

PERCEPTIONS OF TEXAS SECONDARY BUSINESS  
TEACHERS OF THEIR UNDERGRADUATE  
TRAINING IN BUSINESS  
SPECIALIZATION  
COMPETENCIES

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the requirements for  
the Degree of  
DOCTOR OF EDUCATION  
May, 1992

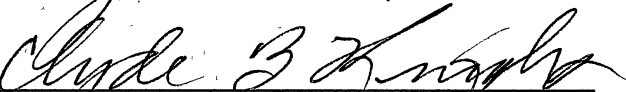
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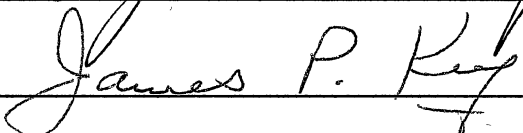
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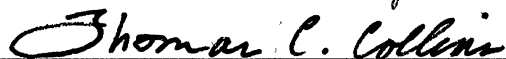
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## CHAPTER I

### INTRODUCTION

Experienced teachers and entry-year teachers report a myriad of training levels in their undergraduate business specialization training. The levels of training range from unprepared to prepared when applied to teaching skill. When the training is compared to the required competency level for successful teaching, many teachers reported that they felt deficient in the specialization areas (Porozny, 1985). These reports exist even though teachers have completed the designated course work within their teacher education program that lead to state teacher certification in the business specialization areas and the passing of state curriculum examinations.

Crafts (1989) indicated that school administrators believed additional specialization course work should be required in the undergraduate training programs for vocational teachers. Graves (1985) indicated that office systems consultants and faculty of office administration courses reported that additional competencies should be taught and mastered at the secondary level in order for students to be adequately prepared to enter office



occupation jobs. The 1984 NBEA (National Business Education Association) Business/Industry Task Force: Report of Survey On Office Automation reported that surveyed companies indicated that students needed additional competencies in word processing in order to be adequately prepared with job-entry skills. Grayson (1983) reported that employers were concerned that students needed additional training in competencies of grammar, punctuation, spelling, vocabulary, and qualities needed for success--stating that the present levels of these skills in students completing business programs and entering the job market for the first time were not adequate. Research conducted by the Connecticut State Department of Education in its evaluation of business teachers reported that teachers felt additional business methods, business content, and business skill competencies should be added to undergraduate business teacher training programs (Research Corporation, 1985).

#### Statement of the Problem

The problem which gave rise to this study was that secondary business teachers may have been underprepared in their undergraduate training in business education specialization competencies.

### Purpose of the Study

The purpose of this study was to determine the perceptions of Texas secondary business teachers regarding their undergraduate training in business education specialization competencies.

### Research Questions

1. Do Texas secondary business teachers perceive that they were adequately trained at the undergraduate level to teach the specialization competencies within the secondary business education curriculum?

2. Do Texas secondary business teachers perceive that specialization competency course work should be revised or deleted from undergraduate business teacher training programs?

### Definition of Terms

The following terms have been defined as used by representatives of Texas Education Agency:

Secondary business teacher: a teacher currently employed in a secondary business education program, a primary purpose of which is to train students for entry-level employment in a business or office occupation.

Specialization competencies: the courses that are required to be successfully completed by undergraduate business teacher education candidates in order to be

recommended for certification as a secondary business education teacher in the state of Texas. The courses are: (1) economics, (2) typewriting, (3) advanced typewriting, (4) word processing, (5) accounting, (6) advanced accounting, (7) recordkeeping, (8) personal finance, (9) business data processing, (10) introduction to computer programming, (11) microcomputer applications, (12) business math, (13) career exploration, (14) business communications, (15) office procedures, (16) shorthand, (17) advanced shorthand, (18) personal business management, (19) business management and ownership, and (20) business and consumer law.

Job-entry skills: basic skills required of job applicants in order to qualify for hiring consideration in an entry-level office or business related occupation.

#### Limitations

1. The study was limited to 1991-92 business teachers certified by Texas Education Agency.

2. The study was limited by having access only to telephone numbers of the schools in which the subjects were employed due to privacy laws prohibiting school personnel from providing home telephone numbers of teachers.

3. The study was limited by the degree of honesty in self-report of the respondent's answers to telephone questionnaire items.

### Assumptions

This study was based on the following assumptions:

1. That each secondary business teacher included in the survey responded independent of influence from others in their answers to questionnaire items.
2. That each secondary business teacher responded honestly and in an unbiased manner.
3. That each secondary business teacher responded without regard to future usage of data collected during this study.

### Organization of the Study

Chapter I introduced the study, presented the problem, stated the purpose of the research, delineated the research questions, pinpointed the limitations of the study, and outlined the assumptions under which the study was conducted.

Chapter II includes a review of the literature pertaining to business teacher education training and factors affecting the development of the present programs.

Chapter III delineates the methodology utilized in conducting the study by discussing the selection of the subjects, instrumentation, data collection procedures, and analysis of the data.

Chapter IV reports the findings of the study after completion of the telephone survey.

Chapter V includes the summary, conclusions, and recommendations, based upon the data compiled in the study.

## CHAPTER II

### REVIEW OF THE LITERATURE

The literature related to business teacher education training and factors affecting the development of current training was reviewed. The review was subdivided into the following six areas: the evolution of teacher certification, factors affecting Texas teacher certification, the changing business curricula, training needs of business training program participants for the 21st century, impending reform in teacher education programs, and the summary.

#### The Evolution of Teacher Certification

Teachers of the colonial period were required only to know more than the students in their classes, be acceptable to members of the community in which they taught in respect to holding compatible religious beliefs and to maintain high moral standards. The common school movement of the early nineteenth century required that teachers be the focal point of higher academic standards and that communities respond by increasing salaries and creating professional benefits paralleling those of other professions (Ryan and

Cooper, 1988). The development of teacher certification parallels the practice of professional licensing in occupations other than education and was an outgrowth of needing to assure taxpayers that those employed as teachers of their children had achieved satisfactory minimum competencies in the specialization areas in which they were teaching.

All fifty states, as well as the District of Columbia, currently require public school teachers to be licensed and/or certified to teach. Vornberg (1989), in referring to Texas teacher certification said . . .

A key component resource of the educational system is the cadre of professionals--teachers, administrators, and service personnel--who work in the schools. To insure that quality personnel are employed in educational programs, state statutes require that all teachers and other professionals be certified for their positions. . . .

(p. 75)

Teacher certification is now regulated by each state, with some states granting certification based solely on completion of an approved plan of study unique to a given discipline within an approved program of a teacher education institution. States are increasingly requiring the passing of specialization competency exams and/or work experience in

occupations related to the teaching field (Ryan and Cooper, 1988).

Vocational teacher certification is generally governed by a state board of vocational education rather than the state department of education (Evans and Herr, 1978). In order to be vocationally certified, vocational teachers, depending on the state, are usually required to have completed additional course work in the discipline pertaining to their certification beyond that required within standard certification requirements of the undergraduate program of a teacher education institution. Some states require additional competency examinations and/or work experience in related occupations beyond the required course work to obtain standard certification. (Pucel, 1989).

Vocational business education teacher training programs are strongly influenced by standards of the National Association for Business Teacher Education, the National Business Education Association, and the American Vocational Association, of which business is a subunit. Present teacher training programs are dynamic and strive to meet the needs of students, teachers, and employers with programs evolving within both secondary and vocational technical schools. Present programs strive to meet the emerging needs of students as they prepare for entry-level job placement in the rapidly-approaching 21st century. The Standards for



Business Teacher Education (NABTE, 1988) defined certification standards of business teachers in the specialization areas of curricula as follows:

Specialized business studies include all preparatory education which has as its major objective the development of specific abilities, knowledge, and skills needed to perform satisfactorily in business occupations. Preservice teachers who are preparing to teach business subjects must attain proficiency in the occupational area(s) in which they are seeking certification. (p. 3)

#### Factors Affecting Texas Teacher Certification

Texas, which has school districts ranging in size from almost 200,000 students to districts with fewer than 20 students has, via the legislature, "made an attempt to strengthen the public school system . . . by passing . . . laws, making additional curricular requirements, demanding teacher and administrator testing. . ." (Holcomb, 1989, p. 41). Teacher certification programs in Texas parallel licensure programs in many other states and have the intent "to ensure minimal standards for those in the teaching profession" (Hefner and Shipman, 1989, p. 87).

Texas school participants have been affected by the Texas Educational Assessment of Minimum Skills (TEAMS) program mandated by House Bill 72 in July, 1984 and initiated into Texas schools during the 1985-86 school year. This program was designed to measure minimum basic skills in mathematics, reading, and writing in grades 3, 5, 7, and 9 and in only mathematics and English language arts for grades 11 and 12 (TEA, 1990, p. 5). Another impact on Texas teachers has been the challenge of developing "partnerships between business, education and government" (Nabors, 1992, p. 3) to better educate Texas citizens, as "33 percent of all adults in Texas are functionally illiterate, reading at or below a sixth grade level" (Nabors, 1992, p. 3).

An additional facet in the evolvement of teacher certification in Texas has been the Examination for the Certification of Educators in Texas (ExCET), initiated via the passing of Senate Bill 50 in 1981 which requires educators to become certified by passing comprehensive examinations. (Pitman, Moore, and Chevrette, 1988) The intent of this program was to ensure that Texas educators be able to demonstrate required content and professional knowledge in content areas. Texas teacher certification is contingent upon one having been admitted to a teacher education program at an approved university, having completed an approved course of study, meeting criteria specified by the Commission on Standards for the

Teaching Profession, and successfully passing the ExCET (Vornberg).

One of the most influential personalities affecting Texas education has been H. Ross Perot. He was appointed in 1983 by Governor Mark White to chair the Select Committee, the scope of which "was enlarged to include every aspect relating to education in Texas" (Blake and House, 1989, p. 60). Perot and the Select Committee have examined problems related to teachers, students, and the status of public schools in Texas. Teacher certification has attempted to unite "academics and pedagogy" (Horton, 1988, p. 7).

#### The Changing Business Curricula

Business programs are changing so rapidly that no one pattern prevails. As education for and about business continues to expand, educators are modifying educational experiences to prepare competent workers and consumers for an ever-changing world. (Schrag and Poland, 1987, p. 5)

Secondary business education programs historically have been designed to meet the educational needs of students ranging from the academically gifted, to the average learner, the slow learner, the educationally disadvantaged, the financially deprived, and the handicapped (Pucel, 1989;

Schrag and Poland, 1987; Popham, Schrag, Blockhus, 1975). At no other time in history has business education faced greater opportunities to prepare students for self-identified goal achievement by enabling them to utilize skills obtained from training received in secondary programs (Pucel, 1990; Gilli, 1990; Finch and Hillison, 1990). Modifications to present and previous training programs will be successful only to the extent that business teachers are willing to be flexible, think creatively, and explore new avenues of presenting data pertinent to training content for the technical employment scene (Boyer, 1983; Pucel, 1989, Sizer, 1985; Bruner, 1988).

Projected employment figures for years 2000 to 2010 indicate that although a decline in office occupation jobs will occur, entry-level technical positions will include the need for job applicants to possess computer skills beyond that of data entry (Johnston and Packer, 1987).

Increased academic requirements will entail training in programming and advanced applications rather than stopping short at literacy, as some business programs presently practice. Academic requirements will also need to be strengthened in order to train students to perform within technical job clusters, such as in computer manipulation of data, repair, and network implementation (Schrag and Poland, 1987).

Although some current business training programs capitalize on competency-based education, future training program design will expand the concept to become known as performance-based instructional design (Pucel, 1989). Society will expect business training programs to continue to address the needs of varied categories of students and focus on occupationally specific behavior, including psychomotor, cognitive, and affective behavior (Boyer, 1983; Pucel, 1989; Miller, 1990). Methodologies will move from teacher-centered instruction to participatory applications, placing the student in roles requiring independent thinking and the application of sound judgment pertinent to job skills (Johnston and Packer, 1987; Pucel, 1989).

Previous curriculum development utilized three primary approaches: Thorndike's transfer of training, the identification of educational objectives, and Dewey's "studies of interest and effort" (Hosford, 1984, p. 31). Building upon each of the previous approaches, the changing business curricula must include training students to be adaptable, to think creatively, and--as Dewey advocated--to solve problems (Lee, 1938). The changing business curricula will need to teach flexibility to students just as . . .

The best of teaching makes use of tested methods, but it is flexible rather than rigid. It works toward specified ends in systematic fashion, but also allows room

for adaptation to unexpected opportunity.

(Rubin, 1985, p. 16)

The changing curricula also must:

Fuse consumer and economic topics and applications into instructional programs . . . and make available individualized instructional materials. (Johnston and Packer, 1987, p. 28)

Training Needs of Business Training  
Program Participants For  
The 21st Century

The acquisition of minimum entry-level job skills upon completion of secondary business training programs is considered an educational mandate (Naisbitt and Aburdene, 1990, Boyer, 1983).

The rapidly changing technological world has influenced the entry-level job requirements by decreasing the availability of low-skilled jobs, forcing automation and a greater increase in service industry personnel (Naisbitt and Aburdene, 1990). The rebalancing of the economic world, the fluctuating inflation/deflation cycles, and the continued emphasis on American competitiveness in the job market creates the need for the next century employees to be more highly trained than previous entry level employees (Boyer, 1983, Naisbitt and Aburdene, 1990).

Employers are no longer seeking employees for whom they can provide on-the-job training; instead, they are seeking employees with varied job-entry skills, those who intend to continue life-long learning, and those who have developed communication skills for cross-level interpersonal and organizational relationships (Naisbitt and Aburdene, 1990; Boyer, 1983).

Traditional business curricula that required students to retain information for the primary purpose of rote memory will no longer be effective according to workplace research; rather, "the basic skills of today and tomorrow include the ability to process information" (USDL/USDOE, 1988, p. 6). The curricula will be designed to enhance a student's decision making, critical thinking, and effective listening skills, as well as the student's writing and computational skills (Johnston and Packer, 1987; Goodlad, 1990).

#### Impending Reform In Teacher Education Programs

Change seems to be the key word as business teacher education programs are examined in view of future expectations from students, society, and employers. The Holmes Group reported that the new agenda for teacher education reform is to improve instruction in our schools (Porreca, 1986) and Tozer and Nelson (1988) point out that:

Vocational educators who can skillfully and insightfully educate through vocations, and not merely for them, will need to (a) be well-educated; (b) have an unusual grasp of innovative teaching methods; and (c) have a grasp of the economic and sociological realities of the world of work, which surpasses the knowledge of their peers in nonvocational elementary and secondary teacher education programs. (p. 24)

Goodlad (1990) continued this theme by saying "My hope is that we can indeed renew schooling and the education of educators simultaneously" (p. 186).

Business teacher educators, via an in-depth study of The Holmes Group, were alerted that greater emphasis must be placed on the teaching of professionalism to prospective educators (Porreca, 1986). The value of preparing educators adequately was described by Tozer and Nelson (1988) as:

First, they will be uniquely able to engage students in activities that develop intellectual skills and understanding where traditional methods are rejected or unsuccessful. Second, they will be equipping students with the communication, interpersonal, and reasoning skills that will give them



the greatest flexibility in the uncertain job market of the future. Third, they will be opening doors for these students by making advanced education a real possibility. And fourth, such educators will be exploring the potential of a curricular method, if Dewey was correct, that should prove successful for all students and not just those who are disenchanted and disaffected.

(p. 24)

Goodlad (1990) has defined four broad categories of expectations for teachers:

. . . teachers must understand that citizenship is the primary political office under a constitutional government, and they must possess a foundation of knowledge about the nation's government and its expectations for citizens. Second, teachers must have the intellectual tools to participate broadly in the human conversation and to introduce young people to it. Third, teachers must possess the pedagogical knowledge and skills necessary to arrange optimal conditions for educating the young.

Further, teachers must thoroughly understand the common places of schooling (goals, clients, organization, curriculum, instruction, and evaluation), promising alternatives, the nature of healthy schools, and how to sustain renewal. (p. 186)

The incorporation of these areas of training into the training of business teachers equips teachers to function more successfully within their own professional goals (Porreca, 1986; Goodlad, 1990; Sizer, 1985).

"An important consideration then in coming years will be the preparation of teachers since as professionals they constitute a definite factor in student learning and achievement" (Hadaway and Florez, 1989, p. 25).

Futrell states that:

Dewey's message has never before been more compelling, never before more relevant. . . The challenge is great, and obstacles are everywhere. Teachers cannot hope to prepare students for this world of perpetual flux if teachers themselves remain wedded to static conceptions of ineffective pedagogy. Teachers cannot hope to equip students for the information age if they themselves

are condemned to organizational structures  
derived from the industrial age. . . .

(1989, p. 65)

#### Summary

Teacher certification has moved from non-existence to just being acceptable to the community, to state-regulated processes entailing completion of designated course work and, in some cases, work experience and/or competency exams. Texas certification mandates, like mandates of other states, attempted to insure that qualified school personnel work in the public schools. Needed changes in business education curricula for students of the 21st century were defined by examining the changing expectations of employers for entry-level personnel. The training needs of students, in order to prepare them for the employment market of the next century, were also examined by reviewing traditional programs that were designed for rote memory, noting their ineffectiveness.

## CHAPTER III

### METHODOLOGY

The purpose of the study was to determine the perceptions of Texas secondary business teachers regarding their undergraduate training in business education specialization competencies. This chapter discusses the methodology utilized in the study by discussing selection of the subjects, instrumentation, data collection procedures, and analysis of the data.

#### Selection of the Subjects

Three hundred forty three subjects were randomly selected from a population of 3038 Texas 1991-92 secondary business education teachers certified by Texas Education Agency. A list of the entire population was numbered sequentially from 1 through 3038. A random number from Bartz, Table L (1988, p. 468-471) was matched to a number on the list, identifying the 343 persons randomly selected.

#### Instrumentation

A telephone script (see Appendix D, page 93) and telephone interview questionnaire (see Appendix E, page 95)

were designed, each having been initially field tested on a panel of experts and a representative sample of 17 secondary business teachers randomly selected from states other than Texas. The teachers selected for the field test were attending a professional development meeting for business education teachers and were asked to voluntarily participate in the field test, provided they were not currently teaching in Texas.

The items on the instrument were administered via telephone to the panel of experts, asking that they answer each item and offer suggestions for clarification, additions, and/or deletions to the instrument. The items on the instrument were answered by the field test participants by administering the instrument to them and asking them to record their answers on the instrument and make suggestions for clarification, additions, and/or deletions. Input from the panel of experts and the field test participants was utilized to clarify the instrument prior to using it with the subjects of the research study.

The instrument contained both fixed and open-ended response items. All survey items pertained to the perceptions of undergraduate business teacher education training as related to preparedness for teaching specialization competencies in secondary business education. The items were designed to elicit information from respondents regarding the business specialization

competencies required for certification in Texas, which were: (1) economics, (2) typewriting, (3) advanced typewriting, (4) word processing, (5) accounting, (6) advanced accounting, (7) recordkeeping, (8) personal finance, (9) business data processing, (10) introduction to computer programming, (11) microcomputer applications, (12) business math, (13) career exploration, (14) business communications, (15) office procedures, (16) shorthand, (17) advanced shorthand, (18) personal business management, (19) business management and ownership, and (20) business and consumer law.

#### Data Collection Procedures

Mass Communications, Inc. (MCI) was contacted, an 800 number was obtained in the name of the researcher and all subjects were telephoned by calling the school in which they were employed during school hours. A telephone message was left for each teacher, asking that the call be returned to the 800 number within a given deadline and within certain hours of the day. The telephone message also specified that it concerned a survey of Texas secondary business education teachers. After four school days, non-respondents were mailed a follow-up letter at their school address, in which they were again asked to telephone the 800 number, stating the purpose of the call and requesting that the call be returned within a given deadline and within certain hours

of the day. A final follow-up procedure was used when, after an additional four school days, another telephone call was placed to non-respondents at school, asking that the call be returned to the 800 number within a specific deadline and within certain hours of the day, while also stating the purpose of the call.

All data collection was conducted by the researcher. One hundred eighty-one telephone calls were completed with business teachers, all of whom answered all items on the telephone survey instrument, representing a response rate of 53%. More than half of the 181 responses were received during the first week of data collection.

#### Analysis of the Data

The collected data for the study were analyzed utilizing a computer program, SYSTAT, Version 5.02 (Wilkinson, 1990). Each questionnaire item was coded, with computer data entry performed by the researcher and verified by an additional coder.

The mean, standard deviation, and percentage were calculated for the response of the subjects to each questionnaire item. The calculated results were used to determine the findings of specialization competencies in which teachers reported a perceived deficit in their teacher training preparation. Additionally, calculated results were used to determine findings of specialization competencies in

which teachers reported recommendations for revision and/or deletion in future business teacher training programs.

Research question number one was answered by calculating frequencies and percents to report the various levels of training and by identifying the "high", "low", or "no training" levels of specialization competency training reported by respondents.

Research question number two was answered by calculating frequencies and percents of responses to report the suggestions for revision or deletion of course work within each competency area and by reporting comments of the respondents to the open-ended response items in survey question nine.

Based on the results obtained, follow-up analyses were conducted by calculating Chi Square (Welkowitz, Ewen, and Cohen, 1988) to assess the differences between the perceived adequacy of training and the time period during which business education teacher certification was attained, whether during the past ten years (1981-92) or prior to 1982.

Follow-up analyses were also conducted by calculating Chi Square to assess the differences between perceived need for revision or deletion of course work in each specialization competency and the level of degree attained, whether undergraduate or graduate.



All of the follow-up analyses, based on frequency distributions, were analyzed with Chi Square in order to determine whether the variables were statistically related. To evaluate the data, the researcher selected a level of significance of .05 or below.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

This chapter presented the findings of the research. The first section presented demographic data relative to the subjects of the study. The second section presented findings relative to the two research questions. The final section presented data relevant to the open-ended responses of the respondents.

#### Demographic Data Relative To The Subjects

The sample of 343 Texas secondary business teachers was selected from the 1991-92 population of 3038 certified by Texas Education Agency (Krejcie and Morgan, 1982; Key, 1990). One hundred eighty-one teachers responded to the survey, representing a response rate of 53%. Sixty-four percent of the respondents held a bachelor's degree, 34% held a master's degree, and 2% held a doctoral degree.

Sixty-six percent of the respondents attained their highest degree within the past ten years (1982-1991), with 93% receiving the degree in Texas. Fifty-six percent attained certification within the past ten years (1982-1991), with 96% being initially certified in Texas.

Twenty-nine percent have completed in-service training since completing their last degree, with 46% of the in-service training having been completed in vocational education subject areas. Forty-two percent of the in-service training reported was completed during 1991-92.

#### Findings Related To The Research Questions

Research Question Number One: Do Texas secondary business teachers perceive that they were adequately trained at the undergraduate level to teach the specialization competencies within the secondary business education curriculum?

This question was answered by data presented in the following tables:

Table I reported the mean, standard deviation, and frequency distribution for each specialization competency. Typewriting and accounting were reported as the two specialization competencies in which respondents perceived themselves to be the most highly trained. Although 101 respondents reported a "high" level of training in typewriting, only 82 reported a "high" level of training for advanced typewriting. One hundred respondents reported a "high" level of training for both accounting and advanced accounting, followed closely by 99 respondents reporting a "high" level of training in recordkeeping and 89 reporting a "high" level of training in personal finance.

Career exploration was reported as the specialization competency in which respondents perceived themselves to be the least adequately trained, with 101 reporting "no training" and 48 reporting "low" training; these two training levels combined represent over 82% of the respondents in this specialization competency. (See Table I, page 30.)

Table II reported both the frequency distribution and percent for each specialization competency. Fifty-five percent of the respondents reported "high" training in the specialization competencies of typewriting, accounting, advanced accounting, and recordkeeping. Forty-five to forty-nine percent reported "high" training in the specialization competencies of personal finance, advanced typewriting, and business communications.

Fifty-six percent reported "no training" in career exploration. "No training" was reported for shorthand and advanced shorthand by 38% of the respondents and 34 to 35% reported "no training" for computer programming, business data processing, and microcomputer applications. (See Table II, page 31.)

TABLE I  
DESCRIPTIVE STATISTICS FOR TRAINING  
LEVELS OF EACH SPECIALIZATION  
COMPETENCY

Specialization Competency	Mean*	S.D.	Frequency (N=181)			
			None	Low	Med	High
Economics	2.359	0.788	19	94	52	16
Typewriting Advanced	3.331	0.857	5	31	44	101
Typewriting	3.144	0.932	11	34	54	82
Word Processing	2.304	1.006	49	51	58	23
Accounting Advanced	3.481	0.638	01	11	69	100
Accounting	3.486	0.620	05	07	69	100
Recordkeeping	3.453	0.670	01	15	66	99
Personal Finance	3.309	0.819	08	17	67	89
Business Data Processing	2.204	1.089	64	44	45	28
Computer Programming	2.193	1.081	64	45	45	27
Microcomputer Applications	2.193	1.081	63	43	48	27
Business Mathematics	2.867	0.891	14	43	77	47
Career Exploration	1.669	0.882	101	48	23	09
Business Communications	3.326	0.714	03	17	79	82
Office Procedures	2.773	1.021	24	47	56	54
Shorthand Advanced	2.564	1.343	69	12	29	71
Shorthand	2.514	1.332	70	15	29	67
Personal Business Management	3.072	0.803	07	31	85	58
Business Management	3.006	0.820	07	39	81	54
Business Law	2.163	0.820	13	70	72	26

\*Mean was computed using:

1=No Training; 2=Low Training; 3=Medium Training;  
4=High Training

TABLE II

FREQUENCIES/PERCENTAGES\* OF RESPONSES PERTINENT  
TO EACH SPECIALIZATION COMPETENCY

Specialization Competency	No Trn'g.		Low		Medium		High	
	N	%	N	%	N	%	N	%
Economics	19	10.5	94	51.9	52	28.7	16	8.9
Typewriting	5	2.8	31	17.1	44	24.3	101	55.8
Advanced								
Typewriting	11	6.1	34	18.8	54	29.8	82	45.3
Word								
Processing	49	27.1	51	28.2	58	32.0	23	12.7
Accounting	1	.6	11	6.0	69	38.1	100	55.3
Advanced								
Accounting	5	2.7	7	3.9	69	38.1	100	55.3
Recordkeeping	1	.6	15	8.3	66	36.5	99	54.6
Personal								
Finance	8	4.4	17	9.4	67	37.0	89	49.2
Business Data								
Processing	64	35.3	44	24.4	45	24.9	28	15.4
Computer								
Programming	64	35.4	45	24.9	45	24.9	27	14.8
Microcomputer								
Applications	63	34.8	43	23.4	48	27.0	27	14.8
Business								
Mathematics	14	7.9	43	23.8	77	42.5	47	25.8
Career								
Exploration	101	55.8	48	26.5	23	12.7	9	5.0
Business								
Communications	3	1.7	17	9.4	79	43.7	82	45.2
Office								
Procedures	24	13.3	47	25.9	56	30.9	54	29.9
Shorthand	69	38.1	12	6.6	29	16.0	71	39.3
Advanced								
Shorthand	70	38.7	15	8.3	29	16.0	67	37.0
Personal Business								
Management	7	3.8	31	17.1	85	46.9	58	32.2
Business								
Management	7	3.8	39	21.6	81	44.8	54	29.8
Business Law	13	7.2	70	38.7	72	39.8	26	14.3

\*N=181

Table III reported that only four of the specialization competencies were reported as perceived by more than half of the respondents as having been a "high" level of training. Only 14 to 15% of the respondents reported a "high" level of training in the specialization competencies of computers. (See Table III, page 33.)

Table IV reported that over half of the respondents perceived their training in economics as having been "low", while only 3.9% reported their training in advanced accounting as "low". Twenty to twenty-eight percent of the respondents reported eight of the twenty specialization competencies in the "low" range of training. (See Table IV, page 34.)

Table V reported that while almost 56% of the respondents had no training in the career exploration specialization competency, only .6% had no training in accounting and recordkeeping. Computer and shorthand specialization competencies reflected no training from 34 to 38% of the respondents. (See Table V, page 35.)

Follow-up analyses were conducted on each specialization competency by calculating the Chi Square Test of Independence to assess the differences between the perceived adequacy of training and the time period during which business education teacher certification was attained, whether during the past ten years (1981-92) or prior to 1982. Significant Chi Square results were reported.

TABLE III

SPECIALIZATION COMPETENCIES IN WHICH  
RESPONDENTS REPORTED A "HIGH"  
LEVEL OF TRAINING

Specialization Competency	Percent Respondents Reported "High" Training
Typewriting	55.8 %
Accounting	55.3
Advanced Accounting	55.3
Recordkeeping	54.6
Personal Finance	49.2
Advanced Typewriting	45.3
Business Communications	45.2
Shorthand	39.3
Advanced Shorthand	37.0
Personal Business Management	32.2
Office Procedures	29.9
Business Management	29.8
Business Mathematics	25.8
Business Data Processing	15.4
Computer Programming	14.8
Microcomputer Applications	14.8
Business Law	14.3
Word Processing	12.7
Economics	8.9
Career Exploration	5.0



TABLE IV

SPECIALIZATION COMPETENCIES IN WHICH  
RESPONDENTS REPORTED A "LOW"  
LEVEL OF TRAINING

Specialization Competency	Percent Respondents Reported "Low" Training
Economics	51.9 %
Business Law	38.7
Word Processing	28.2
Career Exploration	26.5
Office Procedures	25.9
Computer Programming	24.9
Business Data Processing	24.4
Business Mathematics	23.8
Microcomputer Applications	23.4
Business Management	21.6
Advanced Typewriting	18.8
Typewriting	17.1
Personal Business Management	17.1
Personal Finance	9.4
Business Communications	9.4
Recordkeeping	8.3
Advanced Shorthand	8.3
Shorthand	6.6
Accounting	6.0
Advanced Accounting	3.9

TABLE V

SPECIALIZATION COMPETENCIES IN WHICH  
RESPONDENTS REPORTED "NO TRAINING"

Specialization Competency	Percent Respondents Reported "No Training"
Career Exploration	55.8 %
Advanced Shorthand	38.7
Shorthand	38.1
Computer Programming	35.4
Business Data Processing	35.3
Microcomputer Applications	34.8
Word Processing	27.1
Office Procedures	13.3
Economics	10.5
Business Mathematics	7.7
Business Law	7.2
Advanced Typewriting	6.1
Personal Finance	4.4
Personal Business Management	3.8
Business Management	3.8
Typewriting	2.8
Advanced Accounting	2.7
Business Communications	1.7
Accounting	.6
Recordkeeping	.6

Table VI reported the calculated Chi Square for economics which indicated that the differences between the perceived adequacy of training and the time period during which business teacher certification was attained was significant in this specialization competency at the .01 level. (See Table VI, page 37.)

Table VII reported the calculated Chi Square for accounting which indicated that the differences between the perceived adequacy of training and the time period during which business teacher certification was attained was significant in this specialization competency at the .05 level. (See Table VII, page 37.)

Table VIII reported the calculated Chi Square for career exploration which indicated that the differences between the perceived adequacy of training and the time period during which business teacher certification was attained was significant in this specialization competency at the .02 level. (See Table VIII, page 38.)

Table IX reported the calculated Chi Square for office procedures which indicated that the differences between the perceived adequacy of training and the time period during which business teacher certification was attained was significant in this specialization competency at the .001 level. (See Table IX, page 38.)

TABLE VI

CHI SQUARE--DIFFERENCES BETWEEN ADEQUACY OF TRAINING IN  
ECONOMICS AND THE TIME PERIOD DURING WHICH TEACHER  
CERTIFICATION WAS ATTAINED

---

Number of Observations . . . . .	181
Chi Square . . . . .	9.9586
Degrees of Freedom . . . . .	3
Significance Level . . . . .	0.0189*

\*p < .01

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TABLE VII

CHI SQUARE--DIFFERENCES BETWEEN ADEQUACY OF TRAINING IN  
ACCOUNTING AND THE TIME PERIOD DURING WHICH  
TEACHER CERTIFICATION WAS ATTAINED

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Number of Observations . . . . .	181
Chi-Square . . . . .	7.8134
Degrees of Freedom . . . . .	3
Significance Level . . . . .	0.0500*

\*p < .05

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TABLE VIII

CHI SQUARE--DIFFERENCES BETWEEN ADEQUACY OF TRAINING IN  
CAREER EXPLORATION AND THE TIME PERIOD DURING WHICH  
TEACHER CERTIFICATION WAS ATTAINED

---

Number of Observations . . . . .	181
Chi-Square . . . . .	9.4139
Degrees of Freedom . . . . .	3
Significance Level . . . . .	0.0243*

\*p < .02

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TABLE IX

CHI SQUARE--DIFFERENCES BETWEEN ADEQUACY OF TRAINING IN  
OFFICE PROCEDURES AND THE TIME PERIOD DURING WHICH  
TEACHER CERTIFICATION WAS ATTAINED

---

Number of Observations . . . . .	181
Chi-Square . . . . .	15.4491
Degrees of Freedom . . . . .	3
Significance Level . . . . .	0.0015*

\*p < .001

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Table X reported the calculated Chi Square for business management which indicated that the differences between the perceived adequacy of training and the time period during which business teacher certification was attained was significant in this specialization competency at the .02 level. (See Table X, page 40.)

All other specialization competencies did not indicate a calculated significance level of .05 or below. These areas were: (1) typewriting; (2) advanced typewriting; (3) word processing; (4) advanced accounting; (5) recordkeeping; (6) personal finance; (7) business data processing; (8) introduction to computer programming; (9) microcomputer applications; (10) business mathematics, (11) business communications, (11) shorthand; (12) advanced shorthand; (13) personal business management, (14) business management and ownership; and (15) business law.

Research Question Number Two: Do Texas secondary business teachers perceive that specialization competency area course work should be revised or deleted from undergraduate business teacher training programs?

This question was answered by data presented in the tables described on page 41.

TABLE X

CHI SQUARE--DIFFERENCES BETWEEN ADEQUACY OF TRAINING IN  
BUSINESS MANAGEMENT AND THE TIME PERIOD DURING WHICH  
TEACHER CERTIFICATION WAS ATTAINED

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Number of Observations . . . . .	181
Chi-Square . . . . .	9.3152
Degrees of Freedom . . . . .	3
Significance Level . . . . .	0.0254*

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\*p < .02

Table XI reported the frequencies and percentages of responses pertaining to suggestions for the revision or deletion of specialization competency course work in the development of future teacher training programs. Shorthand and advanced shorthand were among the competencies suggested most often for revision, as well as were the most often suggested for deletion. Open-ended responses to survey question nine indicated that respondents suggested revising the two courses to Speedwriting or a similar version of notetaking symbolism, while an even greater number of respondents recommended deleting the courses. (See Table XI, page 42.)

Table XII reported that Office Procedures was the course most often suggested for revision, with most open-ended comments indicating that the course needed to be updated to match new technology. (See Table XII, page 43.)

Table XIII reported that over 48% of the respondents suggested deleting shorthand and advanced shorthand, but word processing, accounting, and advanced accounting were not suggested for deletion by any of the respondents. (See Table XIII, page 44.)



TABLE XI

FREQUENCIES/PERCENTAGES\* OF RESPONSES PERTINENT TO  
SUGGESTIONS REGARDING REVISION/DELETION  
OF COURSE WORK

Specialization Competency	Revise		Not Revise		Delete	
	N	%	N	%	N	%
Economics	19	10.5	160	88.4	02	1.1
Typewriting	19	10.5	154	85.1	08	4.4
Advanced						
Typewriting	15	8.3	156	86.2	10	5.5
Word Processing	19	10.5	162	89.5	00	0.0
Accounting	11	6.1	170	93.9	00	0.0
Advanced						
Accounting	09	4.8	172	95.2	00	0.0
Recordkeeping	02	1.1	129	71.3	50	27.6
Personal Finance	11	6.1	164	90.6	06	3.3
Business Data						
Processing	13	7.2	167	92.2	01	.6
Computer						
Programming	06	3.3	128	70.8	47	25.9
Microcomputer						
Applications	17	9.4	162	89.5	02	1.1
Business Mathematics	10	5.5	150	82.9	21	11.6
Career Exploration	16	8.8	84	46.5	81	44.7
Business						
Communications	04	2.2	173	95.6	04	2.2
Office						
Procedures	34	18.8	142	78.4	05	2.8
Shorthand	22	12.2	71	38.9	88	48.9
Advanced						
Shorthand	19	10.5	74	40.6	88	48.9
Personal Business						
Management	14	7.7	157	86.8	10	5.5
Business						
Management	04	2.2	171	94.5	06	3.3
Business Law	06	3.3	165	91.2	10	5.5

\*N=181

TABLE XII

SPECIALIZATION COMPETENCIES SUGGESTED  
FOR REVISION OF COURSE WORK

Specialization Competency	Percent of Respondents That Suggested Revision of Course Work
Office Procedures	18.8 %
Shorthand	12.2
Advanced Shorthand	10.5
Word Processing	10.5
Economics	10.5
Typewriting	10.5
Microcomputer Applications	9.4
Career Exploration	8.8
Advanced Typewriting	8.3
Personal Business Management	7.7
Business Data Processing	7.2
Accounting	6.1
Personal Finance	6.1
Business Mathematics	5.5
Advanced Accounting	4.8
Computer Programming	3.3
Business Law	3.3
Business Management	2.2
Business Communications	2.2
Recordkeeping	1.1

TABLE XIII

SPECIALIZATION COMPETENCIES SUGGESTED  
FOR DELETION OF COURSE WORK

Specialization Competency	Percent of Respondents That Suggested Deletion of Course Work
Shorthand	48.9 %
Advanced Shorthand	48.9
Career Exploration	44.7
Recordkeeping	27.6
Computer Programming	25.9
Business Mathematics	11.6
Business Law	5.5
Personal Business Management	5.5
Advanced Typewriting	5.5
Typewriting	4.4
Business Management	3.3
Personal Finance	3.3
Office Procedures	2.8
Business Communications	2.2
Microcomputer Applications	1.1
Economics	1.1
Business Data Processing	.6
Word Processing	0.0
Accounting	0.0
Advanced Accounting	0.0

Table XIV reported the calculated Chi Square for business mathematics which indicated that the differences between the perceived need to revise or delete course work in this specialization competency and the level of degree attained was significant at the .01 level. (See Table XIV, page 46.)

Table XV reported the calculated Chi Square for business data processing which indicated that the differences between the perceived need to revise or delete course work in this specialization competency and the level of degree attained was significant at the .01 level. (See Table XV, page 46.)

Table XVI reported the calculated Chi Square for personal business management which indicated that the differences between the perceived need to revise or delete course work in this specialization competency and the level of degree attained was significant at the .05 level. (See Table XVI, page 47.)

TABLE XIV

CHI SQUARE--DIFFERENCES BETWEEN SUGGESTIONS FOR REVISION OR DELETION OF SPECIALIZATION COMPETENCY COURSE WORK IN BUSINESS MATHEMATICS AND THE LEVEL OF DEGREE ATTAINED

---

Number of Observations . . . . .	181
Chi-Square . . . . .	8.2972
Degrees of Freedom . . . . .	2
Significance Level . . . . .	0.0158*

\*p < .01

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TABLE XV

CHI SQUARE--DIFFERENCES BETWEEN SUGGESTIONS FOR REVISION OR DELETION OF SPECIALIZATION COMPETENCY COURSE WORK IN BUSINESS DATA PROCESSING AND THE LEVEL OF DEGREE ATTAINED

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Number of Observations . . . . .	181
Chi-Square . . . . .	8.3697
Degrees of Freedom . . . . .	2
Significance Level . . . . .	0.0152*

\*p < .01

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TABLE XVI

CHI SQUARE--DIFFERENCES BETWEEN SUGGESTIONS FOR REVISION OR  
DELETION OF SPECIALIZATION COMPETENCY COURSE WORK IN  
PERSONAL BUSINESS MANAGEMENT AND THE  
LEVEL OF DEGREE ATTAINED

---

Number of Observations . . . . .	181
Chi-Square. . . . .	5.6385
Degrees of Freedom. . . . .	2
Significance Level. . . . .	0.0596*

\*p < .05

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Chi Square calculations for the following specialization competencies did not indicate that the differences between the perceived need to revise or delete specialization competency course work and the level of degree attainment was significant at an .05 level of significance or below: (1) economics; (2) typewriting; (3) advanced typewriting; (4) word processing; (5) accounting; (6) advanced accounting; (7) recordkeeping; (8) personal finance; (8) computer programming; (9) microcomputer applications; (10) career exploration; (11) business communications; (12) office procedures; (13) shorthand; (14) advanced shorthand; (15) business management; and (16) business law.

#### Data Relative to Open-Ended Responses to Survey Question Nine

Survey question nine solicited a specific response in conjunction with an open-ended response regarding each specialization competency. Respondents were asked to add to their revision or deletion response their specific suggestions for revision or deletion.

Analyzing the open-ended portion of question number nine, all twenty specialization competencies evoked responses from respondents. All of the responses offered were delineated in Appendix A (pages 73-84). Some of the suggestions were summarized in this chapter if suggested by

more than one person and are placed in descending order of frequency of responses.

Some of the revision suggestions for economics were to update the content; increase the college credit hours that are required; combine it with the government curriculum; and emphasize the international component. Although 1.1% of the respondents responded to delete this specialization competency, no specific suggestions were given regarding its deletion.

Some of the revision suggestions for typewriting were to include more keyboarding and less formatting; include the course with word processing; require more training; improve the advanced training; put this course into computers; and teach it on both typewriters and computers. Although 4.4% of the respondents responded to delete this specialization competency, no specific suggestions were given regarding its deletion.

Some of the revision suggestions for advanced typewriting were to require more training; include more keyboarding and less formatting; teach it on both typewriters and computers; and put this course into computers. Although 5.5% of the respondents suggested deletion of this course, no specific suggestions were given regarding its deletion.

Some of the revision suggestions for word processing were to add more varied packages; add more word processing



courses; and to upgrade to the latest software. No responses or suggestions were offered to delete this specialization competency.

Some of the revision suggestions for accounting were to change to computerized accounting; increase advanced accounting functions; and to upgrade to better train students for employment in accounting. No responses or suggestions were offered to delete this specialization competency.

Some of the revision suggestions for advanced accounting were to change to computerized accounting; require more college credit hours; and require this course for every student in every major. No responses or suggestions were offered to delete this specialization competency.

Only two suggestions were received regarding the revision of recordkeeping which were to combine it with business applications and to require a GPA cutoff to "weed out" below average and above average students. More than twenty-seven percent of the respondents responded to delete this competency area, although no specific suggestions were offered regarding its deletion.

Some of the revision suggestions for personal finance were to include more training in this competency area; strengthen the content for training teachers to deal with their own personal financial future; and increase the

content by teaching more budgeting and forecasting. A deletion response was given by 3.3% regarding this specialization competency, but no specific suggestions were given regarding its deletion.

Some of the revision suggestions for business mathematics were to add more algebra; add more training; and include more hours in the college curriculum. A deletion response was given by 11.6% regarding this specialization competency, but no specific suggestions were given regarding its deletion.

Some of the revision suggestions for career exploration were to upgrade the content annually; combine it with education classes (taking it out of business classes); and upgrade the curriculum to include new standards of the business world relative to career hopping and career preparation. A deletion response was given by 44.7% of the respondents regarding this specialization competency, but no specific suggestions were given regarding its deletion.

Some of the revision suggestions for office procedures were to update the course to match new technology; put students in the office; and update the curriculum. A deletion response was given by 2.8% of the respondents, although no specific suggestions were given regarding its deletion.

Some of the revision suggestions for business data processing were to increase hands-on learning; add more of

it; and combine it with word processing. Only .6% of the respondents suggested deletion of this specialization competency, offering no specific suggestions regarding its deletion.

Some of the revision suggestions for computer programming were to increase all languages--especially BASIC and COBOL; "ship" COBOL; and add much more programming into the specialization competency. A deletion response was given by 25.9% of the respondents, with no specific suggestions being offered regarding its deletion.

Some of the revision suggestions for microcomputer applications were to add more applications; add more of these classes; and upgrade to the latest applications. Only 1.1% of the respondents offered a response to delete this competency area, although no specific suggestions were given regarding its deletion.

Some of the revision suggestions for shorthand were to change it to Speedwriting, Rapidwriting, or a similar skill and to upgrade the content. A deletion response was offered by 48.6% of the respondents regarding this competency area, but no specific suggestions were given regarding its deletion.

Some of the revision suggestions for advanced shorthand were to change it to Speedwriting, Notehand, or Rapidwriting and to change and upgrade it to a more usable skill. Again, 48.6% of the respondents offered a deletion

response regarding this competency area, but no specific suggestions were given regarding its deletion.

Some of the revision suggestions for personal business management were to strengthen the content; increase the college credit hour requirements; and add more of this course. A deletion response was given by 5.5% of the respondents, with no specific suggestions being offered regarding its deletion.

Some of the revision suggestions for business law revision were to add the content back into the college curriculum and increase the college credit hour requirements. A deletion response was given by 5.5% of the respondents, with no specific suggestions being given regarding its deletion.

Some of the revision suggestions for business communications revision were to combine the content with office procedures and add more of this specialization competency. A deletion response was given by 2.2% of the respondents, with no specific suggestions being given regarding its deletion.

Some of the revision suggestions for business management and ownership were to upgrade the course work and put more emphasis on small business and home business development. A deletion response was given by 3.3% of the respondents, with no specific suggestions being given regarding its deletion.

Data Relative to Open-Ended Responses  
To Survey Question Ten

Survey question ten solicited an open-ended response regarding suggested future changes in specialization competencies of business teacher education programs. (See Appendix E, pages 95-99.)

All of the responses offered were delineated in Appendix B (pages 85-90). Some of the suggestions were summarized in this chapter. Each suggestion was offered by only one person.

Analyzing the open-ended responses, suggestions were offered relative to four major areas, which were: specialization competencies, computer training, discipline and classroom management, and teacher training and/or college preparation.

Suggestions regarding changes in the specialization competencies included more intensive methods in business content prior to graduation; requiring incoming teachers to spend some time working in the business world in addition to course work; adding School Law; stressing that business teachers work with high school counselors to promote more public relations relative to business education courses and to increase enrollments; and that teachers need to do a better job of "selling" business education to other educators.

Suggestions regarding changes relative to computer training included adding more word processing workshops and microcomputer applications and stressing that every business educator MUST become proficient in the use of the computer.

Suggestions regarding changes relative to discipline and classroom management included several suggestions to train future teachers more intensely in discipline and classroom management.

Suggestions regarding changes in teacher training and/or college preparation included using more practical applications from the teaching world in collegiate theory classes; teaching teachers to better compile resources and teaching files prior to beginning their teaching career; and training future teachers how to evaluate and grade students as well as how to maintain the professional distance that is required between teachers and students in order to foster a professional atmosphere.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter was divided into three sections, which were the summary, conclusions, and recommendations that evolved from the study.

#### Summary

The purpose of the study was to determine the perceptions of Texas secondary business teachers regarding their undergraduate training in business education specialization competencies.

The study attempted to answer the following questions:

1. Do Texas secondary business teachers perceive that they were adequately trained at the undergraduate level to teach the specialization competencies within the secondary business education curriculum?

2. Do Texas secondary business teachers perceive that course work should be revised or deleted from undergraduate business teacher training programs?

The sample was 383 Texas business teachers randomly selected from a population of 3038 teachers certified in 1991-92 through Texas Education Agency. The sample was

contacted by telephone and two follow-up measures were used--a letter and an additional telephone call, seeking their participation in the study, of which 181 responded (53%). The study arrived at a consensus by identifying "high", "low", and "no training" levels of training and by identifying specialization competencies in which suggestions were made for revision or deletion of course work.

Follow-up analyses were conducted using the Chi Square test of significance to determine the significance level of differences between adequacy of training and the time period during which business teacher certification was attained, whether in the past ten years (1981-1992) or prior to 1982. Chi Square was also used to determine the significance level of differences between suggestions for revision or deletion of specialization competency course work with the level of degree attained, whether undergraduate or graduate.

The telephone script and interview questionnaire were field tested on a panel of experts and a representative sample of business teachers who were not teaching in Texas. The telephone interview questionnaire consisted of both closed and open-ended response items and all data collection was done by the researcher.

The review of the literature was divided into six major areas: the evolution of teacher certification;



factors affecting Texas teacher certification; the changing business curricula; training needs for business program participants of the 21st century; impending reform in teacher education programs, and the summary.

#### Research Question Number One

Research question number one was answered by computing, via SYSTAT, Version 5.02 (Wilkinson, 1990), frequencies, means, standard deviations, and percentages for adequacy of training responses as perceived by respondents in each competency area.

Respondents perceived that they were adequately prepared in the following specialization competencies:

- (1) accounting; (2) advanced accounting; (3) recordkeeping;
- (4) business communications; (5) personal finance, (6) typewriting; (7) advanced typewriting; (8) personal business management; (9) business management; (10) business mathematics; (11) office procedures; (12) shorthand; (13) advanced shorthand; and (14) business law.

Respondents did not feel that they were adequately prepared in the following specialization competencies:

- (1) word processing; (2) microcomputer applications;
- (3) business data processing; (4) computer programming;
- (5) economics; and (6) career exploration.

In the statistical analyses, the Chi Square calculation for economics indicated that the differences between the

adequacy of training and the time period during which business teacher certification was attained were significant at the .01 level. Low training was reported by 50.53% of the respondents certified within the past ten years; 60.47% of the respondents certified prior to 1982 reported low training. It appeared that undergraduate economics training for those certified within the past ten years remained somewhat consistent to the training received by those certified prior to 1982.

The Chi Square calculation for accounting indicated that the differences between the adequacy of training and the time period during which business teacher certification was attained was significant at the .05 level. High training was reported by 52.63% of the respondents certified within the past ten years; 39.53% of the respondents certified prior to 1982 reported high training. It appeared that undergraduate accounting training for those certified within the past ten years improved from the training received by those certified prior to 1982.

The Chi Square calculation for career exploration indicated that the differences between the adequacy of training and the time period during which business teacher certification was attained was significant at the .02 level. No training was reported by 52.63% of the respondents certified within the past ten years; 47.67% of the respondents certified prior to 1982 reported no training.

It appeared that undergraduate career exploration training for those certified within the past ten years remained somewhat consistent to the training received by those certified prior to 1982.

The Chi Square calculation for office procedures indicated that the differences between the adequacy of training and the time period during which business teacher certification was attained was significant at the .001 level. High training was reported by 26.32% of the those certified within the past ten years; 41.86% of those certified prior to 1982 reported high training. It appeared that undergraduate training in office procedures declined for those certified within the past ten years from the training received by those certified prior to 1982.

The Chi Square calculation for business management indicated that the differences between the adequacy of training and the time period during which business teacher certification was attained was significant at the .02 level. High training was reported by 26.32% of the respondents certified within the past ten years; 19.77% of the respondents certified prior to 1982 reported high training. It appeared that undergraduate training in business management for those certified within the past ten years remained somewhat consistent to the training received by those certified prior to 1982.

The Chi Square calculations reported for the following specialization competencies below did not indicate a level of significance at .05 or below: (1) typewriting; (2) advanced typewriting; (3) word processing; (4) advanced accounting; (5) recordkeeping; (6) personal finance; (7) business data processing; (8) computer programming; (9) microcomputer applications; (10) business mathematics; (11) shorthand; (12) advanced shorthand; (13) personal business management; and, (14) business law.

#### Research Question Number Two

Research question number two was answered by computing, via SYSTAT (Version 5.02) the means, standard deviations, frequencies, and percentages of responses relative to suggestions for revision or deletion of competency course work in each specialization competency.

Respondents suggested revisions in all of the 20 surveyed competencies. Three courses were not suggested for deletion by any of the respondents, which were: word processing, accounting, and advanced accounting. Suggestions for deletion of the remaining surveyed competencies came from .6% to 48.6% of the respondents, depending upon the competency.

The Chi Square calculation for business mathematics indicated that the differences between suggestions for revision or deletion of course work and the level of degree

attained was significant at the .01 level. Revision of business mathematics was suggested by 4.31% of the undergraduate-degree respondents; 16.92% of the graduate-degree respondents suggestion revision. It appeared that approximately four times as many graduate-degree respondents suggested revision of business mathematics as undergraduate-degree respondents.

The Chi Square calculation for business data processing indicated that the differences between suggestions for revision or deletion of course work and the level of degree attained was significant at the .01 level. Revision of business data processing was suggested by 4.31% of the undergraduate-degree respondents; 13.85% of the graduate-degree respondents suggested revision. It appeared that approximately three times as many graduate-degree respondents suggested revision of business data processing as under-graduate degree respondents.

The Chi Square calculation for personal business management indicated that the differences between suggestions for revision or deletion of course work in personal business management and the level of degree attained was significant at the .05 level. Revision of personal business management was suggested by 3.45% of the undergraduate-degree respondents; 12.31% of the graduate-degree respondents suggested revision. It appeared that approximately four times as many graduate-degree

respondents suggested revision of personal business management as undergraduate-degree respondents.

The Chi Square calculations for the following specialization competencies did not indicate a level of significance at .05 or below: (1) economics; (2) typewriting; (3) advanced typewriting; (4) word processing; (5) accounting; (6) advanced accounting; (7) recordkeeping; (8) personal finance; (9) career exploration; (10) business communications; (11) office procedures; (12) business management; (13) computer programming; (14) microcomputer applications; (15) shorthand; (16) advanced shorthand; and (17) business law.

Open-ended responses from respondents to survey question nine also supplied data relative to suggested revision or deletion of course work within each specialization competency. (See Appendix A, pages 73-84.)

### Conclusions

The following conclusions were determined:

1. Undergraduate business education teacher training is inconsistent among Texas universities. Levels of training within the 20 specialization competencies required for Texas business education teacher certification range from no training to a high level of training.

2. All Texas business education teacher training programs need revision. Content revisions were suggested in all 20 specialization competencies in order to better prepare teachers to train secondary students.

3. In-service training has not been an influential factor in upgrading the skills of Texas secondary business education teachers.

4. Texas secondary business education teaching has been increasingly influenced by vocational education.

#### Recommendations For Practice

The following recommendations for practice are offered:

1. Business education teacher programs need to redesign and upgrade specialization competency course work to closely parallel training requirements of the business world in order to adequately prepare teachers to train students for business and office occupations.

2. A communication network needs to be developed among teacher educators of Texas business education teacher training programs in order to establish consistent parameters of training levels within the 20 specialization competencies.

3. In-service training programs should be developed for certified secondary business education teachers in the specialization competency areas.

4. Secondary business education teacher training programs should delete courses that are no longer considered minimum skills for obtaining entry-level employment in business and office occupations such as shorthand, advanced shorthand, and career exploration.

5. Secondary business education teacher training programs should recruit teaching professionals who are committed to a career in teaching. Loss of business teachers to careers in the world of business is increasing.

#### Recommendations For Further Research

The following recommendations for further research are offered:

1. A follow-up study needs to be conducted to identify factors in secondary business education teacher training which may provide guidelines for the redesign of business teacher training curricula.

2. A similar study needs to be conducted to determine which specialization competency areas business education teachers perceive in-service training would enhance teaching skills.



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**APPENDICES**

APPENDIX A

OPEN-ENDED RESPONSES TO SURVEY QUESTION NINE



## OPEN-ENDED RESPONSES TO SURVEY QUESTION NINE

The following suggestions were given in response to the open-ended portion of survey question nine, which solicited personal opinions pertaining to the perceived need to revise or delete course work in each specialization.

The suggestions were listed in descending order of frequency of responses and were arranged with no meaning assigned to the order of responses or to the arrangement of specialization competencies.

### A. Economics--

1. Update content (4 people).
2. Increase college credit hours that are required (3 people).
3. Increase to 9 college hours (2 people).
4. Combine with government curriculum (2 people).
5. Emphasize international component (2 people).
6. Strengthen content for students (1 person).
7. Include both micro and macroeconomics (1 person).
8. Increase current emphasis on world events and the mix of reality (1 person).

9. Put stronger emphasis on the business aspect of economics (1 person).
10. Emphasize global economics (1 person).

B. Typewriting--

1. Include more keyboarding; less formatting (3 people).
2. Include with word processing (2 people).
3. Require more training (2 people).
4. Improve advanced training (2 people).
5. Put this course into computers (2 people).
6. Teach it on both typewriters and computers (2 people).
7. Change to one semester only of keyboarding on a typewriter, then go to computers (1 person).
8. Put this course into word processing (1 person).
9. Put the course back into the college curriculum; most colleges have deleted it (1 person).
10. Incorporate typing concepts into instructions for computer technology and automation (1 person).
11. Reduce college class time spent on it (1 person).
12. Make this course a graduation requirement for everyone in every major (1 person).

C. Advanced Typewriting--

1. Require more training (4 people).
2. Include more keyboarding; less formatting (3 people).
3. Teach it on both typewriters and computers (3 people).
4. Put this course into computers (2 people).
5. Include with word processing (1 person).
6. Incorporate typing concepts into instruction for computer technology and automation (1 person).
7. Change to one-semester only of keyboarding on a typewriter, then go to computers (1 person).
8. Put this course into word processing (1 person).
9. Reduce college class time spent on it (1 person).
10. Add back into the college curriculum; most schools have taken it out (1 person).

D. Word Processing--

1. Add more packages (4 people).
2. Add more varied packages (4 people).
3. Upgrade to latest software (3 people).
4. Add more of this (3 people)!
5. Increase expectations of employer training (1 person).

6. Include as much keyboarding and word processing (combined) as possible (1 person).

E. Accounting--

1. Change to computerized accounting (4 people).
2. Include automated accounting (1 person).
3. Increase advanced accounting functions (1 person).
4. Upgrade to better train students for employment in accounting (1 person).
5. Require more college hours (1 person).
6. Require this course for every student in every major (1 person).

F. Advanced Accounting--

1. Change to computerized accounting (3 people).
2. Increase advanced accounting functions (1 person).
3. Require more college credit hours (1 person).
4. Require this course for every student in every major (1 person).
5. Upgrade to better train students for employment in accounting (1 person).

G. Recordkeeping--

1. Combine with business applications (1 person).
2. Require a GPA cutoff to weed out below average and above students (1 person).

#### H. Personal Finance--

1. Include more training (2 people).
2. Strengthen content for training teachers to deal with their own personal financial future (1 person).
3. Increase; teach more budgeting and forecasting (1 person).
4. Put stronger emphasis on the advantage of personal finance for everyone (1 person).
5. Update content so that it doesn't overlap with PBM content (1 person).
6. Require more college hours (1 person).
7. Upgrade to include a more broad coverage of personal financial issues (1 person).

#### I. Business Math--

1. Add more algebra (2 people)
2. Increase; teach more college algebra (2 people).
3. Add more training (1 person).
4. Include more hours in the college curriculum (1 person).
5. Update the curriculum (1 person).
6. Increase required college required hours (1 person).
7. Put stronger emphasis on the need for this course for everyone (1 person).

J. Career Exploration--

1. Upgrade content annually (4 people)
2. Combine with education classes; take out of business classes (1 person).
3. Upgrade curriculum to include new standards of the business world relative to career hopping and career preparation (1 person).
4. Add more! (1 person)
5. Include in at least some of the business education collegiate courses (1 person).
6. Move to junior high school level (1 person).
7. Emphasize content (1 person).
8. Add more general hours of this in methods and show how to integrate career expectations (1 person).
9. Increase in guidance and counseling areas that intermingle with business education (1 person).
10. A course in this added into the college curriculum would be helpful (1 person).
11. Include this in specific collegiate course designs (1 person).
12. Teach it more creatively! (1 person)

K. Office Procedures--

1. Update to match new technology (8 people).
2. Upgrade to computer technology (4 people).

3. Update curriculum (3 people).
  4. Put students in the office (3 people).
  5. Increase training (1 person).
  6. Add automation (1 person).
  7. Combine with word processing (1 person).
  8. Combine with computers (1 person).
  9. Increase intensity of training (1 person).
  10. Add the course content into another course and put students into the field (1 person).
  11. Include/increase in cooperative office training programs (1 person).
  12. Emphasize interrelationship with computers (1 person).
  13. Emphasize current office practices with computers and emphasize administrative aspects of office technology (1 person).
  14. Combine with microcomputers (1 person).
  15. Combine with microcomputers, but also emphasize more office content (1 person).
- L. Business Data Processing--
1. Add more! (3 people)
  2. Increase hands-on learning (3 people).
  3. Combine with word processing (2 people).
  4. Add much more into the business education curriculum (1 person).

5. Update curriculum, using latest software (1 person).
  6. Upgrade to include as much variety in training as possible (1 person).
  7. Upgrade to match latest technology (1 person).
- M. Introduction to Computer Programming--
1. Increase all languages--especially COBOL (1 person).
  2. Increase BASIC and COBOL (1 person).
  3. Add BASIC, but ship COBOL! (1 person)
  4. Increase all languages--especially BASIC (1 person).
  5. Add much more! (1 person)
- N. Microcomputer Applications--
1. Add more applications (5 people).
  2. Upgrade to the latest packages (2 people).
  3. Add much more! (2 people)
  4. Update curriculum (1 person).
  5. Add more spreadsheets (1 person).
  6. Increase spreadsheet, word processing, and database (1 person).
  7. Update to match MS-DOS (1 person).
  8. Add more variety in college training (1 person).
  9. Add much more in every area to match requirements of the world of work (1 person).



## O. Shorthand--

1. Change to Speedwriting (11 people).
2. Add back into the college curriculum; many schools have taken it out (3 people).
3. Change to a more usable skill (2 people).
4. Replace with Rapidwriting or Speedwriting (1 person).
5. Upgrade to Superwrite (1 person).
6. Change to Notehand; do not need shorthand (1 person).
7. Change from Gregg to something much more practical in use (1 person).
8. Strengthen content and put Gregg shorthand back into the college curriculum (1 person).
9. Change to an easier system (1 person).
10. Change curriculum to another level, as in Speedwriting (1 person).
11. Correlate shorthand study with English grammar (1 person).

## P. Advanced Shorthand--

1. Change to Speedwriting (9 people).
2. Change and upgrade to a more usable skill (2 people).
3. Replace with a form of Notehand or Rapidwriting (2 people).

4. Strengthen content and put Gregg shorthand back into the college curriculum (1 person).
5. Emphasize more usability of the skill (1 person).
6. Change to an easier system (1 person).
7. Correlate shorthand study with English grammar (1 person).
8. Add back into the college curriculum; many schools have omitted it (1 person).

Q. Personal Business Management--

1. Strengthen content (2 people).
2. Add more (1 person).
3. Increase college course requirements (1 person).
4. Don't need to spend class time on this (1 person).
5. Combine with microcomputer applications (1 person).
6. Update curriculum (1 person).
7. Change this course to Introduction to Business (1 person).
8. Add this course into the business management curriculum (1 person).

R. Business and Consumer Law--

1. Add, if not already in the college curriculum. (3 people)

2. Increase college requirements in credit hours.  
(2 people)
3. Add another course for teachers, bringing requirements to six hours, and make it a full-year course for high school students  
(1 person).

S. Business Communications--

1. Combine with office procedures (2 people).
2. Add more; need to learn how to write resumes  
(1 person).
3. Emphasize business aspects of this and upgrade; also possibly could use this as an English credit (1 person).
4. Increase training in letter writing skills  
(1 person).

T. Business Management and Ownership--

1. Increase the understanding of overall world of business management (1 person).
2. Upgrade course work (1 person).
3. Put more emphasis on small business and home business development (1 person).
4. Require more college hours (1 person).

APPENDIX B

OPEN-ENDED RESPONSES TO SURVEY QUESTION TEN

## OPEN-ENDED RESPONSES TO SURVEY QUESTION TEN

The following suggestions were given in response to survey question ten, which was an open-ended item soliciting personal opinions pertaining to future changes in business teacher education programs.

The suggestions were presented in the following categories, with no meaning assigned to designation of categories, the order of responses, or the arrangement of the responses:

### A. Specialization Competencies:

1. Place student teachers in as diverse and scattered subject areas as possible within business education during the student teaching experience (1 person).
2. Include more intensive methods in business content areas prior to graduation (1 person).
3. Teacher educators need to be required to be actively involved with secondary school teachers through classroom interactions (1 person).
4. More methods in content areas (1 person).

5. Incoming new teachers need to be required to spend some time working in the business world in addition to course work prior to beginning their teaching career (1 person).
6. Add in "School Law" (1 person).
7. Add in a course in Speedwriting as well as more courses in methodology of teaching (1 person).
8. Business teachers need to work with high school counselors and promote more public relations relative to business education courses to increase enrollments (1 person).
9. Teachers need to do a better job of selling business education to other educators (1 person).

B. Computer training:

1. Add more workshops on word processing training and microcomputer applications (1 person).
2. Add more workshops on word processing (1 person).
3. Add more and more computer everything! (1 person)
4. Use more computers everywhere! (1 person)

5. Every business educator MUST become proficient in the use of the computer (1 person).

C. Discipline and classroom management:

1. Discipline and classroom management needs to be taught to teachers entering the teaching field--without fail! (1 person)
2. Future teachers need to be trained more in discipline and classroom management (1 person).
3. Student teachers need to be trained WELL in classroom discipline and classroom management (1 person).

D. Teacher training and/or college preparation:

1. More practical applications from the teaching world should be used within the collegiate theory classes (1 person).
2. Need to better prepare future teachers in terms of compiling resources and teaching files prior to the beginning of their teaching career (1 person).
3. New teachers need to have a reduced course load during the first year in order to develop their first year lesson plans (1 person).

4. New business teachers should be advised to acquire a second teaching certification area in addition to business due to the rapidly changing business teaching field (1 person).
5. Train future teachers how to evaluate and grade students as well as in the professional distance that is required between teachers and students in order to foster a professional atmosphere (1 person).
6. Teachers need to be trained more regarding stress as it relates to their teaching job, perpetually changing and upgrading technology, employer expectations and community expectations (1 person).
7. Get rid of alternative certification for teachers--and emphasize fully prepared, fully-certified teacher training programs to provide better teachers for the future (1 person).
8. Remember to prepare teachers adequately to be able to pass the state exams (1 person).
9. Teachers need to be required to complete a business work internship prior to the beginning of their teaching career and prior to obtaining re-certification (1 person).



10. Shorten student teaching to eight weeks per semester--it does not increase the value of the experience by extending it over an entire semester (1 person).
11. Teachers need work experience prior to teaching--would help them in the area of career exploration as well as in confirming their selection of teaching as a career (1 person).

APPENDIX C

PANEL OF EXPERTS

PANEL OF EXPERTS

Dr. Peggy J. Gray  
Vice Presidential Intern  
Moorehead State University  
Moorehead, Minnesota

Dr. Peggy D. Paler  
Professor of Education  
School of Education  
Howard Payne University  
Brownwood, Texas

Ms. Donna L. Williams  
Business Education Teacher  
Chelsea Public Schools  
Chelsea, Oklahoma

APPENDIX D

SCRIPT FOR TELEPHONE INTERVIEW

SCRIPT FOR TELEPHONE INTERVIEW QUESTIONNAIRE

CD: Hello, may I speak to \_\_\_\_\_.

Teacher: (Identifies self)

CD: \_\_\_\_\_ (Teacher's name) \_\_\_\_\_, my name is \_\_\_\_\_,  
\_\_\_\_\_ (title) \_\_\_\_\_. I'm calling  
business educators identified through Texas  
Education Agency to determine recommendations  
for updating undergraduate teacher training  
programs in business education. As a business  
education teacher, your perceptions are the  
most valuable resource in considering the  
updating of teacher training as the 21st  
century approaches!

When all of the data has been collected, I would  
be glad to send you a summary of it so that you  
can see what other teachers in your field are  
also suggesting!

Your responses to the questions will be held  
confidential, of course, in that only totals  
will be reported in each category.

(Turn to the questions on the "Telephone Interview  
Questionnaire", begin with question #1 and tally  
responses as collected.)

(When finished with the questionnaire items,  
continue by saying. . . )

Thank you very much for helping examine and  
possibly revise undergraduate business teacher  
training programs. We are facing the challenge  
of preparing students for the world of work in  
future decades!

APPENDIX E

TELEPHONE INTERVIEW QUESTIONNAIRE

TELEPHONE INTERVIEW QUESTIONNAIRE

QUALIFIERS:

1. Are you presently teaching business at the secondary level?

Yes \_\_\_\_\_ No \_\_\_\_\_

2. At which school are you presently employed?

School: \_\_\_\_\_

City/State: \_\_\_\_\_

3. Which degrees have you completed?

Bachelor's: \_\_\_\_\_

Master's: \_\_\_\_\_

Specialist: \_\_\_\_\_

Doctorate: \_\_\_\_\_

4. When and where did you finish the above degree(s)?

Bachelor's -- Year: \_\_\_\_\_  
School: \_\_\_\_\_

Master's -- Year: \_\_\_\_\_  
School: \_\_\_\_\_

Specialist -- Year: \_\_\_\_\_  
School: \_\_\_\_\_

Doctorate -- Year: \_\_\_\_\_  
\_\_\_\_\_

5. When were you initially certified to teach secondary business?

Year: \_\_\_\_\_

6. In what state did you earn your initial teaching certification?

State: \_\_\_\_\_

7. Have you completed any business education in-service workshops since completing your last degree?

Yes \_\_\_\_\_ No \_\_\_\_\_

(If above response was "No", go to question # 8; if above response was "Yes", continue with the following, then go to question # 8.)

Would you identify the last three that you attended in terms of (1) the year you completed it; (2) where you completed it; and, (3) in what subject area?

When: \_\_\_\_\_ Where: \_\_\_\_\_  
Subject area: \_\_\_\_\_

When: \_\_\_\_\_ Where: \_\_\_\_\_  
Subject area: \_\_\_\_\_

When: \_\_\_\_\_ Where: \_\_\_\_\_  
Subject area: \_\_\_\_\_

#### SURVEY ITEMS:

8. Using the 20 areas of business education certification in Texas, would you evaluate your business teacher training on a scale of 0 to 3 (with 0 representing "no training", 1 representing "low", 2 representing "medium", and 3 representing "high") to indicate whether you believe that you were adequately prepared as a beginning teacher in the following areas?

	<u>No Trn'g.</u>	<u>Low</u>	<u>Med.</u>	<u>High</u>
Economics:	0	1	2	3
Typewriting:	0	1	2	3
Advanced Typewriting:	0	1	2	3
Word Processing:	0	1	2	3
Accounting:	0	1	2	3
Advanced Accounting:	0	1	2	3
Recordkeeping:	0	1	2	3
Personal Finance:	0	1	2	3



## Computers--

Business Data				
Processing:	0	1	2	3
Intro. to Computer				
Programming:	0	1	2	3
Microcomputer				
Applications:	0	1	2	3
Business Math:	0	1	2	3
Career Exploration:	0	1	2	3
Bus. Communications:	0	1	2	3
Office Procedures:	0	1	2	3
Shorthand:	0	1	2	3
Advanced Shorthand:	0	1	2	3
Personal Business				
Management:	0	1	2	3
Business Management				
and Ownership:	0	1	2	3
Business and				
Consumer Law:	0	1	2	3

9. Based on the same certification areas for Texas business educators, which subject areas do you feel need to be revised or deleted--I'll read each of them again--and please give me your opinion in terms of "revise" or "delete", followed by your specific suggestion(s) for what should be revised or deleted. If you believe no revisions or deletions are needed, please tell me to skip that subject area.

Economics:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Typewriting:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Advanced Typewriting: \_\_\_\_\_

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Word Processing:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Accounting:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Advanced Accounting: \_\_\_\_\_

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Recordkeeping:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Personal Finance:

Specifics: \_\_\_\_\_  
\_\_\_\_\_

Business Math: Specifics:	_____
	_____
Career Exploration: Specifics:	_____
	_____
Office Procedures: Specifics:	_____
	_____
Business Data Processing: Specifics:	_____
	_____
Intro. to Computer Programming: Specifics:	_____
	_____
Microcomputer Applications: Specifics:	_____
	_____
Shorthand: Specifics:	_____
	_____
Advanced Shorthand: Specifics:	_____
	_____
Personal Business Management: Specifics:	_____
	_____
Business and Consumer Law: Specifics:	_____
	_____
Business Communications: Specifics:	_____
	_____
Business Management and Ownership: Specifics:	_____
	_____

10. What additional improvements would you like to suggest be incorporated into business teacher training programs in order to better prepare teachers to teach and train students for employment during the 21st century (open-ended response)?

APPENDIX F

FOLLOW-UP LETTER

FOLLOW-UP LETTER

Date

Teacher's name  
Name of School  
Address of School  
City, State zip

Dear Ms. \_\_\_\_\_:

As a business educator, you have been selected to contribute to a survey that I'm conducting of Texas business teachers which is intended to result in the upgrading of business education teacher training programs. Your input is extremely valuable and it will require answering only 10 questions by telephone next week, taking an estimated 12-14 minutes of your time.

An 800 number has been set up so that you can call me; therefore, I won't interfere with your daily teaching schedule at school. If the line happens to be busy when you dial, please try again, as I'll be talking to another business teacher and would appreciate talking to you next!

The following 800 number will allow you to call me at no expense to you anytime between Monday, February \_\_\_ and Thursday, February \_\_, during the hours of 3:00 to 10:00 P.M. or Saturday, February \_\_, during the hours of 10:00 A.M. to 4:00 P.M.

**1-800-xxx-xxxx**

Thank you for assisting in this telephone survey. If you would like a copy of the final results, just tell me when you call and I'll be glad to send them to you. I really do appreciate your contribution to the recommendations that will be made in an effort to better prepare business education teacher candidates for the teaching jobs of the future!

**REMEMBER--**please put this on your **PRIORITY LIST** for next week!

Sincerely yours,

Carol K. Duckworth  
Associate Professor

VITA 2

Carol K. Duckworth

Candidate for the Degree of  
Doctor of Education

Thesis: PERCEPTIONS OF TEXAS SECONDARY BUSINESS  
TEACHERS OF THEIR UNDERGRADUATE TRAINING  
IN BUSINESS SPECIALIZATION COMPETENCIES

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Wichita, Kansas, April 21,  
1941, daughter of Elmer Floyd and Cynthia Ruth  
Dodson Duckworth.

Education: Graduated from Wichita High School West,  
Wichita, Kansas, May, 1959; graduated from  
Oklahoma Baptist University, Shawnee, Oklahoma  
with Bachelor of Arts degree in Secondary  
Administration, Business Administration, and  
Education in May, 1965; graduated from  
Arkansas State University, Jonesboro, Arkansas  
with Master of Science in Education in  
August, 1975; completed requirements for the  
Doctor of Education degree in Occupational and  
Adult Education at Oklahoma State University,  
Stillwater, Oklahoma in May, 1992.

Professional Experience: Secondary business education  
teacher and department chair, Midway High School,  
Denton, Kansas, 1965 to 1969; secondary vocational  
business education teacher and department chair at  
Potosi High School, Potosi, Missouri, 1969 to  
1972; high school counselor, Green Forest High  
School, Green Forest, Arkansas, 1972 to 1974;  
Professor of Business Administration and  
Secretarial Science, Weatherford College,  
Weatherford, Texas, 1974 to 1976; Director of  
Cooperative Education and Professor of Business  
Administration, North Arkansas Community College,  
Harrison, Arkansas, 1976 to 1981 and again from

1983 to 1988; Assistant University Registrar, Kansas State University, Manhattan, Kansas, 1981 to 1983; University Registrar, University of the Ozarks, 1983 to 1988; Teacher Educator, Oklahoma State University, Stillwater, Oklahoma, 1988 to 1991; Associate Professor of Business Administration and Department Chair, Howard Payne University, Brownwood, Texas, 1991 to present.

Professional Organizations: Phi Beta Kappa Scholastic Fraternity; Phi Delta Kappa Scholastic Fraternity; American Association of University Women; Business and Professional Women; American Association of Women Dean's and Counselors; National Business Education Association; American Vocational Association.

Publications: Author of seven individualized instruction manuals in office skill areas; author of five journal articles in business administration and education; author of three journal articles in cooperative education.

Leadership Activities: Served as grant reader and consultant in cooperative education with U. S. Office of Education, Washington, D. C., 1981-1989; served as national conference presenter for Council for the Advancement of Experiential Learning, Atlanta, Georgia, 1982; served as nationwide consultant for higher education cooperative education programs, trained through National Commission for Cooperative Education, Boston, Massachusetts, 1976-1982.