# CONTINUITY AND CHANGE IN COST MANAGEMENT EDUCATION SINCE 1962: A CONTENT ANALYSIS OF THE PRESENTATION AND PEDAGOGY OF CHARLES HORNGREN'S

COST ACCOUNTING, A MANAGERIAL EMPHASIS

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#### **ABSTRACT**

In 1962, the first edition of the textbook. Cost Accounting: A Managerial Emphasis, was published by Charles T. Horngren. Over a period of nearly forty years, the book has remained the premier textbook in cost accounting and cost management. At the time of its original publication, there were very few competing textbooks in cost accounting with the most notable being the Adolf Matz text that was originally published in the early 1950s. Because of the robust post-war economy of the 1950s and early 1960s, cost accounting had become largely mechanical in nature with little emphasis on planning, efficiency and decision-making. Over its ten editions. the book has been changed and updated as the field of cost management has evolved from the mechanical, standard costing of the 1950s to the more decision- oriented costing techniques such as Activity-Based Costing and Balanced Score-Card Analysis.

During this forty-year period, the book itself acts a window into the evolution of modern cost management and can be used to trace the development of new cost management techniques with the demise of older, less useful ones. The book also provides a wonderful look at the changes in cost education pedagogy. Changes that include a move from a dry, again, rather mechanical, presentation of the basics of cost management to a more student-friendly

approach with many references to actual company usage of cost management techniques and materials that help the students to solve problems and better learn the materials. This paper chronicles and tracks the changes in cost management procedures and pedagogy over the past forty years using Charles Horngren's Cost Accounting: A Managerial Emphasis as a basis of identifying those changes.

Through an exhaustive study of the ten editions of Horngren's Cost Accounting: A Managerial Emphasis, a list of sixty-five items was compiled that dealt with the presentation and learning pedagogy for cost management education used in the books. These items ranged from something as simple as a good subject index to the use of PowerPoint presentations and Web CT. During forty years, Horngren, to enhance an already solid pedagogy, included new teaching innovations as they became available. An explosion ofthese innovations, thirty-eight of the sixty-five Pedagogy items, came in the decade of the 1990s. Due to these innovations, instructors and students had wide-ranging opportunities to interact using modern cost accounting information in ways only dreamed of with Horngren's first edition in 1962.

#### INTRODUCTION

In a 2001 advertisement on their website, Prentice Hall lauds its most

important product in its accounting textbook line as follows: "This acclaimed, marketleading book embraces the basic theme of 'different costs for different purposes.' Cost Accounting reaches beyond cost accounting procedures to consider concepts, analyses, and management."1 The book they were referring to was Cost Accounting: A Managerial Emphasis (Horngren's Book) with its lead author, Charles Horngren. In the intervening four decades since the first publication of the book in 1962, the book has become the premier cost accounting textbook on the market. In its tenth edition, the book has garnered a reputation since the early editions for incorporating the changes in cost management theory and practice while keeping the core of basic cost management techniques intact. The book has also incorporated the changes in cost management education over those forty years by incorporating new teaching pedagogies. This process moved cost management from its very mechanical, cost accounting nature to the more studentfriendly, decision-making orientation.

The following paper will present a short biography of Charles Horngren so that the reader might be more familiar with his education and work experience. An overview of Horngren's Books followed by a detailed content analysis of each edition will also be presented. The content analysis will highlight both the continuity and change of Presentation, Pedagogy, and Cost Management Education the authors have made to the book over the past four decades.

## A SHORT BIOGRAPHY OF CHARLES T. HORNGREN<sup>2</sup>

Charles Thomas Horngren was born in Milwaukee, Wisconsin on October 28, 1926. Horngren, the son of William and Grace Horngren, graduated from Milwaukee's Washington High School in 1944. Upon graduation from high school, he enlisted in the army where he served for twenty-six months. When he left the service in 1946, he enrolled at Marquette University in Milwaukee, where he was elected to Beta Alpha Psi in 1947. Horngren graduated from Marquette in 1949 as that year's valedictorian. Following graduation, he obtained a job at the firm of Peat Marwick Mitchell and Company (currently KPMG Peat Marwick) as a staff auditor. He left Peat Marwick after less than a year and took a full time teaching position at Spencerian College, a commercial business college in downtown Milwaukee. This move was Horngren's first step in what turned out to be a five-decade career in academe. In 1952 he resigned at Spencerian College to pursue a Masters' degree at Harvard, which he received in 1952. Also in 1952, Horngren married Joan Estelle Knickelbine. would eventually have four children.

Upon completion of his Harvard degree, Horngren immediately enrolled in the doctoral program at the University of Chicago. After completing the prescribed course of study and his dissertation entitled "The Implications for Accountants by the Use of Financial Statements by Securities Analysts," he received a Ph.D. in 1955. While pursuing his doctoral studies at the University of Chicago, he was a full-time member of the faculty serving as an instructor from 1952 to 1954 and as an assistant professor from 1954 to 1955. During this period, Horngren earned the credential of Certified Public Accountant in the state of Wisconsin.

Horngren returned to his alma mater, Marquette University, where he taught during the 1955 and 1956 academic school years as an assistant professor. He then joined the faculty of the new University of Wisconsin - Milwaukee as an associate professor. He taught for the U. W. M. from

1956 until to 1959. While at U.W.M., Horngren published his book. CPAProblems and Approaches to Solutions. This two-volume set was co-authored with Justin. A. Leer who was also at the University of Wisconsin - Milwaukee at the time. In 1959, he returned to the University of Chicago where he served as an associate professor from 1959-1963 and a full professor from 1963 to 1966 before moving to Stanford University. It was during this period that he published his first edition of the book, Cost Accounting: A Managerial Emphasis. Through the first five editions of his cost book, Dr. Horngren acted as sole author. With the publication of the Sixth edition in 1987, Horngren named George Foster, an accounting professor at Stanford University, as co-author for the book. With rapid changes concerning cost managerial accounting, Srikant Datar, also of Stanford University then, was named a third author of the book's Eighth edition.<sup>3</sup>

Besides Cost Accounting: A Managerial Emphasis that is the focus of this paper, Horngren is also the author or co-author of several other textbooks. In 1965 he published two different books for the first time. The first was Introduction to Management Accounting. Horngren remained sole author on this book until Gary L. Sundem became co-author with the 8th edition in 1990. Horngren also published the book, Readings in Accounting Theory with S. Davidson, D. Green, and G. Sorter in 1965. In 1981, he published the first edition of Introduction to Financial Accounting. Gary L. Sundem again became the co-author of this book as well in 1990 with its 4th edition. Besides his books, Horngren has served on the editorial boards of several journals and is acting as a consulting editor for the Prentice-Hall Series in Accounting. Horngren's contributions to accounting literature allowed him to become active in

many professional organizations as the following partial list shows:

Served as a member of the Accounting Principles Board from 1968 to 1973.

Served on the Financial Accounting Standards Board Advisory Council from 1976 to 1980.

Served as a trustee of the Financial Accounting Foundation from 1984 to 1989.

Served as the director of research of the American Accounting Association from 1964 to 1966.

Served on a number of American Accounting Association committees and as the organization's president from 1976 to 1977.

Served as a member of the American Institute of Certified Public Accountants' Council from 1978 to 1981 as well as serving on many of the AICPA's committees.

He has also been active in the NAA serving as a member of the Committee on Research Planning (1963-65) and the Board of Regents of the Institute of Management Accounting (1981-84).

Dr. Horngren, during his career, has also been the recipient of many notable honors. Starting in 1973 he was named the Littlefield Edmund W. Professor Accounting at Stanford. That year he also received the Alumni Professional Achievement Award of Marquette University and the first Outstanding Educator Award granted by the AAA. He is the only professor to receive both the Faculty Excellence Award (1975) and the Distinguished Professor Award (1983) issued by the California Society of CPAs. In 1985, he was the recipient of the first Outstanding Accounting Educator Award granted by the American Institute of CPAs.

Finally, in August 1990, Dr. Horngren was inducted into the *Accounting Hall of Fame*. Horngren retired from Stanford in 1993 where he holds emeritus status. In honor of his wife, he established the Joan E. Horngren Professorship in Accounting at Stanford in 1984.

#### OVERVIEW OF HORNGREN'S BOOK

Since 1962, The Financial Accounting Standards Board and its predecessor agency, the Accounting Principles Board, have issued more than 170 separate statements governing the actions to be taken to enhance financial accounting and reporting. Concerning cost management, no such pronouncements exist to govern the way internal business policies and practices are developed.4 Often managers saw cost management and techniques its unalterable and monolithic in nature, yet over its four decades and ten editions, Horngren's Book has incorporated changes in cost management while retaining the "basics" of cost accounting procedures and practices.

In 1962, Charles Horngren published the first edition of his book, Cost Accounting: A Managerial Emphasis. In the preface to this original book, Horngren writes that the book's goal is to, "put cost accounting in focus as a highly developed quantitative device for helping managers to select and reach their objectives." In a very modern concept for 1962, Horngren states, "Today the business world typically wants students with perspective, an ability to analyze, an ability to distinguish the important from the unimportant . . . . The time has come for a change in emphasis--a front-and-center spotlighting of costs for planning and control." In a correspondence with the authors, Dr. Horngren, mentioned, "the first edition was decidedly different from other texts; for example, despite prepublication reviews, I shoved process costing (basically bookkeeping) way back and moved CVP way up; emphasized decision-making via standard costing and relevant costing (a real breakthrough in '62) and capital budgeting and [statistical methods]."<sup>5</sup>

A 1962 review of the book published in the Accounting Review in January 1963 marked the prophetic statement that says "[This Book] is one of the new wave of cost accounting texts which are transforming the subject from a concentration on inventory costing systems into a dynamic study of the role of accounting in planning and control. This book is certain to have a major part in Among Horngren's the transformation." competitors that were making up this wave were the third edition of Matz, Curry and Frank's Cost Accounting and the sixth edition of John Neuner's Cost Accounting: Principles and Practice.

Though Horngren indicated in his early editions that his methodology was decision-oriented, he did emphasize the necessary cost procedures and other methodologies. In the preface to the 1972 third edition he explains:

"Cost accounting courses now cover a wider range of topics than ever. Some instructors prefer to concentrate on developing a solid comprehension of the uses and limitations of formal cost accounting systems, as they exist. Others prefer a normative approach, focusing on how cost systems should be or on how cost information should be provided for various classes of decisions. This book attempts to satisfy both needs."

With the sixth edition, the book took on its second author, George Foster of Stanford University. In the preface to the seventh edition the authors discuss the flexible focus of the book in the following fashion:

"Cost accounting provides data for various purposes, including planning, controlling and product costing. We stress our major theme of "different costs for different purposes" throughout this book. The favorable comparison to previous editions is evidence that cost accounting courses can be enriched and relieved of drudgery by broadening the course from coverage of procedures alone to a full-fledged coverage of concepts, analyses, and procedures that pays more than lip service to accounting as a management tool."

Even with the positive reactions to the previous editions of the book, the authors continued to up-date the book's material and modernize its look and pedagogy. As noted earlier, in the eighth edition, Srikant M. Datar was included as a third author, and over the final three editions, the authors changed the look of the book and provided the most up-to-date cost management topics. In fact, the recommended readings' section (reference bibliography) at the end of each book could always be used to find the most current literature on most cost management topics. Finally, over the ten editions, the book was always noted for being well organized, but even the authors saw that its organization was not perfect and wrote the book in such a way for instructors to be able to choose topics and sequence them as they saw a need. The Horngren correspondence also indicated that changes to the book over the years were driven by reviews of professors' syllabi, as well as market constraints that put the length of the book at about 1,000 pages. Horngren writes, "notable change among various editions has been the decline of long problems and cases. Our systematic tabulations of more and more syllabi revealed little or no use of such. So with some sorrow, we have kissed many goodbye."6

# CHANGES IN PRESENTATION, PEDAGOGY AND COST MANAGEMENT EDUCATION

## The Study

The overall focus of the study was to determine the changes in presentation, pedagogy, and cost management education since the early 1960s. These changes were tracked using a methodology called "content Content analysis tracks the analysis." changes in titles and verbiage of nonquantitative data. The ten editions of the book were studied for changes in subject presentation and the text's pedagogy. Although a similar content study conducted by MacDonald Richardson (1999),<sup>7</sup> that study focused primarily on subject matter and whether academe was a leader or follower in the timing of teaching those subjects.

### **Study Results**

The list of sixty-five (65) items in TABLE I was compiled from an exhaustive study of the Horngren Books. The analysis following TABLE I will break the study into

decades and discuss the developments over the span of forty years in presentation and pedagogy in cost accounting, but a cursory look at this table certainly indicates that the impact in the 1990's has been nothing less than phenomenal.

#### The 1960's

Considering the sixty-five items identified over the four decades of Horngren's Books (TABLE I), only 14 items were present in the decade of the 1960's. These represented the basics included in most textbooks of the time such as a Preface, Surveys of Company Practice, End of Chapter--Summary, Questions, Exercises, Problems, Self-study problem/solution, Case

TABLE I PRESENTATION & PEDAGOGY ITEMS OVER FOUR DECADES OF HORNGREN

		60's	70's	80's	90's
1	"Correcting Student Misconceptions" in most Chapters				X
2	"New in This Edition" in most Chapters				X
3	"Points to Stress" Examples				X
4	"Points to Stress" in each Chapter				X
5	"Teaching Tip" in most Chapters				X
6	Accounting & Taxation Services Hotlines				X
7	Annotated Instructor's Book				X
8	Author Index		X	X	X
9	Biography of Authors		X	X	X
1	Black and White Graphics	X	X		
1	Case Studies	X	X	X	X
1	Chapter Summary	X	X	X	X
1	Check Figures Beside Problems				X
1	Collaborative Learning Problems				X
1	Company Index				X
1	Company Vignettes—Concepts in Action				X
1	Computerized Applications in Cost Accounting				X
1	Cost Accounting in Professional Exams				
	Appendix-End of Book of the Book	X	X	X	X
1	Cover with City Picture		X	X	X
2	Current Business Trends				X
2	Curriculum Linkage				X
2	Different Colored Pages for End of Chapter Material				X
2	Dual (or tri-) colored Graphics		X	X	X
2	End of Book Glossary	X	X	X	X
2	End of Book List of NAA Research Publications	X	X		11
2	End of Book Recommended Readings	**	71	X	X
2	End of Chapter Exercises			**	X
2	End of Chapter Problem/Solution for Self-Study	X	X	X	X
2	End of Chapter Problems	X	X	X	X
3	End of Chapter Questions	X	X	X	X
3	End of Chapter Suggested Readings	X	X	X	71
3	End of Chapter Terms List	Λ	Λ	X	X
3	How to use Annotated Instructor's Edition			Λ	X
3	Instructor's Manual and Media Guide			v	
3				X	X
	Interactive CD-ROM (Career Paths)				X
3	Learning Objectives by Chapter Multi-colored Graphics				X
3					X
3	Notes on Compound Interest and Interest			~~	
2	Tables (PV & FV)		X	X	X
3	Notes to Corresponding Research				X
4	Photo Credits				X
4	Photographs				X
4	Power Notes for Students				X
4	Power Point (or similar) Presentations				X
4	Preface	X	X	X	X
4	Problems to Review Previous Chapter		X	X	X
4	Professors-Book Web site				X
4	Publisher's Custom Tests				X
4	Solutions Manual	X	X	X	X

4	Solutions Manual for Computerized				
	Applications in Cost Accounting				X
5	Solutions to Spreadsheet Templates				X
5	Solutions Transparencies			X	X
5	Spreadsheet Templates			<b>X</b> .	X
5	Student Book Web site				X
5	Student Guide and Review Manual		X	X	X
5	Student Solutions Manual (Even # Problems)				X
5	Subject Index	X	X	X	X
5	Surveys of Company Practice				X
5	Table of Contents	X	X	X	X
5	Table of Contents—Brief				X
6	Teaching Transparencies				X
6	Test Item File		X	X	X
6	Time Line from 1962 Cost Accounting 1st Edition				X
6	Video Case Studies				X
6	Videos				X
6	WebCT				X

Studies, and Suggested Readings. Also, at the end of the text. Horngren provided Professional Accounting Exam questions, a list of NAA Research Publications, a Subject Index and a Glossary. The body of the chapters contained some Black and White Graphics for the students to use as learning The instructor was provided with a solutions manual, but little else. Only three of these items, Black and White Graphics, the List of NAA Research Publications, and Suggested Readings have been discontinued over the years, but the other eleven have remained through the 10<sup>th</sup> edition (TABLE II).

#### The 1970's

Horngren's Books became a bit more user-friendly during the 1970's. Although Black and White Graphics remained, Colored Graphics were added to enhance the book's presentation, and the Cover of the books began featuring a photo of a different, prominent, United States City for each edition. Additional benefits added for the students included: Review Problems regarding the Previous Chapter, Interest Tables, and a Student Guide and Review Manual. Supplemental material for instructors encouraged them to test in a more uniform way because a Test Item File or "Test Bank" was made available. Prior to the test bank, each instructor prepared his or her own test questions. The availability of the test bank substantially reduced the time needed by instructors to prepare an exam. However, according to anecdotal information, some instructors were hesitant to use this new tool and continued to prepare tests the old-fashioned way for a period of time. Apparently, change, even when there are benefits, often takes time to be embraced.

Beginning with the 1970's, the author was recognized via a Biography placed in the front of the textbook. Initially, in the third edition, 1972, the Biography was printed on the jacket of the book, but thereafter it was printed in the book itself. An Author Index was also added during the 70's.

#### The 1980's

Very little changed with Horngren's Books during the decade of the 1980's. End of Chapter Recommended Readings and a List of Terms were new, Black and White Graphics were dropped in favor of color graphics, Solutions Transparencies were made available to the instructors, and Spreadsheet Templates were promoted to encourage the use of

# TABLE II PRESENTATION & PEDAGOGY ITEMS IN ALL FOUR DECADES OF HORNGREN

- 1 Table of Contents
- 2 End of Chapter Problem/Solution for Self-Study
- 3 Chapter Summary
- 4 End of Chapter Questions
- 5 End of Chapter Problems
- 6 End of Book Glossary
- 7 Subject Index
- 8 Solutions Manual
- 9 Case Studies
- 10 Preface
- 11 Appendix Cost Accounting in Professional Exams

Cost Accounting: A Managerial Emphasis, Charles T. Horngren, Editions 1-10

computers. As previously mentioned, Horngren added his first co-author, George Foster, with the 6<sup>th</sup> edition in 1987, and it was that edition where Spreadsheet Templates were introduced.

#### The 1990's

There was a virtual explosion of changes in Presentation and Pedagogy in Horngren's Books in the 1990's (TABLE III). Technology is evident in every facet of education in that decade and it is especially outstanding in Horngren's Books. To begin with, there were four new editions of Horngren's Book--twice as many as any other decade. As noted earlier, George Foster continued as a co-author on the 7<sup>th</sup> through the 10<sup>th</sup> editions and Srikant M. Datar was added as a second co-author with the 8<sup>th</sup> edition in 1994 and has remained as such through the 10<sup>th</sup> edition.

Per TABLE III, the 1990 editions contained thirty-eight (38) of the sixty-five (65) Presentation and Pedagogy items introduced in TABLE I. A few of the significant changes in the 1990's occurred with the 9<sup>th</sup> edition. For example, Video Case Studies first became available, PowerPoint slides were made available in lieu of Teaching Transparencies, an

Interactive CD ROM (Career Paths) was introduced, and Computerized Cost Accounting Applications with Solutions were also introduced. The 10<sup>th</sup> edition has moved into the World Wide Web with Web CT and a Professors' Web site.

#### **SUMMARY**

Although there have been many changes and enhancements over the four decades of Horngren's Book, most (eleven of fourteen) of the original Presentation and Pedagogy items identified were carried through from the 1st to the 10th edition. Significant changes in the 1970's included color graphics and supplements for the students such as review problems and interest tables. The instructors were provided with a test bank for the first time in the 4th edition in 1977. Few innovations marked the passing of the 1980's editions of Horngren's Book, but an instructor's manual and solution transparencies in the 5<sup>th</sup> edition in 1982 were welcome additions. The most profound changes came in the 1990's with the addition of thirty-eight (38) unique items--primarily created due to technological innovations-most recent of which Horngren's, Cost Accounting: A Managerial Emphasis to the World Wide Web.

# TABLE III PRESENTATION & PEDAGOGY ITEMS ONLY IN THE 1990'S DECADE OF HORNGREN

1	"Correcting Student Misconceptions" in Most Chapters
2	"Points to Stress" Examples
3	"Point to Stress" in Each Chapter
4	"Teaching Tip" in Most Chapters
5	Accounting & Taxation Services Hotlines
6	Annotated Instructor's Book
7	Check Figures Beside Problems (Not in 9th and 10th Ed.)
8	Collaborative Learning Problems
9	Company Index
10	Company Vignettes — Concepts in Action
11	Computerized Applications in Cost Accounting
12	Current Business Trends
13	Curriculum Linkage
14	Different Colored Pages for End of Chapter Material (Not in 10th Ed.)
15	End of Chapter Exercises
16	How to Use Annotated Instructors Edition (Not in 9th and 10th Ed.)
17	Interactive CD ROM (Career Paths)
18	Learning Objectives by Chapter (Not in 10 <sup>th</sup> Ed.)
19	Multi-Colored Graphics
20	New in this Edition
21	Notes to Corresponding Research
22	Photo Credits
23	Photographs
24	Power Notes
25	PowerPoint (or Similar) Presentations
26	Professors' Book Web Site
27	Publisher's Custom Tests
28	Solutions Manual for Computerized Applications in Cost Accounting
29	Solutions to Spreadsheet Templates
30	Student Book Web Site
31	Student Solutions Manual (Even # Problems)
32	Surveys of Company Practice
33	Table of Contents — Brief
34	Teaching Transparencies (Not in 9 <sup>th</sup> and 10 <sup>th</sup> Ed.)
35	Time Line From 1962 Cost Accounting 1st Ed.
36	Video Case Studies
37	Videos
38	 Web CT
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#### **ENDNOTES**

- 1 http://vig.prenhall.com/catalog/professional/product/1,4096,0137605544,00.html.
- <sup>2</sup> The biography was developed primarily from the Accounting Hall of Fame biography that was posted by the Ohio State University's Fisher College of Business web-site, and the article, "A Charles T. Horngren: Management Accounting's Renaissance Man" by Kathy Williams that was published in the January 1986 Management Accounting pages 24 29.
- <sup>3</sup> George Foster received his undergraduate degree at the University of Sydney in Australia and his Ph.D. from Stanford University. He is currently the Paul L. and Phyllis Wattis Professor of Management at Stanford University. Srikant Datar has his undergraduate degree from the University of Bombay in India and Ph.D. from Stanford University. He is currently the Arthur Lowes Dickinson Professor of Business Administration at Harvard University.
- <sup>4</sup> The Cost Accounting Standards Board was implemented in 1970 to provide defense, and other government contractors, guidance on methods of government contracts. The Board was dissolved in 1980, but reconstituted as a part of the Office of Federal Procurement Policy in 1988.

<sup>&</sup>lt;sup>5</sup> Email from Charles Horngren, horngren\_charles@gsb.stanford.edu, May 30, 2000.

<sup>&</sup>lt;sup>6</sup> Email from Charles Horngren, horngren\_charles@gsb.stanford.edu, May 30, 2000.

<sup>&</sup>lt;sup>7</sup> MacDonald, Laura and Alan Richardson. Testing the Relevance Lost Paradigm: Does Academic Management Accounting Lag Practice? Presented at the 8th World Congress of Accounting Historians, Madrid, Spain, October 2000.