</td>
</tr>
<tr>
<td>ELUSABLE</td>
<td>.5558**</td>
<td>.4913**</td>
<td>.5314**</td>
<td>.2597</td>
<td>.4077*</td>
<td>.3077</td>
</tr>
<tr>
<td>ELUSEFUL</td>
<td>.4376**</td>
<td>.5262**</td>
<td>.5250**</td>
<td>.1708</td>
<td>.3747*</td>
<td>.3043</td>
</tr>
<tr>
<td>ELEFFECT</td>
<td>.4068*</td>
<td>.4947**</td>
<td>.4769**</td>
<td>.1510</td>
<td>.3553*</td>
<td>.3327*</td>
</tr>
</tbody>
</table>

Correlations: BAUSABLE | BAUSEFUL | BAEFFECT | ELUSABLE | ELUSEFUL | ELEFFECT
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>GEUSABLE</td>
<td>.4748**</td>
<td>.4028*</td>
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<td>GEUSEFUL</td>
<td>.2186</td>
<td>.4853**</td>
<td>.3970*</td>
<td>.5314**</td>
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<td>GEEFFECT</td>
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<td>.4897**</td>
<td>.5325**</td>
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<tr>
<td>FNUSABLE</td>
<td>.5325**</td>
<td>.3790*</td>
<td>.5314**</td>
<td>.2597</td>
<td>.4077*</td>
</tr>
<tr>
<td>FNUSEFUL</td>
<td>.3355*</td>
<td>.6155**</td>
<td>.5250**</td>
<td>.1708</td>
<td>.3747*</td>
</tr>
<tr>
<td>FNEFFECT</td>
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<td>.6740**</td>
<td>.7659**</td>
<td>.3077</td>
<td>.3043</td>
</tr>
<tr>
<td>BAUSABLE</td>
<td>1.0000</td>
<td>.6040**</td>
<td>.3783*</td>
<td>.1910</td>
<td>.1198</td>
</tr>
<tr>
<td>BAUSEFUL</td>
<td>.6040**</td>
<td>1.0000</td>
<td>.7697**</td>
<td>.3778*</td>
<td>.3615*</td>
</tr>
<tr>
<td>BAEFFECT</td>
<td>.3783*</td>
<td>.7697**</td>
<td>1.0000</td>
<td>.3784*</td>
<td>.4410**</td>
</tr>
<tr>
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<td>.3778*</td>
<td>.3784*</td>
<td>1.0000</td>
<td>.8578**</td>
</tr>
<tr>
<td>ELUSEFUL</td>
<td>.1198</td>
<td>.3615*</td>
<td>.4410**</td>
<td>.8578**</td>
<td>1.0000</td>
</tr>
<tr>
<td>ELEFFECT</td>
<td>.1356</td>
<td>.3829*</td>
<td>.4785**</td>
<td>.7991**</td>
<td>.9414**</td>
</tr>
</tbody>
</table>

Minimum pairwise N of cases: 61
2-tailed Signif: * - .01 ** - .001

Each cell within the correlation matrix functions as a Pearson correlation coefficient. Thus each summary statistic indicates both the strength as well as the direction of the association between any two variables. Table 22 indicates that all twelve knowledge utilization categories were positively correlated or associated with simultaneously compare them across curricular domains.
one another. That table also indicates that many of the categories were "strongly" associated. In other words, the larger the number, the stronger the association. In an unduplicated count of all cells, nineteen of the cells had correlation coefficients larger than .5000. This meant that in these nineteen comparisons, increased knowledge utilization in one category was connected to increased knowledge utilization in the other category fifty percent of the time or more. As might be expected, the correlation matrix indicated that there were generally weak to moderate relationships in knowledge utilization across curricular domains. For example, if "usable" knowledge from foundation business courses were compared to "usable," "useful" and "effective" knowledge in general education and elective courses, the correlation coefficients would be: .5521, .3202 and .2398 for general education courses and .2597, .1708, and .1510 for elective courses, respectively. Except for general education usable knowledge ($r = .5521$), all the other relationships are relatively weak (correlations ranged from .3202 to .1510). In other words, increased "usable" knowledge from foundation business courses did not mean a concomitant increase in knowledge utilization in general education and elective courses.

One very important piece of statistical information in the correlation matrix was the two-tailed level of significance. Single and double asterisks mark relationships that could have occurred by chance only one time in a hundred or one time in a thousand, respectively. The levels of significance in Table 22 indicated that
34 of the relationships were significant at the .001 level, while 17 were significant at the .01 level. Only 15 of the relationships were not statistically significant.

Careful inspection of the matrix indicated that something "unusual" was occurring within one knowledge utilization category. General education "usable" knowledge was correlated at a statistically significant level with every other knowledge utilization category. All the Pearson's r were positive. Following the logic of correlation, this mean that as "usable" knowledge from general education courses increased, "useful" and "effective" knowledge in all the other curricular domains also increased. Sometimes, the associations were strong, with a Pearson's r of .6173 in the general education "usable" - general education "useful" relationship; a Pearson's r of .5558 in the general education "usable" - elective "usable" relationship; and a Pearson's r of .5521 in the general education "usable" - foundation business "usable" relationship. The weakest relationship was general education "usable" - management "effective," which had a Pearson's r of .3961. Furthermore, the single and double asterisks indicated the probability that each relationship could not have occurred by chance. Four of the relationships could only have occurred by chance one time in a hundred (* - .01), while seven of the relationships could only have occurred by chance one time in a thousand (** - .001).

Something very, very interesting was occurring between "usable" knowledge derived from general education courses and all other
knowledge utilization categories.

An intuitive leap occurred when this writer reasoned as follows: Since all of the Pearson's r were positive and since none of the relationships could have occurred by chance, perhaps general education "usable" knowledge was a "controlling" variable that influenced knowledge utilization in the other curricular domains. This hypothesized relationship is presented in Figure 7. "Usable" knowledge from general education courses was, after all, the only knowledge utilization category that had a positive, statistically significant relationship with every other knowledge utilization category. If "usable" knowledge derived from general education courses was, indeed, a "controlling" variable, then respondents reporting extensive (high) knowledge utilization on this variable might also report extensive (high) knowledge utilization on the other variables. And, conversely, respondents reporting limited (low) knowledge utilization on general education "usable" knowledge might also report limited (low) knowledge utilization on the other variables. To test this relationship, a one-way analysis of variance was conducted with general education "usable" knowledge recast as an independent variable.

Analysis of variance requires at least two levels in the independent variable. Since "usable" knowledge is a continuous variable (as are "useful" and "effective" as well), a judgment was made on dividing "usable" knowledge into groups. At first, general education "usable" knowledge was divided into five equal groups.
Figure 7. Diagram of a Revised "Model" of Knowledge Utilization when General Education "Usable" Knowledge is Recast as an Independent Variable.
Then, it was divided into four equal groups and finally into three equal groups. It must be stated that in the earlier iterations of the analysis of variance, comparably high levels of statistical significance were found. Partitioning "usable" knowledge into three equal groups yielded the greatest number of between group differences as identified by a Tukey's B test of multiple comparison. (Tukey's B is a statistic that compares group means to one another to determine where the "real" differences between the means are.) Thus, partitioning "usable" knowledge in thirds was logically defensible. Not only did it maximize the number of between group differences, but it also divided the BA-only respondents into groups having an adequate number of interviewees. Furthermore, dividing this variable in thirds would be roughly analogous to having groups of "high," "medium" and "low" knowledge utilization. Tables 24-34, found in Appendix F, summarize the one way analysis of variance with "usable" knowledge from general education courses partitioned in thirds. Each table also includes the computed Tukey's B. And the results of this data run were truly amazing.

Immediately it was evident that when general education "usable" knowledge was recast as an independent variable, it did divide the BA-only group into meaningful, statistically significant sub-groups. The F statistic for each analysis of variance was statistically significant, minimally, at the .01 level. Table 27, Table 32 and Table 33 all in Appendix F indicate those relationship that were statistically significant at only the .01 level. But even the most
cursory review of the remaining tables indicates that the majority of F probability levels were much smaller than .01. As Appendix F, Table 28 indicates, the likelihood that the differences between the groups tested here could have occurred by chance was seven times in ten thousand (F probability = .0007). And in fact, most of the one way analyses of variance have F probabilities of less than one in ten thousand.

The Tukey's B further supports the inference that there were "real" differences between the three groups. Except for the general education "usable" - foundation business "effective" relationship (Table 27), Group 3's group mean (high knowledge utilization) always differed from one of the other group means, at a statistically significant level of .05. Most commonly, Group 3 differed from Group 1; but in some relationships, as Appendix F, Table 23, Table 24, Table 28 and Table 29 indicate, Group 3 also differed from Group 2 as well.

The conclusion was unmistakable: "usable" knowledge from general education courses, when recast as an independent variable, meaningfully differentiated the BA-only respondents across every other knowledge utilization category. The relationship between general education "usable" knowledge and all other knowledge utilization categories as reconceptualized in Figure 7 seemed supported. Furthermore, as the Tukey's B multiple comparisons indicated, respondents in Group 3 were statistically different from respondents in Group 1. In ordinary language, individuals with
"high" "usable" knowledge from general education courses were different from individuals with "low" "usable" knowledge from general education courses. Moreover, individuals with "high" "usable" knowledge from general education courses were consistently different from all the remaining respondents on every knowledge utilization category. It became clear that the 13 individuals comprising Group 3 were, indeed, the "interesting" cases for interview.

But before proceeding with the interviews, this writer tried to "make sense of" this finding. What did it "mean" to say that general education "usable" knowledge was an independent variable that influenced knowledge utilization? Perhaps it meant merely that "smart" students were "smart" across all curricular domains. This would be roughly analogous to the experience many faculty have that a "good" student is "good" in many different courses. But at a deeper level, maybe this finding suggested something about "learning" and individual "valuing" of the entire undergraduate experience. As noted in Chapter II, general education courses are the most "problematic" for undergraduates. Undergraduates typically tend not to see the relevance or point to these courses. For vocationally-oriented students (these were, after all, management majors), general education courses often seemed remote, irrelevant and distant in time and place to the more immediate concerns of their world, which was job preparation. Yet the finding outlined above suggested that some undergraduates interpreted their general education courses differently. To say that some individuals derived a great deal of
"usable" knowledge from general education courses (individuals in Group 3) was, in fact, to say that those individual "made sense of," derived "meaning" from, or found "value" in general education course -- and they did so across all other dimensions of the curriculum. Since "usable" knowledge is knowledge that has potential and is, by definition, unrelated to specific situations, "usable" knowledge might roughly parallel the notion of "knowledge for knowledge’s sake." It was the challenge of the in-person interviews to explore the relationships between "sense making" in general education courses and the rest of the undergraduate curriculum. The findings from the interviews are presented in Chapter V.
CHAPTER V
THE QUALITATIVE INTERVIEWS

William Shakespeare, at the very end of *Macbeth*, has his title character muse on the transience and nihilism of life after learning that his wife, Lady Macbeth, has committed suicide. Macbeth's short (and famous) soliloquy begins, "Tomorrow, and tomorrow and tomorrow,/Creeps in this petty pace from day to day..." and ends with the famous lines, "It is a tale,/told by an idiot, full of sound and fury,/Signifying nothing." William Faulkner, another famous writer, took the title for his novel, *The Sound and the Fury*, directly from these lines of Shakespeare. But what does Shakespeare mean when he has Macbeth say, life is a tale told by an idiot signifying nothing?

Shakespeare uses the word "idiot" in two contrasting ways. On the one hand, Shakespeare uses idiot in the contemporary sense of a person who acts foolishly or who is stupid. But, on the other hand, Shakespeare puns on the Greek origin of the word which means individualistic. This latter sense of idiot is still found in the word, "idiosyncratic" which can mean, in its least pejorative sense, something that is unique to one individual. Thus, Shakespeare is really having Macbeth say that while the stories or tales that people tell about themselves are at once unique and individualistic, the stories, themselves, ultimately have no larger meaning. In effect,
life is meaningless because, as Macbeth sees it, the stories that people tell about themselves are likewise meaningless. Both are "full of sound and fury, signifying nothing."

The qualitative researcher, however, stands in stark contrast to the tragic hero, Macbeth. For while Macbeth concludes that the tales people tell about themselves and about the world(s) they live in are totally devoid of meaning, it is just the opposite for the qualitative researcher. For the qualitative researcher, stories aren't devoid of meaning, stories resonate with meaning. Whereas words have a vacuous, trivial quality for Macbeth, it is, in fact, the very words that individuals use to describe themselves and their worlds that the qualitative researcher cares so deeply, so passionately and so minutely about.

Weiss (1994), in the introduction to his book on the art and method of qualitative interviews, has movingly "made the case for" the qualitative interview. He has said:

Interviewing gives us access to the observations of others. Through interviewing we learn about places we have not been and could not go and about settings in which we have not lived. If we have the right information, we learn about the quality of neighborhoods or what happens in families or how organizations set their goals. Interviewing can inform us about the nature of social life. We learn about the work of occupations and how people fashion careers, about cultures and the values they sponsor, and about the challenges people confront as they lead their lives.

We can learn also, through interviewing, about people's interior experiences. We can learn what people perceive and how they interpret their perceptions. We can learn how events affected their thoughts and feelings. ...Interviewing rescues events that would otherwise be lost. The celebrations and sorrows of people not in the news, their triumphs and failures, ordinarily leave no record except in their memories. And there are, of course, no observers of the internal events of thought and feeling
except to those to whom they occur. Most of the significant events of people's lives can become known to others only through interview. (pp. 1-2)

van Manen (1989) calls this "the lived experience." And it is precisely the exploration of the lived experience of 12 recently graduated management majors from one, church-affiliated university that are at the center of this research and this chapter.

This chapter proceeds as follows. After a short summary of the interview process, a thumbnail sketch of each participant is given. Then, the four main findings from the interviews, along with other interview themes, are presented. But first, a short commentary on how these research findings can be meaningfully read in conjunction with some other research.

Links with Other Research

Most significantly two qualitative studies stand out as companion pieces to this research. The first is Baxter Magolda's (1992) five-year, longitudinal study of the intellectual development of 100 undergraduates at Miami University, Oxford, Ohio. Baxter Magolda (1992) asked the question, "How do college students learn?" and her book is both the reporting out of her extended interviews with these undergraduates as well as her own categorization of different student learning types. If an analogy is made likening Baxter Magolda's (1992) work to a motion picture (because her work is process-oriented and charts changes of intellectual development over time), then this research can be likened to a snapshot. This
research captures the "picture" of 12 individuals, all within five years of their baccalaureate graduation. It is, then, the logical extension to Baxter Magolda's work for the research question here is: How do graduates "use" what they have learned on their jobs after graduation.

The second companion piece is Twombly's (1992) report on undergraduate perceptions of general education requirements. Twombly conducted a series of focus groups with students at a major research university, and her article consists of extended excerpts from those interviews. As noted in Chapter IV, the general education component of the curriculum became the significant independent variable in this research, so the interview findings presented here revolve, to a great degree, around perceptions and evaluations of general education courses. Thus Twombly's research and this research cover common ground, with some of the same findings.

Finally, scholars and researchers seeking to understand the elements of "good" and "poor" teaching from the student perspective will find these interviews interesting as well.

The Interviews

The twelve interviews presented here were conducted during January and February, 1994. Each interview was audio taped and transcribed verbatim. Interview length ranged from 35 minutes to one hour and 20 minutes. The average interview length, however, was 45 minutes. Four of the interviews were telephone interviews. The
remaining eight were conducted in person. Interviews followed the interview schedule of Appendix E.

Interviewee Profiles

* Adrienne: White, adult female student; age 51 at time of graduation; age 52 and out of the job market at time of interview.

* John: African-American male; age 23 at time of graduation; age 25 and employed as assistant store manager for drug store chain at time of interview; feels underemployed in current job and wants to change career focus.

* Chris: White male; age 22 at time of graduation; age 23 and employed as a customer service representative at time of interview; likes his current job very much.

* Don: White male; transferred from a community college; double majored in management and marketing; age 25 at time of graduation; age 29 and working part time as a union carpenter at time of interview; has had series of jobs unrelated to academic major and feels pessimistic about job prospects.

* Joe: white male; double major in management and marketing; age 21 at time of graduation; age 23 and working as a mortgage broker at time of interview; enjoys present job very much.

* Ron: white male; transferred from a community college; age 23 at time of graduation; age 24 and working as a management trainee for a local automobile leasing agency at time of interview; is actively considering a career change to become a building surveyor.

* Dave: white male; double majored in accounting and management; age 22 at time of graduation; age 24 and working as the accounting manager at the California branch of a nationally known consumer and industrial products company; supervises an office of 12 and controls budget of $7 million; enjoys current job.

* Michelle: white female; transferred from a community college; age 21 at time of graduation; age 24 and worked three jobs at time of interview; two of the jobs were seasonally connected with a local country club; likes work at the country club very much.

* Jill: white female; age 21 at time of graduation; double majored in marketing and management; age 24 and store manager of one of three local women's boutique and clothing store; very much committed to retailing.
* Nikki: white female; age 22 at time of graduation; 27 and a homemaker at time of interview; previous job was accounts receivable clerk.

* Tom: white male; age 21 at time of graduation; management major, philosophy minor; age 23 and working as an assistant care giver in a sheltered workshop program for developmentally disabled adults; feels trapped by current job and feels underemployed.

* Frank: white male; age 22 at time of graduation; age 23 and working at a local grocery chain's central warehouse and loading dock; is a union member; sees career as moving up within the union; satisfied with current position.

The Four Key Findings

Four findings stand out as being the most interesting in this research. They are:

1. Participants perceived knowledge utilization in a very pragmatic way. Knowledge utilization was almost always defined by its instrumental, utilitarian quality.

2. One of the most valued aspects of going to college, at least in terms of knowledge utilization, is how selective courses build personal confidence and competence.

3. Interviewed individuals tended to see their general education courses as necessary and helpful precursors to their business courses. In fact, when general education courses were compared to business courses, it was the general education courses, overall, and not their business courses that individuals interpreted as being more useful and thereby having higher amounts of utilized knowledge. As will be noted below, however, there was a minority opinion that held just the opposite: that general education courses were not helpful precursors to their business courses.

4. Interviewees were extremely inarticulate when asked to describe what they learned in specific courses. Participants were confident that they had learned something. They just couldn't put that "something" into words. This phenomenon will be termed their "feeling of knowing." Quite significantly, this feeling of knowing was pervasive in all the interviews. This feeling of knowing is both a significant finding in itself as well as a finding that has a powerful, mediating effect on other findings.
However, presenting the four key research findings is only half the challenge of this chapter. Determining in what order to present the findings is the other half.

Lewis Carol is often quoted when writers and logicians wonder how to sequence things. Carol wrote, in Alice's Adventure in Wonderland, "Where should I begin? Begin at the beginning and then go to the end and stop." Carol's advice is amply seen in the organization of this and every other dissertation. Basically, it is: Begin with the research question, describe the methods of investigation, state the research findings, interpret them and end by suggesting what further research could or should be done based on what was found. But to follow Carol's advice in this qualitative chapter, would ultimately lead to a dry, formal and boring presentation of findings.

Instead, this chapter will proceed by using a literary technique that was once popular but is little used today. Findings will be presented in medias res; that is, quite literary in the middle of the action. In medias res is a Latin phrase that means "into the middle of things" and was the narrative device used by Homer, Virgil and Milton to immediately capture the reader's or listener's interest by starting an epic poem with a truly riveting event. Having once "hooked" the reader or listener by using this riveting event, which quite literally came from the middle or central portion of the action, the poet then proceeded to fill in earlier narrative events and all succeeding actions as well. By poem's end, a complete story
had been told, but not in strictly chronological order. This chapter will proceed in similar fashion. It begins with the most interesting finding from the interviews (the feeling of knowing) and proceeds to develop other themes and findings as they logically relate to each other. No attempt is made to develop themes in a chronological order. As the grounded theory developed in Chapter VI will indicate, the feeling of knowing resides quite literally in the middle of the grounded theory. In this sense, then, it is presented here in media res.

Remembering Knowledge in Contrast to Having Knowledge

As noted both in Chapters I and III, this research grew out of this writer's personal interest in teaching undergraduate management majors. So, the place to begin is with the finding that most startled this writer¹: that for all the time and energy devoted to having undergraduates remember the "facts" of a particular course, that is, its content, very few of those "facts" and very little of the course's specific content remained "top-of-mind" after

¹Wolcott (1990) is worth quoting at length here for he captures at least one view of directly inserting the voice of the writer/researcher directly into the narrative. "I opt for subjectivity as a strength of qualitative approaches rather than attempt to establish a detached objectivity that I am not sure I want or need. As I am doing here, I have always put myself squarely into the settings or situations being described to whatever extent seemed warranted for the purpose at hand. With some fear and trepidation, I introduced that strategy in my doctoral dissertation, and committee members raised no concern except for the question of excess. I decided that if I could get away with it there, I certainly could be as forthright in the future when writing to satisfy myself" (p. 131).
graduation. Said differently, relative to the total amount of classroom time faculty spend lecturing, reviewing, questioning, drilling and testing undergraduates on course content (facts, dates, names, terms, definitions, book contents, event sequences, and the like) -- this writer included -- little of that content was remembered during these interviews.

But what was truly fascinating about these 12 interviews was that although remembered knowledge was low, the sense of having knowledge was high. And by the phrase, "having knowledge," this writer means an often inarticulate but very real sense on the part of all 12 interviewees that valuable knowledge was gained from a course, even if it couldn't be expressed or put into words during the interview. Psychologists who study metacognition have, since 1965, called this state, a "feeling of knowing." "The classic definition of feeling of knowing is that it is the state of believing that a piece of information can be retrieved from memory even though the information currently cannot be recalled" (Miner & Reder, 1994, p. 47). And it is exactly this experience, of a strong feeling of knowing, that the 12 individuals interviewed here described time and time again. In short, then, these 12 individuals articulated a very small amount of remembered course knowledge (course facts, dates, theories, authors, etc.) but expressed a very strong feeling of having knowledge from specific courses. Clearly, a feeling of knowing results when remembered knowledge fails. So it is to a discussion of remembered knowledge that this discussion now turns.
Patterns of Remembered Knowledge

Three patterns emerged relative to remembered course content. They were: (1) condensed, (2) conflated and (3) forgotten. The condensed pattern was the most common. It simply means, as its name implies, that individuals reduced or summarized an entire course's content into one or two broad concepts. Thus, Principles of Management, for example, got reduced to working with people (Nikki's interview); international business got summarized as "import and export laws" (Frank's interview); organizational behavior was simply "team work" (Michelle's interview); finance "is just numbers and graphs and the dotted line and the bell curves" (Don's interview) and so on.

In the conflated pattern, the content from several different courses got merged into one, summary statement. In other words, several courses got conflated or reduced into one. Jill recognized this conflated pattern when she said, point blank, "Well, it's so funny. When I was thinkin' about coming here I'm like, 'God, it's so hard to think what I learned in each class. They all just start blending together after all these years.'" John's interview had several examples of conflated course remembrance. The first was when he was encouraged to really try to remember what he retained from two different, required economics courses, micro and macroeconomics. John merged the two together and said simply, "supply and demand." Later in his interview John said this about a whole cluster of courses in
the management major:

You see, management is all the same thing. Principles of Management. Sales Management. They all kind of say the same thing. Human Resource Management, too. It all ties in... [pause] "Management" is one word, whether it be sales management, human resources management or principles of management. It's all management. And you just apply the same to small business management, sales management, and the human resources. It all ties in. It probably ought to be taught in one course. I don't think you need to spend a full semester on human resources management. It's not that broad of a topic, before you start hitting into sales management.

Finally, as one would expect, some course content was simply forgotten -- pattern three. For example, three-quarters of the way through John's interview he just stopped and said, "You see a lot of this stuff I forgot what the class is about." And Joe's entire interview concluded with this comment: "Overall, looking back over all these courses, it's hard to believe that I took them all and I don't recall four or five of them. You know, it's like they weren't even there." But while forgetting is a common human trait, several interviews had sequential strings of courses that were forgotten. And when the interview responses fell into this sequence, the extent of forgotten course material was simply thrown into high relief.

Michelle's interview was indicative of this pattern:

Researcher: Let's move on to western civ.
Michelle: Oh, gosh.
Researcher: Do you remember anything?
Michelle: Not a thing.
Researcher: Zip.
Michelle: Zip-o-la.
Researcher: How about your intro to human communications class.
Michelle: I'm not sure that I had to take that. Did I take that?
Researcher: You had to have taken something like that. Perhaps a speech course or some equivalent, as part of your gen ed requirements.
Michelle: You know, I did take a speech course at [a local
community college], but I don't remember much.
Researcher: Do you remember anything?
Michelle: No.
Researcher: How about your philosophy course?
Michelle: Yes! I took that at the community college.

But even at this point in the interview, although Michelle remembered "something" from her philosophy class, she did not remember any of the course's specific content. She instead remembered the physical location of the class: it was held in the corridors of the community college she attended!

And finally, as one would expect, interviews often contained mixtures of all three patterns. One short sequence from Dave's interview illustrates how the condensed and forgotten patterns of remembering course content intermingle:

Researcher: How about your Principles of Marketing class.
Dave: Just...I really don't remember that much about it. But I know not to put your face on TV when you're advertising! (laughs).
Researcher: Remember anything else?
Dave: Nope.
Researcher: Do you remember anything about your finite math class?
Dave: No. Just kind of how to find the average. Stuff like that.
Researcher: And how about management science.
Dave: I don't remember who I had. But I don't remember much at all.

Thus far, quotations from the interviews have dealt with remembering knowledge. But what about that feeling of knowing -- of having knowledge, even if one is unable to articulate it?

Feeling of Knowing

Michelle captured the essence of a feeling of knowing when she
said, "I really enjoyed all the classes I took at [the community college]. As far remembering them all, I don't. But if I was to see the book or whatever, I'm sure it would come back to me. I'm sure I use a lot of that stuff, but I'm not conscious of it." The confidence that Michelle evinced that she had gained valuable, "useful" knowledge from some of her community college courses, even though in that very moment of the interview, she couldn't remember or cite specifics, is the very essence of the feeling of knowing. Michelle again stated her feeling of knowing later in the interview when she said, "I can't remember everything from that class. I know I used a lot of things that I learned in management class on my job. But as far as pinpointing everything the teacher said, I can't." And at the end of her interview, Michelle returned again to the feeling of knowing theme, "You know, I know that I use everything [from my management courses] subconsciously...I know I use them, but I can't pinpoint anything."

Like Michelle's interview, Joe's interview similarly captured his own, strong feeling of knowing. For Joe, the feeling of knowing is a deeply rooted phenomenon. He knew, somewhere in the back of his mind, that he had learned a variety of things through various courses, but his ability to call them forth during the interview was nil. He said, "I mean, even if I don't recall learning it, I'm sure I did -- somewhere. And back in my mind, I'm probably going to draw upon different ideas and probably think that they're mine. Like I'm some great genius! (chuckles) But I know that I learned them in
school, and it's probably basic to a lot of people." Later in the interview, he returned to this same point, when asked for his opinions on his human resources course. After first reducing the course to merely "interview techniques" (condensed remembering), Joe said, "Like I say, I'm going to think of some great idea one day and, you know, just use different techniques that I learned in this class. You can't say specifically it's the X, Y or Z technique. You just use it."

And from Chris's interview here are several selections on his own feeling of knowing. Chris said, "Well, right now, for example, [my wife and I] are looking for a house, and I know there are certain ways you can get these loans and things like that. But do I remember the formula? No. But I know that maybe I should ask, something about that." Earlier in the interview, Chris said, "Philosophy. That's the sort of like an unconscious thing. You just do it. You don't memorize it. You don't think about it. It's just like...(long pause), I don't know how to describe it." As Michelle noted above, a feeling of knowing is so deeply ingrained that individuals expressed it as operating at either a subconscious level or, in Chris's phrase, unconsciously. Chris reiterated his own feeling of knowing toward the interview's end when he stated, "Whether I remember exactly what I learned in that class when I have a meeting ten years from now, probably not. I might do it unconsciously."

So far, the examples given are from individuals who were confident and assured about their own feeling of knowing. They knew
course knowledge was there; they knew they used it; they just couldn't express it exactly in words. The feeling of knowing operated at some "deeper" level within them, often described as subconscious or unconscious. But a feeling of knowing was also expressed by one interviewee with a lot more tentativeness and more hesitancy. And this suggests that a feeling of knowing exists on a continuum. Individuals can still have that feeling of knowing, but it can exist in varying degrees of intensity and depth.

Don's interview captured the attenuation of a feeling of knowing. Overall, Don expressed a great deal more hesitancy and tentativeness throughout his entire interview. As will be described in Chapter VI, Don represents a type of learner who, by definition, is less assured of himself and is less confident in his ability to do things. Don was hesitant, it will be proposed, because at the time of the interview he was unemployed and was discouraged about his job prospects. Part of his discouragement was linked directly to his ongoing reevaluation of his choice of major. Nonetheless, Don, too, expressed a feeling of knowing, albeit more ambiguously and less confidently than the individuals cited above. In this excerpt, Don was evaluating his college writing course. He said that the course "helped me a lot." When asked whether anything else from the course really stuck with him, he said, "I'm sure it has, but I don't really know if I remember it per se...Some of it just really sticks with you. I wouldn't know the [specific] term, but maybe just know the knowledge and not really know that I know it." Although stated
tentatively, Don had a feeling of knowing as well -- that he knew some things at a deeper, subconscious level that were beyond his immediate capacity to express. Thus, throughout the interviews, this feeling of knowing appeared and reappeared.

Gaining the Confidence to Do Things

Closely related to the feeling of knowing is the finding that the perceived benefit of many undergraduate courses, especially in the general education sequence, was that they built confidence. In other words, certain courses created competence and confidence in the learner's ability to do things. Two major patterns presented themselves. The first, and the most prevalent, was that skill practice in a course lead to confidence. The second and less common was that course content built confidence.

Practice Builds Confidence

Ron captured the essence of this finding. He gave a detailed description of what he learned from his speech class. Reflecting on his experience at the beginning of his speech class he said:

I remember when I first took speech, my first speech. God! I got up there. I was real nervous. All these people were lookin' at me. And I was unsure what to think of it. But then I remembered that the teacher told me, "Just kinda look over their heads. You know, they put on their pants the same way you do. [chuckles] There's nothing to be nervous about. They're going to come up [here] and do the same thing you are." So, that's one of the things I learned. Lots of times I'll go into a body shop and I got all these mechanics standing there, smoking, and they're all watching me. So I kinda have to do the same thing: I kinda look at the tops of their head or something.
And when asked what he thought he got from this speech class, Ron said, emphatically, "I think it gave me confidence. And I think it was the practicing, practicing, practicing in front of different people [in class] that gave me that confidence."

Adrienne experienced a similar change as a result of her Introduction to Human Communications course. She, too, gained confidence in her speaking abilities as a direct result of this class. She summarized the course's value as follows:

That was one of the hang-ups I used to have. I was always petrified to get up in front of anybody and try to speak in front of them. I'd get up there and the papers would go like this... And by the time the class was over, I could get up and speak -- no problem. I would get involved in discussion groups. I was always apprehensive about giving my opinions. I always had them, but was afraid to give them. But that changed [because of this class].

And Jill echoed Adrienne's observations:

I mean, when I first got into college I did not like getting up and talking in front of people. And [the professor] did teach us a few things about getting up and speaking, public speaking. It definitely was a good experience. He taught you how to organize your thoughts and get them down on paper. You have to keep them in a logical order. And as far as practicing, you just need to practice before you go out and talk to people. Eye contact and all that kind of thing. I'd say I definitely connect that to work because I work with people all the time! So I really try to use those skills, as far as talking with them one-on-one or over the telephone. Whatever it might be. You know, establishing eye contact. I try to do all that.

Other interviewees gained confidence in other areas as well.

Chris noticed an increase in his writing competence when he described how his college writing course helped him:

Well, my paper writing got a lot better for one thing. I was able to pull information from, say, a magazine and look for the paragraph that said this is what it's all about. I would pull that out and use it where I wanted to use it. And at work, where my job is essentially just to assemble the facts of a
customer order or complaint, I try to do the same thing. When I'm writing the facts at work, I do it within a paragraph and pull all my thoughts together there.

Broadly speaking, Dave's interview also captured a growing sense of mastery over the written word, albeit this time in the more abstract dimension of being confident about writing a complex, research report. When discussing his sociology class, Dave said that although he "hated" the homework, he ultimately found the assignments valuable because "that forces you into thinking about things [the course subject matter]. And doing it, helped you in the future, too. You can now say to yourself, 'Okay, I've done this already. I know how this works.'" Having found out that he can write a lengthy course paper and apply sociology concepts, Dave now has the personal confidence that he can do these things. That confidence stemmed directly from his experience of doing the class work.

Finally, Joe's interview demonstrated that students gained confidence in quantitative subjects as well as the qualitative ones (speaking, writing) mentioned so far. Joe found that his finite math course gave him the confidence to "do" math. In answer to the question, what did he take away from finite math? Joe said, assertively,

Working with numbers! By the end of the course, they didn't scare me; you know what I mean? Maybe they did at the beginning, but by the end, you found out that you could do this, this and this [type of mathematical calculation] (not that I could do it today), but the course gave you confidence for the future.
Course Content Builds Confidence

Earlier in his interview, Joe touched on another aspect of confidence building. Sometimes it was the course content and not the attendant skill practice that lead to personal confidence. Joe related, for example, how his Music for the Listener class increased his own confidence in dealing with people of different social backgrounds precisely because of his exposure to the course content. He said that because of his awareness of classical music he now felt comfortable in different social settings. "The class was mostly classical music and that kind of refined you. The class made it so that you don't feel uncomfortable discussing things. And I firmly believe that the more familiar you are with different topics, the more comfortable you feel discussing things."

Similarly, Frank illustrated how his philosophy class enabled him to carry on a conversation in a social setting with business professionals. Frank said,

Now I can specifically remember an incident where I was at a party and there was this lady and she thought she knew everything! And she kept bringing up things about Nietzsche and other philosophers. I thought she was a real snot nose. But I was able to come across as being snot nosed too! (chuckles) I felt as though I could join in the conversation!!! These were real business-type people at this party. That philosophy class helped me come across as knowledgeable. It can be a plus sometimes.

Again, what is interesting about Frank's example is that it is the course content that proved valuable: things about Nietzsche and other philosophers. In a sense, Frank had the confidence to "hold his own" and it is clear from his example that he felt good about that.
The Centrality of Good Teaching

You can sense [as the student] if the teacher gets up there and lectures, straight lecture or reads from the book and doesn’t give you the opportunity to ask questions; that you really don’t know where you’re at; or doesn’t bring anything to the class to enhance the excitement or the education. You [the student] just end up saying to yourself, "I can’t go to this class again. It’s terrible." [On the other hand,] if the teacher turns around and makes the class interesting by asking, Are there any questions? Are you understanding what I’m saying? Or, Here’s an example of this. And he brings in examples ...then you want to go to that class. (Adrienne contrasting two different business teachers)

As Adrienne’s quotation makes abundantly clear, students are minutely sensitive to good and bad teaching. And why not? After 16 years of formal education, students are savvy consumers when it comes to teachers and teaching. They know what, for them, makes for good and bad teaching. Sometimes they need prompting to articulate those qualities, but they always know them.

Adrienne’s quotation begins this section because it succinctly captures many of the hallmarks of both good and bad teaching. The good teacher makes class interesting, engages students by asking questions and brings in outside examples to class. The process seems to be very much like a two way conversation between student and teacher. Sometimes the teacher talks the most; other times, the students. But it’s always a back and forth. The bad teacher, in contrast, is boring, reads only from the book, focuses mainly on him/herself and doesn’t involve the student in any meaningful way in the class. The process here is strictly one way: teacher to student, in which the student is the passive recipient of the teacher’s
"knowledge." The essence, then, of Adrienne's statement is this: Teachers are like magnets. The good teacher draws students into the class and engages them. The bad teacher repels students from the class and loses them.

Numerous times, these 12 interviewees explored the qualities that for them informed good and bad teaching. What seems clear from these interviews is that:

1. Good teaching is a highly valued element in every course. Chris captured the essence of this point when he commented on his business law teacher. He said, "The content wasn't that interesting, but also I think, the instructor wasn't that interesting either. He was sorta monotone. I guess [the teacher] does make a difference. I never really thought about it before, but it does make a difference."

2. Good teaching is synonymous with being a good teacher.

3. Having a good teacher is often a necessary condition (in the philosophic sense of necessary) for gaining confidence. To confirm this, all one needs to do is reread the quotations presented above on gaining confidence through practice. The centrality of the teacher in helping to create that confidence is clearly evident.

If one theme was most repeated about good teaching during the interviews, it was that the good teacher captured the student's interest. Making the class "interesting" (as Adrienne noted above) is central to an effective classroom learning experience. Here's Chris on his College Writing instructor: "When I took that course, I really, really enjoyed it and I did well in it. And probably one of the reasons is that I had a good instructor."

Ron captured the essence of the engaged, energetic teaching experience when he gave this detailed description of his natural science teacher:
He was very interesting. He was into his work and he enjoyed what he was doing. And I could get that from him. He really enjoyed it, and he made us enjoy it too. [Natural science] was so interesting. He was so enthusiastic about it. He would come in and you just knew that he really liked what he was doing. And that is very easy [for students] to see in a teacher.... If the teacher likes what he's doing, I think it gets conveyed to the students, that they're going to like it too.

Ron went on to say that because a teacher's enthusiasm is contagious students interpret that to say, "Wow, this is kinda neat. It's something different. He [the teacher] really likes it and he is bringing that attitude across to me, and it's fun." Ron concluded by saying, "I think when a teacher is having fun doing something, so is the student."

Taking a personal interest in the student's intellectual development and caring for that student as an individual were also elements of good teaching.

I had Brother Owen. And he was the best I thought. He was a great guy. He was very personable. He made learning fun. (Joe on his college writing teacher)

She really cared about you. She was personable. And I think that was what made the class. I think the teacher really makes the class. And she was a very strong teacher. She knew her material. She was excited about it. (Ron on his Strategic Management teacher)

I felt that she cared about the students and didn't spoon feed them. She forced them into thinking for themselves. (Dave on his philosophy teacher)

He really took time to ask us what we thought, and he had a lot of discussions. It wasn't just like, "Read this!" "Write this!" and that's it. He really seemed to be knowledgeable and had, you know, good ways of explaining what was going on. (Jill on her religion teacher)

As Jill noted, good teachers also give good, clear explanations.
And here's Ron on the quality of the explanations he got from his accounting teacher:

He just went through everything slowly. He defined everything clearly. I understood exactly what he was trying to get across....I felt like I accomplished something when the class was over. Like I really learned. I absorbed the information that was there.

Michelle nicely summarized this dimension of good teaching when she said this about her marketing teacher: "He was a good explainer."

And often, as noted above, good explanations are a necessary condition for creating confidence. Chris made this point explicit when he commented on his finite math teacher. "Finite math was an interesting class. I'm not much of a math person...and I really took off with it. I got math for the first time in my life. But it was more because of the instructor and the way it was done." Chris's statement that he "got math for the first time" explicitly connected his own sense of confidence in his math abilities with effective teaching. And when asked to describe specifically what the teacher did, Chris said:

He was easy going, not your straight-laced...not our average math teacher. The way he explained things really made the difference. I can't explain how he explained it, but the way he explained it, he didn't just say, "Here's the formula and you just plug in the numbers." He said, "Let's do it, and we'll do it again if you don't understand it and until you get it right, we'll do it again." Part of the thing was, too, you could have your notes open during an exam. You had the formula there but it wasn't cheating to have the formula there. It seemed to help, and it made you want to work because you haven't done this before. After a while I'd remember the formulas for this to apply on the next test. So I'd say, "Oh, I remember this part; I just have to remember that part."

And Joe gained confidence through his math teacher as well. "[My
finite math teacher] was one of the better teachers, I thought, because he would grind it out with you. And if you ever needed help, you could go and he would help you out. He would walk you through it." And when asked to explain the phrase "grind it out," Joe said: "Well, just that he would see that you didn’t understand it, even though he knew what was going on.....He would relate to you; where he wasn’t above you. He would go back and say, 'One plus one is two' and then build on that knowledge. He would start from the basics and go up in the course."

Finally, Adrienne had this extended critique of her finite math teacher:

[I really liked] the way she presented [the material]. I mean she would go through very slowly, and made sure that you understood it. And she did it in such a way that was logical. I mean, it fell into place. Whereas some teachers that teach math, they’re in left field and I’m playing right field and never the twain shall meet. But she explained it; she made it seem so logical, so understandable, that when I walked out of there I said, "You know, this isn’t so hard." So I think it was the teacher. You could ask her a question, and if you didn’t understand a concept, she would not go on until she was sure that you understood it. And that made a big difference.

As noted by Ron, Chris, Joe and now by Adrienne as well, good teachers give clear, logical and patient explanations of the subject, which often lead to sense of confidence and competence within the student-learner.

Good teachers are also balanced in their comments and criticisms of student work:

I learned from the instructor. I thought he was very good. He pointed out some things that I was doing wrong, that I could do better and [he pointed out] things that I was doing great. So he kind of went both ways: things that I could use improvement
on and things that I was doing really well. (Ron on his speech teacher)

Bad Teaching

Just as good teaching has many dimensions, so does bad teaching. Often, but not always, bad teaching and bad teachers were defined by the absence of those qualities that were the good teacher's hallmarks. Thus, for example, bad teachers were boring. Jill had this to say about her accounting class: "The class was okay. You memorized things. Where things go, and I did fine in it. But it was never anything that interested me. It seemed so boring." And when asked why the class was boring, Jill directly said, "The teacher. It was just, like, 'Write this. Do this.' We had assignments to do from a workbook. And it just seemed so mundane. I did it, and my grades were fine, but it was just very boring."

Dave commented on his political science teacher: "He just read over basically the chapters. He was very, very dry and very boring. He wasn't getting the class involved. And you could sit there and sleep. And he didn't know."

Bad teachers are uneven in their evaluations of students. The bad teacher only focuses on negatives:

He was a hard grader. He never gave you positive reinforcement. Nothing was ever good enough. Know what I mean? (Joe)

Bad teachers create too much stress in the classroom:

He was very, very strict. All I can remember was that we had a major project where the class got into teams and we each got assigned a book. Each team had to give a presentation. The first two teams went up to give their presentations and the teacher would just slash them. "You didn't cover this! You
didn't cover that!" It was a very stressful class. I mean, I really didn't appreciate all the stress because he would tell you outright, "You're wrong!" I mean, he wouldn't belittle you, but he would make it known that if you didn't read a chapter [you would be in trouble]. I would say that the stress level in that class was a little too high. I mean, we all were in there shaking. (Michelle on her organizational behavior teacher)

Bad teachers give poor explanations:

He was an okay teacher. He kinda had a problem explaining things the same way, though. I found myself going back a lot and like really reading through the book and trying to figure things out on my own...because some of the principles are hard to understand. I'd be reading and I'd say, "Wait! How did this dollar go from being $10 over here and $10,000 over here?!" So I remember doing a lot of work on my own, going back in the book and trying to figure out equations and stuff like that....As a teacher, he was okay. He tended to always explain things the same way, though. And if you didn't understand it, it was still the same way -- but it was just over again! You know what I mean!! (laughs) So I remember doing a lot of work on my own in that class, to try and figure out the way things should piece together. (Jill on her finance teacher)

I mean, some of that teachers are so dead beat. They didn't get the subject matter over very well at all. It just was so repetitive to them. (John on bad teaching in general)

Bad teachers don't care about teaching:

He had open book tests. He would walk out of the room and you'd open the book, do the tests, put the test on his desk and leave before he even came back. It was not...I didn't learn a thing. (Joe on his business information systems teacher)

He came to the night class, let us out after an hour. You could walk out whenever you wanted to, walk in whenever you want to. Again, he didn't show me [that the course material] was important. So I didn't feel that it was important. He took no conviction in it. (Joe on his business law teacher)

The net effect of all this is to reaffirm that teaching and teachers are central to a great deal of what counts in the learning experiences of students. This is not to say, however, that teaching is the only thing that counts. Astin (1993), in his most recent
national study on the effects of college on students, makes it abundantly clear that a great deal of learning occurs outside the classroom: with peers and in the residence halls. But to talk about curriculum design, purpose and intent in the abstract -- or to talk about why undergraduates either do or don't value their general education courses -- or to even talk about what knowledge utilization means as a general concept -- without talking about what happens in the classroom, is to rarify all these discussions to such a degree that they each become detached from the underlying reality that students experience. In essence, the classroom is "where the rubber meets the road." It is, in fact, the place where students make continuous judgments about useful knowledge.

Perceptions of General Education

Throughout this entire dissertation, a central theme has been the open-ended, ambiguous and often contentious debate surrounding general education. Chapter I began with an overview of the current curricular debate about general education, multiculturalism and "the canon;" a debate that is now rippling throughout all of higher education. Chapter II then went on to review some of the voluminous literature on the purposes of general education as well to contrast those purposes with the purposes of liberal education and professional education. And in the preceding chapter, Chapter IV, it was hypothesized that, after statistical analysis, the 12 individuals whose interviews are being reported here had statistically
significant different responses about general education and knowledge utilization than the rest of the 94 survey respondents. So it is to the 12 interviewee's observations about general education that this chapter now turns.

Commonplaces abound about general education. And two of the most common were evidenced in these 12 interviews. The first dealt with the commonly held and pervasive notion that the purpose of general education is to create a "well-rounded person." For example, when Don was asked what he thought the purpose of the entire general education sequence was, he said, "I guess I can say what I've said to my friends: that you're more of a well-rounded person." Dave embellished this point when he answered the same question about general education's purpose as follows: "Probably to help shape the student into a more well-rounded person. To look at things differently. To give, you know, different viewpoints. And to help people expand their person and their inner feelings and their inner thoughts and everything." Twombly (1992, pp. 252-53) presented parallel student comments about general education developing the well-rounded individual in her research as well.

The second commonplace view about general education is that, from the student perspective, general education courses are often seen as a necessary but distasteful aspect of getting a college education. For these students, general education courses are to be endured, not enjoyed. As noted in Chapter I, such students find general education courses remote in time, place and meaning vis-a-vis
their contemporary lives. Dave exemplified this view when he was asked to comment on his western civilization class. He said,

I really didn't care for it. I'm not a history guy. I don't see where anything from that class really helps. I mean, they say history repeats itself. But I don't really see that too often. I think the past really doesn't set the pattern for the future. I don't see that happening. I would rather think ahead than behind...I just think that history is kinda boring.

John, likewise, concluded that his western civ courses were irrelevant. He reasoned that because the courses were required, they did not hold much meaning for him. John said,

Western Civilization I & II. I look at those as they were forced upon you. You had to take them whether you wanted to or not. And when you're forced to do something, you have an attitude already. Why go? You don't get anything out of it. So, I went because I had to! Basically that was it. As far as getting anything...I don't think I can apply western civilization to any of my career opportunities, or whatever.

In short, general education courses, as emblematically embodied by the western civilization course, were irrelevant for Dave, John and other students like them. The irrelevance of western civ was also noted in Ron's, Jill's and Michelle's interview.

**General Education is Dispensable**

And, to add insult to injury, students find another, perhaps more grievous objection to general education courses: It's that general education courses take time away from the "real" purpose of going to college: to concentrate on one's major. This writer labels this finding as: General education courses are dispensable. It is not surprising, then, that this sentiment was expressed in these interviews as well. Here's what two individuals said about general
education courses being dispensable:

I think definitely [the gen eds] helped with these [my business courses] but I don't think it was a necessity. To be honest with yah...You should have learned this [gen eds] in high school...I thought that the [gen eds] helped me; it made me be more knowledgeable instead of being ignorant towards certain things like Cultural Diversity. It helped me grow as a person...But I think I coulda made it without 'em to be honest with yah. To be honest, I think I could have taken [the business courses] and BOOM! And maybe in two years, just went right through [college] without the gen ed courses...I mean I don't think that I'd be as diverse as I am now, but I think I could be solid without them. (Ron)

[Gen eds] were just your basic ways of life. You know, I know I had to sharpen up my math and speech. But to get into what I want to do in life, business and all that...I would have just sorta have [preferred to] jump into my major. (Michelle)

Admittedly, both Michelle and Ron were somewhat equivocal about the general education courses. They admitted that there was some value in them. But as Ron's repeated phrase, "to be honest with yah," indicated, on the whole, general education courses had marginal utility. In other words, while there was some benefit to taking general education courses, in comparison to courses in one's major, business courses were much more important and meaningful.

The Undergraduate Curriculum and Knowledge Utilization

Knowledge utilization has been the central concept behind this entire dissertation. And it is now time to deal with this concept directly.

Based on these 12 interviews, knowledge utilization is a highly focused, direct concept. For these individuals, both the knowledge most worth having and the knowledge that gets "used" is knowledge
that serves an instrumental purpose. So whether one classifies knowledge as "usable," "useful" or "effective," as Kilmann, Slevin and Thomas (1983) did in their conceptual framework, knowledge utilization for these 12 individuals is highly practical and applied. Knowledge is valued, gets retained and is deemed helpful precisely because that knowledge enables these individuals to do things. And "doing things" means having some connection, relevance or applicability to the world outside the classroom, most directly to their work life. To wit, the following two quotations:

[My organizational behavior class] wasn't very hard, but I think it was useful. Just a lot of useful information that you could take out into the real world. (Ron)

I liked [my business statistics] class because it wasn't just crunching numbers or just going out and doing problems. It was relating, you know, problems to business: businesses that had problems. And [the teacher would ask], "How would you go about fixing these problems?"...and I enjoyed that." (Michelle)

Given the voluminous literature on the aims and purposes of general education, it must be noted that none of the 12 individuals interviewed here came even remotely close to mentioning that ideal, held dear by many faculty, that some course knowledge and/or some courses were "good" in and of themselves. Knowledge for these 12 individuals was always instrumental. And although they could repeat the platitudes of the well-rounded person (as noted above) and could say that such-and-such a course was not directly relevant to work but applied more in their "personal lives," knowledge was always derivative: it had to have meaning and do something in the world outside the classroom. And it is that meaning that is illustrated in
Ron's and Michelle's quotations given above.

The pervasiveness of the instrumental interpretation given to knowledge utilization was, for this writer, truly startling. It was, for example, an essential component of courses in all three curricular domains (general education, foundation business courses and courses in the management major). It also was found to be an essential component of good teaching. And, above all, it is embedded in many of the quotations stated earlier in this chapter. To illustrate this last point, three quotations will be revisited. This time, however, the focus will be on the instrumentality of knowledge.

The first two revisited examples can be found in the section entitled, "Course content builds confidence" (beginning on page 176). One quotation is by Frank; the other by Joe. Frank's statement centers on how he used his knowledge of Neitzsche to hold his own at a party; while Joe's discussion was about how confident he felt in group conversations because he had a talking knowledge of classical music. For both Frank and Joe, course knowledge was "useful" precisely because it helped them in social situations. It had a direct, utilitarian application. As quoted above, neither individual valued what he learned from the course because of any intrinsic qualities or any aesthetic dimensions to the learning. Neitzsche's philosophy had no effect (or at least he didn't mention it) on Frank's thinking about God, determinism or the nature of man. Similarly, Joe was not changed in any deeply rooted or personal way
(or at least he didn't mention it either) because of his understanding of classical music. Classical music was merely an intellectual container of ideas for Joe, just as Neitzsche was for Frank, to be invoked when he was meeting with people. For both Frank and Joe, the knowledge so utilized was purely instrumental in nature: it helped them both carry on conversations with people unlike themselves in social situations and settings.

The third quotation to be revisited is Chris's, which was presented in the section on feeling of knowing (see page 172). In that section, Chris described his feeling of knowing from his finance class when he and his wife were in the process of purchasing a house. It seems clear that the knowledge Chris was attempting to remember had an immediate, instrumental quality to it. This knowledge, if it could be remembered, would help them do something important: finance their first home.

Utilized knowledge is instrumental knowledge. Having said that, however, one raises the question: instrumental for what purpose(s)? The answer to that question appears in the next section.

Knowledge Utilization and Four Basic Business Competencies

All knowledge is not equal in the minds of these interviewees. And certainly all courses do not contribute equally to knowledge utilization. Taken en masse, though, these interviews strongly indicate that four domains of knowledge were repeatedly thought to be essential for business success. And any course that contributed to
one of these four domains was said to be high in utilized knowledge. The four domains were: speaking, writing, self-reflective thinking and getting along with people in a group.

Thus, the answer to the research question of whether and to what extent management majors used or employed course knowledge on their jobs is this: Yes, they did use course knowledge on their jobs. However, the knowledge used on the job was nonspecific and general because it was often mediated by a strong feeling of knowing. Overall, though, the knowledge most worth using related to speaking, writing, self-reflective thinking and getting along with people. These four areas were selected because the individuals interviewed here saw them as the fundamental building blocks (core components) for success at work.

John’s interview captured the very essence of how individuals commonly evaluated these four fundamental domains:

I use intro to human communications every day. Not one specific thing. Not, how you get up in front of the class and talk. I haven’t used that yet. But as far as how to communicate with people, and how not to look at everybody as the same, that people are different...to forget the differences and to get your point across -- I do that every day.

College Writing: I use it enough. I haven’t had to do a big research project. I haven’t do that yet; but I know I can do it if I had to. Like, it’s there.

And Cultural Diversity. It’s every day. I think I can deal with prejudice; that comes to mind. I now understand different cultures. But you know, there’s only one race: it’s the human race. I just deal with it. Things aren’t just black and white. It’s not an all white world, and it never will be. The world’s not all white. It’s just one big soup bowl.

And when asked to explain further why he thought those three courses
were the most useful, John said,

Well, my thing is, that I’m the kind of person that likes to do a lot of creative things. And in these classes that I pointed out, we did a lot of getting together in groups, discussing a lot of things. Going back to your room, discussing this, discussing that. It kinda made for an interesting conversation, even if there were different cultures in the room. That kinda helped with cultural diversity: You had to communicate. You had to write your stuff down in a way that everyone can understand it. I mean...I guess it all tied in, especially these three courses.

What John made clear is the interconnectedness and interrelationship between these four core aspects of knowledge utilization. The embedded logic that stands behind John’s exemplary quotation (and behind all the other interview quotations as well) runs something like this. The ability to speak and communicate well is essential to work. Effective, clear writing is also essential to work. Writing and speaking ultimately have some audience and understanding who that audience is important to work too. But, as John noted, people at work often tend to be different from oneself. Thus being able to understand individual differences is crucial for having a good personal, one-on-one relationship with individuals at work; understanding differences is also essential for working effectively with and in groups or teams. Ultimately, then, what matters most at work is working and interacting effectively with people, and any course that builds competence and confidence in the student-learner to achieve that goal is said to be high on utilized knowledge.

John’s interview confirmed this embedded logic, when he cycled
back to some of his earlier comments at his interview's end. He said,

Whether it be communication, philosophy, cultural diversity, or principles of management, you're going to be working with people. Communication. You're going to have to talk differently to management. You might even have to get up and give a presentation. Well, even in your class [this writer's class], we had to get up and speak. And I guess the different type of activities you do in class really matters too. If you get up and talk, you get up in front of the class. You've got to get up in front of the class and give your presentation. Fact being, you never know. You never know when it might be in your job one day: You've got to give up and give a presentation to the president of your company. [If you've had these classes], it's not going to be that bad. You've got to be prepared. Be prepared. That's half the battle: just being prepared.

Ron was especially articulate and expansive about knowledge utilization, and so it is to his interview that the discussion now turns. Ron echoed all of John's key points: knowing how to write is important; being able to speak in front of a group is important; getting along with others who are different from oneself is important; and, finally, developing one's thinking skills is important. Here's Ron on the centrality of good writing:

I think you've got to have good writing skills in the business environment. You can't just get by with sloppy handwriting, or with incomplete sentences. I mean, people are going to read this, so it kinda shows if you're professional or if you're not! (chuckles) So I've seen some things from different bosses who really couldn't write, and it kinda showed me that, maybe, they weren't as educated as I thought. And some of the other things I learned from college writing [were] how to write basically a sentence, a complete sentence, with correct commas, periods and capital letters.

Other things that I took away from [that course] were basically how to think. If you're readin' something, how to actually draw that knowledge from the reading and put it on the paper. Sometimes we had to summarize a story, and I think that was very useful because you have to do that in your own mind if someone's talkin' to ya. You have to summarize what they're saying, and
Ron then went on to say that some of the learning activities were group-based. He said that the teacher "would kinda do a group thing where he'd discuss about how you did your writing and he made you compare it to somebody else's...I remember we worked in groups...that really helped, the group setting. Talking to other people, really helped."

For Ron, like John, writing is one of the four essential business skills. On the one hand, good writing was a sign of being a "professional." On the other, it distinguished the educated from the uneducated manager. Furthermore, good writing involved reflective, analytic thinking -- another essential business skill. Thus, to summarize a story involved the same mental discipline and skills as summarizing what someone verbally said. Finally, working in groups (another of the four essential business skills) helped Ron improve his writing. Ron's conclusion, "I found [college writing] to be very useful" (i.e., high on utilized knowledge).

Ron commented on the relation between his speech course and work:

My speech class, I thought that was very useful, too. I mean I try and remember the things I learned in that class. Like you have to pronounce your words correctly, be fluent and try not to be nervous. Lots of times I'll go into a body shop and I got all these mechanics standing there, smoking and they're all watching me. So I kinda have to do the same thing I did in [my speech] class: I kinda look at the tops of their heads. They're all listening to what I have to say, and I'll be talkin' to the secretary, or maybe I'll be talkin' to a whole group while I'm in the body shop. I'll say, "Hey, these are our rates. If you get anybody in, refer them to Premier. You know, we have the cheapest cars, and we provide excellent service to our customers." You know...da, da, da, da. So, maybe, I'll be
sayin' this and at the same time lookin' at a whole group of people. [From that speech class] I remember how to look around. Maybe make some eye contact, here or there. (Unless somebody's tryin' to make me laugh). (chuckles) Which is okay, you know when you're in there. It's okay to make mistakes. You can always bounce back.

So for Ron, the overriding benefit of his speech class was its direct connection with work. And the skills that he learned and practiced in class (making eye contact, controlling his nervousness) were transformed from something that was merely "nice to know" into highly useful knowledge the moment he entered the body shop and began talking. One should note, too, that Ron's pitch was always made in relation to someone else (either the secretary or a group of watchful mechanics). In stating this, Ron alludes to another of the four essential business skills: getting along with people. Utilized knowledge is instrumental knowledge. And finally, when asked whether he got anything else from his speech class, he said emphatically, "I think it gave me confidence!"

Adrienne's interview provides additional support for the primacy of speaking and writing as essential components of knowledge utilization. First, the writing component. Adrienne began her interview with this extended statement about her college writing course. She said,

I was always able to write, and express myself in writing. However, [College Writing] gave me a different outlook; it taught me how to finish off [my writing]. To give it the finer points and the finesse that really would add to it and make it more professional. That's what I took away from there. Previous [to the course], at work I would just write something, skim it, and then just send it through. But this course taught me how to write it, set it down, then come back and look at it critically. And then when I did, I would find I would pick out things that I didn't like. I'd think to myself, How can I
change this? Okay, instead of using four words, think of one word that you could use that would enhance your writing. This is what helped me.

Each week there was a writing assignment. The first week, it was just like, Oh, it’s done and it’s over! But then by the second and third week, I found myself changing. And by the time I got to the fourth and the fifth week I was handling it differently. I would do [the assignment] right away, but I would put it down and two or three days later come back to it. "Oh!" I’d say. "I couldn’t have written this! This is terrible!" I’d cross this out; cross that out. "Oh, this is a misspelled word. I know better than this!" So I found I was grabbing the dictionary and the thesaurus more. I knew that I could do a better job...And that’s what really helped me and that’s why I was able to fill out reports at the bank and do my monthlies so much better. And when I was asked to evaluate bank systems, to evaluate different things about management and to give ideas about how we could change, I was able to give additional reasons.

What seems clear from Adrienne’s statement is that effective writing was essential for her work at the bank. Again, this highlights the instrumentality of knowledge. But Adrienne’s quotation also makes it clear that as she became a better writer, she also became a better thinker. As time went on, she became better able to critically evaluate her writing, which is, fundamentally, an abstract thinking skill. So her honest self-appraisal was developed concurrent with her mastery of the "finer points" of writing.

Writing, thinking and critical, abstract analysis go hand in hand.

In a similar fashion, Adrienne gave this description of her speech class:

The best benefit [of the speech class] was just dealing with [bank] customers on a one-to-one basis. They’d come in and I’d now have the ability to help them in ways I couldn’t before. Naturally, we had to check out deposits and if they were wrong, I’d have to explain it to them. But some of these people didn’t even know how to add, and you’re standing there and you’re trying to help them. I found I ended up balancing their check books, going through each check, and helping them out. Whereas
before [my speech class] I couldn't do this. I couldn't do this otherwise.

And like all of the individuals interviewed here, Adrienne makes a direct statement about how the writing course built personal confidence: "I couldn't do this before." The payoff from this class, and what made it high on utilized knowledge, was that Adrienne could directly apply what she learned in class to her work as a bank teller.

Finally, the centrality of being able to speak clearly at work permeated Frank's interview as well. Frank said this about the overall value of clear communication:

I can speak on things. I can communicate with people now. Like my supervisors. I don't have to do that a lot, though, because I'm kinda left alone. But I still have to communicate [to them] what I did. Even if I did something my own way, I gotta be able to communicate: this is the way I did it.

But Frank's interview is interesting because it represents an important sub-theme regarding the relationship of knowledge utilization to specific courses. So far, the quotations have illustrated a rather mundane aspect of this relationship. It's expected that a speech course would build confidence in the student-learner's ability to deliver speeches. A writing course should, likewise, build competence in one's ability to write. But Frank's interview illustrated that any course (the interesting finding) had the potential to contribute to the four essential business skills. And in Frank's case, it was his international business course that gave him confidence in speaking! He said, about his international business class, "There was a lot of getting up in front of people and
expressing how you feel on a certain theory, or what you wrote as your answer, or what your essay was. That helps you become more relaxed in front of people." For Frank, international business was high on "useful," practical knowledge because it helped him develop good speaking skills.

Later in the interview, Frank reinforced just how important good communication and effective speaking skills were when he discussed his small business class. Frank said this class was also high on "useful" knowledge because it not only gave him practice speaking before a group again, but it also gave him an important, practical business insight about the relationship between the individual and his or her work group. Frank learned that although there may be times at work that one feels embarrassed or that one is confronted with things, the manager, the boss or the responsible team member, still needs to get the work done:

[In the small business class,] you had to open your own business and you had to get up in front of people [in class] and tell them why, or what you were doing, or what’s left. And even if you had a stupid answer, you had to keep a straight face and try and be real business-like in front of everybody. In other words, you didn’t want to look like an ass. And that would be the same thing as if you worked for somebody and you screwed up something, or you realized that [people at work] weren’t picking up on something you told them, or that they didn’t seem to care. You still have to stand up there and get through it.

Yet again, utilized knowledge is instrumental knowledge, and for Frank, his small business class was useful precisely because it helped with his speaking skills.

Reflecting back on Ron’s interview, it’s now possible to see a similar pattern there: that any course in the curriculum had
potential for contributing "useful" knowledge in relation to the four essential business skills. When asked about his fine arts course, Ron stated that it gave him "usable" knowledge. The reason? His theater course built confidence in his ability to speak in front of people. Acting skills were transferable to work:

The thing is: in theater you're kinda on stage and it's the same when you're in sales. When you go into business environment you've got to look your best. You've got to do a little bit of an acting job: smile, be yourself. But you've got to act a little bit. And I try to do that especially when I'm in a body shop and it's my first time goin' in. I'm kinda nervous. I'll put on a big smile. I have a nice tie. I'll go and try to meet the secretary and try to talk to her. I try to convince her that if she has a referral to give it to Premier [my company] instead of Enterprise or an agency. Yeah. So I mean, you're on stage. It's like the spotlight is on you when you're in there, and you have to perform while you're there. I thought [my theater class] was kind of a good class to have.

And finally, Don reinforced Ron's observations about the relationship of his theater class to business. For Don, as for Ron, the essential utility behind his theater course was its applicability to public speaking. Don said, "Theater appreciation is kinda like public speaking. You're speaking to an audience, and you're using some emotion. I think that is useful in the business world because you're trying to get [people] to your point of view. You're trying to persuade them. I think it had usable knowledge."

Lastly, in this section, this writer needs to describe what he means when he posits that "self-reflective thinking" is one of the four essential elements in knowledge utilization.

William Perry's (1970) work on the intellectual development of college students helps illustrate what self-reflective thinking is
all about. Perry has become famous for his series of in-depth interviews with college students at Harvard and Radcliffe Universities because he found out that the way students "constructed knowledge" changed over time. Basically, Perry found that undergraduates typically went through three stages of intellectual development. The starting point and first stage was dualism: Knowledge was seen as either right or wrong; things were either black or white. The second stage was "multiplicity." Here students came to understand that knowledge was a lot more problematic. As Andrews (1981) summarized this stage, students learned "a new cognitive organization characterized by tentativeness and an appreciation for complexity" (p. 6). In other words, knowledge was complex. Knowledge was contingent upon different points of view. Hence the name "multiplicity." Students came to understand that contingent quality of knowledge and adopted an it-all-depends perspective. In essence, knowledge had a relativistic quality to it. Finally, Perry suggested that the third and highest stage of intellectual development was "commitment," whereby students developed and support their own, personal view of the world. All three of Perry's stages can be found in these interviews, since they were interviews conducted after graduation. However, the concept of self-reflective thinking centers mainly on the change from stage one to stage two thinking in Perry's scheme. In other words, from a dualistic to a relativistic view of knowledge.

Self-reflective thinking is best described as the student-
learner's understanding of the world as a set of differences. People are different: values are different; cultures are different; religions are different; languages are different. Furthermore, the student-learner comes to understand that there are, in fact, many different and valid ways to solve "objective" problems. Colloquially, there are many ways to skin a cat. In essence, the student learns, when he or she engages in self-reflective thinking, that his or her view is not the only view, but is just one view. The reason this is termed "self-reflective" is that the learner raises this understanding to a level of consciousness that enables her or him to thoughtfully, analytically see and judge himself or herself in relation to others. There is a reflexive quality here. The individual attempts to understand herself or himself as a part of the group as well as apart from the group. John's earlier statements about his understanding of the differences in people captured his self-reflective thinking.

Dave's interview provided several examples of self-reflective thinking. Early on in the interview, Dave said this about his philosophy teacher, whom he admired greatly,

She basically forced you into thinking about things. Okay, it's not black and white. What will come from your decisions? Why am I making this decision?...[In other words] she would force you not only to think one sided, but to see the other side. Compare. And that really confused a lot of people [in class]. A lot of people [in class] were brought up in the Midwest [and were taught]: All Blacks are bad...and this and that. And [the teacher] forced you to see everything. Both sides. Sometimes it even confused me."

Dave immediately made this work-related application:

Well, in going through and making a business decision, you can't
just react right away. You have to think about it and make sure it's financially [sound] and how everything else is going to fall into the same whole. [You need to ask yourself] is it a good decision for us? I mean, financially it might be. But what about people-wise? What is the reason why we're doing this? [Philosophy] just made me think about things more.

Dave later returned to this same self-reflective thinking when he evaluated his business policy course, which was the capstone course in the management major. The essence of that course was "finding out that there's more than one answer to certain situations. [The teacher] was great. He forced people (maybe forced is a bad word), he helped students reach into themselves and do things. He made you look into things and to see that there isn't necessarily a right way, but many different ways [to do things]. And then [you had to] choose out of that what is the best [for that] situation."

And Dave finally came back to this same theme at the end of his interview. When asked to summarize his perception of the value of general education courses, he said, "[They, the gen eds,] forced me to think different ways and to look at a situation and to know that there's not only one answer. There could be two answers." This was a profound change in Dave's thinking, as he immediately went on to explain. "Well, I was brought up that there was one way and only one way...you know, my way. And some of things [I learned] was to say, 'Okay, this the way I want to do it; I want it done [this way].' But I learned to see other ways that it can be done." And to illustrate just how important being able to think self-reflexively was, Dave made this connection with work:

Let me give you an illustration accounting-wise. The way I close the books this month and the way somebody else does are
two different ways. I may take more shortcuts than somebody else. Or, I may accrue for something differently than somebody else does. But the net effect at the end is the same thing. Like my boss says, "Ehh, a million this way, a million that way. It all equals out!" (chuckles)

Self-reflective thinking, for Dave, implied that there is not one set way to do things, even in accounting. And as always, self-reflective thinking related to work and thus was an element in knowledge utilization.

Other interviews, besides Dave's, illustrated the connection between self-reflective thinking:

Sometimes you have to be a little philosophical about things. Sometime you just have to blow it off. You've got to look at things from different points of view -- different aspects. (John on his philosophy course)

I found out that there is no right or wrong. It's just trying to find a happy medium between the two. (Ron on his philosophy course)

[My ethics course] just taught me how everybody's different and that it's okay to be different because that's what makes the world go round. If everybody's the same, life would be boring. (Ron)

I learned from this [ethics course] that you have to know when to make judgments and pass judgements and when not to. (Adrienne)

Adrienne captured the very essence of self-reflective thinking and her ability to understand "differences," when she said this about her sociology class, "[I took away] that even though there are different levels of people that everybody isn't the same. You don't lump everyone into one category. Just because you're Hispanic, just because you're Black, just because you're Chinese, you don't say, 'Well, I don't want anything to do with you.' " She then went to
give an example of how she applied these insights at work:

I work with an Asian girl, and it's a lot easier now. I mean, this one girl nobody wanted to work with and I think I handled it with no problem...[My soc course] helped me in my job because I learned to accept different customs. You meet with people. You talk with them and ask them, "So why do you do this? Why don't you do this? What?! You don't believe this?"

Jill explicitly connected the self-reflective thinking she gained from her religion class with her everyday work experiences managing a retail women's clothing store:

I think my whole thinking from [my religion class] has just changed me, maybe a little bit. Maybe I'm in tune to other people's beliefs. You know, not everyone thinks the same way I do. So maybe I have a little bit more of an open mind. [And that relates at work] because I come in contact with a lot of different people, with a lot of different religions, races...that kind of thing. So I really think knowing more about religion, not just from a Catholic view, has helped.

Teachers, Teaching and Knowledge Utilization

Astin (1993) makes the self-evident point that "students learn what they study" (p. 423). And in a very real sense, a parallel construction can be made from this research that students "use" what they're taught. The role of the teacher, which, as has been noted many times above, is the nexus for a whole cluster of ideas in education, is central to knowledge utilization as well. Often in these interviews, individuals stated that it was the teacher's responsibility to demonstrate the instrumentality of knowledge. Curiously, though, they often made this point by citing examples of teachers who failed to make these essential connections. This was another characteristic of the bad teacher.
The following short statement by Chris captured the essence of how the teacher and knowledge utilization failed to come together in his marketing class. He said, "I guess maybe I didn't get a lot out of [my marketing class] because I didn't have anywhere to apply it." Chris went on to say, quite significantly, "There wasn't a whole lot of application in that class. I think that's what brings it out for me is the application. I learn about it. Now I want to see how it works." The terms "application" and his phrase, "I want to see how it works" gets at Chris's central idea that marketing knowledge is applied knowledge. It is instrumental. And having once "learned" it (i.e., the course content: marketing terminology, concepts and theories), Chris wanted to see how it applied in the real world. Failure on the teacher's part to do this, meant a failure in knowledge utilization. What wasn't learned, couldn't be utilized.

Similarly, Frank said this about his finance teacher: "He really didn't have a teaching style. You know, he was just textbook teaching. This is how you teach. This is how he taught....He didn't relate it to real life. Everything was textbook." And the key phrase, "he didn't relate it to real life" meant that just learning the course content, for Frank, was insufficient. Frank wanted, like Chris, some application of how finance could be used in "real life;" that is, in the world outside the classroom. Likewise, Jill made the same comments and reached a parallel conclusion about her marketing teacher: "He was just there. He was very much by the book, and I didn't think he had much business knowledge to bring in. So I find
that, it’s not boring, but just that he didn’t bring that principle home. It didn’t tie in with things that are going on in the business world today.” What all of these individuals wanted was to be shown how the knowledge they were learning could be used, i.e., applied.

What emerged from these interviews as well was a recurrent theme about new knowledge. It must always be connected to a meaningful context for the student-learner. Knowledge taught devoid of context, what these individuals term the "real world," is sterile and useless. Time and time again, this theme reappeared. Here’s Jill on the limitation of her finite math teacher and on the limited utility of her finite math course:

[His teaching style] was just step-by-step. Follow your book. Do this: ta-da, ta-da, ta-da, boom, boom, boom. Follow your workbook assignment. It was just...it didn’t bring anything really home. It didn’t tie in with anything that I do. I mean I couldn’t even tell you any of the equations or anything that I learned in there. Hell! I remembering doing it all, but I don’t remember what any of it meant!

Jill’s statement that "it didn’t tie in with anything that I do" represents, on the one hand, the quintessential fallacy of trying to teach course content devoid of context and, on the other, the student-learner’s requirement that knowledge be instrumental; that is, that knowledge must somehow connect with or somehow be applied to something meaningful that the learner does. The irony for Jill was that while she remembered the process of the course ("I remember doing it all"), she gained no "usable" or "useful" knowledge from it ("I don’t remember what any of it meant!").

And here’s one last example of when teachers fail to make
knowledge instrumental and fail to provide a meaningful context for that knowledge, there is a concomitant failure in knowledge utilization. Joe had this to say about his Accounting I and II teacher and class:

I thought the teacher was very dry, monotone and boring. You'd go in and open up the book and just...you know, everything was right out of the book. All of the assignments were out of the book, and he didn't relate anything that we were doing to effective or useful knowledge...He didn't relate anything to any form of life or it didn't seem that I would need any of the information that I was being given.

What is especially interesting about Joe's statement is his awareness that knowledge has a future dimension to it: "It didn't seem that I would need any of the information I was given." So, on the one hand, Joe recognized that some knowledge becomes meaningful or useful in the future but, on the other, that his accounting teacher failed to make this clear. Joe was hoping to envision how, when and where accounting might have a pay-off for him (its instrumental dimension), but that never happened. Wistfully Joe added that, in hindsight, he now saw the value of the course but that it was too late to do anything about it, "And now looking back, I wish I did know more about accounting!" Ironically, Joe, the mortgage broker, must have an accountant do the loan and financing charge computations for him.

So far, however, illustrations about the instrumentality of knowledge utilization have been approached by considering its absence. The interviews also illustrated what the individuals saw as the positive presence of instrumental knowledge. They knew it when they saw it in class, and they valued it. Very often, interviewees
cited the examples used in class as one key expression of instrumental knowledge. And because it was the teacher who either created or explained the example, the good teacher was one whose examples illustrated the utilitarian nature of the knowledge presented.

This nexus of knowledge utilization and the teacher is readily demonstrated by Don. Don said this about his microeconomics teacher:

I had a teacher [for microeconomics] who I know was a very good teacher...I think he made the class interesting....He’d give examples that would pertain to us in Joliet. He’d say, "Well, this is about the Rialto Theater" [an historic 1920s movie theater recently restored]. One of his favorite subjects was the Rialto and the money that the city government was giving the Rialto. So the example kinda pertained to us. By seeing [it]...it just wasn’t something that was in the textbook. He’s showing you an application of it.

For Don, as for all 12 individuals interviewed, knowledge utilization was often a function of course content being mediated by a good teacher who stressed how course knowledge applied in the world outside the classroom and who did so through compelling, realistic and relevant examples.

Michelle, for example, valued her marketing teacher not only because he was easy to talk to and gave clear explanations but also because he brought a lot of real world examples into class. Michelle’s word for this was props: "He was a real easy going person...And he was a good explainer. He would bring in different types of props. He would show you different types of advertising, the different types of sales pitches. He would use a lot of props,
and that made the class very interesting." And John echoed Michelle's point that real world examples were both tangible signs of good teaching and demonstrable cues that the knowledge being presented was worth knowing: "My Principles of Management teacher went over a lot better than other teachers because you [the student] could actually see some of the things that he talked about. He would bring in examples, you know: life situations, newspaper article, movies and pictures."

Finally, this quotation from Frank captures the relationship between practical real world examples and the interpretation that students give to it:

[My sales management teacher] seemed to know a lot. He was knowledgeable...He would go through the text and say, "This is how you're suppose to do it." Then, he would bring up a real-life situation and would say, "This is how it really is. This is how you get around it." And that's always good to know.

So, to restate at chapter's end, the major conclusion from this research it was that the 12 management majors interviewed here did use and apply course knowledge on their jobs. For them, course knowledge was viewed in highly pragmatic, utilitarian terms. Knowledge was "used" because it helped the individual do something meaningful at work, and the reduction that utilized knowledge was instrumental knowledge followed from that. However, what specific course knowledge these individuals employed was rather complicated. Four core areas were judged fundamental to success at work, and any course that built personal confidence and competence in one of these four was said to be high on utilized knowledge. The four areas were
(1) speaking well, (2) writing well, (3) developing self-reflective modes of thought, but all of these got subsumed under the superordinate goal of (4) getting along with people. This chapter has also demonstrated that good teachers and effective teaching were often a necessary condition for illuminating the instrumental quality of knowledge. Nonetheless, no matter how "good" the teaching was, the utilized knowledge was often general and nonspecific. The key (and surprising) research finding here was that course knowledge was often mediated by a strong feeling of knowing.

Now what remains is to critique the Kilmann, Slevin and Thomas (1983) conceptual framework and to propose a grounded theory which "explains" knowledge utilization within these 12 individuals. This will be found in Chapter VI. Chapter VII concludes the dissertation and will focus on recommendations resulting from this research and implications for further research.

But before moving on to the last chapters, Wolcott's (1990) wise words are worth repeating, for they help put in perspective the overall approach that was taken here and will be taken again in Chapter VI. Wolcott (1990) muses on the dilemma every qualitative researcher struggles with regarding how much direct quotation to include in any given report versus how much summary. He says,

In striking the delicate balance between providing too much detail and too little, I would rather err on the side of too much....Accordingly, my accounts are often lengthy; informants are given a forum for presenting their own case to whatever extent possible and reasonable. This poses a dilemma: In reading the descriptive accounts of others, I confess that I often skip over the quoted material in my haste to "get right at it" and see what the researcher made of it all; yet I knowingly risk boring my readers with potenitally tedious detail. (p. 130)
CHAPTER VI
THE GROUNDED THEORY

The long journey of this dissertation is almost at an end. But before reaching its conclusion, this writer must deal with two remaining issues. The first issue is to critique the Kilmann, Slevin and Thomas (1983) conceptual framework of knowledge utilization, which has permeated this entire research. The second issue is to propose a grounded theory which "explains" knowledge utilization within the 12 individuals who served willingly as research subjects.

Jackson (1990) makes a supremely helpful distinction that can guide the reader throughout this chapter. Jackson (1990) differentiates between looking for as opposed to looking at things (pp. 163-64). "Looking for," in this research, means looking for a comprehensive, integrated and "richer" way of understanding knowledge utilization. How do these 12 individuals construct, explain, interpret and/or apply that illusive and often ambiguous concept, knowledge utilization? In essence, how does this research help inform, add to, take way from or in some other dimension give insight into what knowledge utilization means for these 12 individuals? The ultimate goal here is to gain understanding. And as Wolcott (1994) succinctly states, "Research is a means of organizing our thoughts to reach understanding, not an end in itself" (p. 37).
"Looking at," in this research, means revisiting and analyzing the Kilmann, Slevin and Thomas (1983) conceptual framework. Conceptual frameworks are important because, as Miles and Huberman (1994) remind all researchers, a conceptual framework states "the main things to be studied -- the key factors, constructs or variables -- and the presumed relationships among them" (p. 18). Conceptual frameworks are intellectual "bins" (Miles and Huberman’s word) that help researchers reduce a "mountain of particulars" into a few general constructs (p. 18). But above all, conceptual frameworks are important because it is "impossible to embark upon research without some idea of what one is looking for and foolish not to make the question explicit" (Wolcott quoted in Miles & Huberman, 1994, p. 16).

The Kilmann, Slevin and Thomas framework was, indeed, the intellectual starting point of this research and helped focus the research throughout. The essential issue here is how helpful was the Kilmann, Slevin and Thomas framework in explaining things about knowledge utilization? In other words, did they (Kilmann, Slevin and Thomas) get it "right" when they articulated the differences between "usable," "used," "useful" and "effective" knowledge?

A Critique of the Conceptual Framework of Knowledge Utilization

Preeminently, the strength of the Kilmann, Slevin and Thomas (1983) conceptual framework of knowledge utilization is its logic. It does attempt to partition knowledge utilization into four mutually exclusive categories: usable, used, useful and effective. The
framework reminds individuals interested in knowledge utilization as an area of study that knowledge utilization is a complex concept. This is a strength. Furthermore, their conceptual framework takes seriously Berger and Luckman's (1968) admonition about the philosopher's (and any researcher's) professional obligation to aim for maximal clarity in how one uses words (quoted earlier in Chapter II of this dissertation). In this regard, a strength of the framework is its differentiation of knowledge utilization along a time continuum. Knowledge utilization has both a near-term application and a more distant, long range application. The notion that some knowledge is of more immediate use and that other knowledge becomes useful in the long term is likewise helpful. The near-term/far-term distinction harkens back to a critical, philosophical issue related to undergraduate education: Is the aim of an undergraduate education to prepare students for their first job (near term), or is it to prepare students for "life" (far term)? Of course, the answer here is that baccalaureate education should do both.

Where the framework falls short, ironically, is in its own instrumentality; that is, in its own meaningful application in the real world! And the framework's essential limitation is that it is fundamentally linguistically derived. It attempts to parse out subtle, lexical distinctions between words, unrelated to whether flesh-and-blood individuals actually talk in this way. On the one hand, this can be good (as Berger and Luckman [1968] noted). On the
other hand, this lexically-derived framework begs the very important question of, So what? In other words, do these distinctions help in the real world of student-learners, business teachers, curriculum specialists and/or managers? The answer here is, regrettably, they don't help very much. The distinction made here is parallel to the difference in the quantitative realm between statistical significance and practical significance. Data may be statistically significant but may hold, in the end, very little practical relevance for the overall research question or issue at hand. When this happens in quantitative research, the question is, So what? It is the same here.

This writer concludes that on the basis of these 12 interviews the distinctions between "usable," "used," "useful" and "effective" knowledge, as proposed by Kilmann, Slevin and Thomas (1983), are too subtle and minute for these interviewees to meaningfully comprehend. The difficulty, it should be noted, was not methodological. Improving the methods for introducing and explaining what these words mean to future research subjects, would not, this writer believes, make the distinctions, themselves, clearer. As Chapter III noted, care was taken to pretest the survey instrument. Additionally, as Chapter III also noted, anticipating that these words would be problematic for the individuals interviewed, this writer took the proactive step of preparing a card that simultaneously defined each word definition and illustrated the logical relationship of one word to the other (previously displayed as Figure 4 on page 92 in Chapter
II). Each interviewed individual was given that card and was asked, as outlined in the research protocol, whether he or she understood what the words meant. The interview did not proceed until the interviewee confirmed an understanding of the words.

Two additional steps were taken to ensure understanding. The first was this writer's verbal restatement of what each word meant while the individual was looking at the card. Every interview included this verbal restatement. Here is the verbatim restatement from Tom's interview.

There are three words that I'm interested in trying to have you talk with me about. They are usable knowledge, useful knowledge and effective knowledge. You can see that usable knowledge is all the knowledge that has the potential of helping you reach some goal. And useful knowledge is all the knowledge that you actually apply in a specific situation, and really effective knowledge is just your figuring out whether that little piece of knowledge that you've chosen for that situation really worked or not.

And here's how I've thought about trying to help everyone that I'm talking with really understand the difference in the words. The word usable has the word "able" in it. So if you have usable knowledge (and do you see the word "able" in usable?), it is knowledge that makes you "able" to do things. A metaphor to think about this is the athlete. Knowledge that makes you "able" to do things, is like an athlete that trains. Training makes the athlete able to do things or, in other words, gives the athlete the ability or the potential to do lots of things. That's usable knowledge. Now, to just continue on with the athlete, the athlete trains for a specific event; let's say a race or something; but that race that the training helps the athlete prepare for is always sometime in the future. The race, the specific event, causes the athlete to draw on that training, the ability she or he has. With me? This now is useful knowledge. Usable knowledge turns into useful knowledge when you have a specific situation and you say, "Aha! Now I have a specific situation that I must try to solve or do something with." You take knowledge from the usable category and turn into useful knowledge. So that's why usable is the biggest and largest amount on the card, as you can see. Understand? [Tom said yes.] Good! And when you evaluate whether that bit of knowledge really worked, then it becomes effective knowledge.
Does all that make sense?

When Tom responded with, "Sure," the interview proceeded to explore the courses comprising the general education sequence.

The second thing this writer did to help clarify the subtle differences between the words was to continually summarize the difference between usable and useful knowledge throughout each interview. A typical example would be, "Now, did this course give you usable knowledge? Meaning potential knowledge that you may or may not have had a chance to apply yet?"

None of this seemed to help improve interviewee understanding. For example, individuals often got confused about the words. Tom, for example, said this: "Oh, I'm sorry. I just said all the usable knowledge. The sentence I gave you was usable knowledge. We're talking...the sentence was effective knowledge. Usable knowledge: that is very usable at work and it's all those things." The garbeldness and inchoate quality of Tom's response points out his very confusion over the terms. Furthermore, Dave, in this passage, was emphatic that he gained useful knowledge from his college writing course; but the essence of his response was that he got usable knowledge (knowledge that can be applied to a lot of different situations sometime in the future): "College writing. I think that's more useful knowledge. Because it's just learning how to write...It just enhanced my skills and made me learn, you know, the proper way of writing things." The fact that Dave is really talking about usable and not useful knowledge springs out of Dave's statement
that he "learned how to write" -- a generalized skill, unrelated to any immediate, specific situation.

Oftentimes as well individuals completely reversed the meaning of "useful" and "usable" knowledge. Emblematic of the confusion is this response from Don, where the words "usable" and "useful" were basically synonyms for each other: "I think that course is helpful, I mean, useful in the business world because you're trying to maybe get them to your point of view -- persuade them to your point of view. Yeah, I think it was helpful. I think it was usable knowledge."

Finally, few of the interviewed individuals took hold of the distinctions and incorporated them into their responses. Only Chris was able to apply these words accurately to his learning experiences during the interview. Chris correctly distinguished future knowledge unrelated to an individual's goals (usable knowledge) from situation-specific knowledge (useful knowledge) in this response about his Management Science course: "A lot of usable knowledge, but only useful if you go into that field."

More often than not, individuals answered with substitutes for the words usable and useful, like helpful:

Finance kinda helped me a little bit with just like, all the numbers and formulas and how to do annuities and stuff like that. (Nikki's interview)

But the word most commonly employed was the generic "used." For example:

Management information systems. I think I'll be able...I hope I'll be able to use it. (John's interview)

I worked at Great America one summer as an assistant manager in
a soda stand. I noticed a lot of our queuing line. A lot of stuff from business stats, I used that summer directly, right after I learned it because it was a summer course. (Tom's interview)

My two [writing classes], very definitely...that I used in my last two jobs. (Nikki's interview)

I can see there were only two or three classes that I can say, "No, I didn't use 'em." But a lot of the things as I was taking the course, I was probably [thinking], "God, why am I taking these?" But you do. You do really use it. (Jill's interview)

In fact, individuals never really seemed comfortable employing "usable," "useful" and "effective" in their responses. While "comfort" is not necessarily a defining characteristic of good qualitative research, the lack of comfort does suggest that these distinctions don't naturally fit within the everyday language of the interviewed individuals. There was nothing in vivo about these words. And this writer proposes that it is exactly that fact that goes to the heart of the problem. The Kilmann, Slevin and Thomas (1983) conceptual framework is basically ungrounded. It did not spring from the naturally occurring concepts or language of the research participants themselves. It was, in fact, an academic, linguistic framework built from logical distinctions that have, in this research, been pasted onto these 12 research subjects. And while the 12 individuals interviewed here could manipulate the words and wanted to help this writer as much as possible in his research, the framework simply did not have a "ring of truth" to it. The grounded theory developed in the next section attempts to overcome this limitation.
A Grounded Theory of Knowledge Utilization

Quite simply a grounded theory is one that is tightly linked or "grounded" in the data that has been collected. And one of the unique features of grounded theory is that it simultaneously collects and verifies research data. As such, grounded theory is highly inductive, but is clearly not an anything-goes methodology. As Glaser and Strauss (1968) and more recently, Strauss and Corbin, (1992, 1994) affirmatively assert, there are precise rules and procedures for coding data, developing categories, subsuming lower level categories into higher categories and ultimately for developing the grounded theory itself. But before proceeding, it's worthwhile to stop and ponder the question: What is a theory?

Strauss and Corbin (1994) give an answer that will help frame the grounded theory presented below. They state, "Theory consists of plausible relationships proposed among concepts and sets of concepts" (emphasis in original, p. 278). The notion of plausibility is crucial here because grounded theories have a fluid quality to them. "They call for exploration of each new situation to see if they fit, how they might fit and how they might not fit. [Grounded theories] demand an openness of the researcher, based on the 'forever' provisional character of every theory" (emphasis in original, Strauss & Corbin, 1994, p. 279).

Strauss and Corbin (1994) also say that "Grounded theory methodology is designed to guide researchers in producing theory that is 'conceptually dense' -- that is, with many conceptual
relationships. These relationships, stated as propositions, are, as in virtually all other qualitative research, presented in discursive form: They are embedded in a thick context of descriptive and conceptual writing" (p. 278). Grounded theory researchers are also interested in patterns of action and interaction between and among actors and concepts, as well as in the processes and conditions that may change that interaction. The grounded theory researcher is thus obligated to describe "what occurs under certain conditions: with movement forward, downward, up and down, going one way then another" (Strauss & Corbin, 1994, p. 278). The grounded theory of knowledge utilization that grew out of these 12 interviews is presented in Figure 8.

As is immediately noticeable, the grounded theory is process oriented. It begins with the antecedent conditions for knowledge utilization that occur before individuals go to college, continues with how knowledge utilization is developed while in college and then concludes with knowledge utilization post college: on the job. Furthermore, the grounded theory consists of a series of actions, interactions and iterations between categories. One will notice unidirectional arrows as well as multidirectional arrows. This is all an attempt to illustrate the complexity of the relationships here. Knowledge utilization is not a "simple" concept. To "explain" how knowledge utilization occurred in these 12 individuals, the dynamic, interactive quality of the phenomenon must be considered. And like the boa constrictor found digesting an elephant in St.
FEELING OF KNOWING

PREEXISTING CONDITIONS → CURRICULUM → CONFIDENCE TO DO THINGS → KNOWLEDGE UTILIZATION ← JOB

- Family values
- A good high school education

• General Education
  - Management courses
  - Foundation courses

• Business courses

Group Interaction

KNOWLEDGE CONTEXT
- Teacher’s examples
- Part time job

CAREER LINE
- Strength/clarity
- Openness to reevaluation
- Choice of college major

Figure 8. A Grounded Theory of Knowledge Utilization
Exupery's story, *La Petite Prince*, the phenomenon (knowledge utilization) must be "digested whole."

Readers will note, too, that the grounded theory includes many (but not all) of the concepts reported in Chapter V. The grounded theory includes categories relating to the three curricular domains (general education, foundation business courses and the management major), the centrality of good teaching and good teachers and the individual's confidence to do things. Interacting and mediating most of these categories is the feeling of knowing (i.e., that unexplainable sense that one knows things and can do things, even if one can't put it into words). All of these were described in Chapter V. However, three categories that were not described in Chapter V but that now need discussion are "preexisting conditions," "knowledge context" and "career line."

**Preexisting Conditions**

Preexisting conditions were simply those things that individuals brought to college that they said affected their knowledge utilization. These things were antecedent to their college experience. The interviews identified two domains of experiences that individuals had prior to college. They were: (1) family experiences that gave the individual values and reaffirmed his or her religious faith; and (2) a solid high school education that made college-level courses redundant.

Family experiences essentially revolved around gaining a solid
values orientation from one’s parent(s). This value orientation was
either in terms of religious values (always Catholic) and/or ethical
values (how to behave morally). John commented on the moral values
that his mother gave him:

Action and values. My mother instilled those in me very well.
So I don’t think that I even needed [that course]. It was a
blow-off. I had my own "actions" and my own "values" before I
even went to college. And if you don’t have your own actions
and values before you get to college, it’s too late. They can’t
teach you action and values. That’s something that you have to
be brought up with.

Other interviewees stressed their already existing religious
understanding, always derived from home:

I was brought up religious and stuff. And I had family values.
Just having values is important. Those courses just
added...they just enhanced me, the way I was brought up. They
just enhanced what my parents taught me. (Dave’s interview)

I mean I was Catholic to begin with. So, all those things that
they talked about in class, I had grown up really learning
[that] anyways. So if I didn’t have them by the time I got to
class, it wouldn’t have made much difference. (Nikki’s
interview)

Another preexisting condition dealt with previous learning from
high school. In all of these instances, required courses,
particularly in the general education domain, were simply redundant
of knowledge these individuals already had. Nikki was most vocal
about the repetitiveness of many of her college courses:

[Your general education courses] didn’t do much besides giving
an overview. But really, you had that in junior high and you
had it in high school. So not too much was different. I mean,
it was kinda basically like you had to take your general
[education] courses, like American history, and I had history
several times. I mean, it gave you an overview which really
doesn’t change much from high school to college. History is
history.
For Nikki, her general education courses, as generically represented by her history course, just didn't add anything new to what she already knew. Hence, the courses themselves contributed little to utilized knowledge. That theme was repeated in other interviews as well:

I think the state and federal government course was basically enhancing me a little bit more than what I learned in high school. I didn’t feel that the course was very good. (Dave)

Well, I took sociology, and it was interesting, but it was things that I sorta learned in high school. [The teacher] was basically going over the same thing. I didn’t really get a lot out of it. (Chris)

Knowledge Context

Knowledge context centers on the idea that students, while in college, need contexts for learning. As is often noted by educational psychologists, learning cannot occur in a vacuum. This applies across all levels of formal and informal education. This grounded theory proposes that the two main knowledge contexts were the teacher's examples and part time jobs held during college.

Chapter V presented evidence that class examples were especially significant for student-learners. What purpose did these examples hold? At the most basic level, examples made tangible more abstract concepts, terms and ideas. Examples gave the learner a "picture" in which to put or frame new knowledge. But at a deeper level, the 12 individuals interviewed here implied that the best, most helpful examples really functioned as substitutes or replacements for direct personal experience with the concept or topic. If, as was asserted
in Chapter V, utilized knowledge is instrumental knowledge, then the knowledge being presented in class had to have a place where it could be shown to work. Thus, it was the teacher's obligation to make these examples relevant to the student-learner's level of life and work experience. That is what Michelle meant, back in Chapter V, about props being so important. So, too, Don's statement, also in Chapter V, about his microeconomics teacher and the Rialto Theater examples. In essence, all 12 individuals wanted a direct, real-world application for the knowledge they were learning. When this was done, the interviewed individuals identified the teacher as being good and said that the course was high on utilized knowledge. Here, the teacher, through her or his examples, provided context.

The other knowledge context was the part-time job. Tom's quotation, above, regardless of whether he got the words "usable" and "useful" right, demonstrates the importance of the part-time job for connecting classroom knowledge with the real world. Chris restated this connection when he talked about his Principles of Management class:

[From that class] there was lots and lots of usable knowledge. That stuff...[pause] I used a lot while I was still in college just because I use to work down the street here. I was the assistant manager at a local video store. I had to train people and I think in that class we talked about training and that was my job to train people. I thought maybe that's something I should try to do the way we did it in class.

Career Line

Career line is simply the individual's ability to envision the shape, scope or direction of her or his career. Career lines can
thus be said to be weak, strong or somewhere in the middle depending on the clarity and confidence of the individual’s career vision. As expected, career lines changed for many individuals interviewed here during their undergraduate years. Jill began college as a nursing major and changed to a management major. Both Nikki and Ron started college as accounting majors; they too changed. Joe started college wanting to be a golf course manager but ended up being a mortgage broker due to his double major in management and marketing. Other individuals, in contrast, began college with vague, ill-defined career lines. They had no clear idea of what they wanted to do and consequently used different college courses to help preview a particular area to see whether it was right for them. Chris, Frank and John began like this, with either no or very weak career lines.

Most significantly, however, in terms of knowledge utilization, career line also refers to how well-defined and/or how strong the individual perceives his or her career after college. Two individuals were of note here. The first was Don. When Don was interviewed, Don was unemployed and was working as a part time, union carpenter. Several times during the interview Don referred to his candid reevaluation of whether his choice of a double major was the correct thing to do. He was, in fact, experiencing serious difficulty finding a job. Don’s career line can be classified as weak.

Ron is the second individual. Ron, too, was reevaluating his career, although he was doing this from a very different position
than Don. Ron was employed, but was wondering whether he might be happier in another career. He talked extensively about seriously considering becoming a land surveyor:

Honestly I think right now you almost need to specialize in an area for a person to be successful. What I mean by that is that I was thinking about taking a class or a seminar for like land surveying or for building surveying...when they want to sell a building, you go in and estimate how much the building is worth. I think you have to specialize in somethin' in order to get a little bit ahead, or you have to have a skill that somebody else doesn't. I think that there are so many people who have degrees nowadays, with management degrees, that they're not worth maybe as much as they were ten, maybe fifteen years ago...on the market. I think employers look at this almost like a high school degree. I mean there are so many people out there. I just found that I ran into a brick wall when I got out of school. I said, "Oh my God! There's so many people out there. I didn't realize that they're out of work or looking for work. They are in the same boat that I am." But if you get into something and learn a business, then it's okay. You need an anchor somewhere; you need to learn a business and really get into it, like it and really understand it.

I feel kinda in between right now. I kinda want to get into somethin'. What I'm doing is okay, but I kinda want to get into something else that I can specialize or be better than somebody else in, or have some special skill or talent. I'm not really sure whether I really want to do the land surveying. But I met a gentleman and he did it. And he worked in that industry. He walked into Premier Car Rental. He was returning a car one day. So I had to drive him back to the body shop where his car was being fixed at. So I thought, "Oh God, here goes another one." And we were talkin', kinda small talk. And then he started talking about his job. And it was land surveying, and it was very, very interesting. And he said, this is what I do. This is how many hours I work a week. And this is what my job entails. And at the end of the conversation I was so interested in what this guy was trying to tell me that I was just kind a wrapped around this guy and said, "Hey, this is really neat! I think this was something I would enjoy!"

I think the thing that got me interested in it was that in college, I worked at a lumber yard. I was kinda into building materials, building houses and things like that. And when he mentioned that I kinda had a bridge from where I was at to where he was at. I could kinda see what his job was about, and I was very interested in it. And that's what kinda got me interested.
Two aspects of this extended quotation are worth mentioning. The first is just how important the career line is. For Ron, his current career line is being reevaluated. Dissatisfied with his current job and the very competitive job market, he feels he needs to find a niche. Something he can do better than someone else. He believes this might be land surveying. Second, Miles and Hueberman (1994) thoughtfully comment on the trickiness of "explaining" what something means in qualitative research: "Good explanations will need to link the explanations given by the people we study with explanations we develop as researchers" (p. 144). In this instance, to explain Ron's career line, this writer must, perforce, note some important aspects of how the grounded theory works. For example, Ron's career line is obviously linked to his current job in the car rental agency. But Ron specifically states that part of his interest in land surveying was because he held a part time job at a lumber yard during college. Career line thus interacts with knowledge context in the grounded theory.

The Grounded Theory "Explained"

So how does the grounded theory "explain" knowledge utilization? In other words, how does the grounded theory work? The individuals interviewed here clearly affirmed that the courses (the curriculum) they took in college that gave them the greatest utilized knowledge were courses that built confidence in themselves to master what they thought were four, fundamental business activities. Those four
activities, which were the four pillars of success in a job, were writing well, speaking well, being a self-reflective thinker and the ability to get along in a group. Utilized knowledge was directly linked to mastering these four abilities. The confidence these individuals desired came from multiple sources. Preeminently it came from the classroom: Good teaching and good teachers (teaching style) were able to build that confidence. These 12 individuals said that they needed concrete, real-world examples to make course knowledge meaningful. Thus, either a parttime job or the teacher's own examples provided a knowledge context for new learning. However, the level of utilized knowledge from a class was reduced when individuals had learned the course's content prior to college (preexisting conditions). Two large and separate forces also influenced knowledge utilization. The first was the individual's career line. If the individual had a strong, clear and well-defined career line, she or he had "mental hooks" on which to "hang" what was being learned. The career line could work prospectively or retrospectively. A career line could begin as early as high school, but more commonly it developed while in college. Finally, mediating and explaining why individuals were confident in their abilities to do things but were highly inarticulate when trying to explain how that confidence was created was the large feeling of knowing.

Strauss and Corbin (1994) make a crucial statement about the risks involved in doing grounded theory research. They state that any researcher errs when doing this type of research when she or he
"has discovered a basic process but [fails] to develop it conceptually, because they overlooked or do not understand that variation gives a grounded theory analysis its conceptual richness" (emphasis added, p. 277). Huberman and Miles (1994) make the further point that in cross-case analysis (which is what this research really is), there is a universal tension between the particular and the universal: "The tension here is...reconciling an individual case's uniqueness with the need to understand generic process at work across cases" (p. 435). So it is to explaining the variation found within these 12 interviews that this chapter now turns.

The purpose here is two fold. First, it is to give this grounded theory the conceptual richness that Strauss and Corbin say is essential. Second, it is to "confirm" or build credibility for the grounded theory itself. Without getting into a lengthy discussion about issues of validity, all research is concerned with the notion of "getting things right."\(^1\) And as was quoted above, research always has an openended, "forever" quality to it. It can be changed, modified, reaffirmed and questioned by any succeeding piece of research. Thus, Wolcott (1990) is fundamentally right when he says that no researcher can ever legitimately claim that he or she has things totally right. The best the researcher can hope to claim is that she or he has not gotten things totally wrong!

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\(^1\) For those readers interested in the specific issues of validity and confirmation of findings in qualitative research, the following books are a good starting point: Kirk and Miller (1986), Guba and Lincoln (1989), Eisner and Pleshkin (1990), Wolcott (1994), Miles and Huberman (1994), Lincoln and Denzin (1994).
Understanding and accounting for the various degrees of knowledge utilization with these 12 individuals are essential. And the way this writer proposes to do this is through a classification scheme that categorizes all 12 of the interviewees. The classification scheme was developed through a qualitative technique called the constant comparative method. As its name implies, the constant comparative method works by comparing one case to another, with the express intent of evaluating whether each case "fits" with earlier cases. Any negative case that doesn't "fit" prompts the researcher to figure out why. In so doing the researcher more tightly defines and delimits the concepts, categories and relationships within the theory that emerges from the research. Thus the researcher is able to develop an explanation for why certain things go together and why certain things don't.

The classification of all 12 interviewed individuals that researcher devised is presented in Table 23. The classification scheme posits three different types of learners: transformation,

<table>
<thead>
<tr>
<th>TYPE OF LEARNER</th>
<th>CASE</th>
</tr>
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<tbody>
<tr>
<td>1) Transformational</td>
<td>Frank, Chris, Adrienne</td>
</tr>
<tr>
<td>2) Transactional</td>
<td>Joe, Dave, John</td>
</tr>
<tr>
<td>3) Transitional</td>
<td></td>
</tr>
<tr>
<td>a) Successful</td>
<td>Jill, Ron, Michelle</td>
</tr>
<tr>
<td>b) Unsuccessful</td>
<td>Don, Tom, Nikki</td>
</tr>
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transactional and transitional. Within transitional learners there are two sub-groups: Individuals who successfully make the transition and those that don't.

Transformational Learners

Transformational learners are characterized by fundamental, deeply rooted changes that occur within them because of the courses they take. The transformational learner, as its name implies, is literally transformed by his or her learning. Something new and profoundly different is created within these learners that wasn't there before. Literally, the transformational learner sees the world in a new way due to the new insights, experiences and knowledge gained in and through classes. It is a deep seated change and can be captured by the self-reflective statement that "my college courses really changed me!"

The transformational learner furthermore sees the relationship between courses in the curriculum in a highly elaborated, complex way. The transformational learner sees numerous connections and relationships between courses. Such learners see connections and interplays not only among courses within a specific curricular domain (general education, foundation business courses and management courses) but also across curricular domains (general education courses relate to management courses; management courses relate to foundation business courses). Thus any course in the curriculum has the potential for connecting meaningfully with any other course. But
the courses contributing the greatest utilized knowledge are the general education courses. Knowledge utilization is heavily influenced by the curriculum. What happens because of the courses the transformational learner takes influences knowledge utilization. Figure 9 illustrates how the grounded theory in relation to the transformational learner.

Frank: The Paradigm Case for a Transformational Learner

Frank represented the quintessential transformational learner, and following Wolcott's (1990) advice at Chapter V's end, page 212, Frank will speak for himself:

Well, I wasn't always a good writer. And College Writing helped me express my thoughts clearer in words. And make sure that I wrote right! And stuff like that. The teacher made you go through the exercises in the book until you got it right. If you got it wrong, he'd make you do it again. He wouldn't just give you the answer if you got it wrong. He'd make you figure it out for yourself. So basically I can say he taught me how to write.

I had Brother French for both parts of Western Civ. Excellent teacher. He was very knowledgeable and it seemed to kind of rub off on the students. Because of him, it made me interested in Western Civilization. I picked up a lot of it. Like I don't know if I could give any specifics. But let's say I was at a social gathering and someone started speaking about the Mayan civilization. I might remember something and I could join in the conversation. Overall, I'd say western civ gave me an appreciation. Especially for fine arts appreciation. It just seems that a lot of fine arts come from history. Western civilization deals with history. And what you learn about western civilization helps you relate to fine arts. And while at school I took an art course, Art Appreciation. I was interested in that. Also I took Theater Appreciation. I guess I have a taste for art (embarrassed). Well, I draw. And I like going to museums...and I appreciate history. And, you know, I thought those classes might help me out, you know, later in life. Maybe just learning to appreciate people. Or maybe like Western Civilization, other cultures, the way people act.
Figure 9. A Grounded Theory of Knowledge Utilization for a Transformational Learner
Actually, I never liked literature or reading until I took the course. Five Great Books. I took Five Great Books. I never liked reading. All of a sudden I found myself liking to read. Plus the books help...you know, they talk about some of the past and the history. Like I remember the stock yard book. What book was that? The Jungle! By Upton Sinclair. I mean, that was the year when my grandparents were in their prime. And I could go home and talk to my grandfather about it and he could recall, specifically recall some of the stuff out of the book. Because he use to work on the railroads...at the stockyards and stuff. And I just kinda remember a lot of the books from that class. Animal Farm. That book, 1984. Catcher in the Rye. And this was the first time I was forced, in a way, to really read. And I found myself enjoying reading!

I'd say the word that describes these gen ed courses, the word that pops into my mind is appreciation. I mean...for culture, for your past, for science, your religion. You learn about other people. Maybe, so that you know more about yourself and more about other people. Sometimes I'm a little embarrassed by saying all this. Why? Because I still consider myself a kid. And you know, I'm a jock. I'm from Cicero. And stuff like that. I wasn't too appreciative before I went to college, you know. I'd say coming out of college, I was a 100% changed. Before I went into college? All I cared about was sports, girls and cars. Mainly sports. That was one of the reasons why I was going to go to college. But then in college I found myself...I wasn't taking any blow-off courses. And I was taking more and more classes that might help me. And it was a change. Before I was the jock, punk, the one who got into trouble, and once I got into college I calmed down. I did my work. I tried to get my grades. Sports were still there but it wasn't number one on my list. Now, I'd say I'm an adult. You know, I appreciate many things in life and, where I'm at now...I appreciate people. Not much into being a jerk party animal any more. Kind of had to grow up a little with it. Still like sports, though. But my priorities have changed.

Transactional Learners

As its name implies, the transactional learner views college education as a transaction; basically, a cognitive transaction. Courses, as defined by the curriculum, are discrete units that the transactional learner engages one at a time. For the transactional learner, courses are reduced to exchanges between the teacher and
student as well as between student and student. And this notion of
exchange is crucial here. Exchanges have both a give-and-take
dimension to them and an objective, distancing quality to them. This
distancing quality is the essential characteristic of the
transactional learner; for unlike the transformational learner, the
transactional learner stands apart from the learning. It is
something done to him or her. It is purely cognitive. It merely
adds to the storehouse of knowledge the learner already has. Unlike
the transformational learner, the transactional learner does not
undergo any profound or deeply rooted change.

An apt analogy is that of the ledger book in accounting. The
ledger book charts monetary transactions, and each recorded
transaction either adds to or takes away from the total amount of
money there is. The transactional learner engages in a similar
"mental accounting" about the knowledge gained in and hence utilized
from each course taken. Knowledge utilization is purely a function,
a mental accounting, of whether course knowledge adds to what he or
she already knows.2 Practicality and instrumentality of knowledge

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2To be totally complete in considering this analogy, ledgers also
track transactions in which more money goes out than comes in --- in
other words, debt. This is an intriguing comparison with learning:
to posit that the learner may engage in classroom learning
"transactions" that actually take away from his or her knowledge, or
in some manner diminishes his or her storehouse of knowledge in the
same way too much money going out of a company puts the company in
debt. If such a situation arose, ethical and philosophical questions
about the cause(s) of this imbalance surely would be raised: What
kind of "education" and what kind of "teaching" would diminish
knowledge in an analogous way that too many expenses relative to
income diminishes a company? All that can be said here is that none
of the 12 individuals interviewed in this research fell into that
category.
are key here as well. Accountants don't enter numbers in the ledger for any intrinsic quality inherent in the "beauty" of the journal entry itself. Journaling is a practical aid that helps accountants do something. In like manner, knowledge utilization for the transactional learner stresses the enhancements, the additive quality that new knowledge gives the learner. Clearly, then, good teaching and good teachers heavily influence knowledge utilization in the transactional learner. Figure 10 illustrates the grounded theory for the transactional learner.

Joe: The Paradigm Case for a Transactional Learner

Joe represents a good example of the transactional learner.

Like I say, I think the point of the gen eds is to refine you, to make you aware of different viewpoints or topics, or the just the general knowledge of life itself. You can't take them all these [gen ed courses] and say all of them were "great" courses, but the points that you did get out of them were very important points and things that do stick with you.

I mean, maybe a lot stuck with me [from econ] that I don't recall because he related a lot of things to [everyday life]. I think it was more a common sensical course where you kind of knew what they were going to say, or at least I knew what they were going to say before they said it.....But, it's just...for me, I think I was kind of...like I say, I have good commonsense and know a lot about it and with the little teaching [he] did, I think it was to refine what I already knew. So maybe that's why I'm not getting much out of them.

[The writing courses] were building, like I say, from the fundamentals of writing through the college writing through the writing for the professions. It was just to reiterate the facts and just go over them again. I think it was basically a repeat -- but they graded you on a higher level.

Organizational behavior. Not very exciting, even though I think I got an A in it. I did well in all of her courses. I think it was more of something where I learned for the moment, and then kinda blew it off. So if I had to take a test, I'd read the
Figure 10. A Grounded Theory of Knowledge Utilization for a Transactional Learner
paper, know it for the test, take the test, and forget it...go
golfing or whatever.

Overall, I think that there is [a connection between the gen eds
and the business core], but it's more of, like I say, a building
process where personally, I, I connected them in a way
where....It's kind of weird because I see different things like
one course may mean nothing to me but then I see a course I like
and I kind of try and relate that to different things in my life
that I'm going through. I mean, just as far as, you know every
day out there selling; you know, meeting people; you know, I'm
trying to sell 'em using techniques from [my business courses]
but I'm trying to use different ideas here like treating them
like individuals and understanding them better that came from
[my gen eds].

Basically, like I said, I'm pretty strong willed. And if I want
to do learn something or do something, I do it. If I see
there's something in it for me or something I'm interested in
and don't know a lot about, I'll put in the effort to learn. If
I know something [already], I blow it off as common knowledge.

Transitional Learners

Transitional learners are closely allied with their career line.

As noted earlier, when the concept of career line was explained,
individuals often enter college not knowing what they want to do.
The curriculum, for them, is a veritable supermarket, where they can
"sample" various disciplines and different majors, with the ultimate
aim of choosing a major. No individual can graduate college without
a major. So selecting a major is a requirement for graduation. The
transitional learner thus enters college in a state of flux.

But as Table 21 indicates, in the required search for a major,
there are two possible outcomes for the transitional learner. One is
that he or she will successfully make the transition and chose the
"right" major. On the other hand, a transitional learner can be
unsuccessful. In this instance, post-college experiences lead the
individual to conclude that, in hindsight, she or he chose the "wrong" major. While transitional learners may be identifiable while they are in college, judging whether they fall into the successful or unsuccessful subgroup can only occur after college.

Knowledge utilization for the transitional learner is thus clearly influenced by one's career line. See Figure 11 for the grounded theory in relation to transactional learners. If the career line is strong and the individual judges being a management major affirmatively, utilized knowledge increases. When career lines are judged weak and the individual feels that she or he made a mistake by becoming a management major, knowledge utilization is limited and greatly diminished.

Readers should note that there is an exceptionally strong contingent quality to the knowledge utilization patterns of the transitional learner. In fact, this is what makes them interesting. Knowledge utilization is a retrospective judgment based on their current job situation. Jill and Michelle liked their current jobs. Thus, they gained usable knowledge from their courses. Don, on the other hand, was unemployed. He was experiencing a great deal of angst over his employment situation and his choice of major. His dual major, marketing and management, has left him unemployed. In hindsight he muses painfully about his college choices.

Well I started out on my marketing degree and I found out that they were so close to a dual major with management (that there
Figure 11. A Grounded Theory of Knowledge Utilization for a Transitional Learner
were only three classes dividing them) that I thought: Well, as long as I'm this close and I have to take an extra class or two anyway why don't I get 'em both and I'll be more job marketable. That's the reason why I took the management part of it.

Marketing...the reason I took that was that I was more or less talked into that when I went to Joliet Junior College.

Uh...They told me that [marketing] entails sales, it entails advertising, it entails public relations, it entails marketing itself. I thought, 'Well, jeeze, if it entails all these different areas, how can I go wrong!' You know, well jeeze, there are all these different things, but I find that is a detriment. It's so broad that it's not specific enough! I mean when I...you know, if I was to look for an advertising [job] or something like that I think I should have gone to Columbia University in Chicago or some place like that that actually would deal with advertising as a regular major. They're known for that type of stuff. Now I get out and it's kinda like...it's more or less a very general degree. Bottom line is, I'm unemployed!

The tentativeness and hesitancy evidenced by Don's quotations in Chapter V are now explained by his weak career line. Here's another representative passage of Don's tentativeness about knowledge utilization:

Intro to philosophy [pause] I'd say it's...it's...there may be something there that's usable, but I'm not really sure. The natural science courses I'd say no. That would not be usable. The religion courses...It's kinda like philosophy ..[long pause] I don't know. That's one of those where it's more like the well-rounded person. I suppose you could take some things away from there regardless and use them. But I don't know. I'm not really sure. It's kind of up in the air. Action and values. Ethics. I suppose it does [have usable knowledge] just because of the word "ethics" itself is a word that has a swing toward business. Some of the different philosophers and some of the points they made could be used in, you know, in business.

Knowledge utilization for Don was minimal at best.

Nikki: A Paradigm Case for a Transitional Learner

In comparison to other interviews, Nikki's was rather "thin."
It did not have the depth, detail and self-reflective quality found in other interviews. Essentially, this was due to Nikki's dissatisfaction with her career.

At the time of the interview, Nikki was a housewife, who was removed from the job market. But Nikki, as is paradigmatic of the unsuccessful transitional learner, was reevaluating her career line. She was now mulling over whether, in fact, being a management major had been the best choice of major for her. Based on her experiences raising her family, she came to the conclusion that being a management major was not really "in synch" with her real interests and values. And as a result, her retrospective evaluation about knowledge utilization mitigated against finding significant amounts of utilized knowledge associated with her jobs, which she now disliked.

Knowledge utilization was minimal at best. Some selective responses follow:

Philosophy is kinda to get you to think about the "ifs" and "ands" and that that, which maybe kinda helps [you] make better decisions.

Cultural diversity was another kinda class like ethics, which kinda does...again [it] makes you aware that everyone isn't the same, which definitely helps in business, especially with your bosses and like that.

I enjoyed taking my [fine arts course]. But I mean it certainly didn't help me with any of business skills. I don't think it made me, you know, a better business person out in the world.

Finance, I guess kinda helped me a little bit, with just like...it was all numbers and the formulas and how to...like annuities and stuff like that. It didn't really apply to my work, but for my personal life. You know, what's the best thing to invest in...double your money and things like that.
The influence of Nikki's career line affected her evaluation of all of her courses. But what made Nikki an interesting case and, in turn, supported the power of the career line for the transitional learner, was what she said at her interview's end. She concluded by stating that if she had to do it all over again she would become a teacher:

If I could do this all over again, I think I would have gone into teaching. I just think I really enjoy... I like kids and I just really think I would like working with young kids, in kindergarten or first grade. I really think if I had to start again, that's what I would do. Actually I've even talked about even going to take classes that would get me a teaching degree. I mean I guess I'm more family oriented. I mean I look at it this way. I like to be around kids, and if I taught, I'd have the same time off as my own kids where I'd have plenty of time to spend with them. I'm just not much interested in working 60 to 70 hours a week downtown; where you take the train and you're workin' 12-hour days.

And what's interesting about that statement is that she then immediately went into an evaluation of how her judgments about knowledge utilization would change based upon her new teaching career when asked: "Do you think you would see some of those gen ed courses in a different way than what we just went over?" Nikki said:

Probably some of them I would. Like, probably western civ, though it depends on the grade I taught, you know. Obviously history would be something that I would really have to remember to teach to [the kids]. Where, with me, something that happened a 100 years ago in Egypt didn't really effect any business. But if I'm teaching kids, things change. Definitely intro to human communication becomes more important, where that would help me become more of a public speaker... to talk to the children. Again, I'm sure natural science courses you'd probably like to help a little more... I mean in business they really didn't... I mean what do you really need to know about biology in business?

And so on. The essence of Nikki's statement is that for the transitional learner (as potentially for any learner) there is always
an open-ended, contingent quality to knowledge utilization. Change jobs and utilized knowledge changes.

Some Reflections on Method

With all qualitative research (grounded theory included) there are always issues related to the integrity and believability of the research. The issue is generally framed: How can one "know" that the theory a researcher proposes is really "true." Maxwell (1992) cites Bask as saying, "All field work done by a single field-worker invites the question, Why should we believe it?" (p. 279). This is exactly the question to be asked here. This writer found Maxwell (1992) and Wolcott (1990, 1994) to be most helpful here in reflecting on the integrity of this research.

Wolcott (1990) mentions that one criteria for judging worth, integrity or "validity" of a qualitative study is a self-reflexive quality in the researcher. Wolcott's admonition is "be candid." In other words, since the researcher is the instrument in qualitative research, the researcher must "come clean" with her or his "biases" suppositions and presumptions. This writer has done this continually by noting his "surprise" in certain findings. What started out as an exploration of the management major in relationship to the jobs of a small group of recent graduates turned out to be, in the end, an exploration of perceived competencies for work and the relation of the general education component of the curriculum to the business component (i.e., the major).
Wolcott (1994) also asks qualitative researchers:

(1) to highlight their findings -- this was done in Chapters V and VII;

(2) to display data -- this was done in Tables 2 through 21 as well as in Figures 8 through 11;

(3) to follow and report "systematic" field work procedures -- this was done in Chapter III;

(4) to identify patterned regularities in the data -- see Chapters V and VI;

(5) to compare data; and

(6) to critique the research process itself (this section).

This writer believes readers will find consistency between what Wolcott suggests and this research.

Maxwell (1992) is equally helpful in directly speaking to the issue of validity in qualitative research. He establishes a hierarchy of terms, from descriptive validity to interpretive validity through theoretical validity. Essentially Maxwell says be as accurate in recording the physical data as possible (descriptive validity) and be as true to the participant's meaning as possible (interpretive validity). Theoretical validity will be dealt with in Chapter VII. This writer believes that the extended discussion of how the categories were derived in Chapter III (beginning on page 108) gets at the issue of interpretive validity. Accuracy and fidelity to the physical data were also discussed in Chapter III.

Maxwell (1992) makes an interesting point when he asserts that
the issue of generalizability in qualitative research is really an issue of validity. He says,

Generalizability refers to the extent to which one can extend the account of a particular situation or population to other persons, times, or settings than those directly studied. This issue plays a different role in qualitative research than it does in quantitative and experimental research, because qualitative studies are usually not designed to allow systematic generalization to some wider population. Generalization in qualitative research usually takes place through the development of a theory that not only makes sense of the particular persons or situations studied, but also shows how the same process, in different situations, can lead to different results. (p. 293)

This writer believes that this grounded theory of knowledge utilization in management majors presented in Chapter VI does meet Maxwell's two criteria in the last sentence quoted above. The grounded theory does attempt to make sense of these 12 individuals studied and it does show, by developing a three-fold typology of learners (transformational, transitional and transactional) that the same process can lead to different results.

Overall then, this writer believes there is sufficient warrant for believing the "truth" of the grounded theory hereby proposed.

Chapter VII concludes this dissertation. There readers will find a summary of the research methodology, a recap of the research's major findings, suggestions for an ongoing program of research in knowledge utilization as it relates to business education at the collegiate level and some recommendations for improving the management curriculum.
CHAPTER VII
SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

Ronald Christensen (1982), in The Art and Craft of Teaching, has paraphrased Amy Lowell by saying, "Teaching is like dropping ideas into the letter box of the human subconscious. You know where they are posted, but you never know when they will be received or in what form" (p. xiv). Christensen's two sentences neatly summarize the origins, the intent and the scope of this research. What kind of teacher would it be that did not wonder, sometime in his or her career or at some point while lecturing, if the ideas he or she was "posting" were being received and in what form? At its most basic, unadorned level, this research was simply an attempt to explore that question: Were the ideas that this writer expressed in his management classes, along with the ideas that the collectivity called "a faculty" expressed in their classes, getting through? A simple enough question. A complicated answer.

The search for "an" answer began with this premise about business education. Businesses do things. So undergraduates enrolling in any one of several business majors must be taught both the theory and the practice of their respective majors. There is thus a practical, instrumental foundation undergirding undergraduate management education. As stated in Chapter I, accounting majors
learn the basic principles of accounting. They learn to do accounting. Majors in computer science learn to write and debug computer programs. Management majors (the major of interest here), in contrast, learn the theories and ideas associated with sound management practice, but they generally don’t practice "management" in the same way that accounting, finance and computer science majors do while in school. For management majors, practice and skill refinement are deferred until after school -- when students get jobs. Since application of formal classroom learning is generally done after the student graduates, this lead inevitably to the research question being explored here: "Whether and to what degree do management majors 'use' course knowledge on their job."

As with all research (an intelligent discourse), maximal clarity in language was essential. "Use" was (and still is) a highly ambiguous term. The need for a conceptual framework to guide this research was paramount. Kilmann, Slevin and Thomas's (1983) conceptual framework was chosen because it not only differentiated between four closely related words ("usable" knowledge, "useful" knowledge, knowledge that is "used" and "effective" knowledge), but because it also came from professors of organizational behavior who were exploring a closely related issue: Why didn't managers "use" more of the published, academic, business research in their day-to-day decision making? The central issue of "use" is what allied Kilmann's framework to this research.

Obviously, only former student could state whether and to what
degree they "used" course knowledge on their job. One challenge was finding these graduates. Moreover, a challenge was to find graduates whose knowledge utilization patterns were distinctive along some meaningful dimension. First, a questionnaire was sent to the 245 declared management majors who graduated between 1988-1992 from the institution where the research was conducted.¹ Ninety-four completed surveys were received, and 61 surveys fell into the category of interest to this researcher: Graduates who had not continued their education with post-baccalaureate course work. These 61 surveys were statistically analyzed. Based on this analysis, 13 individuals were found to be statistically significantly different from the other respondents. These 13 graduates had high knowledge utilization scores in "usable" knowledge gained from their general education courses. Of these 13 respondents, 12 were interviewed. These in-depth interviews, about their perceptions of how knowledge gained through their courses was utilized on their jobs, formed the core of this research.

This writer found, after the 12 interviews were transcribed and analyzed, that the Kilmann, Slevin and Thomas (1983) conceptual framework was virtually unintelligible to these 12 individuals. The

¹The institution is best characterized as a relatively small, private, church-affiliated university having both undergraduate and graduate degree programs. The university has a College of Arts and Sciences, a College of Business and a College of Nursing. Total student enrollment was 2,500, with about 600 students enrolled in the College of Business. The Management Department was the largest business department with 125 majors. Most students commuted to the university and were generally the first individuals in their family to go to college.
framework did not help these individuals articulate their ideas about what they learned in class and how that knowledge applied on the job. In fact, it hindered their expression of these very ideas. Thus, this research had the following key findings:

(1) Knowledge utilization for these 12 individuals was narrowly defined and tightly constrained. It was highly instrumental and very pragmatic. Any distinctions that the Kilmann, Slevin and Thomas (1983) conceptual framework proposed between "usable," "useful," and "effective" knowledge were simply too subtle for these interviewees to make.

(2) Four core competencies were perceived to be essential for successfully carrying out the functions of a manager. These four were the ability to write well, to speak well, to work well (collaboratively) in a group and to understand how one is different from others.

(3) Of the two distinct curricular domains that comprise the curriculum (general education versus the major), it was generally the general education courses that were said to contribute knowledge utilized in the four business competencies.

(4) Relative to the total amount of time all faculty spent lecturing on, discussing, reviewing and testing "objective" course content, little of that course content resided "top of mind."

(5) Theoretical course knowledge was perceived as being just that: theoretical. These 12 individuals always wanted theory-based knowledge to be applied in some way. They always wanted to see how the theory "worked" in the real world.

(6) Teachers and teaching were at the center of all truly meaningful classroom learning experiences. Good teachers made the linkages clear between theory and practice. Good teachers gave these individuals confidence in themselves and their ability to do things. Good teachers had a genuine interest in and dedication to their students. In essence, good teachers made the difference between whether the student truly got excited and passionate about the subject or whether the student merely got by.

(7) Mediating whatever knowledge these individuals gained in the classroom was something called "a feeling of knowing." A feeling of knowing was the reported and pervasive sense that
an individual's learning at such a "deep" level that they were unable to express it in words. Individuals were confident that they had learned things. They just couldn't specifically put what they learned into words.

A Context for Study Recommendations

This research intersects with a vast, complicated and interrelated set of higher education issues. Something so pervasive as "the curriculum" is bound to have a multitude of connections. Framing these recommendations are these reminders from three scholars quoted earlier in Chapter II. The first is J Lon Hefferlin's (1968) wise quotation that "The curriculum is the battlefield at the heart of the university." The second is Derek Bok (1986, pp. 39-40), who reminds one that discussion and debate about how to educate the whole person are eternal. No new "solutions" are ever proposed, and no permanent victories are ever won. Everything has been tried at least once, Bok says, and curriculum revision proposals that don't gain widespread faculty support merely go into hibernation to be reawakened sometime in the future. Colloquially, every dog will have his day -- some again and again and again. Finally, there is Jerry Gaff (1983), who makes this trenchant point: There is really no such thing as "the" curriculum. To speak of "the" curriculum is to speak of something mythical. There are only individual curricula, designed for individual institutions that are attempting to accomplish unique, institution-specific goals. All curricula are historically bound and situated. To speak of "the curriculum" is really to speak of a situation where n=1.

Gaff's point is not merely semantics. In one of its most
important publications, the Carnegie Foundation (1980) echoed Gaff's point by titling its work, *Three Thousand Futures*. The central idea was that each institution of higher education in America, all 3,000 of them, has a unique history, a unique mission and thus a unique future to offer its students -- and the country. Furthermore, Gaff's statement is thoroughly modern -- postmodern if one will -- in the sense that it recognizes the contextual, historically-situated and contingent nature of all curricula. Like the deconstructionists mentioned in Chapter I, all curricula (which are basically a form of "text") are products of a specific point in time; curricula cannot be divorced from the faculty who create them, from the institutional culture in which they live, from the institutional history to which they are inextricably linked, or from the disciplinary ideologies that are percolating within and outside academe at the time the curriculum is being designed, redesigned and debated. This last point merges nicely with the emerging role that qualitative research plays in the human sciences.

Qualitative researchers are often interested in "the local." They are interested in unique individuals or groups of individuals. Whether it is the anthropologist interested in some heretofore unexplored tribe in New Guinea, or the ethnographer interested in capturing the "insider's view" of how a business operates, or the survey researcher/interviewer interested in how individuals afflicted with a terminal illness, say HIV infection, "manage" that illness, all qualitative researchers are interested in gaining insight and
understanding about relatively small pieces of social reality. Although some human scientists are interested in creating "grand theories," many have more modest aims: To describe faithfully, honestly and "validly" what they saw, heard and felt, and then to give that description some theoretical interpretation. As the quotation from Wolcott (1994) in Chapter VI reminds one, the purpose of research is understanding.

Grounded theory is one technique that the researcher can use to uncover the local, situation-specific meanings in phenomena of interest. And because grounded theory is so "rooted" in and bound by the individual(s) being studied, it seems to make a nice "fit" with the essentially local, institution-specific character of any curriculum. Since all curricula are local and context bound, a research methodology that actually works at that level and which incorporates that essential understanding into its own methodological procedures, has compelling face value.

Revisiting the Issue of Generalizability

This discussion inevitably leads back to issues of the generalizability of qualitative research. Some thoughts were proffered at the end of Chapter VI. A brief statement of Maxwell's (1992) essential point is in order, though: Generalizability is typically not a goal of qualitative research. Furthermore, Maxwell states, that in qualitative research, "Generalizability is normally based on the assumption that this theory may be useful in making
sense of similar persons or situation, rather than on an explicit sampling process and the drawing of conclusions about a specific population through statistical inference" (p. 293). The use of the phrase "may be useful in making sense of" is particularly telling. Maxwell is supporting, this writer believes, the open-ended and contingent nature of all theory, as briefly discussed in Chapter V. The essential issue here is: Can this grounded theory of knowledge utilization in one small group of management majors be useful to others in making sense of similar persons or situations? This writer believes the answer is "Yes!" And this opens the door for an ongoing program of research.

An Ongoing Research Program

Several research projects present themselves. First, if career lines play such an important role in individual judgments about knowledge utilization, how do career changes or career developments influence knowledge utilization? Conducting a five-year follow-up study with these same 12 individuals would be both interesting and exciting. Secondly, the whole panoply of higher education institutional "types" could become local sites for further grounded theory development. For example, would the same categories and the same relationships hold, if the management majors were from Cornell, Barnard, Knox College, the University of Michigan, Oral Roberts University or Miami-Dade Community College? Would new relationships emerge? Would existing categories yield "richer" descriptions? If,
for example, the grounded theory was supported (or confirmed) across some or all of these various institutional types, the "robustness" of the theory would be supported. Generalizability in the commonsense use of that term, "the extent to which one can extend the account of a particular situation or population to other persons, times and settings" (Maxwell, 1992, p. 293), would be upheld. One always has to be cautious here, however, because failure to find the same categories does not invalidate this grounded theory. It simply means that this grounded theory pertains only to this specific group of management majors, in this particular institution, with such-and-such curricular characteristics.

Another domain for research concerns the continual development of a conceptual framework that more accurately categorizes knowledge utilization within the classroom learning environment in college. In Maxwell's (1992) framework, the research issue here is one of "theoretical validity." Theoretical validity "depends on whether there is consensus within the community concerned with the research about the terms used to characterize the phenomenon" (Maxwell, 1992, p. 292). The answer, based on this research, is that there is little agreement about terms and even phenomenon. If not the Kilmann, Slevin and Thomas (1983) framework, which other? Much more work needs to be done here.

Specific Curriculum Recommendations

A brief review of the curriculum design literature noted in
Chapter II leads to the inescapable conclusion that these 12 students went through four years of college without ever having a clear sense of what the curriculum they were experiencing was attempting to do.\textsuperscript{2} Squires (1990) goes right to the heart of the matter when he asks, "What does a course of study do for students that they would find difficult or impossible to do on their own? What advantages does it [the curriculum] offer over independent study? Why formalize the learning process in a curriculum at all?" (p. 5). Based on these 12 interviews, the "curricular purpose and design" at this one institution was ill-defined, indistinct and almost totally invisible to its students. This simply reaffirms the truism that the message faculty think they are sending students when they design a curriculum may be a far cry from "the message" the students actually receive.

The pragmatic recommendation here is that this institution (and maybe others as well) must go beyond the pious sounding phrases in college viewbooks and catalogs to make very explicit their curricular intent. Moreover, faculty must live that intent. It is not sufficient to just give the "goals" of this institution's curriculum lip service -- as these 12 interviews clearly indicate.

From the interviews it was also clear that the general education courses and \textbf{not} the business courses were most valued. Reevaluation of the major at this institution is a must. Why even have a management major if so little value is given to these courses? If

\textsuperscript{2}Of course, this presupposes that there is a coherent rationale for the curriculum at this institution and that courses were not just thrown together willy-nilly.
curricular design is to he "integrated" in some way, then renewed attention to the major is in order. Boyer (1986) proposed one way of making the linkages between the major and general education tighter was through "the enriched major." It is a starting point. Connectedness is the issue here.

Clearly the foundation courses in business as well as the sequence for the management major itself need tighter coordination and integration. The fact that business skills interrelate was shockingly absent from the thoughts of these interviewees. Business and management courses were seen in isolation from one another rather than in conjunction with each other. The trick here is to get faculty to make the connections.

Context was a critical concept in this research. Students, as befits individuals just starting on their careers, are strong on energy but sometimes limited in experience. Finding ways to help management majors develop the "skills and competencies" of the manager while still in school is a must. Such approaches as developing courses that are meant to teach and practice skills is one possibility.

Finally, at the most global and most difficult level, the entire undergraduate business curriculum -- foundation business courses and management courses -- could be restructured. Business is an overlapping and interlocking series of activities and disciplines. In reality, a problem in marketing may not solely be a "marketing" problem, but it probably has tendrils and roots in management,
finance, operations, the legal department and overall administration. Innovative curricula are now being discussed in MBA programs. The undergraduate management programs can profit from such discussion as well.

Conclusion

This research has been a long journey. It has been exhilarating, frustrating, difficult and rewarding. For this writer, this dissertation's most important aspect has been that it gives voice to individuals who are often overlooked as worthy contributors to the endeavors of higher education. MBA students and MBA programs attract the most attention in business schools. Undergraduates who don't go on for graduate work are a silent but large group. Quite literally, their voices need to be heard. This dissertation took a small step in giving them voice.

For anyone who has traveled down the road of scholarship, teaching and/or research, the journey can be a taxing one. Knowledge utilization and undergraduate management majors are an interesting combination. Clearly more work needs to be done on knowledge utilization and its relation to the curriculum. As noted in this chapter, the curriculum is at the heart of every institution. It is the battle ground that is central to a lot of what happens in higher education. And it is contested terrain. But it is a terrain that is worth fighting for and tilling everyday in the classroom.
To end, these concluding lines from Tennyson's poem, "Ulysses":

Come my friends.
'T is not too late to seek a newer world.
Push off, and sitting well in order smite
The sounding furrows; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die.
It may be that the gulfs will wash us down.
It may be we shall touch the Happy Isles,
And see the great Achilles, whom we knew.
Tho' much is taken, much abides; and tho'
We are not now that strength which in old days
Moved earth and heaven, that which we are, we are, --
One equal temper of heroic hearts,
Made weak by time and fate, but strong in will
To strive, to seek, to find, and not to yield.
APPENDIX A
SURVEY INSTRUMENT

CURRENT JOB HISTORY

1) Are you currently employed? __Yes __No

Please skip to Q. 7

2) Is your current job: __Full-time or __Part-time (Please check)

3) Length of time in current job: ________________

4) Your current job title is: ________________

5) Please list the primary duties in your current job (for example, "I supervise 3 people. I prepare the department's budgets. I attend division planning meets. I write the quarterly newsletter."): ________________

6) Type of employer (for example, bank, manufacturer, construction, securities firm, etc.): ________________

Please continue on to next section on Academic History (Q. 12)

7) Were you employed, either full or part-time, during the past three months?

Yes __ No

Please stop. Please return this survey in the self-addressed, return stamped envelope. Thank you very much for answering the above questions.

Continue with question 8 please.

8) What was your job title on your most recently held job? ________________

9) Total length of time you held this job: ________________
10) Please list the primary duties in that job:

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

11) Type of employer (for example, bank, manufacturer, construction, securities firm, etc.):  

____________________________________________________________________

12) Month and year you graduated from Lewis University:  

13) Did you transfer to Lewis from another school?  _Yes _No

14) While at Lewis, you were (please check one):

___ only a Business Administration/Management major
___ a double major, one of which was Business Administration/Management
___ a major other than Business Administration/Management

15) Did you considered yourself generally;

___ a fulltime day student taking 12 or more hours a semester
___ a full time evening student taking 12 hours a semester
___ a part-time evening student taking 9 hours or less a semester

16) Since graduating from Lewis, you have taken at least one graduate level course: _Yes _No

____________________________________________________________________

Please continue to the next section.

Please stop. Please return your this survey in the self-addressed, return stamped envelop. Thank you very much for answering these questions.

17) Your gender is: ___Female ___Male (please check one)

18) Your age at the time of graduation was: ___
Please read the following:

This research is specifically designed to determine your perceptions of the "usefulness" of course knowledge you have gained during your entire undergraduate education as it applies to jobs that you have held. Please read the following examples that describe different words that can apply to the usefulness of course knowledge.

Course knowledge is termed:

**Usable** if you learn something in a course and you think that that piece of new knowledge might be applicable to some job situation you might face in the future.

**Useful** if you learn something in a course and you have a specific situation at work in which you think this bit of knowledge will help you solve, resolve or handle the situation.

**Effective** if the knowledge you applied in a specific situation actually did solve, resolve or improve the situation as you anticipated that it would.

Example

You learn in a personnel course that one common error managers can make in performance evaluations is called a halo error. You would classify this bit of knowledge as **usable** if you have not yet had to conduct an employee performance appraisal, but you think at some future point in your career you will be asked to do so and so you want to remember the concept of halo error.

You learn that managers can make a halo error when they conduct performance reviews. You would classify this knowledge as **useful** if you remind yourself about the possibility of making a halo error when you are actually about to conduct a performance appraisal at work.

You actually do conduct a performance evaluation at work and you take care not to make a halo error during the evaluation. You would classify this piece of knowledge **effective** if, after the performance review, you did not make the halo error.
Using the above definitions as a guide, please evaluate your Business Administration courses on each dimension. Business administration courses include Organization Behavior, Personnel Management, Business Law, Government and Business, Business Policy, etc.

A. What percentage of the knowledge you gained through all your business administration courses do you think is usable in your current job? If you are between jobs and have been employed within the last three months, please answer each question in relation to your previous job. Also please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of usable knowledge gained from all courses in my business administration major

<table>
<thead>
<tr>
<th>100%</th>
<th>80%</th>
<th>60%</th>
<th>40%</th>
<th>20%</th>
<th>0%</th>
</tr>
</thead>
</table>

B. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you thought might be usable in your job.

C. What percentage of the knowledge you gained through all your business administration courses do you think is useful in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of useful knowledge gained from all courses in my business administration major

<table>
<thead>
<tr>
<th>100%</th>
<th>80%</th>
<th>60%</th>
<th>40%</th>
<th>20%</th>
<th>0%</th>
</tr>
</thead>
</table>

D. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you thought might be useful in your job.
E. What percentage of the knowledge you gained through all your business administration courses do you think has turned out to be effective in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of effective knowledge gained from all courses in my business administration major

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

F. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you found to be effective in your job.
Now I'd like you to apply the same three words and their definitions to your foundation courses in business.

<table>
<thead>
<tr>
<th>Course knowledge is termed:</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usable</strong> if you learn something in a course and you think that that piece of new knowledge might be applicable to some job situation you might face in the future</td>
<td>You learn in a marketing course the concept of market segmentation. You would classify this bit of knowledge as usable if you have never segmented a market but you think at some future point in your career you might be asked to do so and so you want to remember the concept.</td>
</tr>
<tr>
<td><strong>Useful</strong> if you learn something in a course and you have a specific situation at work which you think this bit of knowledge help you solve, resolve or to which it can apply</td>
<td>You learn about market segmentation in class. You would classify this knowledge as useful if you know within the year you will have to prepare a planning document in which you think the concept of market segmentation will be helpful.</td>
</tr>
<tr>
<td><strong>Effective</strong> if the knowledge you applied in a specific situation actually did solve, resolve, improve or apply to the situation as you anticipate it would</td>
<td>You actually do apply the concept of market segmentation while preparing a planning document. You would classify this piece of knowledge as effective if you found that it was, indeed, helpful in the planning process.</td>
</tr>
</tbody>
</table>
Using the above definitions as a guide, please evaluate your Foundation courses in business on each dimension. Foundation business courses are Principles of Accounting, Principles of Finance, Principles of Marketing, Business Information Systems, etc.

A. What percentage of the knowledge you gained through all your foundation courses in business do you think is usable in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of usable knowledge gained from all of my foundation business courses

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

B. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you thought might be usable in your job.

C. What percentage of the knowledge you gained through all your foundation courses in business do you think is useful in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of useful knowledge gained from all of my foundation business courses

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

D. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you thought might be useful in your job.
E. What percentage of the knowledge you gained through all your foundation courses in business do you think has turned out to be effective in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of effective knowledge gained from all of my foundation business courses

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

F. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you found to be effective in your job.
Finally, please consider the same three words as they apply to all of your General Education courses.

<table>
<thead>
<tr>
<th>Usable</th>
<th>If you learn something in a course and think that that piece of new knowledge might be applicable to some job situation you might face in the future.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful</td>
<td>If you learn something in a course and you have a specific situation at work in which you think this bit of knowledge will help you solve, resolve or handle the situation.</td>
</tr>
<tr>
<td>Effective</td>
<td>If the knowledge you applied in a specific situation actually did solve, resolve or improve the situation as you anticipated that it would.</td>
</tr>
</tbody>
</table>

You learn in a course on logic about the errors one can make in logical reasoning. You would classify this bit of knowledge as usable if you have not yet evaluated workplace discussions in terms of errors in logical reasoning, but you think that at some future point in your career such analysis would prove helpful.

You learn several types of logical errors in reasoning and realize that shortly you will be in a meeting presenting your ideas in which you anticipate the debate will be lively and intense. You would classify this knowledge as useful if you remind yourself that at this meeting you should pay close attention to any errors in reasoning that your colleagues might present.

You go to this meeting and during the debate you actually point out a colleague's errors in logical reasoning. You would classify this piece of knowledge as effective if in so doing, you change or alter the debate so that your ideas are accepted.
E. What percentage of the knowledge you gained through all your General Education courses do you think has turned out to be effective in your current job? Please consider all the courses you took in your major, whether they were at Lewis or another school.

Percentage of effective knowledge gained from all of my general education courses

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

F. In considering your answer to this item, why did you answer as you did? Please be as specific as you can be about certain courses, concepts, theories or ideas that you found to be effective in your job.

THANKS FOR COMPLETING THIS SURVEY.

PLEASE RETURN IT IN THE ENCLOSED STAMPED, SELF-ADDRESSED ENVELOPE.
APPENDIX B
COVER LETTER FOR SURVEY
APPENDIX B
COVER LETTER FOR SURVEY

Dear Graduate:

No! This is not a letter from the alumni office. But it is a letter in which I'm asking for your help.

I am currently in the final stages of my Ph.D. Part of every Ph.D. program is the requirement for each candidate to conduct some original research. My research involves Business Administration majors who graduated between May 1988 and this past June -- and that's the reason I'm writing to you.

In a nutshell, my research is about whether you feel that you have been able to "use" any of the knowledge you've learned during your undergraduate education on your job. The enclosed survey is a systematic way of helping me find that out.

I'd like to ask you to spend 10 minutes or so today, if you can, to complete the survey. The survey has already been pilot tested so I can assure you that it won't take much time to complete.

I can also assure you that:

1) All information will be kept strictly confidential. No one at school will see or will have access to your survey results.
2) I will be doing my own data entry, using the mainframe at Loyola University where I am getting my Ph.D.
3) A self-addressed stamped envelope is enclosed to make it easy for you to respond.
4) Your participation will make a major difference in the quality of my final dissertation.

Also you'll note that each survey has a series of numbers on it. These are for tracking survey returns and for possible follow-up. If you have any questions about the survey or my research, I'd like you to call me. Please feel free to call me at school or at my consulting firm's number:

   School: (000) 555-5555 x-123
   Consulting firm: (000) 555-5555

Thanks very much.
APPENDIX C
COPY OF FOLLOWUP POSTCARD
APPENDIX C
COPY OF FOLLOWUP POST CARD

JUST A REMINDER.

Three weeks ago I sent you a survey from XYZ University about your job and the courses you took while at school. If you still have the survey but haven't returned it yet, I'd like you to take time to return it. If you need another, please call me either at school or at my consulting office.

School: 000/555-5555 x-123
Consulting office: 000 555-5555

Thanks. Al Rosenbloom
APPENDIX D
LIST OF COURSES BY CURRICULAR DOMAIN
APPENDIX D
LIST OF COURSES BY CURRICULAR DOMAIN

GENERAL EDUCATION COURSES

- College Writing
- Western Civilization I and II
- Introduction to Human Communication
- Introduction to Philosophy
- Natural Science Courses (Biology, Chemistry, etc.)
- 2 Religion Courses (Level I and II)
- Action and Values (Ethics)
- Social Science Course (Sociology, State and Federal Gov.)
- Cultural Diversity
- Fine Arts (Music for the Listener, Art Appreciation, Theater Appreciation)
- Literature Course

FOUNDATION BUSINESS COURSES

- Principles of Accounting I and II
- Principles of Management
- Principles of Marketing
- Principles of Finance
- Microeconomics
- Macroeconomics
- Finite Math
- Business Statistics
- Management Information Systems
- Management Science
- Writing for the Professions

MANAGEMENT COURSES

- Organizational Behavior
- Human Resource Management (Personnel and Manpower Mgt.)
- Business Policy (Strategy Analysis and Action)
- Business Law
- Government and Business
- Financial Planning and Control
- Small Business Management/Entrepreneurship
- International Business
- Sales Management
I. Introduction

Interviewer reads the following:

This interview is intended to explore your ideas about whether and to what degree you "use" course knowledge on your job that you gained as part of your undergraduate education. It will be an open-ended interview so as to let you describe your own experiences in your own words. I'd like to tape record our interview. This will let me do two things: (1) It lets me focus on what you're saying and not become distracted with writing your answers down now; and (2) it lets me go back after our interview and code your responses for my dissertation. Our conversation will be totally confidential. Is it okay to tape our interview?

Good. I'd also like to encourage you to be as honest with me as you can. Please don't hesitate to be honest about your opinions about any courses you and I might have had together.

II. Job History

Interviewer reads the following:

I'd like to begin with your current job. Can you tell me:

1) How long you've had your current job?
2) What is your current job title?
3) What are the major duties, responsibilities or activities in this job?
4) Have your job duties, responsibilities or activities changed at all while you've had this job?
5) Could you please describe what a typical day is like for you?

III. Academic History

Interviewer reads the following:

Good. Now, I'd like to get an overview of your undergraduate education.

6) Did you have any other major other than Business Administration?
7) Why did you choose to be a business administration major?
8) Did you take all of your course work at this university?

IV. Knowledge Use

Interviewer reads the following:

Now, I'd like to focus on your perceptions of how much useful knowledge you gained as an undergraduate in relationship to your current job. You might remember that on the survey I sent you, I had three different terms which can be applied to knowledge use. I've brought the same examples of each of these terms today.

I'd like you to look at this card which explains the three terms I'm particularly interested in and see if you understand them.

[Hand participant card.]

Is it clear when you could classify knowledge as useable, useful and effective? If participant says "no," explain. If participant says "yes," continue.

9) Now I'd like you to look at this card. It is exactly the same as the previous card, except that it has listed all the courses required for a business administration major. I'd like you to take a minute and think about each of the courses listed. After you've considered the courses, tell me if any of the courses stand out as giving you useable, useful and effective knowledge. Please be as specific as you can about what it was about this course that causes you to evaluate it as you do.

Probe: specifics of course content as being useful or usable instructor's presentation or examples other student's questions, comments or participation pedagogy: text, cases, group discussions, videos, guest lecturers, exams, etc.

10) Next, I'd like for us to do the same thing with the foundation courses in business.

[Hand respondent a card with foundation business course listed.]

I'd like you to take a minute and think about each of the courses listed. After you've considered the courses, tell me if any of the courses stand out as giving you useable, useful and effective knowledge. Please be as specific as you can about what it was about this course that causes you to evaluate as you do.
Probe: specifics of course content as being useful or usable
instructor's presentation or examples
other student's questions, comments or participation
pedagogy: text, cases, group discussions, videos, guest
lecturers, exams, etc.

11) Lastly, I'd like for us to do the same thing with the
general education courses.

[Hand respondent a card with the general education courses
listed.]

I'd like you to take a minute and think about each of the
courses listed. After you've considered the courses, tell me
if any of the courses stand out as giving you useable, useful
and effective knowledge. Please be as specific as you can be
about what it was about this course that causes you to
evaluate as you do.

Probe: specifics of course content as being useful or usable
instructor's presentation or examples other student's
questions, comments or participation pedagogy: text,
cases, group discussions, videos, guest lecturers,
exams, etc.

12) Finally, is there anything else that you'd like to tell me
that we haven't covered about how you "use" the knowledge
you've gained during your undergraduate education on your
job?

Thanks very much. Your identity will be kept strictly
confidential.
APPENDIX F

ONE WAY ANALYSIS OF VARIANCE TABLES
FOR USABLE GENERAL EDUCATION KNOWLEDGE PARTITIONED IN THIRDS
APPENDIX F
ONE WAY ANALYSIS OF VARIANCE TABLES
FOR USABLE GENERAL EDUCATION KNOWLEDGE PARTITIONED IN THIRDS

Each of the following 11 tables summarizes a one way analysis of variance for each of the dependent knowledge utilization variables of Figure 7, page 154. In each, general education "usable" knowledge, partitioned in thirds, is the independent variable. A Tukey's B statistic is computed when group means differed at the .05 level.

Table 24. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USEFUL GENERAL EDUCATION KNOWLEDGE with accompanying Tukey's B.

<table>
<thead>
<tr>
<th>Variable: % Useful knowledge, general education courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Variable: % Usable knowledge, general education, partitioned in thirds</td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>20722.0449</td>
<td>10361.0225</td>
<td>20.3200</td>
<td>.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>58</td>
<td>29573.7256</td>
<td>509.8918</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>50295.7705</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>21.1935</td>
<td>24.5702</td>
<td>4.4129</td>
<td>12.1811 To 30.2060</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>43.5882</td>
<td>24.7160</td>
<td>5.9945</td>
<td>30.8804 To 56.2960</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>67.6923</td>
<td>11.8630</td>
<td>3.2902</td>
<td>60.5236 To 74.8610</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>37.3443</td>
<td>28.9528</td>
<td>3.7070</td>
<td>29.9291 To 44.7594</td>
</tr>
</tbody>
</table>

Tukey-B Procedure

<table>
<thead>
<tr>
<th>G</th>
<th>G</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td>r</td>
<td>r</td>
</tr>
<tr>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

Mean Group 1 2 3

21.1935 Grp 1
43.5882 Grp 2 *
67.6923 Grp 3 **

(*) Denotes pairs of groups significantly different at the .050 level
Table 25. One way analysis of variance for usable general education knowledge (partitioned in thirds) and EFFECTIVE GENERAL EDUCATION KNOWLEDGE with accompanying Tukey's B.

Variable: % Effective knowledge, general education courses

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>17836.0638</td>
<td>8918.0319</td>
<td>17.6346</td>
<td>.0000</td>
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<tr>
<td>Within Groups</td>
<td>58</td>
<td>29331.2477</td>
<td>505.7112</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>47167.3115</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>18.2581</td>
<td>19.2267</td>
<td>3.4532</td>
<td>11.2057 To 25.3105</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>41.4706</td>
<td>28.1561</td>
<td>6.8289</td>
<td>26.9941 To 55.9471</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>60.6154</td>
<td>21.5195</td>
<td>5.9684</td>
<td>47.6113 To 73.6195</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>33.7541</td>
<td>28.0379</td>
<td>3.5899</td>
<td>26.5733 To 40.9349</td>
</tr>
</tbody>
</table>

Tukey-B Procedure

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.2581</td>
<td>Grp 1</td>
</tr>
<tr>
<td>41.4706</td>
<td>Grp 2</td>
</tr>
<tr>
<td>60.6154</td>
<td>Grp 3</td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level
Table 26. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USABLE FOUNDATION BUSINESS COURSE KNOWLEDGE with accompanying Tukey's B.

---

**Variable:** % Usable knowledge, foundation business courses  
**By Variable:** % Usable knowledge, general education, partitioned in thirds

### Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>14703.7371</td>
<td>7351.8686</td>
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<td>.0000</td>
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<tr>
<td>Within Groups</td>
<td>58</td>
<td>31537.9022</td>
<td>543.7569</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>46241.6393</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>38.6452</td>
<td>26.6865</td>
<td>4.7930</td>
<td>28.8565 To 48.4339</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>75.9231</td>
<td>18.9361</td>
<td>5.2519</td>
<td>64.4801 To 87.3661</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>53.1967</td>
<td>27.7614</td>
<td>3.5545</td>
<td>46.0867 To 60.3067</td>
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</tbody>
</table>

**Tukey-B Procedure**

G G G  
G r r r  
P P P  

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
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<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.6452</td>
<td>Grp 1</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>62.3529</td>
<td>Grp 2</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.9231</td>
<td>Grp 3</td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level.
Table 27. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USEFUL FOUNDATION BUSINESS COURSE KNOWLEDGE with accompanying Tukey’s B.

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>9793.7215</td>
<td>4896.8608</td>
<td>7.5692</td>
<td>.0012</td>
</tr>
<tr>
<td>Within Groups</td>
<td>58</td>
<td>37522.6063</td>
<td>646.9415</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>47316.3279</td>
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<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>31.0000</td>
<td>26.4411</td>
<td>4.7490</td>
<td>21.3013 To 40.6987</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>54.2941</td>
<td>22.4855</td>
<td>5.4535</td>
<td>42.7332 To 65.8551</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>58.6154</td>
<td>26.5504</td>
<td>7.3638</td>
<td>42.5711 To 74.6596</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>43.3770</td>
<td>28.0821</td>
<td>3.5955</td>
<td>36.1849 To 50.5692</td>
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</table>

Tukey-B Procedure

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
<th>1 2 3</th>
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<tbody>
<tr>
<td>31.0000</td>
<td>Grp 1</td>
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</tr>
<tr>
<td>54.2941</td>
<td>Grp 2</td>
<td>*</td>
</tr>
<tr>
<td>58.6154</td>
<td>Grp 3</td>
<td>*</td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level
Table 28. One way analysis of variance for usable general education knowledge (partitioned in thirds) and EFFECTIVE FOUNDATION BUSINESS COURSE KNOWLEDGE with accompanying Tukey’s B.

- - - - - - - - - - O N E W A Y - - - - - - - - - -

Variable: % Effective knowledge, foundation business courses
By Variable: % Usable knowledge, general education, partitioned in thirds

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6355.9136</td>
<td>3177.9568</td>
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<td>.0154</td>
</tr>
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<td>Within Groups</td>
<td>58</td>
<td>41059.1356</td>
<td>707.9161</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>47415.0492</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard Group Count Mean Deviation Error 95 Pct Conf Int for Mean
Grp 1 31 26.5161 27.0492 4.8582 16.5944 To 36.4378
Grp 2 17 46.8235 25.8100 6.2598 33.5533 To 60.0938
Grp 3 13 47.0769 26.5376 7.3602 31.0404 To 63.1134
Total 61 36.5574 28.1114 3.5993 29.3577 To 43.7570

Tukey-B Procedure

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.5161</td>
<td>Grp 1</td>
</tr>
<tr>
<td>46.8235</td>
<td>Grp 2</td>
</tr>
<tr>
<td>47.0769</td>
<td>Grp 3</td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level
Table 29. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USABLE MANAGEMENT COURSE KNOWLEDGE with accompanying Tukey's B.

**Table 29.** One way analysis of variance for usable general education knowledge (partitioned in thirds) and USABLE MANAGEMENT COURSE KNOWLEDGE with accompanying Tukey's B.

**Analysis of Variance**

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2</td>
<td>7487.1325</td>
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<td>Total</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>45.2258</td>
<td>22.8542</td>
<td>4.1047</td>
<td>36.8428 To 53.6088</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>55.9412</td>
<td>22.6508</td>
<td>5.4936</td>
<td>44.2952 To 67.5871</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>73.6923</td>
<td>14.7105</td>
<td>4.0799</td>
<td>64.8029 To 82.5817</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>54.2787</td>
<td>23.7915</td>
<td>3.0462</td>
<td>48.1854 To 60.3720</td>
</tr>
</tbody>
</table>

**Tukey-B Procedure**

<table>
<thead>
<tr>
<th>G</th>
<th>G</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td>r</td>
<td>r</td>
</tr>
<tr>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.2258</td>
<td>Grp 1</td>
</tr>
<tr>
<td>55.9412</td>
<td>Grp 2</td>
</tr>
<tr>
<td>73.6923</td>
<td>Grp 3</td>
</tr>
</tbody>
</table>

(\*) Denotes pairs of groups significantly different at the .050 level.
Table 30. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USEFUL MANAGEMENT COURSE KNOWLEDGE with accompanying Tukey’s B.

---

**Table 30.** One way analysis of variance for usable general education knowledge (partitioned in thirds) and USEFUL MANAGEMENT COURSE KNOWLEDGE with accompanying Tukey’s B.

---

**Variable:** Useful knowledge, management courses

**By Variable:** Usable knowledge, general education, partitioned in thirds

### Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6865.7323</td>
<td>3432.8661</td>
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<td>.0025</td>
</tr>
<tr>
<td>Within Groups</td>
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<td>29997.4153</td>
<td>517.1968</td>
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</table>

### Group Statistics

<table>
<thead>
<tr>
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<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>37.8387</td>
<td>25.6282</td>
<td>4.6030</td>
<td>28.4382 To 47.2392</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>44.2941</td>
<td>23.7954</td>
<td>5.7712</td>
<td>32.0597 To 56.5286</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>65.1538</td>
<td>10.1394</td>
<td>2.8122</td>
<td>59.0267 To 71.2810</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>45.4590</td>
<td>24.7868</td>
<td>3.1736</td>
<td>39.1108 To 51.8072</td>
</tr>
</tbody>
</table>

### Tukey-B Procedure

<table>
<thead>
<tr>
<th>G G G</th>
<th>r r r</th>
<th>P P P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Group</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>

37.8387 Grp 1
44.2941 Grp 2
65.1538 Grp 3

(*) Denotes pairs of groups significantly different at the .050 level
Table 31. One way analysis of variance for usable general education knowledge (partitioned in thirds) and EFFECTIVE MANAGEMENT COURSE KNOWLEDGE with accompanying Tukey’s B.

- - - - - - - - - - O N E W A Y - - - - - - - - - -

Variable: % Effective knowledge, management courses
By Variable: % Usable knowledge, general education, partitioned in thirds

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>28.9677</td>
<td>26.0327</td>
<td>4.6756</td>
<td>19.4189 To 38.5166</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>38.8824</td>
<td>22.0394</td>
<td>5.3453</td>
<td>27.5507 To 50.2140</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>53.4615</td>
<td>17.5766</td>
<td>4.8749</td>
<td>42.8401 To 64.0830</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>36.9508</td>
<td>24.9643</td>
<td>3.1963</td>
<td>30.5572 To 43.3445</td>
</tr>
</tbody>
</table>

Tukey-B Procedure

G G G
r r r
P P P

Mean Group 1 2 3

28.9677 Grp 1
38.8824 Grp 2
53.4615 Grp 3 *

(*) Denotes pairs of groups significantly different at the .050 level
Table 32. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USABLE ELECTIVE COURSE KNOWLEDGE with accompanying Tukey's B.

--- ONEWAY ---

**Variable:** usable knowledge, elective courses  
**By Variable:** usable knowledge, general education, partitioned in thirds

### Analysis of Variance

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<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>10991.9568</td>
<td>5495.9784</td>
<td>9.6319</td>
<td>.0002</td>
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<tr>
<td>Within Groups</td>
<td>58</td>
<td>33094.9940</td>
<td>570.6033</td>
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<td></td>
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<td>Total</td>
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<td>44086.9508</td>
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### Group Statistics

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<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>20.7742</td>
<td>19.3093</td>
<td>3.4680</td>
<td>13.6915 To 27.8569</td>
</tr>
<tr>
<td>Grp 2</td>
<td>17</td>
<td>38.6471</td>
<td>26.5917</td>
<td>6.4494</td>
<td>24.9749 To 52.3192</td>
</tr>
<tr>
<td>Grp 3</td>
<td>13</td>
<td>54.1538</td>
<td>29.7149</td>
<td>8.2414</td>
<td>36.1973 To 72.1104</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>32.8689</td>
<td>27.1069</td>
<td>3.4707</td>
<td>25.9265 To 39.8112</td>
</tr>
</tbody>
</table>

### Tukey-B Procedure

- G G G
- r r r
- P P P

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
<th>1 2 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.7742</td>
<td>Grp 1</td>
<td></td>
</tr>
<tr>
<td>38.6471</td>
<td>Grp 2</td>
<td>*</td>
</tr>
<tr>
<td>54.1538</td>
<td>Grp 3</td>
<td>*</td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level
Table 33. One way analysis of variance for usable general education knowledge (partitioned in thirds) and USEFUL ELECTIVE COURSE KNOWLEDGE with accompanying Tukey’s B.

Variable: % Useful knowledge, elective courses
By Variable: % Usable knowledge, general education, partitioned in thirds

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5839.6670</td>
<td>2919.8335</td>
<td>4.7467</td>
<td>.0123</td>
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<td>Within Groups</td>
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<td>35677.1198</td>
<td>615.1228</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>41516.7869</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
<td>20.9355</td>
<td>20.5490</td>
<td>3.6907</td>
<td>13.3980 To 28.4729</td>
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<tr>
<td>Grp 2</td>
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<td>34.0588</td>
<td>27.8690</td>
<td>6.7592</td>
<td>19.7299 To 48.3878</td>
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<tr>
<td>Grp 3</td>
<td>13</td>
<td>45.2308</td>
<td>29.6961</td>
<td>8.2362</td>
<td>27.2856 To 63.1759</td>
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<tr>
<td>Total</td>
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<td>29.7705</td>
<td>26.3049</td>
<td>3.3680</td>
<td>23.0335 To 36.5075</td>
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Tukey-B Procedure

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
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<tbody>
<tr>
<td>20.9355</td>
<td>Grp 1</td>
</tr>
<tr>
<td>34.0588</td>
<td>Grp 2</td>
</tr>
<tr>
<td>45.2308</td>
<td>Grp 3</td>
</tr>
</tbody>
</table>

(*) Denotes pairs of groups significantly different at the .050 level.
Table 34. One way analysis of variance for usable general education knowledge (partitioned in thirds) and EFFECTIVE ELECTIVE COURSE KNOWLEDGE with accompanying Tukey's B.

--- O N E W A Y ---

Variable: % Effective knowledge, elective courses
By Variable: % Usable knowledge, general education, partitioned in thirds

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5347.3115</td>
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<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grp 1</td>
<td>31</td>
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<td>3.9031</td>
<td>10.7707 To 26.7132</td>
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<tr>
<td>Grp 2</td>
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<td>30.8235</td>
<td>25.8414</td>
<td>6.2675</td>
<td>17.5371 To 44.1100</td>
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<tr>
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<td>7.5446</td>
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<td>25.5210</td>
<td>3.2676</td>
<td>20.5621 To 33.6346</td>
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</table>

Tukey-B Procedure

| G G G |
| r r r |
| P P P |

Mean Group 1 2 3

18.7419 Grp 1
30.8235 Grp 2
42.1538 Grp 3 *

(*) Denotes pairs of groups significantly different at the .050 level
REFERENCES


VITA

Alfred Rosenbloom is an Assistant Professor in the Marketing Department in the Graduate School of Business at Illinois Benedictine College (IBC). Before joining the Graduate School at IBC, Al Rosenbloom was Assistant Professor of Business Administration and Chair of the Business Administration Department at Lewis University. He served in that capacity for seven years.

Before beginning his career in higher education, Al Rosenbloom worked in the health care industry. He has served as Administrative Assistant to the Director of Mental Health at the DuPage County Health Department and has served as the Marketing Director for Carnow, Conibear and Associates, an international industrial medicine and occupational health consulting firm. In 1981, he founded his own consulting firm, A & R Consultants, that has specialized in marketing consultations to service companies.

Al Rosenbloom holds a B.A. in English Literature from Drake University, Des Moines, IA; an M.A. in English Literature from the University of Toronto, Toronto, Ontario, Canada; and an M.P.H. from the University of Illinois at Chicago Circle.
The dissertation submitted by Alfred Rosenbloom has been read and approved by the following committee:

Dr. Terry E. Williams, Ph.D., Director
Associate Professor, Department of Educational Leadership and Policy Studies, Loyola

Dr. Steven I. Miller, Ph.D.
Professor, Department of Educational Leadership and Policy Studies, Loyola

Dr. John E. Eber, Ed.D.
Dean of Graduate and Continuing Education; Professor of Business, Illinois Benedictine College

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

October 4, 1994
Date

Terry E. Williams
Director's Signature